INTERNATIONAL MONETARY FUND

IMF Country Report No. 21/240

MEXICO

2021 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

November 2021

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2021 Article IV consultation with Mexico, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its November 3, 2021 consideration of the staff report that concluded the Article IV consultation with Mexico.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on November 3, 2021, following discussions that ended on October 1, 2021, with the officials of Mexico on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on October 20, 2021.
- An **Informational Annex** prepared by the IMF staff.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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International Monetary Fund
Washington, D.C.

IMF Executive Board Concludes 2021 Article IV Consultation with Mexico

FOR IMMEDIATE RELEASE

Washington, DC – **November 5, 2021:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Mexico.

The Mexican economy is rebounding from its deepest recession in decades, driven by strong U.S. growth and the pandemic-related re-opening of sectors. After shrinking 8.3 percent in 2020, real GDP is forecast to grow by 6.2 percent in 2021 and 4 percent in 2022.

Nonetheless, Mexico is bearing a very heavy humanitarian, social, and economic cost from COVID-19. There have been over half a million excess deaths, under-employment remains very high, poverty that was high before the pandemic has increased further, and the young have experienced sizable learning losses with potentially harmful long-term consequences.

The government has emphasized a conservative fiscal stance with a focus on containing debt. The overall deficit target is 4.2 percent of GDP in 2021, with increased allocations for health spending and public investment. Efforts to combat tax evasion have contributed to generally better-than-expected revenues. The gross debt of the public sector (by staff's definition) is estimated at about 60 percent of GDP. With inflation well above its target, the central bank has raised the policy rate to 4.75 percent. The current account, which jumped to a record surplus of 2.4 percent of GDP in 2020, has moderated and is nearly balanced. The banking sector has strong capital positions and nonperforming loans are relatively low at 2.4 percent of total loans (as of May 2021). International reserves remain at a comfortable level, boosted by the new general allocation of SDRs.

Executive Board Assessment[2]

Executive Directors broadly agreed with the thrust of the staff appraisal. They commended the authorities for successfully maintaining economic stability through a challenging period, underpinned by very strong macroeconomic policies and institutional policy frameworks. The economy continues to rebound, despite further COVID 19 waves and supply chain constraints. However, given economic scarring risks and Mexico's low long run growth performance, Directors underscored the need to safeguard the recovery and promote stronger, more inclusive, and greener growth.

Directors generally saw merit in additional well targeted fiscal support using available fiscal space for health and education, social safety nets, and quality public investment. In this

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

context, a few Directors considered the authorities' conservative approach appropriate to contain public debt. Directors stressed the importance of enhancing spending efficiency and containing the projected rise in pension spending. They also urged reform of Pemex's business strategy and governance.

Directors welcomed the authorities' recent successes in improving tax administration. A credible medium term tax reform, to be implemented as the economy strengthens, would help finance needed social and public investment spending and put the public debt to GDP ratio on a firm downward trajectory.

Directors noted that recent inflationary pressures, while mostly temporary, pose a difficult balancing act amid still sizable slack. They recommended a gradual, data driven pace of policy normalization that carefully balances support for the recovery while keeping medium term inflation expectations well anchored. Continued efforts to enhance the central bank's communications would be helpful in this regard, while a strategic review of the monetary policy framework could be conducted at the appropriate time. The flexible exchange rate should continue to serve as an external shock absorber.

Directors recognized Mexico's early adoption of climate change mitigation policies and targets. They encouraged implementing a comprehensive strategy, which could consider the scope and level of carbon pricing as part of broader mitigation and adaptation actions and redistribution policies. They emphasized that leveraging Mexico's large and diverse renewable resource base can foster a cheaper, more sustainable, and competitive energy sector.

Directors encouraged the authorities to tackle impediments to productivity growth through well prioritized structural reforms. They highlighted the need to promote labor market formality, narrow gender gaps, foster financial inclusion, and improve governance. Directors also recommended calibrating minimum wage increases to productivity growth. Advancing AML/CFT reforms and addressing outstanding recommendations from the 2016 FSAP will be important.

It is expected that the next Article IV consultation with Mexico will be held on the standard 12 month cycle.

Mexico: Selected Economic Indicators, 2020–22

Population (millions, 2020):	127.8	GDP per capita (U.S. dollars, 2020)	8,403.6
Quota (SDR, millions):	8,912.7	Poverty headcount ratio (% of population, 2020) 1/	43.9

Main export products: cars and car parts, electronics, crude oil
Main import products: cars and car parts, electronics, refined petroleum
Key export markets: United States, EU and Canada
Key import markets: United States, China, EU

		Proj.	
	2020	2021	2022
Output			
Real GDP (% change)	-8.3	6.2	4.0
Employment			
Unemployment rate, period average (%)	4.4	4.1	3.7
Prices			
Consumer prices, end of period (%)	3.2	5.9	3.1
Consumer prices, period average (%)	3.4	5.4	3.8
General government finances 2/			
Revenue and grants (% GDP)	24.5	24.0	23.2
Expenditure (% GDP)	29.0	28.3	26.8
Overall fiscal balance (% GDP)	-4.5	-4.2	-3.5
Gross public sector debt (% GDP)	61.0	59.8	60.1
Monetary and credit			
Broad money (% change)	13.4	9.2	6.6
Credit to non-financial private sector (% change) 3/	1.5	3.3	5.9
1-month Treasury bill yield (in percent)	5.3	N.A.	N.A.
Balance of payments			
Current account balance (% GDP)	2.4	0.0	-0.3
Foreign direct investment (% GDP)	2.3	1.9	1.9
Gross international reserves (US$ billions)	199.1	211.8	221.5
In months of next year's imports of goods and services	4.6	4.8	4.8
Total external debt (% GDP)	43.1	36.8	36.4
Exchange rate			
REER (% change)	-7.6	...	...

Sources: World Bank Development Indicators, CONEVAL, National Institute of Statistics and Geography, National Council of Population, Bank of Mexico, Secretariat of Finance and Public Credit, and Fund staff estimates.
1/ CONEVAL uses a multi-dimensional approach to measuring poverty based on a “social deprivation index,” which takes into account the level of income; education; access to health services; to social security; to food; and quality, size, and access to basic services in the dwelling.
2/ Data exclude state and local governments and include state-owned enterprises and public development banks.
3/ Includes domestic credit by banks, nonbank intermediaries, and social housing funds.

INTERNATIONAL MONETARY FUND

MEXICO

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

October 20, 2021

KEY ISSUES

Context. Spurred by strong U.S. growth and rising vaccination rates, the economy is rebounding. The government has successfully maintained external, financial, and fiscal stability despite the deepest recession in decades. Nonetheless, Mexico is bearing a very heavy humanitarian, social, and economic cost from COVID-19, including over half a million excess deaths, sizable under-employment, an increase in already-high levels of poverty, and learning losses for the young. Real income per capita is continuing its long-run divergence from the U.S., while additional challenges are emerging from technological shifts and climate change.

Policies. The government has emphasized a conservative fiscal stance with a focus on containing debt. With inflation rising well above its target, the central bank has begun raising the policy rate. These settings imply a relatively tight policy mix. The government's plans to reverse past energy reforms have weighed on the investment climate.

Recommendations. Strong U.S. growth should support the near-term rebound in demand and presents an opportunity to implement policies to secure the recovery, mitigate the scars of the pandemic, and deliver sustained, strong, and inclusive growth.

- *Fiscal policy.* Increase spending by 1½ percent of GDP in 2022, rising to 3 percent of GDP over the medium term on quality public investments, education, health, and social programs. Finance this spending, while ensuring declining debt/GDP, through a credible tax reform that begins raising revenues once the recovery is well entrenched.

- *Monetary policy.* With medium-term inflation expectations well anchored, the central bank should signal that it expects to pursue a gradual pace of rate increases, providing time to assess how price pressures are evolving. Give further information on the central bank's outlook and expected rate path.

- *Supply-side reforms.* Seek a stronger, fairer, and greener recovery including by reforming Pemex's business strategy to improve efficiency and governance, encouraging private sector participation in energy, tackling informality, calibrating minimum wage increases to productivity growth, and combating climate change by pricing emissions and gradually raising the carbon tax.

Approved by
Nigel Chalk (WHD) and Bikas Joshi (SPR)

Discussions were held virtually during September 13–October 1, 2021. The team comprised Rishi Goyal (head), Swarnali Ahmed Hannan and Kevin Wiseman (all WHD), Carolina Claver (LEG), Jean-Marc Fournier (FAD), Misa Takebe (SPR), and Jeffrey Williams (MCM). Nigel Chalk (WHD) attended the concluding meetings. Alfonso Guerra and Andrea Arevalo Arroyo (OED) also participated. The team met with Finance Secretary Ramírez de la O, Governor Díaz de León, Labor Secretary Alcalde, other officials, and representatives of the financial and private sectors. The team was supported by Simon Black, Boele Bonthuis, Koralai Kirabaeva, Ian Parry, Mehdi Raissi, Alpa Shah, and Karlygash Zhunussova (all FAD), Keiko Honjo (RES), and Laila Azoor and Juan Pablo Cuesta Aguirre (WHD).

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ANNEXES

RECOVERY FROM THE PANDEMIC

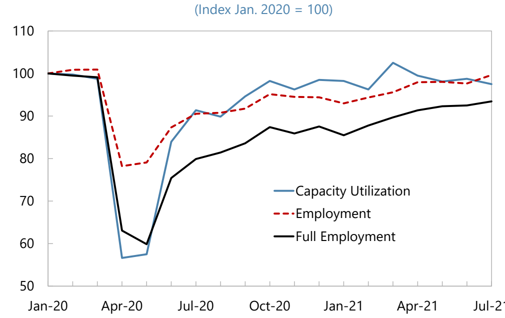
1. **Strong U.S. growth and rising vaccination rates have facilitated a bounce back from Mexico's steepest recession in decades.** Growth last year was -8.3 percent, among the lowest in the G20. Starting in the second half of 2020, Mexico experienced a two-speed recovery as U.S. growth fueled manufacturing while construction and services lagged, owing to pandemic-related closures of workplaces and reduced demand in contact-intensive sectors. Fiscal support has been limited, an outlier among the G20. More recently, the strength in manufacturing has been constrained by supply chain shortages (notably of semiconductors). Starting in Spring 2021, improvements in health metrics have facilitated a re-opening of the economy and a broadening of the recovery. Rising vaccination rates[1] and improving mobility have supported a recovery in services.

2. **Employment has bounced back but under-employment remains high.** Employment in manufacturing is above its pre-pandemic level, although employment in services remains about 3 percent below its pre-pandemic level as of mid-2021. Informal employment, where access to the social safety net is limited, has recovered quickly and now exceeds its pre-pandemic level. However, underemployment remains above the peak rate witnessed during the global financial crisis.

3. **COVID-19 has imposed very significant human and social costs.** Since early 2020, there have been over 555,000 excess deaths—among the highest globally. After spiking in mid-2020, poverty rates have been declining but remain above pre-pandemic levels. About 44 percent of the population is in poverty, up from 42 percent in 2018 (CONEVAL, 2021). This includes 8½ percent of the population in extreme poverty. An additional one-third of the population remains vulnerable to various forms of social or income deprivation and the share of the population without access to health services rose by 12 percentage points. Women have borne the brunt of the pandemic, given the increased demand for child and family care, their larger role in the informal labor market, and the greater likelihood they fall into poverty.

4. **Slack remains sizable.** Estimates of slack are especially uncertain. Nevertheless, the U6 unemployment rate—which includes the unemployed, under-employed, and those available to work—is around 6½ percentage points, or 4.6 million people, above the pre-pandemic level. Median incomes have fallen for those in work, indicating an excess supply of labor (Annex V). Staff estimates output will be around 4 percent below potential in 2021.

Capacity
(Index Jan. 2020 = 100)



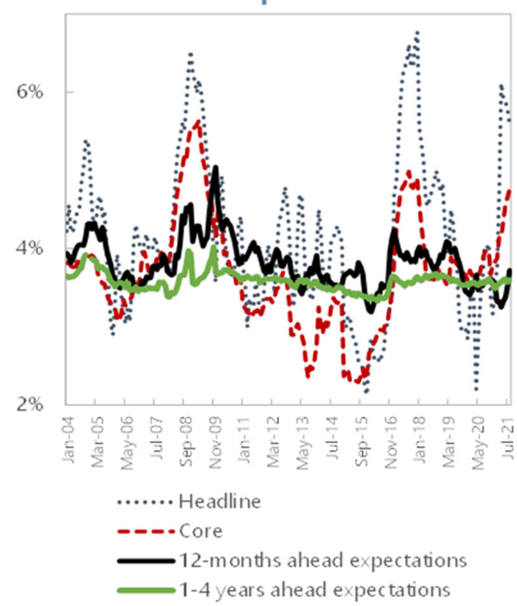
Sources: INEGI and IMF staff calculations

[1] Over 77 percent of adults are partially vaccinated, with over 55 percent fully vaccinated. Vaccines are expected to be widely available to all adults by the end of the year. Mexico has a diverse portfolio of vaccines, led by AstraZeneca, Pfizer, and Sinovac vaccines, with Sputnik, Moderna, and Johnson & Johnson also in use.

5. Inflation has risen above the central bank's target of 3 percent ± 1 percent variability interval. As in other countries, the rise was initially driven by a surge in energy prices and sustained by agricultural prices, compounded by base effects. Processed food comprises a quarter of the core consumption basket, which has resulted in elevated core inflation. Non-food prices are also higher reflecting a pandemic-related shift toward goods consumption as well as supply constraints. Core services inflation was weak but in mid-2021 exceeded 3 percent as pent-up demand for in-person services was not matched by increases in supply. As in the U.S., these price dynamics appear to be largely transitory, reflecting idiosyncratic supply-demand mismatches that will wash through the system in the coming months as the economy fully re-opens (Box 1).

6. In response to higher inflation, the central bank has started hiking the policy rate. Since June 2021, the central bank has raised the policy rate by 75 basis points to 4.75 percent. The move was more front-loaded than was expected by markets prior to the June meeting. Subsequently, market expectations of policy rate increases were brought forward (survey-based expectations of the policy rate for end-2022 have increased from 4.5 to 5.5 percent). Market pricing is higher, with the market-implied policy rate above 7 percent in 2023, bringing the policy rate from below the authorities' estimates of the neutral rate to above.[2] While inflation expectations for end-2021 are well above the target, inflation expectations for 2-years and beyond remain well anchored at around 3.5 percent (their average over several years), signaling strong central bank credibility.[3]

Observed Expected Inflation



Sources: INEGI, Bloomberg, and IMF Staff calculations.

7. The current account surplus has moderated as domestic demand has rebounded. Last year, strong U.S. demand, remittance inflows, and weak domestic demand led to a current account surplus of 2.4 percent of GDP. This external position in 2020 is assessed as stronger than the level implied by medium-term fundamentals and desirable policies (Annex I). This is largely a result of fiscal policy responding to the pandemic by less than Mexico's trading partners. The current account is expected to return to deficit over the medium term.

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[2] Staff considers the neutral rate to be somewhat below the authorities' (nominal) estimate of 4.8–6.4 percent, given staff's lower estimate for potential growth and the broad declines in the neutral rate in the U.S. and other major economies.

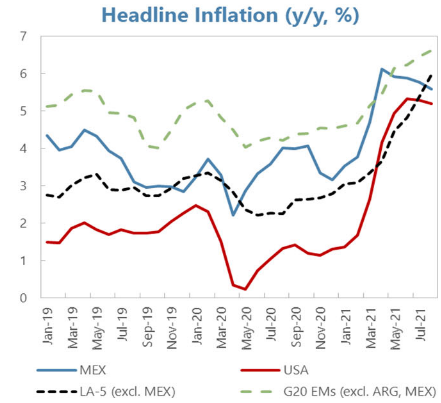
[3] Market-based measures of inflation expectations have responded more strongly to price developments than survey-based measures. However, interpreting these measures is complicated by large and time-varying liquidity premia. Beauregard et al. (2021) find that, controlling for liquidity premia, medium-term inflation expectations in Mexico have remained well anchored for several years.

Box 1. Recent Price Pressures in Mexico Appear Mostly Transitory

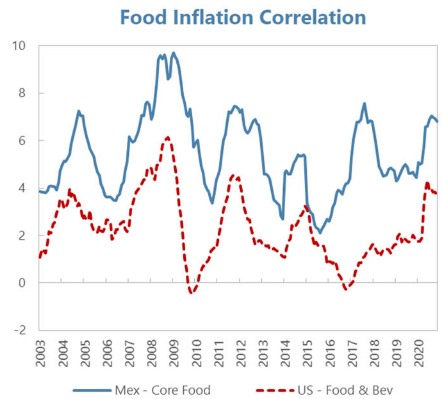
Price pressures in 2021 have been a global phenomenon. Spurred initially by global energy prices, inflation has been further propelled by tradable merchandise where supply pressures from inputs, especially in semiconductors (Banco de Mexico 2021, Box 3; Annex VI), have constrained the sector's ability to meet recovery demand. The Mexican inflation gap with the U.S. has declined during this period suggesting an important role for inflation imported from the U.S. Key input shortages in manufacturing are now expected to persist through 2022 but their contribution to inflation should ease, and subsequently reverse, as supply disruptions subside.

Processed food prices are contributing up to 2 percent to the overall index's exceedance of the target. Processed food prices have significantly exceeded the inflation target for many years and, unlike in other countries, are included in the core price index. Processed foods occupy a large share of the basket and are highly correlated with non-core food items in the U.S. (the U.S. and Mexican food markets are tightly integrated). As with energy commodities, agricultural commodity inflation is expected to slow under the latest WEO assumptions.

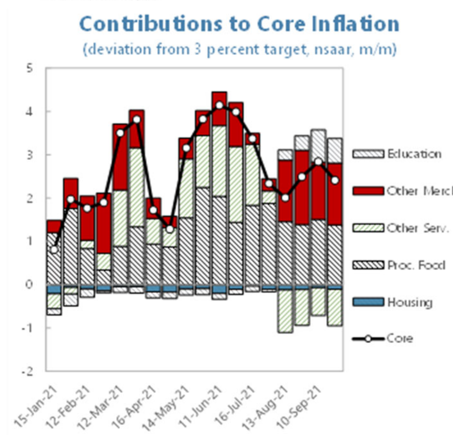
Services inflation was visible during the rapid expansion of demand following the second COVID-19 wave but has recently reversed. The spring and early summer of 2021 saw a rapid recovery in the demand for services owing to the release of pent-up demand, optimism about vaccinations, and declining COVID-19 cases (Figure 1, panels 1 and 5). Restaurant reservations rose above 100 percent of their pre-pandemic levels by end-March and were above 120 percent in late June and early July. These trends reversed as the third wave of COVID-19 infections hit Mexico. The dissipation of pent-up demand should provide time for supply to adjust. Even as pandemic-related restrictions are relaxed with continued progress in vaccinations, it is expected that price pressures are unlikely to recur in the coming months.



Source: Haver Analytics.



Source: Haver Analytics.



Source: INEGI and IMF Staff calculations.

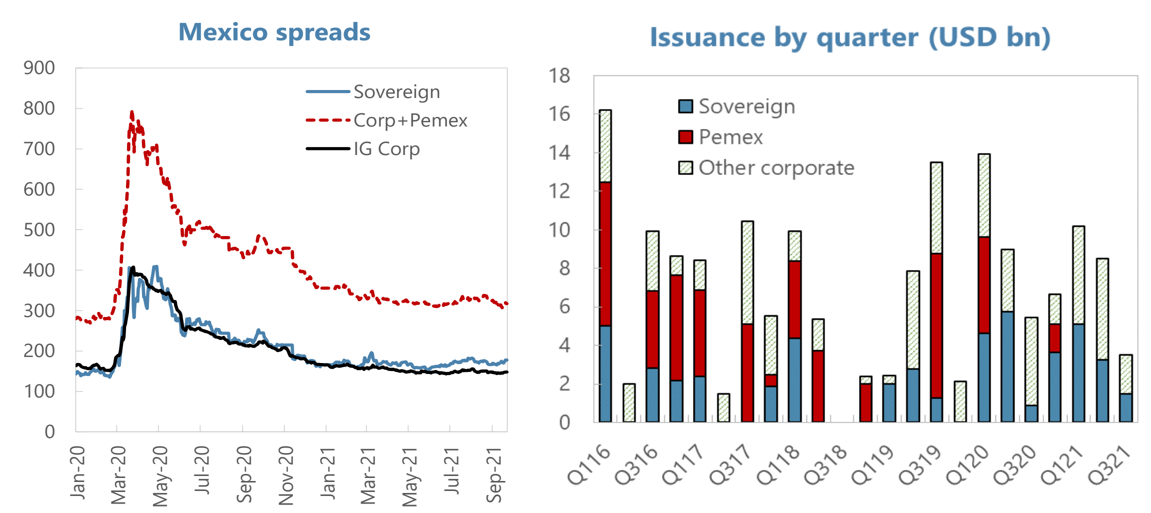
8. The general SDR allocation has further strengthened Mexico's external buffers. Mexico's allocation amounted to USD 12.1 billion or 1 percent of GDP. As a result, gross international reserves increased to USD 212 billion at end-September (134 percent of the Reserve Adequacy metric).[4] The USD 60 billion swap line with the Federal Reserve was extended until end-

[4] After the SDR allocation, the government bought foreign exchange of USD 7 billion from the central bank (albeit without recourse to SDRs) to meet the public sector's foreign currency debt amortization over the next year as part of its asset-liability management strategy.

2021 and Mexico has access to USD 12 billion in other pre-existing swap lines with U.S. entities as well as USD 63 billion (500 percent of quota) from the IMF's Flexible Credit Line.

9. External financing conditions have been favorable. Spreads on the government's U.S. dollar bonds have returned to near pre-pandemic levels despite being downgraded one notch by all three major rating agencies early in 2020. The government borrowed a record USD 15 billion externally last year and USD 10 billion so far in 2021 (including about USD 2 billion in SDG issuances in 2020–21). Through new issuances and debt management operations, the authorities have extended the average maturity and reduced the amount of bonds maturing through 2023 by nearly 80 percent (to just over USD 2 billion). Net portfolio capital inflows have been anemic thus far, as new issuances were offset by amortizations and nonresidents sold local currency government bonds while local investors increased their exposure. Private Mexican issuers have maintained comfortable market access.

10. Having lost investment grade in 2020, Pemex's rating was further downgraded in July 2021. While Pemex was the dominant Mexican issuer before the pandemic, the sovereign has now taken that role with Pemex not accessing markets since October 2020 (despite the company's after-tax deficit remaining sizable). The sovereign provided significant support (about 3 percent of GDP during 2019–21 in tax relief, financing for debt repayments, and funding for the Dos Bocas refinery; Box 2). Pemex's external debt maturities amount to about USD 4¼ billion in each of 2022 and 2023.



Source: Bloomberg.

11. The government has continued to privilege state-owned energy producers and reverse the 2013 energy reforms, which is weighing on the investment climate. Actions to favor Pemex include easing revocation of licenses to the private sector, imposing onerous storage capacity constraints on competitors, and declaring Pemex the operator of an oil field that spanned private and public claims. Meanwhile, Pemex's market share in hydrocarbon distribution has continued to decline. For the state electricity company CFE, actions include privileging CFE's own brown energy generation over cheaper green energy sources and stalling the granting of permits for new green

Box 2. Pemex: Government Support and Needed Reforms

Pemex has faced recurrent financing problems. Its key structural weakness is declining production from the few large mature fields that constitute the bulk of proven reserves and the low expected life of reserves (under nine years). Oil production has stabilized recently owing to contributions from newer fields but remains notably below earlier levels. Its investments, e.g., in an expensive new refinery, have crowded out resources for oil exploration and upgrading existing refineries. Inadequate preventive maintenance has led to shutdowns (including from accidents) and low capacity utilization.

USD bn	2019	2020	2021	Sum
Cash Support	8.2	7.1	7.8	23.2
Equity Injection (Dos Bocas, Deer Park)	1.3	2.3	2.8	6.5
Equity Injection (debt repayments)	5		5	10.0
Pull forward of pension assets	1.9	4.8		6.7
Tax Support	1.6	4.6	6.5	12.7
DUC tax reduction (65%, 58%, 54%)		1.3	2.9	
DUC 2019 tax deductibility benefit	1.6			
2020 one-off tax cut		3.3		
2021 one-off tax cut			3.6	
Total	9.8	11.7	14.4	35.9
Total (% GDP)	0.8%	0.9%	1.0%	2.7%

The government has provided substantial support in recent years. Treasury financing has been provided for the new Dos Bocas refinery and to service debt. Tax relief has included a lower profit-sharing duty (which provides the bulk of the government's oil revenues) from 65 percent in 2019 to 58 percent in 2020 and 54 percent in 2021, alongside additional one-off tax credits for 2020 and 2021.[1] (The 2022 budget proposes permanently reducing it to 40 percent from 2022 onward.) Despite this support, Pemex has generated large after-tax deficits (or negative free cash flow, FCF) and debt has increased. Since 2018, financial debt has increased by US$9 billion to US$115 billion, debt to suppliers by US$5 billion to US$13 billion, and pension liabilities by US$11 billion to US$66 billion. Based on the current business plan, analysts and rating agencies expect that Pemex is likely to continue running a negative FCF of around 1–1.5 percent of GDP.

Changes to Pemex's strategy and governance are essential if it is to become a viable standalone entity. These include: (i) increase investment for replacing reserves (according to rating agencies, capital expenditure plans fall below the required investment for full replacement); (ii) scale down investments with low returns on capital (such as in a new refinery, when existing refineries are running well below capacity); (iii) encourage greater private sector participation by utilizing available tools (e.g., farmouts, migrations) to bring in experienced operators on more complex fields (as they can help achieve higher oil recovery and generate higher revenues); (iv) sell non-core assets; and (v) strengthen Pemex's governance and procurement processes (see last year's Article IV staff report, Annex VII, for details). Note that, since the 2014 oil shock, peers such as Petrobras and Ecopetrol have notably changed their strategy (e.g., higher private sector involvement in exploration and sale of assets such as refineries) that supported a significant improvement in their financial position. Thus, government support should be paired with reforms to put Pemex on a sound footing.

USD bn	Actual		Stylized scenarios with higher capex	
	2019	2020	75% tax reduction	75% tax reduction + 30bn capital
Total crude oil production (Mbd)	1,720	1,725	1,773	1,773
Mexican crude oil basket (USD/bbl)	56	36	60	60
Upstream				
EBITDA estimate	9	12	24	24
Interest expense	-8	-7	-7	-5
E&P capex	-7	-8	-13	-13
Taxes	-20	-8	-5	-5
Upstream Free Cash Flow	**-17**	**-14**	**-1**	**1**
Downstream Free Cash Flow	-5	-8	-3	-3
Total Free Cash Flow	-22	-22	-4	-2

Illustrative calculations highlight the difficulty of turning Pemex into a viable entity solely through financial support. In 2019, Fitch Ratings assessed the level of support Pemex would need to be upgraded to the level of the sovereign: (i) reduce the tax take by 75 percent; (ii) increase capital expenditure to US$13–18 billion to achieve a 100 percent reserve replacement ratio; and (iii) lower Pemex's debt stock to around $100 billion. Even with these assumptions and very substantial budget support (1½ percent of GDP tax relief and nearly 3 percent of GDP debt reduction),[2] the FCF could remain somewhat negative. Moreover, even if the FCF is assumed to return to zero, the ratio of debt-to-proved reserves would remain well above industry peers. Changes to the business strategy are, thus, essential and urgent.

[1] Estimated tax support in the table is based on the difference between new rates and those that prevailed in 2019, using full year estimates for 2021 average oil price and production.

[2] These estimates assume a similar relationship of total sales to production and oil price as in prior years. The scenarios' 75 percent tax reduction is applied to the average effective tax rate during 2017–20.

installations. A proposed constitutional amendment seeks to overhaul the institutional framework underpinning electricity generation, including significantly enhancing the role of CFE, limiting private participation, and dissolving the regulatory bodies overseeing competition and granting of permits. It thus seeks to reverse the energy sector reforms and is likely to raise costs and hamper competitiveness. It could also further complicate achievement of Mexico's climate change mitigation commitments. The government also announced plans for a public liquefied petroleum gas (LPG) distributer and imposed a ceiling on LPG prices.

12. Mexican banks' capital positions have remained strong and profitability is recovering. The banking sector is concentrated in a few banks whose balance sheets are mostly comprised of loans to large corporates and sovereign-related entities that generally are viewed to be low risk. The tier 1 capital ratio improved to a record high of 16.8 percent in May 2021, driven by larger sovereign debt holdings and lower credit to the private sector. Despite the overall strength, there are pockets of weakness related to some small institutions. Most of the central bank's liquidity and credit support facilities have expired, with the credit facilities providing a useful backstop but having seen little use. System-wide liquidity has increased. Nonperforming loans peaked at the beginning of 2021 following the expiration of credit relief programs and remain very low at 2.4 percent of loans despite the downturn. The average return on equity is 11 percent after declining in 2020, largely because of higher loan loss provisions. Lending conditions for corporations remain tight, especially for smaller entities, with credit to small and medium-sized enterprises (SMEs) contracting 6 percent (year-over-year) as of July 2021 due to the risk of such credits given the pandemic-related strains.

OUTLOOK AND RISKS

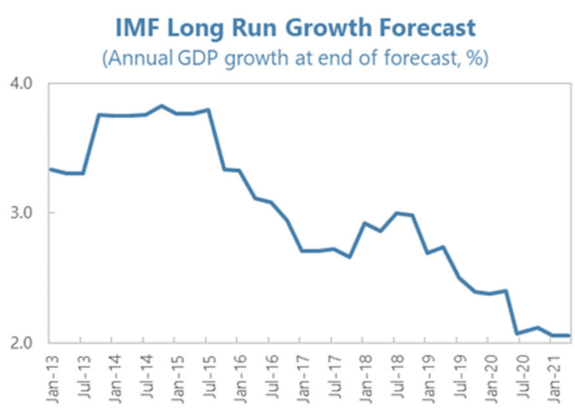
13. The Delta variant caused infections to rise above the January 2021 peak but now appears to be waning. Some restrictions were reintroduced, although somewhat less than seen in the previous wave, and fatalities rose. Vaccinations of the most vulnerable and the prior penetration of the disease in the population appear to have blunted the effects of this third wave (peak excess mortality was less than half that of the second wave).

Real GDP Growth Forecast (in percent)	2021	2022
Ministry of Finance	6.3	4.1
Central Bank	6.2	3.0
Consensus	6.2	3.0
IMF Staff	6.2	4.0

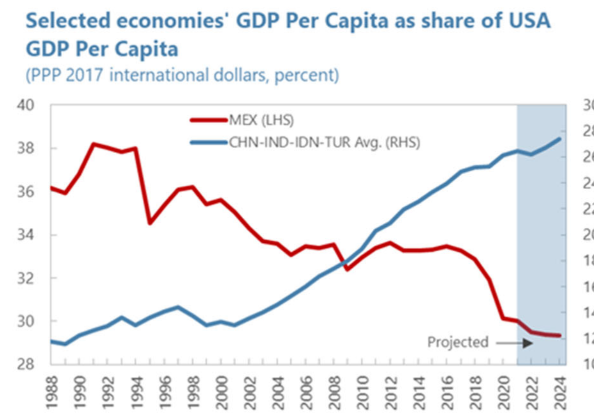
14. Staff projects the economy to grow by 6¼ percent in 2021 and 4 percent in 2022. These are based on an expected expansion of vaccinations and continued normalization of economic activities. Projected growth in 2022 is above consensus, reflecting the Fund's above-consensus U.S. growth forecast for 2022 (of over 5 percent). Unemployment is expected to converge to its historical average. However, underemployment and wages could lag (with workers taking lower-productivity jobs and human capital having depreciated). The re-opening of the economy and a recovery of domestic demand, including re-stocking of intermediate goods (which make up 80 percent of imports), is expected to lead to a broadly balanced external current account in 2021–22.

15. The pandemic is expected to exacerbate Mexico's long-standing record of low growth and weak productivity. Prospects for long run growth have declined steadily in recent years, owing largely to reform reversals, especially in the energy sector. Also, earlier expectations of reform dividends were likely too optimistic in the face of structural challenges (such as pervasive labor market informality, poor access to finance, security concerns, and corruption). Education gaps were large even before the pandemic and have worsened, given uneven internet coverage and the variable quality of remote learning (Annex IV). Capital investment is likely to remain weak for some time and the labor market could take time to recover fully. Additionally, the economy will face new challenges from technological shifts and the effects of climate change.

16. Mexico's real per capita income continues to diverge from the U.S. Real GDP per capita is projected to return to the pre-pandemic peak only in 2025. Relative to pre-pandemic projections, real GDP per capita over the medium term is about 4 percent lower, and under current policy settings the divergence in PPP GDP per capita vis-à-vis the U.S. that has been seen over the past few decades is projected to continue.



Source: WEO projections.



Source: WEO.

17. Inflation is expected to converge from above to the central bank's target. Elevated commodity and traded goods inflation, supply chain constraints in manufacturing, as well as local demand outpacing supply in certain services as the economy re-opens could maintain pressure on inflation in the near term. However, as supply constraints are alleviated and normalization of activity locally proceeds apace, inflation is expected to return to the central bank's target over the next 1½ years, although inflation risks are to the upside of this expected path. This forecast also assumes a further 50 basis point increase in the policy rate by mid-2022. However, if policy rates evolve on a steeper path consistent with current market expectations, inflation would be expected to fall below the target by 2023.

18. Risks to growth are skewed downward. The principal risk is a renewed and more intense COVID-19 wave (Annex II). Disappointing U.S. growth or a less-supportive-than-expected fiscal or monetary policy in the U.S. would also diminish recovery prospects through reduced external demand, lower remittance flows, possibly a less favorable financing environment, a repricing of risk, and capital outflows. A de-anchoring of U.S. inflation expectations that caused the Federal Reserve to bring forward expected rate increases would tighten international financial conditions, raise credit spreads in Mexico, spill over into higher Mexican inflation, and may require decisive policy tightening in Mexico to anchor domestic inflation dynamics. A worsening of Pemex's financial situation, e.g., owing to lower oil prices or production or announcements of additional loss-making investments, presents further downsides.[5] However, stronger growth in the U.S., even if accompanied by higher U.S. and Mexico interest rates, would—on balance—be growth positive for Mexico. Faster progress on vaccinations and an early resolution of supply bottlenecks would also provide important upsides.

19. Authorities' views. The authorities foresee significant catch-up growth over the next year on the back of their vaccination campaign, their economic policies, and U.S. growth. However, they see the emergence of new COVID-19 variants and the evolution of the pandemic, further disruptions to global supply chains, international financial volatility, and lower-than-expected investment among the principal risks and they consider their policies are working to mitigate their possible effects. The central bank projects inflation to converge to the 3 percent target by mid-2023. They consider the balance of risks for the trajectory of inflation to be biased to the upside.

POLICY DISCUSSIONS

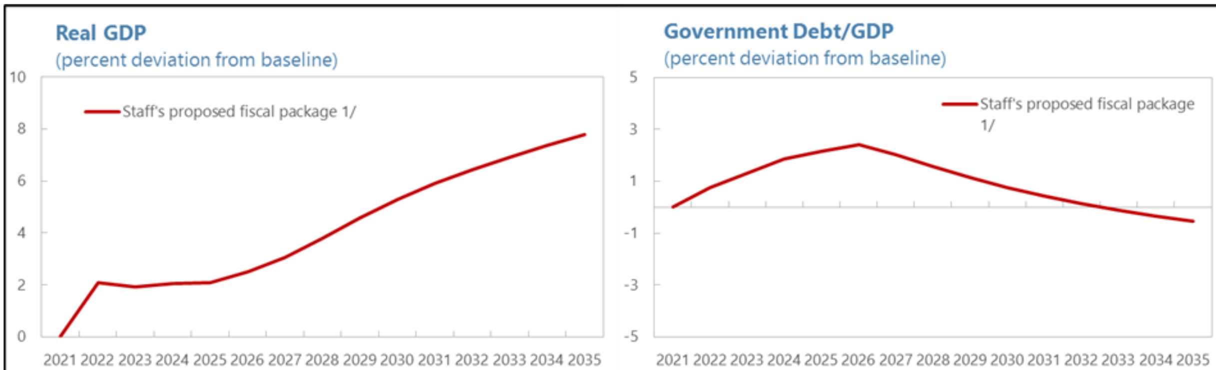
20. There was broad agreement that the priorities ahead are to safeguard the recovery, preserve economic stability, and promote inclusive growth. First and foremost, this will require vaccinating the population as swiftly as possible and ensuring sufficient access to vaccine supply.

21. Mexico would benefit from higher, front-loaded fiscal spending, combined with a credible tax reform that would raise revenues once the recovery is well established. Current plans for fiscal support to the population are unlikely to ameliorate longer-term scarring or bolster prospects for inclusive growth. Mexico has some fiscal space and enjoys comfortable market access (Annex III). Stronger and well-targeted social assistance in the coming year would reduce the burdens on the vulnerable and mitigate poverty (including the effects on the poor from higher inflation). A structural increase in education, health, and public investment spending would help secure a durable and inclusive recovery and mitigate hysteresis effects from the pandemic. This would need to be combined with policies that raise government revenues. Additionally, measures should be implemented to reform Pemex, improve the business climate and governance, tackle informality, and combat climate change, among others. The present conjuncture of a strong U.S.-led rebound, and the government's continued strong mandate, provides a valuable opportunity to decisively address these long-standing challenges.

22. A simulation exercise shows the benefits of such an approach. Illustratively, spending is increased by 1½ percent of GDP in 2022 and a further ¾ percent of GDP each in 2023–24 (for a total, permanent increase of 3 percent of GDP relative to the baseline) to strengthen social assistance, education and health, and public investment (such that each of these categories

[5] Higher energy prices would improve Pemex's financial situation but would add to inflationary pressures.

increases by about 1 percent of GDP above the baseline). This is financed by an increase in revenues relative to the baseline by 3 percent of GDP that is phased in gradually over the medium term (2023–25) as the economy strengthens; planning for such revenues in 2023 and beyond would allow for properly preparing the reform over the course of the next year. In this simulation, real GDP would be higher than the baseline by 2½ percent through the medium term and would rise further thereafter. Public debt would increase marginally at first but would decline gradually thereafter below the baseline.[6]



Source: IMF Staff calculations. See also "IMF/WP/20/215" from last year.
1/ These scenarios reflect front loaded spending increases and backloaded gradual tax revenue increases, as well as 30 percent more efficiency in public investment.

A. Fiscal Policy

23. The authorities have pursued a conservative fiscal policy through the pandemic, with a focus on containing public debt. Direct budgetary support in 2020 amounted to 0.7 percent of GDP—for health (0.4 percent of GDP) and for SMEs and workers (0.2 percent of GDP)—compared with an average of 4.1 percent of GDP in EMs. Guarantees and loans to SMEs by development banks were also modest relative to other EMs (1.2 percent of GDP compared to 2.6 percent of GDP). The authorities have sought to tackle tax evasion which, despite the historic downturn last year, boosted revenues; the authorities plan to deepen these efforts going forward. They also restrained other spending. Public debt rose by around 8 percent of GDP in 2020, owing mainly to the drop in GDP. The 2021 budget pursued a similar restrained stance with the overall deficit expected to decline from 4.5 to 4.2 percent of GDP.

24. The draft 2022 budget maintains the authorities' conservative fiscal approach. The stance is neutral in structural terms, while the overall deficit target improves to 3.5 percent of GDP.[7] The budget increases resources allocated for social (non-contributory) pensions for the elderly, Pemex, public investment projects, and health, and restrains spending in other areas. There is a

[6] See also the 2020 Article IV Staff Report and IMF WP/20/215. Structural reforms would amplify these benefits. As the WEO has shown, the payoffs of well-designed reforms can be large, in a context of labor market informality, governance improvements, and fiscal support in a cyclically weak environment (October 2019 WEO, Chapter 3).

[7] Based on staff's macroeconomic forecasts, there is a fiscal gap of ¼ percent of GDP in 2022, which gradually increases to around 1 percent of GDP by 2026. In recent years, the authorities have closed expected gaps through revenue and spending measures and modest changes in the target.

simplification of the tax regimes for SMEs and the self-employed, moving mainly to a cash basis and granting accelerated depreciation to support investment. The government is not projecting additional revenues from this measure, but the multiplicity of tax regimes can incentivize tax planning, deter business growth (through scale or threshold effects), and be complicated to administer (owing to the co-existence of cash and accrual basis regimes). As such, careful attention to the design of the tax regimes is warranted. The authorities have also started to introduce a sovereign asset and liabilities management framework.

25. Cross-country analysis has shown that a forceful fiscal response can mitigate scarring, alleviate the burdens on the vulnerable, and support the recovery (IMF Fiscal Monitor, April 2021). Although COVID-19 has had far larger impacts than other pandemics, the experiences of five previous pandemics suggest that the increases in unemployment, poverty, and inequality following those pandemics were higher and more persistent for countries that provided less fiscal support and had weaker initial conditions (relatively high informality, lower family benefits, and lower health spending; IMF WP 21/181). This suggests that, in Mexico, where informality is high and over half of the population lacks adequate social protection, the individual and social cost of the modest fiscal response could be large and persistent.

26. A permanent increase in spending of about 1½ percent of GDP in 2022 would provide an important near-term offset to the hysteresis and poverty impacts of the pandemic. This could involve about ¾ percent of GDP in spending for education and health (particularly since education losses from nearly 1½ years of school closures have been magnified in under-served areas where internet access is weaker and parents' education is lower; see IMF Fiscal Monitor, April 2021).[8] About ½ percent of GDP could strengthen poverty reduction efforts, including for childcare benefits and maternity support for women in poverty to facilitate a stronger recovery of female labor force participation as well as to partially offset the adverse distributional consequences of VAT measures and future carbon taxes. A further ¼ percent of GDP could be allocated for incremental public investment in green infrastructure.

27. These measures should dovetail with a further increase in spending (of about 1½ percent of GDP) over the medium term aimed at fostering inclusive growth. Thus, in total, there would be a permanent increase in spending of about 3 percent of GDP relative to the baseline, of roughly equal amounts for poverty alleviation, education and health, and quality public investment. Although even more resources are likely needed to make satisfactory progress toward the Sustainable Development Goals (SDGs) in education and health, such spending would constitute a meaningful and pragmatic down payment.

- *Social assistance.* Social assistance programs could be strengthened by: (i) lowering the sizable leakage of benefits to high-income groups (IMF WP/20/215); (ii) reducing overlaps and coverage gaps across multiple programs by creating a single registry of beneficiaries and strengthening

[8] In staff's view, there is flexibility to accommodate such spending within Mexico's fiscal rule framework (e.g., see Annex IV of the 2019 Article IV staff report).

administrative capacity; (iii) improving targeting, such as using community-based methods to identify those in need, and adopting new instruments to reach them (e.g., mobile money); and (iv) increasing the use of evidence-based analysis in designing or improving programs.

- *Education and health.* Before the pandemic, Mexico needed to increase spending by around 1–1½ percent of GDP each on education and health to make satisfactory progress toward the SDGs (IMF WP/21/244). The pandemic has exacerbated these spending needs (Annex IV). Alongside increased spending, there is also scope to enhance efficiency by rebalancing education spending toward investment in equipment and facilities, auditing payrolls to identify ghost workers, curbing absenteeism, improving early-childhood education (including increasing access in low-coverage regions and for disadvantaged children), targeting health sector investment toward impoverished areas, decreasing administrative and insurance costs, and reducing beneficiary duplication.

- *Public investment.* Non-Pemex public investment is low and investing in high quality projects would support long-run growth. The 2019 Public Investment Management Assessment points to important efficiency gains from better coordination across levels of government, effective national and sector strategies to guide planning, and better multi-year budgeting. Conducting rigorous and transparent cost-benefit analyses, including through a process of external review, would help ensure sound project selection.

28. The above supportive policies would need to be coupled with measures that contain rising pension costs as well as reforms to Pemex's business plan. The scope for further cuts to non-pension, non-Pemex spending is limited on account of previous sizable cuts.

- *Pensions.* Last year's pension reform sought to increase the system's low replacement rate by increasing contributions from private employers, lowering the required number of years of contributions and increasing government contributions for formal low wage jobs. To contain costs, consideration should be given to reforming the design of the minimum pension, which would also mitigate risks of incentivizing early retirement (strengthening the link between the level of minimum pensions and the age of retirement), aligning the special regimes with the broader system, swiftly completing the transition from the expensive pre-1997 pension scheme (to ensure no new contributions count toward the entitlements in the old system), and increasing the age at which workers in the public sector become eligible for a full pension. Consideration should also be given to maintaining the current level of social (noncontributory) pensions, adjusted for inflation, in the coming years.[9]

- *Pemex.* Pemex's ongoing losses are burdening the budget and increasing fiscal risks (Box 2). Past corruption scandals underline the critical importance of strengthening governance and

[9] The authorities have increased social pensions—more than tripling allocations in 2019–20, with plans to increase monthly payments over five-fold between 2018 and 2024. The eligibility age has been lowered to 65 years for everyone (previously indigenous population only). These changes are motivated by high levels of poverty among the elderly and the limited coverage and low replacement rates (particularly for women) of the pension system.

procurement processes within the company. Support to Pemex should be limited and contingent on changes to Pemex's business plan to prioritize financial objectives and improve governance. Changes should include focusing production only on profitable fields, selling non-core assets, postponing new refinery plans, and reforming its costly special pension scheme. Partnering with private firms would help leverage specialized expertise and manage costs.

29. A credible medium-term tax reform will be needed to ensure this higher public spending can be accommodated while putting debt/GDP on a firm downward path. Prior to the pandemic, Mexico's non-oil revenue collections were nearly 6 percent of GDP below Latin American peers (and about half those of the OECD average). Such a reform should be designed and legislated over the next year and phased in gradually over the medium term as the economy strengthens, with a goal of raising 3–4 percent of GDP. Efforts should also continue in parallel to further strengthen tax administration. Combining this reform with an increase in social assistance (as described above) will promote progressivity. A well-calibrated and gradual reform could draw from the following menu of options:

- *Value added tax (VAT)*. VAT collection is low compared to OECD and Latin American peers, with a compliance gap of around 2½ percent of GDP. There is scope to eliminate zero-rating, except for a few key foodstuffs, and rationalize VAT exemptions. This would increase revenues, improve efficiency, simplify tax administration, and reduce avenues for fraud. Consideration should also be given to introducing a comprehensive compliance risk management strategy and moving toward a high-coverage audit process for VAT returns. Reduced rates at the border should be eliminated and the uniform statutory rate applied to all imports.[10]

- *Personal income tax*. Personal income tax collections are 5 percent of GDP below OECD peers. Broadening the base by eliminating a range of exclusions (e.g., of income on personal business activities and independent services) and tax expenditures and broadening the top personal income tax bracket by lowering its threshold (Mexico has a very high threshold for its top tax bracket relative to peers) could yield up to ¾ percent of GDP.

- *Corporate income tax*. The corporate income tax has a relatively high tax rate and a typical base. Improvements in taxpayer compliance have generated greater-than-expected revenues. A global agreement on a corporate minimum tax may help support corporate income tax revenues over the medium term by lessening the incentives for profit shifting.

- *Subnational taxes*. Increased property taxes could gradually yield revenues of at least ¾ percent of GDP over the medium term (these collections are about 1½ and ¾ percent of GDP below OECD and Latin American averages, respectively). This would need to be supported by an update of the cadaster and policy coordination between the federal and subnational governments. Simplifying and better enforcing the local vehicle tax would help generate revenues for states and municipalities.

[10] The standard VAT rate is 16 percent, but the rate is 8 percent for the Northern and Southern borders.

- *Natural resource taxes.* A review of Mexico's natural resource taxation would be timely. Mexico is a top ten producer of gold, copper, and zinc. As such, a moderate increase in the royalty rate and a refinement of the additional rent tax would allow Mexico to share in the upside of mining projects with minimal effects on competitiveness, bringing Mexico closer to its peers (IMF WP/21/245).

- *Gasoline excise.* The formula in place since late 2018 disproportionately benefits richer households as it guarantees cumulative retail fuel price growth that is below CPI inflation. Moving toward a more market-based system of excises would increase revenues.

- *Carbon tax.* Mexico's carbon tax on fossil fuels is USD 1.5–3 per metric ton of CO_2 equivalent, which is below that in other OECD countries and well below what is needed to achieve its Nationally Determined Contribution (NDC). Comprehensively pricing emissions, gradually strengthening carbon pricing (e.g., raising the carbon tax to USD 75 per ton by 2030), and implementing reinforcing sectoral measures (e.g., feebates) would avert 11,600 deaths from local air pollution, raise 1.8 percent of GDP in annual revenues, achieve Mexico's unconditional NDC target, and contribute significantly toward achieving the ambitious net zero emissions goal for mid-century.[11] A balance could also be considered between such price-based measures and the use of alternative instruments to achieve the government's mitigation goals. A border carbon adjustment could also be considered to help preserve competitiveness (IMF WP/21/246).

30. Authorities' views. The authorities noted that their budget seeks to protect the poor, support the recovery, safeguard fiscal sustainability, and promote regional GDP per capita convergence. They are vaccinating the eligible population and increasing health and social spending, which would support household consumption, alongside measures such as labor and pension reforms and continued minimum wage increases. They argued that their social programs have prevented more people from falling into poverty. Considering the strains of the pandemic and to support the economy, they do not see scope for raising tax rates or imposing new taxes. However, building on recent success, they are seeking to tackle tax evasion, where large compliance gaps provide opportunities to raise revenues. They anticipate that their new simplified tax regimes will facilitate compliance and reduce burdens, encouraging formalization. As an EM, they are mindful of market volatility and consider that the current environment of rising rates in Mexico could add to market costs and lead to a steeper debt path, resulting in a higher burden to future generations. Therefore, they do not want to increase the public debt/GDP ratio, an approach that they believe has contributed to preserving macroeconomic stability. They also emphasized that constitutional constraints limit debt issuance except for public investment. They are investing in poorer regions to support development and facilitate closing social and income gaps. They expect that tax and debt relief for Pemex, alongside measures to enhance efficiency, will yield important returns to the economy, including fostering energy security. They appreciate the need to catalyze behavioral

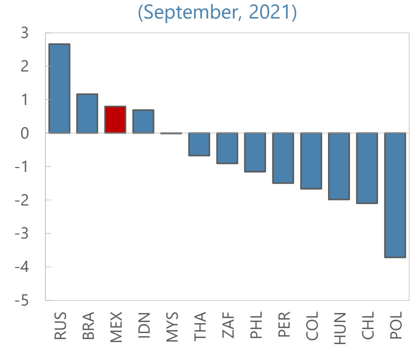
[11] Equivalently, the emission trading system could be enhanced, including by fully auctioning allowances. Revenue-neutral feebates at the sectoral level provide a sliding scale of fees and rebates on products or activities with above or below expected average emission rates, respectively; they are cost effective and help to contain the impacts on energy prices.

change for reducing carbon emissions and are reflecting on the elements of a feasible strategy, including a broad set of mitigation actions as well as redistribution to assist the poor, given potentially sizable distributional and price consequences of carbon tax increases.

B. Monetary and Exchange Rate Policies

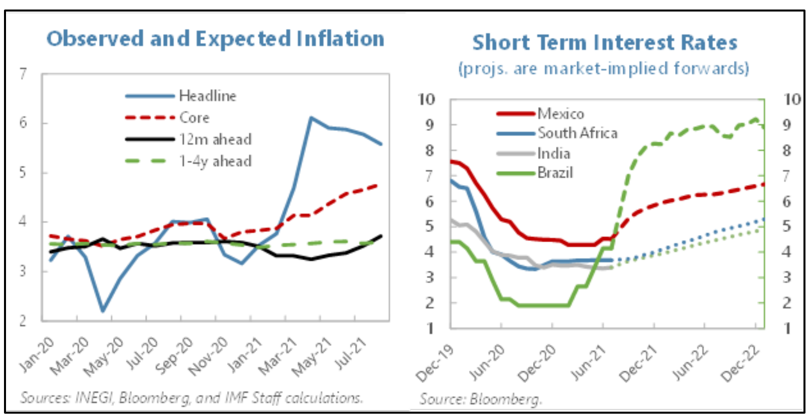
31. In response to the pandemic, the central bank lowered the policy rate to 4 percent. Despite these cuts, the real ex ante rate remained positive and one of the highest among large EMs. With the corporate sector well-hedged, the depreciation in the peso helped facilitate the adjustment to the shock, with only limited foreign exchange intervention in the non-deliverable forward market during mid-2020 amid severe market stress.

Real Policy Rate
(September, 2021)



Source: Haver Analytics and IMF Staff calculations.

32. With inflation well above the target, the central bank has raised the policy rate by 75 basis points since June 2021. This puts the policy rate at the lower end of the authorities' estimated range for the nominal neutral rate (although the *ex ante* real rate is below the authorities' range for the real neutral rate). The inflation surge is expected to be mostly temporary but the central bank has considered it prudent to raise the policy rate to signal its strong commitment to its inflation objective and ensure a firm anchoring of inflation expectations. Following the hike in June 2021, the central bank further enhanced transparency by presenting an updated inflation forecast with each decision and publicizing the vote of each board member.

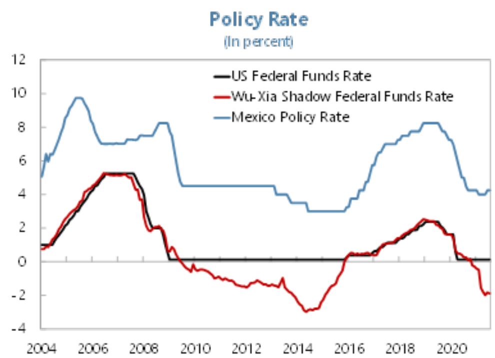


33. Elevated inflation, amid sizable economic slack, presents the central bank with a difficult balancing act. The unprecedented nature of the pandemic has complicated policy by adding significant uncertainty on the outlook for inflation and nature of supply-demand imbalances.

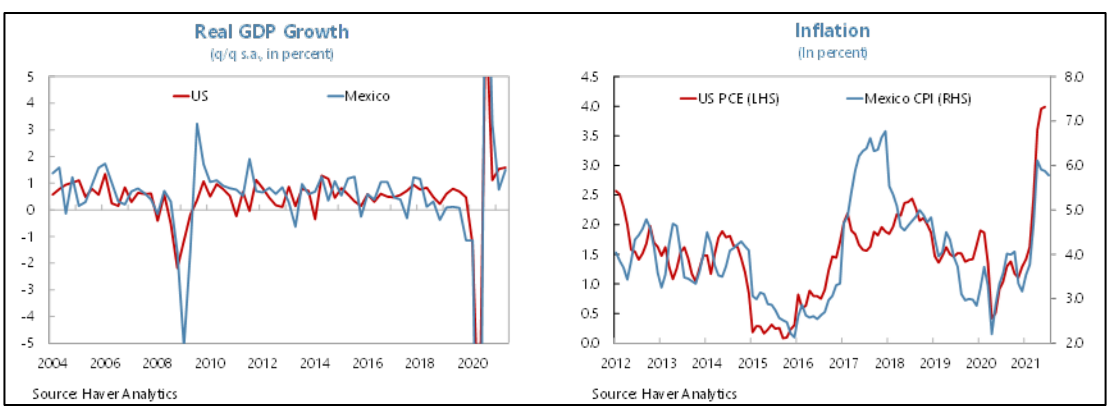
- On one hand, inflation has significantly exceeded its target for several months, raising concerns that higher inflation could become entrenched, with potential second-round effects on wage and price formation. In this context, tightening monetary policy could provide insurance against more lasting increases in prices and help anchor inflation expectations more firmly. While this would create costs in the form of foregone output and employment, these may be relatively modest compared to the economic costs that would need to be incurred to re-anchor inflation expectations if they started to move upwards.

- On the other hand, the Mexican central bank enjoys strong credibility, and there is a case to look through what are generally viewed as largely transitory price level adjustments, especially since price pressures—from commodity prices, manufacturing input bottlenecks, and a surprise surge in services demand in a market still constrained by epidemiological conditions—will likely subside before higher policy rates feed through to prices. The sizable slack in the economy should create a disinflationary force and inflation expectations remain well anchored around their historical averages. Rapid hiking could also constrain room for policy maneuver at the time of U.S. liftoff. Looking through the current price pressures would help promote the recovery and reduce scarring.

34. A gradual path of policy normalization would offer a reasonable balance between promoting the recovery while ensuring a firm anchoring of medium-term inflation expectations. The expectation that price pressures are largely transitory, the persistence of considerable economic slack, and the fact that Mexico did not cut its policy rate abruptly in 2020 could give the central bank more time to assess how price pressures are evolving. Such a patient approach is supported by the fact that Mexican policy rates, output, and inflation co-move very closely with the U.S., and price pressures in the U.S. are generally viewed to be transitory. That said, policy will need to remain highly attuned to the evolution of inflation expectations. A somewhat faster pace of policy tightening could be called for if medium-term inflation expectations rise. Exchange rate flexibility should be maintained to continue facilitating adjustment to shocks and foreign exchange intervention should be limited to instances of disorderly market conditions.



Source: Haver Analytics (note: Mexican interbank rate used until end-2007)



35. Greater clarity on the central bank's assessment of the outlook would help to better navigate the current challenges. Building on recent innovations to enhance transparency, further steps to provide more details about the central bank's macroeconomic forecasts—including eventually publishing an internally consistent macroeconomic forecast that includes the policy rate path that underpins the forecasts—would help guide market participants and facilitate orderly adjustments across the yield curve. In that context, it will be important to continue emphasizing that policy is not on a pre-set path but will respond to developments, including the evolution of inflation expectations and potential emergence of second-round effects. Over time, this would allow analysts to also infer how the central bank's expected policy rate path evolves with changes in the macroeconomic outlook. The experience of other countries shows that publishing scenarios and fan charts and reiterating that these are projections and not commitments have improved communication and credibility.

36. A strategic review of the monetary policy framework could suggest areas for enhancing effectiveness. The existing framework has served Mexico well—delivering generally low and stable inflation for two decades, with a free-floating peso. However, headline and core inflation (as well as inflation expectations) have remained consistently above the central bank's target. The review could assess the performance of the framework and possible changes to the monetary policy toolkit or to the central bank's communications strategy. Also, with Mexico's business cycle, inflation, and policy rate co-moving closely with that of the U.S., the review could consider any implications of the Federal Reserve's shift to flexible average inflation targeting for Mexico's framework. Finally, the review could consider the roles of financial stability, inclusion, employment, and the greening of the financial system within the bank's existing legal framework.

37. Authorities' views. The authorities considered that current price pressures are predominantly exogenous and are expected to be temporary. Nonetheless, given their breadth and magnitude, and the extended horizon over which inflation has exceeded the target, they deemed it necessary to start removing monetary accommodation to keep inflation expectations anchored and guard against second-round effects. They noted that their actions are helping foster an orderly adjustment of interest rates along the yield curve and containing risk premia at longer tenors. The authorities emphasized the important role of their recent enhancement of communication tools in helping markets to better understand the central bank's outlook while underscoring that they remain data dependent. In their view, given the recurrent shocks to the economy, publishing the path of interest rates in the baseline forecast would need careful assessment and gauging of potential benefits against possible risks of undermining its communication strategy, as it may be perceived as a policy goal and, hence, could add uncertainty to the yield curve or undermine credibility when the policy rate deviates to respond to new developments. The authorities noted that monetary policy framework reviews are best conducted on a pre-determined regular frequency and, in any case, could be considered once the COVID-19 shock is over and the longer-lasting effects of the pandemic, including on potential output and neutral interest rates, are better understood.

C. Financial Sector Policies

38. The banking sector appears resilient to shocks, but some smaller institutions remain vulnerable. The authorities conducted stress tests in June 2021 based on various scenarios: historical episodes, tighter financial conditions with higher U.S. rates and inflation, a weak domestic recovery, and higher risk premia with a sovereign credit rating downgrade. These tests revealed that most banks would remain above the regulatory minimum capital ratios, even under severe stress. However, some institutions, representing a small percentage of the system's overall assets, could see capital or liquidity thresholds fall below the regulatory minimums. Proactively addressing these pockets of weakness would further bolster resilience. However, as noted in paragraph 12, the banking system is concentrated in a small number of banks and lending by the system is subject to concentration risk, given that most banks lend to a handful of large corporates.

39. Continuing to uphold regulatory and supervisory standards will underpin financial stability. Even as Mexico prepares for its next FSAP in 2022, progress against outstanding recommendations of the 2016 FSAP would help boost resilience, including increasing the operational independence, budget autonomy, and legal protection of the banking and securities supervisor, and ensuring adequate access to funding for deposit insurance, with consideration given to transferring legacy debt to the government to free up resources. Progress on these and other recommendations, such as enhancing the definition of "common risk" and "related parties" for bank exposures and strengthening the resolution regime for financial holding companies, should be examined by the forthcoming FSAP. Flexibility within the framework should continue to be used to cope with challenges.

40. New challenges and opportunities are arising from rapid technological change in finance. While their economic footprint remains small, Fintech firms are growing rapidly from a low level and making inroads in some areas, e.g., credit card issuance. Following the implementation of the 2018 Fintech law, the approval of Fintech licenses has accelerated; 57 firms, primarily in the e-payments sector, have now received a license, after only one had been approved as of a year ago. The rapid evolution of technology in finance requires regulatory agility to harness the benefits, but with care to ensure that financial, operational and market integrity, consumer and investor protection, and financial stability are not impaired.

41. Lack of financial depth is a headwind for inclusive growth and boosting competition for financial services could foster inclusion. Mexico performs poorly relative to its peers in measures of financial depth. Notwithstanding the 2014 reform that sought among others to ease the recovery of collateral and enhance competition, perceptions have not improved on the ease of collateral recovery or judicial quality. The concentrated banking system typically charges higher fees and interest margins, discouraging participation and expansion.[12] Increasing competition could lower fees and margins, especially for the unbanked and other higher risk segments of the population. Further analysis is warranted of the practical challenges in collateral recovery, among other impediments to credit provision, to identify next steps. Efforts to increase financial education and boost connectivity could also help.

42. Authorities' views. The authorities attributed the strength of the banking system to sound regulation and supervision over the years and the support provided during the pandemic. The

[12] In early 2021, the competition agency charged seven large banks with collusion on market pricing in the government bond market about a decade ago.

implementation of new TLAC requirements, which were delayed by the pandemic, is now progressing. They recognize the benefits of greater financial inclusion and see it as key to the further development of the financial system. They are seeking to foster the development of Fintech, including increased access to financial products, transparency on products and prices, and enhanced competition. They noted the importance of increased formalization, greater financial literacy, improved connectivity, and increased digitization of payments in fostering inclusion. They also consider that international cooperation will be key to monitor and manage risks stemming from the cross-border provision of digital products and services.

D. Supply Side Policies

43. Mexico has struggled to achieve strong growth for the past few decades. Despite policies that have safeguarded economic stability and the benefits of close trade integration within North America, Mexico has struggled to outgrow advanced economies and close the income gap with its USMCA peers. Several long-standing and mutually reinforcing impediments are holding back productivity and hindering an efficient allocation of resources. These include widespread informality, lack of financial inclusion, insufficient competition in energy and other key sectors, crime, and corruption (see IMF WP/18/112, IMF WP/19/87, and IMF WP/19/257). Turning around growth, therefore, will require sustained implementation of a reform program that tackles all these areas. However, staff remains concerned that the authorities' policies fall short of such a program.

44. The government's growth strategy comprises several elements. These include implementing the USMCA trade deal (2020 Article IV report, Annex IX), increasing public investment for regional development and partnering with the private sector on infrastructure projects,[13] enhancing financial inclusion (by supporting financial literacy and transparency and improving access to financial services), and promoting better governance. However, the authorities' actions to support state-owned energy producers, efforts to reverse the landmark 2013 energy reforms, and the canceling of certain investment projects have weighed on investment and will potentially offset some of the growth benefits of planned trade, investment, and governance improvements.

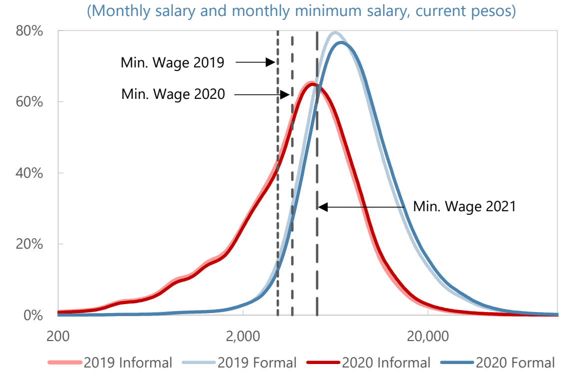
45. Changing course on energy policy would improve competitiveness and investment. Electricity prices for corporations in Mexico remain notably above those in the U.S. and other key manufacturing EMs, and reliability issues are a rising concern. Leveraging Mexico's large and diverse renewable energy resource base would foster a cheaper, more reliable, sustainable, and competitive energy sector and promote efficiency and investment. Reforming Pemex's business plan, as noted above, to prioritize financial and governance objectives and partnering with private firms to leverage specialized expertise and manage costs, encouraging private sector participation in electricity generation and hydrocarbon distribution, and strengthening the electricity grid to further support reliability and facilitate contributions from variable renewable sources would support competition and lower costs.

[13] The government has so far announced about 2.3 percent of GDP of infrastructure projects in partnership with the private sector, which are expected to be implemented over the medium term. Further projects are planned.

46. With the right mix of policies, Mexico can significantly reduce its greenhouse gas emissions. Cognizant of their beneficial local and global effects, Mexico has been an early adopter of climate change mitigation and adaptation policies. These were codified in national legislation, an institutional framework, and a series of strategies. Mexico has pledged to unconditionally reduce greenhouse gas emissions 22 percent below baseline levels in 2030 or by 36 percent conditional on external support. Mexico would need a more ambitious intermediate mitigation pledge if it were to follow other countries in adopting a net zero emissions target by mid-century. A mix of policies will be needed to achieve these targets (IMF WP/21/246). These could include robust carbon taxation (¶29), investment in green or low-carbon technologies (to transition to cleaner energy systems for ½ percent of GDP), and providing a coherent regulatory framework (e.g., avoiding subsidizing fossil fuels and providing incentives to increase the share of energy from renewable sources).

47. Further efforts are needed to promote the formalization of work and narrow gender gaps.

Mexico: Minimum wage and the estimated wage distribution
(Monthly salary and monthly minimum salary, current pesos)



Source: ENOE and IMF Staff calculations. Income and minimum wages are monthly as recorded in ENOE for municipalities except for those along the northern border with the US.

- To improve workers' conditions, the authorities are, among other actions, limiting the ability of companies to outsource part of their labor requirements (about 5 million workers are subject to the reform) and are raising minimum wages for formal workers.[14] However, higher employer social security contributions, along with higher minimum wages (Box 3), which were above the median informal income and much of the formal income distribution in 2021, could deter formalization. The minimum wage has risen rapidly relative to the income distribution. A comprehensive approach is advisable including lowering firing restrictions as the labor market strengthens, reducing regulatory costs of formalizing a business, lowering the tax wedge of low-income workers, and calibrating minimum wage increases in line with labor productivity growth.

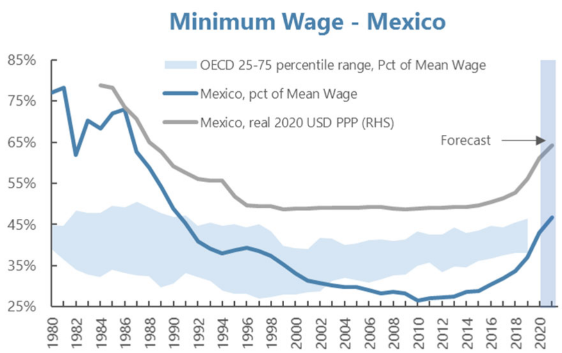
- Low female labor force participation, large gender pay gaps, and high levels of violence against women need to be addressed urgently (see also World Bank 2021). These are long-standing issues that have become more acute because of COVID-19. Improving access to and the quality of childcare would increase female labor force participation and could more than pay for itself over time.

48. Addressing concerns of deterioration in institutional quality would support growth and stability. Key government agencies have seen significant turnover of staff in recent years, owing in part to reductions in public sector wages and strong restrictions on moving to the private

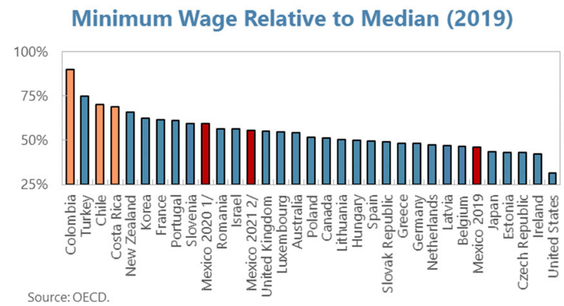
[14] Informality is consistently around 55–60 percent of total employment.

Box 3. Rising Minimum Wages in Mexico

The minimum wage has grown significantly in recent years. Previously relatively low, the real minimum wage for most workers began increasing sharply in 2019, with nominal increases in the last three years of 16, 20, and 15 percent, respectively.[1] These changes amount to a cumulative rise of about 40 percent in real U.S. dollar terms by 2021, while labor productivity has been modest or declined (Figure 4). They have put Mexico's 2021 minimum wage above 22 OECD countries' (2019) values in terms of the ratio of the minimum wage to the average wage. They have moved Mexico from the bottom to the top quartile in just three years.



Source: OECD and IMF Saff calculations.



Source: OECD.
1/ Incorporates 20 percent minimum wage increase in 2020, while assuming the median wage grows with the average wage growth of the first 3 quarters of 2020.
2/ Incorporates 15 percent minimum wage increase in 2021, while assuming the median wage grows with nominal GDP at 7 percent.

The growth in the minimum wage will likely impact labor market prospects. This is even more so if, as the authorities have indicated, the nominal minimum wage grows by a further 50 percent over the next three years. At one level, studies in other countries point to larger negative labor market effects of minimum wages or labor market reforms when implemented during periods of economic stress (Sabia 2014 and IMF 2020). In Mexico's case, the minimum wage is high compared to formal income levels, and it has overtaken the median informal monthly income in Mexico (see chart in the main text). Thus, the sharp rise in the minimum wage to the point that it exceeds an important part of the formal and informal wage distributions is at the very least likely to strain formalization efforts. This could disproportionately affect women who are over-represented in the informal sector. Informal jobs are more precarious, disincentivize human capital investment by employers and workers, and add to scarring risks. The informal labor rate is high relative to Mexico's per capita income and recently exceeded its pre-pandemic level even as the most challenging phase of re-absorbing workers fully into the labor market remains. Other policies that raise the costs of formalization will further complicate this effort.

[1] A special minimum wage regime was introduced in 2019 for workers in municipalities near the U.S. border.

sector. As experienced staff have left, risks have risen regarding the quality of service. Legislative efforts have also raised concerns regarding the independence of some bodies, e.g., in the energy sector. Reinforcing institutions, consistent with their duties and core competencies, would further support the investment climate.

49. Strengthening governance, transparency, and the effectiveness of the AML/CFT and anti-corruption frameworks would support investment and inclusive growth.

- **Anti-corruption.** Notwithstanding steps to strengthen the national anti-corruption framework, including a recent law to facilitate investigations, enforcement against corruption cases has remained limited. Further steps to strengthen the framework include adopting implementing regulations, filing positions and adequately resourcing relevant bodies and agencies, enhancing the powers of the institutions in charge of investigations, prosecution, and oversight of public spending, facilitating the reporting and detection of corruption cases, including by enacting whistleblowing protection, improving the efficiency of the courts, and enhancing the verification mechanism related to the public asset declarations by high-level public officials.

- **AML/CFT.** Mexico has made progress in addressing some of the technical deficiencies identified in its 2018 AML/CFT assessment by enhancing the legal and regulatory framework.[15] Important steps were also taken regarding the implementation of a risk-based approach to AML/CFT supervision in the financial sector and in financial intelligence. Areas for further work include amending and enacting legislation to ensure that accurate and up-to-date basic and beneficial ownership information is available, expanding the obligations applicable to designated non-financial businesses and professions, enhancing money laundering enforcement commensurate with Mexico's risk profile, and introducing comprehensive criminal liability for legal persons.

50. Authorities' views. The authorities noted that they are seeking to promote trade, develop poorer regions through infrastructure projects and integrate them into the national economy, and increase formalization and financial depth. They pointed to increased interest in investment in near-shore value chains. They consider that the economy would be best served by strengthening their energy state-owned enterprises and placing them on a solid financial footing. They reiterated their commitment to their emissions reduction targets, which they view as a starting point for greater ambition. They agreed on the need to continue advancing the governance agenda and ensure swift and timely adoption of pending legal reforms.

STAFF APPRAISAL

51. The authorities have successfully maintained external, financial, and fiscal stability in a very challenging period. Their macroeconomic policy and institutional policy frameworks continue to be assessed as very strong. The economy is rebounding from its deepest downturn in decades. Spurred by U.S. growth and rising vaccination rates, it is set to grow by 6.2 percent in 2021 and 4 percent in 2022. The external position in 2020 is assessed as stronger than the level implied by medium-term fundamentals and desirable policies.

52. Nevertheless, Mexico is bearing a very heavy humanitarian, social, and economic cost, and average real incomes per capita continue to diverge from the U.S. There have been over half a million excess deaths, sizable under-employment, increases in already-high levels of poverty, and learning losses for the young with potentially harmful longer-term effects. Low productivity growth and high poverty remain Mexico's key problems. New challenges are arising from technological shifts and the effects of climate change.

[15] A third enhanced follow-up report and technical compliance re-rating was approved by the Financial Action Task Force in June 2021.

53. The present conjuncture, with tailwinds from a strong U.S. rebound, provides a valuable opportunity to decisively address Mexico's challenges. The priorities are to safeguard the recovery, preserve economic stability, and promote inclusive and sustainable growth. This will require swiftly vaccinating the eligible population. The authorities have pursued a conservative fiscal policy through the pandemic, with a focus on containing public debt. However, a more supportive stance targeted toward well-designed social assistance, education, health, and public investment would alleviate the burdens on the vulnerable, mitigate scarring, and promote growth. It should be combined with a fiscal reform that is phased-in over the medium term as the economy strengthens, alongside supply-side reforms to raise productivity and tackle informality. Implementing such a package of reforms would yield sizable growth dividends over the medium term and reverse the trend divergence in per capita incomes from the U.S.

54. Higher upfront spending for poverty alleviation, education and health, and quality public investment could have significant social and economic payoffs. Social assistance can be strengthened by improving targeting, reducing overlaps and coverage gaps across multiple programs, and enhancing administrative capacity. Investing in education equipment and facilities, improving early-childhood education and childcare facilities, curbing absenteeism, and targeting health sector investments toward impoverished areas would enhance the efficiency of education and health spending. Given that non-Pemex public investment is low, investing in high quality projects based on rigorous and transparent cost-benefit analyses, including through a process of external review, to ensure sound project selection would support growth.

55. At the same time, measures to contain rising pension costs and reforms to Pemex's business plan are needed. Building on last year's pension reform, consideration could be given to improving the design of the minimum pension, aligning special regimes with the broader system, swiftly completing the transition from the expensive pre-1997 scheme, and increasing the age at which workers in the public sector become eligible for a full pension. The level of social noncontributory pensions should be kept constant, adjusted for inflation, in the coming years. Pemex's losses are placing a burden on taxpayers and crowding out more productive uses of fiscal resources. Past corruption scandals underline the critical importance of strengthening governance and procurement processes within the company. Further support for Pemex should be accompanied by a new strategy to improve governance and prioritize financial objectives, e.g., focusing on profitable fields, selling non-core assets, postponing new refinery plans, and partnering with private firms to leverage specialized expertise and help manage costs.

56. To accommodate higher public spending and set debt/GDP on a firm downward path, a credible medium-term tax reform is needed. Such a reform could be designed and legislated over the next year or so and phased in gradually over the medium term as the economy strengthens, with a goal of raising 3–4 percent of GDP. Efforts should also continue in parallel to further strengthen tax administration. Combining this reform with an increase in social assistance will help bolster social stability and improve living standards for the poor. A well-calibrated and gradual reform could draw from a menu of options that include improving VAT collections by eliminating zero-rating except for a few key food items, rationalizing exemptions, implementing a comprehensive compliance risk management strategy, and eliminating reduced rates at the border; broadening the personal income tax base by eliminating a range of exclusions and tax expenditures and broadening the top income tax bracket; increasing property tax collections by updating the cadaster, improving coordination across levels of government, and simplifying and better enforcing the vehicle tax; adopting a more market-based system for gasoline prices as the current excise formula disproportionately benefits the rich; and reforming the mining taxation regime to collect more revenues when profits rise.

57. A gradual path of monetary policy normalization would balance the need to support the economy with ensuring a firm anchoring of medium-term inflation expectations. The expectation that price pressures are largely transitory, the persistence of considerable economic slack, and the fact that Mexico did not cut its policy rate abruptly in 2020 provide room for the central bank to move gradually. That said, policy will need to remain highly attuned to the evolution of inflation expectations. A somewhat faster pace of policy tightening could be called for if medium-term inflation expectations start to rise. Further steps to provide more details about the central bank's forecasts, including eventually publishing the policy rate path that underpins the forecasts, would help guide market participants and facilitate orderly adjustments across the yield curve. Exchange rate flexibility should be maintained to continue facilitating adjustment to shocks, with foreign exchange intervention limited to instances of disorderly market conditions.

58. Changing course on energy policy would improve competitiveness and investment. Electricity prices for corporations remain notably above those in the U.S. and many other EMs. Leveraging Mexico's large and diverse renewable energy resource base, encouraging private sector participation in electricity generation and hydrocarbon distribution, strengthening the electricity grid, and reforming Pemex's business strategy would foster a cheaper, more reliable, sustainable, and competitive energy sector.

59. Mexico was an early adopter of climate change mitigation policies, but more is needed to reduce greenhouse gas emissions and promote sustainable growth. Comprehensively pricing emissions, gradually strengthening carbon pricing, and implementing reinforcing sectoral measures such as feebates could enable Mexico to achieve its pledge for reducing emissions by 2030 and contribute significantly toward achieving the ambitious net zero emissions goal for mid-century. A balance could also be considered between such price-based measures and the use of alternative instruments to achieve the government's mitigation goals. A border carbon adjustment may also need to be considered to help preserve competitiveness.

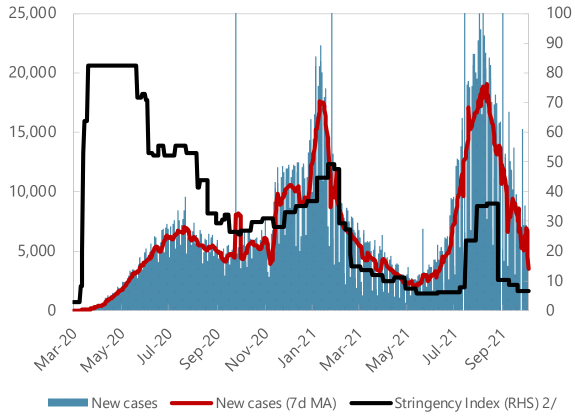
60. Measures to promote labor market formality, narrow gender gaps, enhance financial depth, and improve the rule of law and governance would foster productivity and inclusion. Calibrating minimum wage increases in line with labor productivity growth and taking a comprehensive approach, including reducing regulatory costs of formalizing a business, would raise incentives for formalization. Improving access to, and quality of, childcare would increase female labor force participation and could more than pay for itself over time. Boosting competition for financial services and tackling impediments such as timely legal enforcement of contracts would lower costs and enhance access to finance. Strengthening the business climate would both raise productivity and investment as well as position Mexico to take advantage of rapid technological change. Adequately resourcing the relevant anti-corruption agencies, enhancing the powers of the institutions in charge of investigations, prosecution, and oversight of public spending, and enhancing money laundering enforcement commensurate with Mexico's risk profile would help to combat corruption and strengthen AML/CFT.

61. It is proposed that the next Article IV consultation with Mexico take place on the standard 12-month cycle.

Figure 1. Mexico: High Frequency Indicators

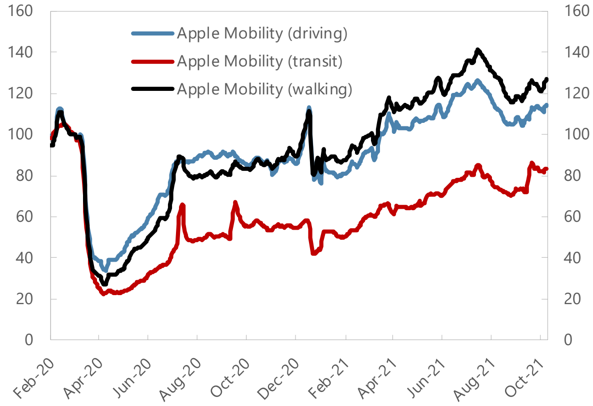
Confirmed Covid-19 cases fell through the Spring but set a new peak in August, now rapidly abating...

Covid-19 Case Growth and Policy Response Stringency 1/



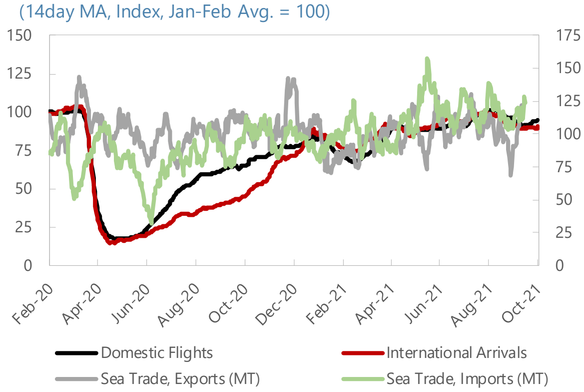
...as individual mobility has recovered, with slowdowns or reversals during the Covid waves.

Individual Mobility
(7day MA, Index, Mar. 8 = 100)



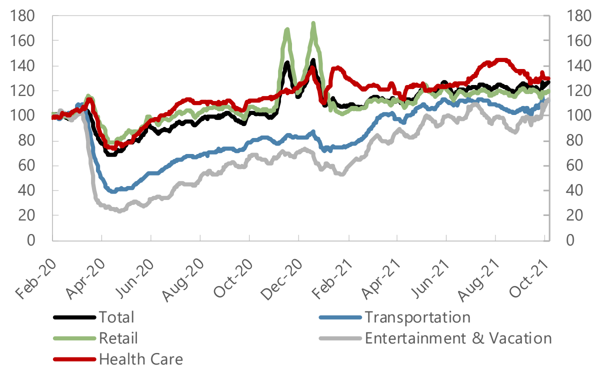
Flight traffic has recovered as well.

Trade and Transit
(14day MA, Index, Jan-Feb Avg. = 100)



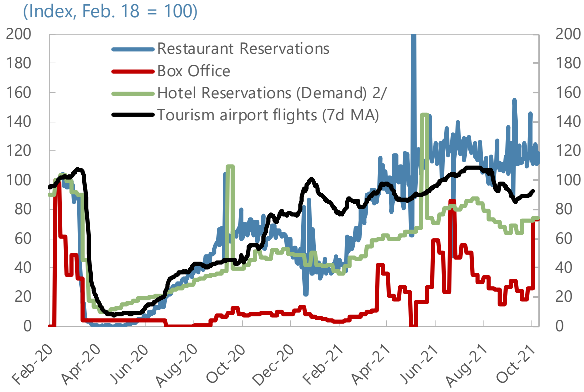
Card-based purchases are recovering but contact-intensive sectors declined and health care rose during the third wave.

Card Transaction Volumes
(14day MA, Index, Jan-Feb Avg. = 100)



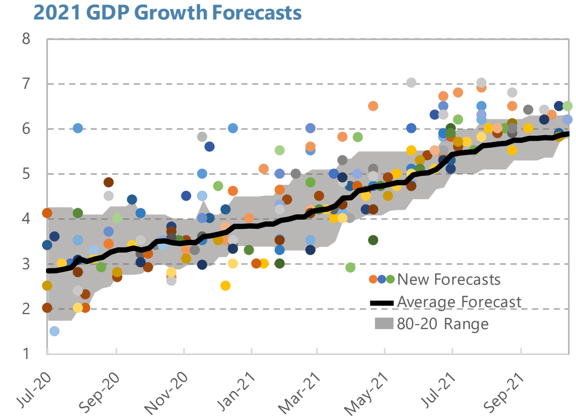
High-contact services recovered strongly in the Spring, dipped during the wave, and may now be recovering.

Highly Exposed Industries
(Index, Feb. 18 = 100)



Private sector forecasts for 2021 have risen and are now converging.

2021 GDP Growth Forecasts

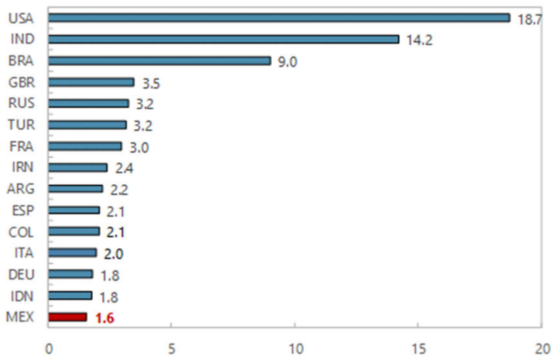


Sources: National authorities, Oxford University, Apple Mobility, UN Comtrade, Haver Analytics, Bloomberg, STR Hotel Data, Open Table.
1/ Stringency calculated as the Oxford University Stringency index of the health policy response multiplied by a simple average of state risk levels given by the national "traffic light" system with red=1, organge =0.5, yellow=0.25 and green =0.
2/ Data from STR, LLC. Republication or other re-use of this data without the express written permission of STR is strictly prohibited.

Figure 2. Mexico: COVID-19 Indicators 1/

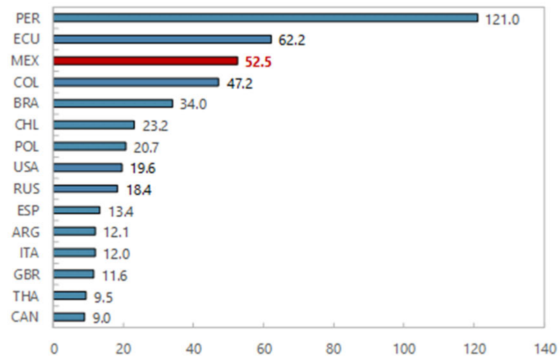
The official case count in Mexico is low…

Covid-19 Cases
(As Percent of World Total)



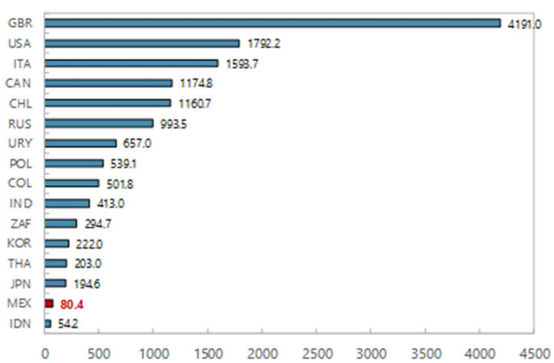
…but Mexico has one of the worst excess mortalities in the world.

Covid-19 Excess Deaths 2/
(As Percent of Expected Mortality, 2020-2021)



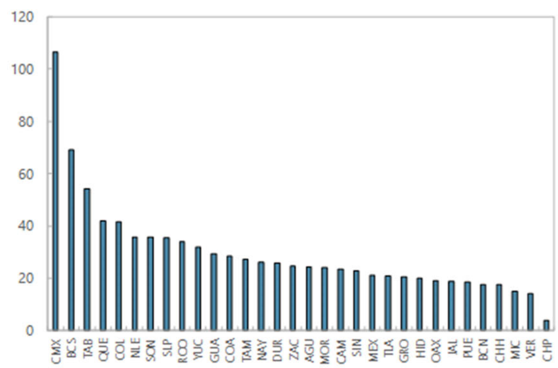
Low official case and death counts are related to a meager testing regime.

Covid-19 Tests
(Per Thousand Persons)



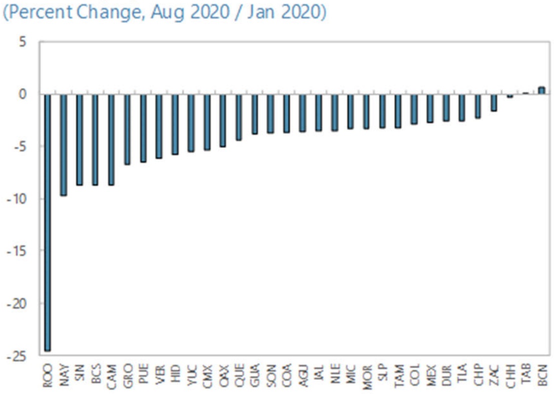
Tourism-intensive areas were among the hardest hit…

Covid-19 Cumulative Cases Across States
(Per Thousand Persons)



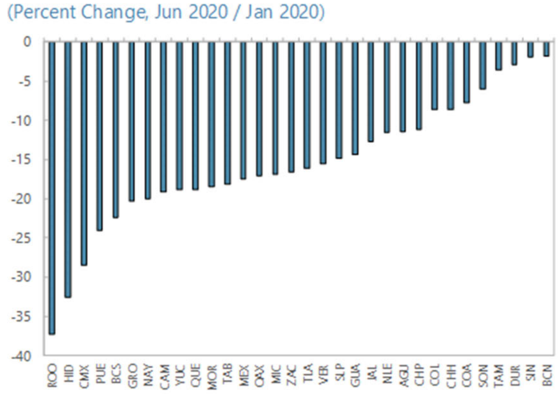
… while seeing large peak employment losses…

Insured Employees
(Percent Change, Aug 2020 / Jan 2020)



…and peak revenue losses.

Retail Sales Index Across States
(Percent Change, Jun 2020 / Jan 2020)

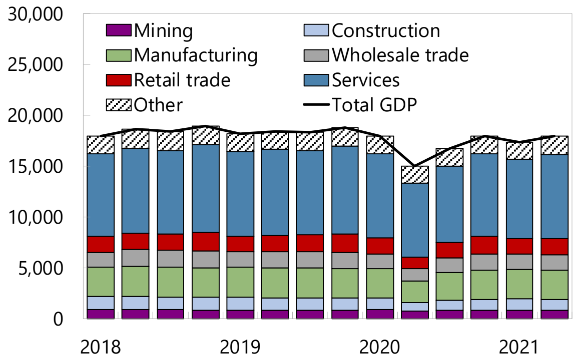


Sources: National Authorities, Our World In Data; and, IMF Staff estimates.
1/ Data as of October 15, 2021, unless otherwise stated.
2/ Comparison for selected G20 and LA5 countries.

Figure 3. Mexico: Real Sector

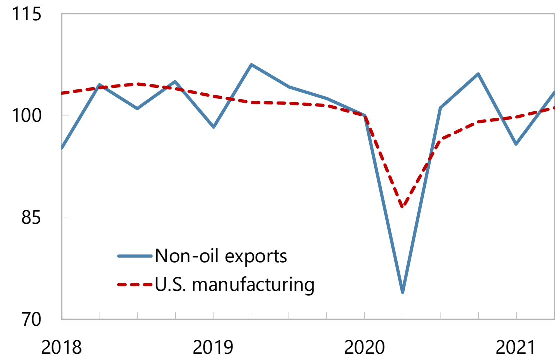
Manufacturing led the contraction and the early recovery, but services have taken a lead role this year.

Supply Contributions to GDP
(NSAAR, Billions of 2013 Pesos)



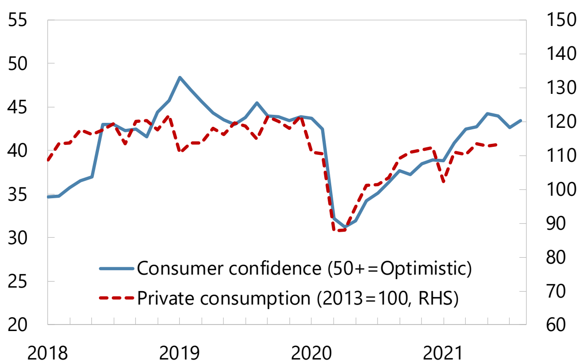
Exports contracted dramatically but now exceed pre-pandemic levels.

Real Export Growth
(2020Q1 = 100, NSA)



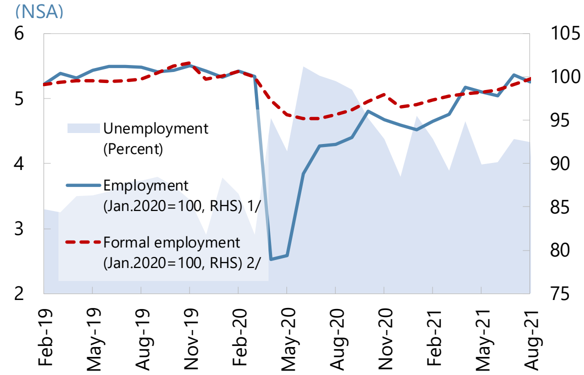
Private consumption cooled during the second and third waves but is broadly recovering…

Consumption
(Index. NSA)



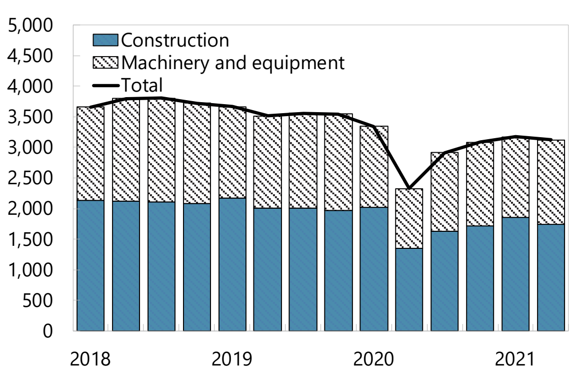
…while deep job losses have largely recovered (though slack remains).

Employment
(NSA)



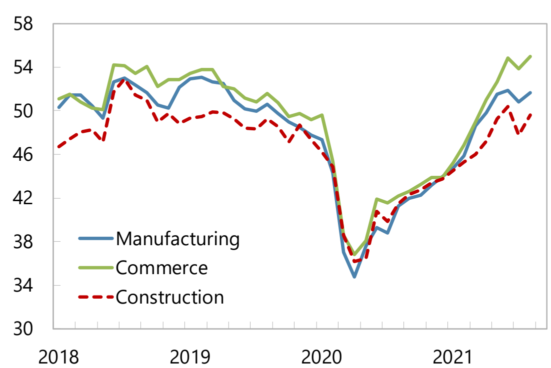
Gross fixed capital formation fell sharply and has seen a slower rebound than other GDP components…

Gross Fixed Capital Formation
(NSAAR, Billions of 2013 Pesos)



…but business confidence is now booming.

Business Confidence by Sector
(Index)

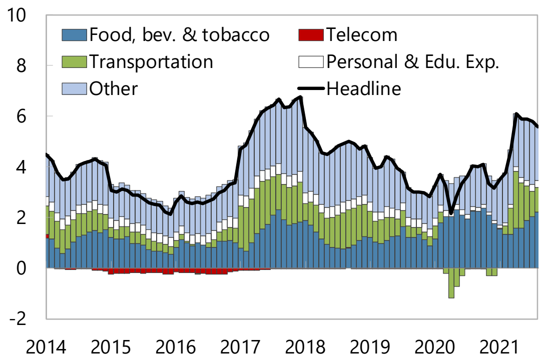


Sources: National Authorities, Haver Analytics; and, IMF Staff estimates.
1/ Employment is calculated as employment as a share of the economically active population.
2/ Formal employment is calculated as the number of IMSS-reporting employees, which does not capture self-employed formal workers.

Figure 4. Mexico: Prices and Inflation

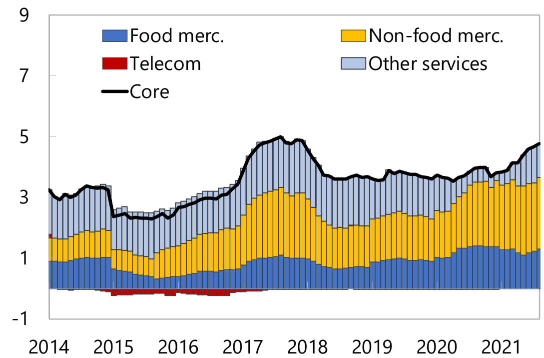
Headline inflation has risen to 2017 levels in 2021H1…

Contributions to Headline Inflation
(Y/Y, in percent)



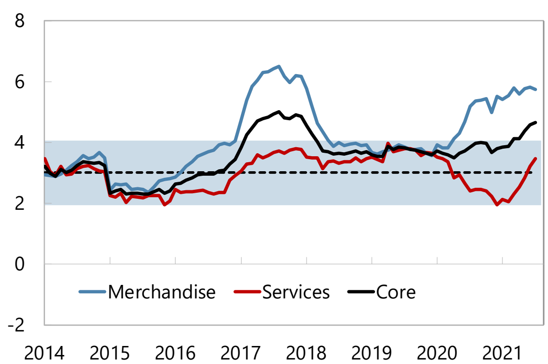
…with core inflation also rising, initially on merchandise inflation but also from services between Covid waves.…

Contributions to Core Inflation
(Y/Y, in percent)



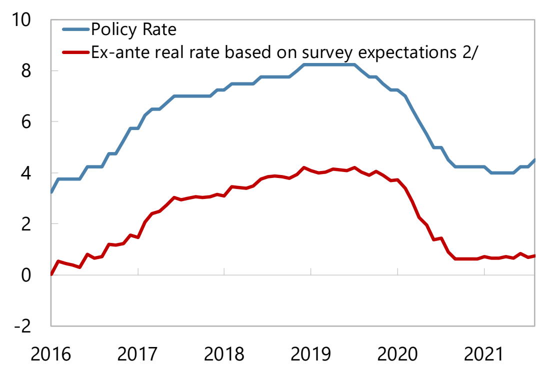
…reversing the trend of the initial outbreak.

Inflation
(Y/Y percent growth)



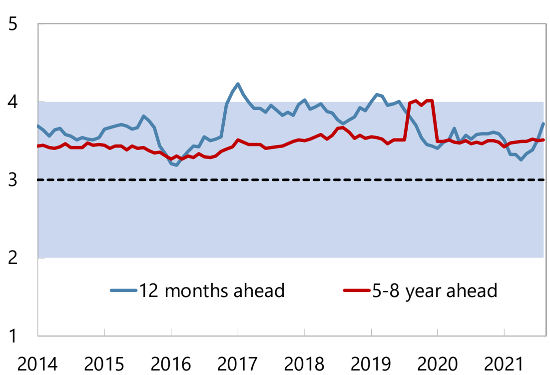
The policy rate eased considerably but remained above comparator countries, and has recently begun increasing.

Policy Rates
(In percent)



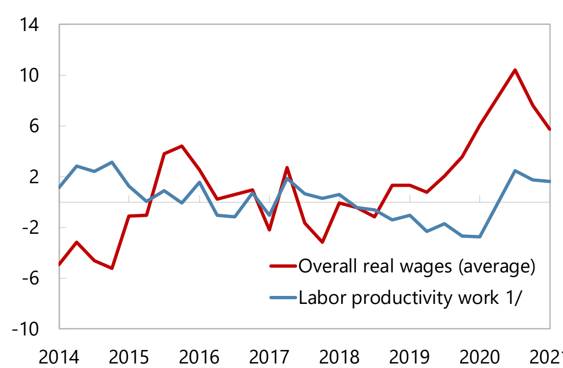
Survey-based expectations have barely moved through the early crisis or the recent spell of inflation.

Survey-based Inflation Expectations
(In percent)



Real wage growth reflects minimum wage hikes and composition effects of recent layoffs.

Real Wages and Labor Productivity
(Y/Y percent growth)

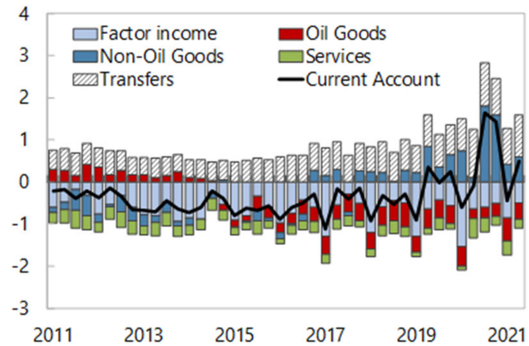


Sources: National Authorities, Haver Analytics; and, IMF Staff estimates.
1/ Based on hours worked.
2/ Calculation using the average inflation expectation for the next 12 months (NSA, %). Source: Banco de Mexico. Survey on the Expectations of Private Sector Economists.

Figure 5. Mexico: External Sector

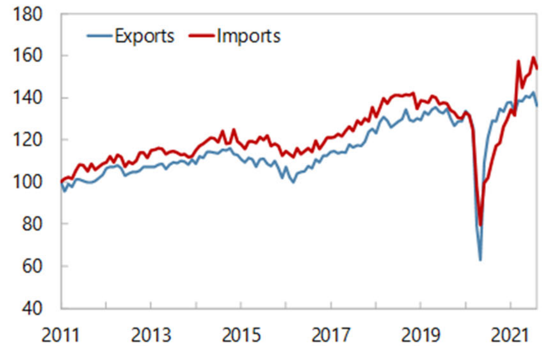
The current account surplus is receding…

Current Account Balance
(In percent of GDP)



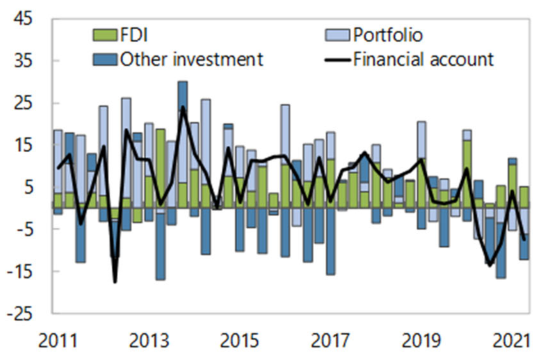
…as a strong import recovery outpaced an export rebound.

Trade Balance
(Index, Jan. 2011 = 100, SA)



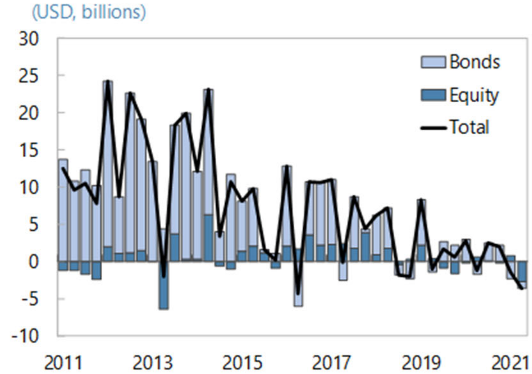
FDI remained relatively resilient despite still elevated uncertainties…

Net Capital Flows
(USD, billions)



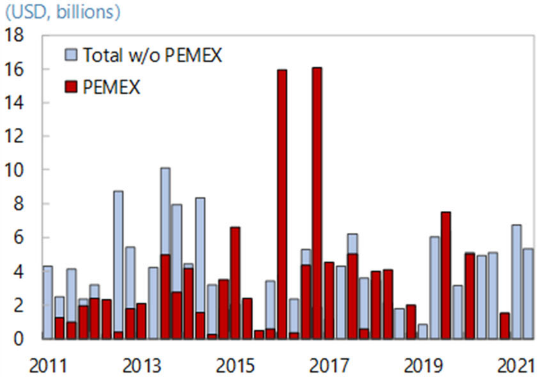
…although net portfolio inflows diminished.

Non-Residents' Net Portfolio Inflows
(USD, billions)



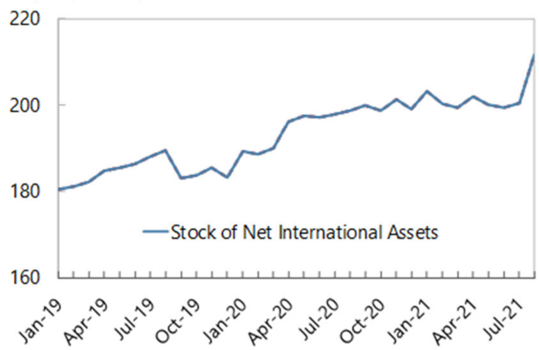
Financial conditions for corporate bond issuance have been favorable.

Corporate Bond Issuance: Foreign Placements
(USD, billions)



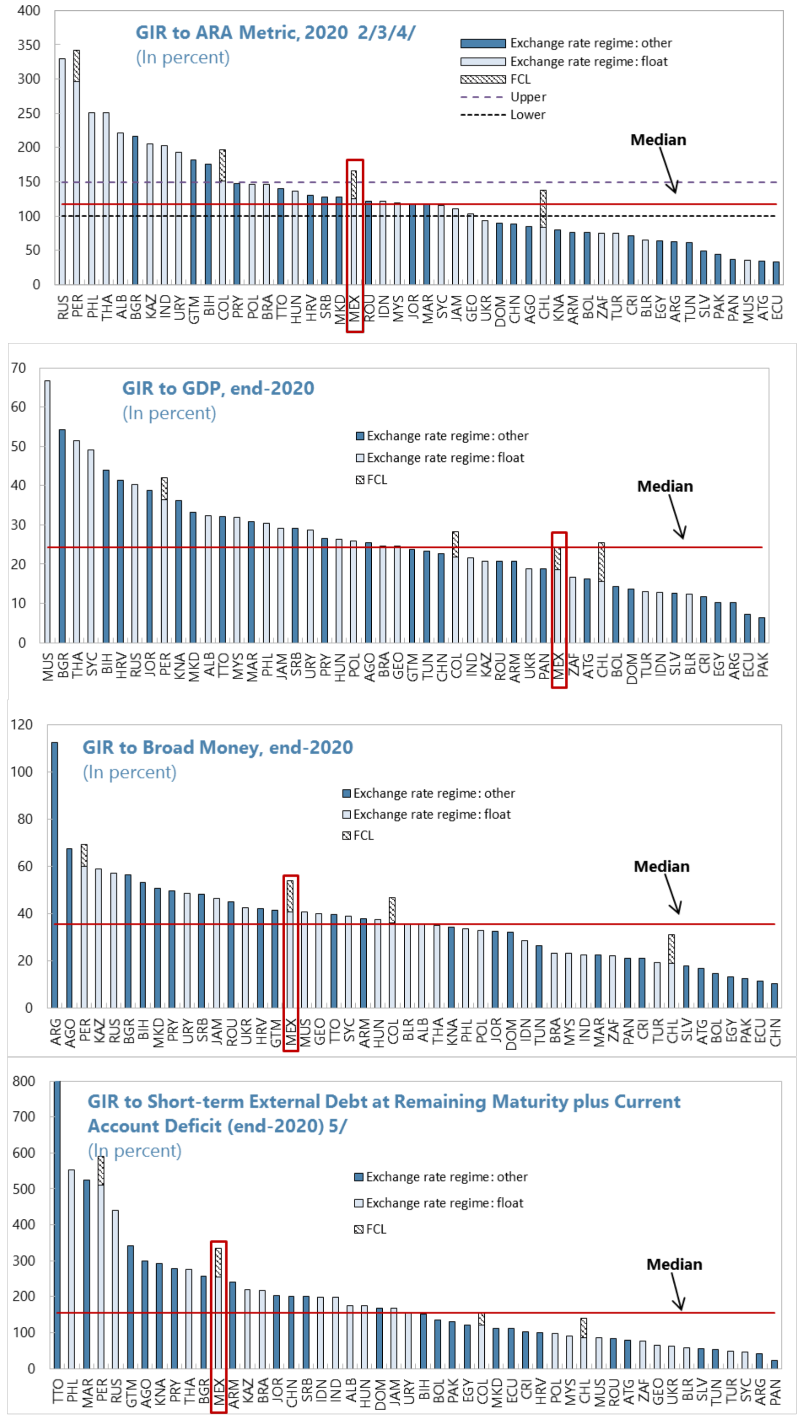
International reserves have increased with the general SDR allocation.

Reserve Accumulation
(USD, billions)



Sources: National Authorities, Haver Analytics; and, IMF Staff estimates.

Figure 6. Mexico: Reserve Coverage and FCLs in an International Perspective 1/

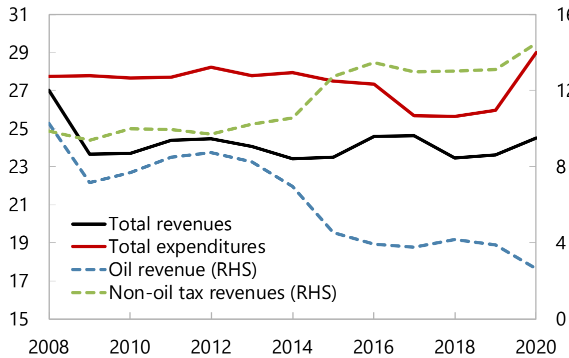


Sources: World Economic Outlook; IFS; and IMF staff estimates.
1/ The sample of countries included in these charts includes all EMEs for which data is available.
2/ The ARA metric provides a tool to help inform reserve adequacy assessments, but individual circumstances (for example, access to swap lines, market maturity, etc.) require additional judgment and, for this reason, mechanistic comparisons of the ARA metric do not provide a complete view.
3/ The ARA Metric is a weighted sum of potential drains on the BoP, depending on the country's exchange rate regime. For fixed exchange rates, ARA Metric = 10% × Exports + 10% × Broad Money + 30% × Short-term Debt + 20% × Other Liabilities. For floating exchange rates, ARA Metric = 5% × Exports + 5% × Broad Money + 30% × Short-term Debt + 15% × Other Liabilities. See "Guidance Note on the Assessment of Reserve Adequacy and Related Considerations", IMF, 2016.
4/ The upper and lower lines denote the 100-150 percent range of ARA metric, which are considered broadly adequate for precautionary purposes.
5/ The current account balance is set to zero if it is in surplus.

Figure 7. Mexico: Fiscal Sector

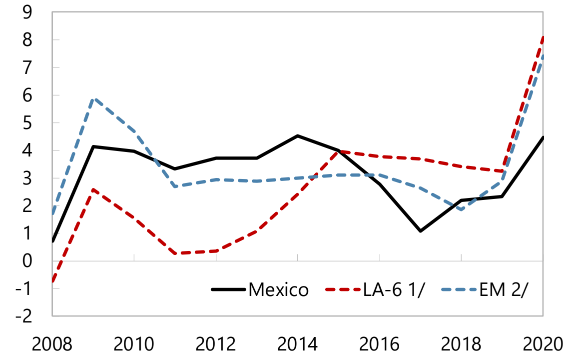
Revenues held up and expenditures increased following the pandemic.

Public Sector Revenues and expenditures
(In percent of GDP)



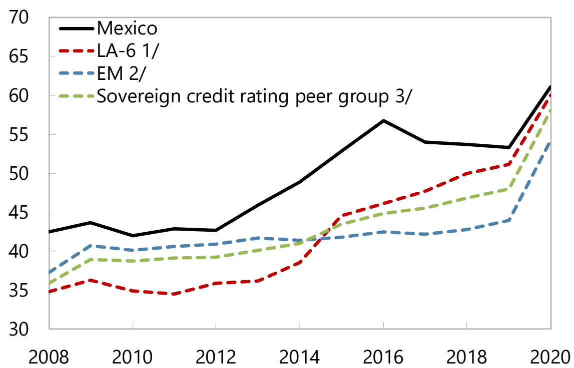
The increase in deficit was lower in Mexico than peers due to the limited pandemic support.

Overall Public Sector Deficit
(In percent of GDP)



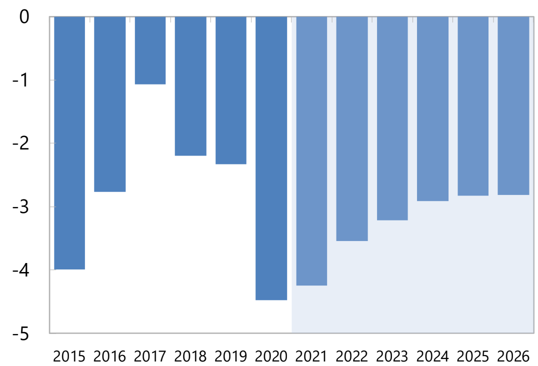
Public debt remained higher than peer groups in 2020.

Gross Public Sector Debt
(In percent of GDP)



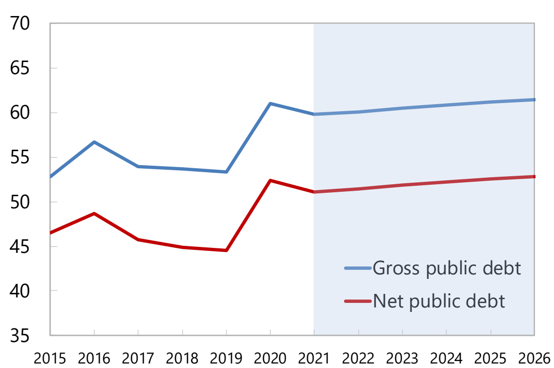
The fiscal deficit is projected to narrow to 4.2 percent in 2021 as the economy recovers.

Fiscal Balance
(In percent of GDP)



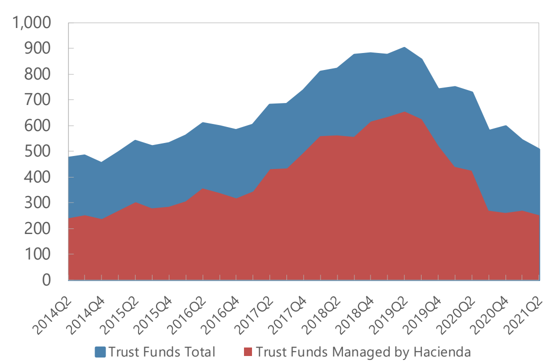
Public debt is forecast to decline slightly in 2021 owing to the recovery and stronger peso.

Public Sector Debt Path
(In percent of GDP)



The authorities continue to utilize resources from various trust funds.

Trust Funds Managed by Secretaría de Hacienda
(As of June 2021, in billions of pesos)

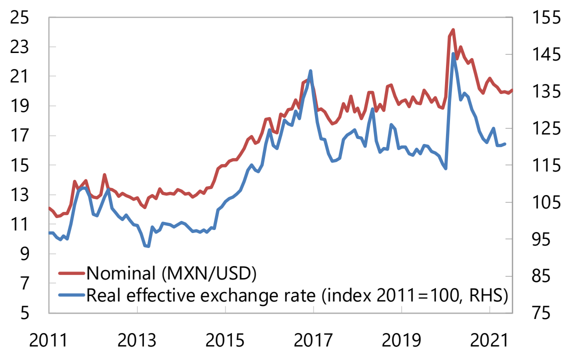


Sources: National authorities, World Economic Outlook, Fitch Ratings; and, Fund staff estimates.
1/ LA-6 excluding Mexico is comprised of Brazil, Chile, Colombia, Peru, and Uruguay.
2/ EM comparator group is comprised of India, Indonesia, Poland, Russia, Thailand, and Turkey.
3/ Fitch sovereign credit rating peer group includes Brazil, Chile, Colombia, India, Poland, Russia, South Africa, Thailand, and Turkey.

Figure 8. Mexico: Financial Markets

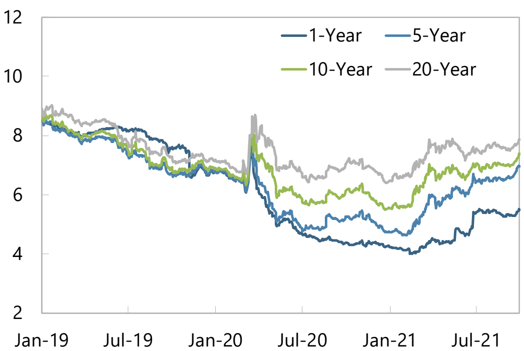
The peso spiked in April 2020 but has returned to its pre-pandemic range while the real rate has shown no trend depreciation since 2016.

Exchange Rate
(As of August, 2021)



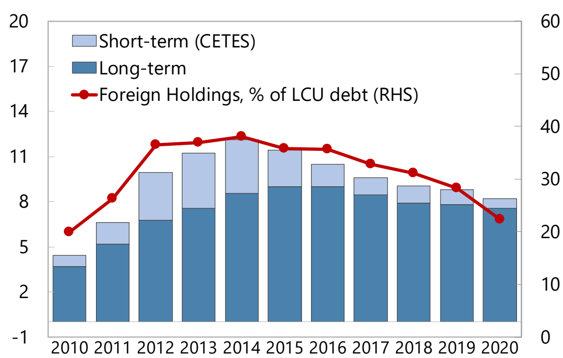
Long-term bond yields rose some in response to higher US yields early in the year and the short yield followed on inflation concerns.

Local Government Bonds Yields
(In percent; as of September, 2021)



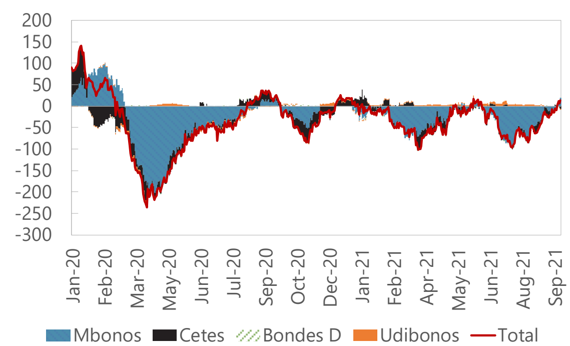
The trend decline in the share of foreign holdings in local currency sovereign debt accelerated during the pandemic.

Sovereign Debt Holdings in Local Currency
(In percent of GDP; as of December, 2020)



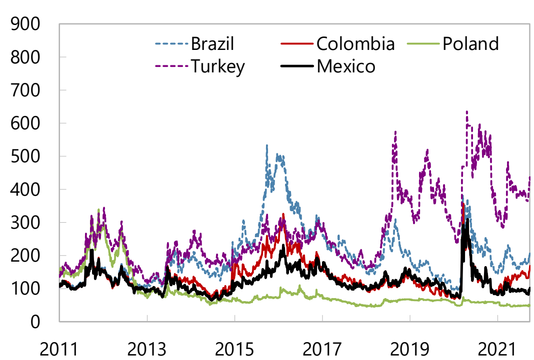
Capital outflows resumed in two waves in 2020, concentrated on long term debt.

Foreign Inflows in Local Currency Debt 1/
(30 day Moving Sum, MXN bn)



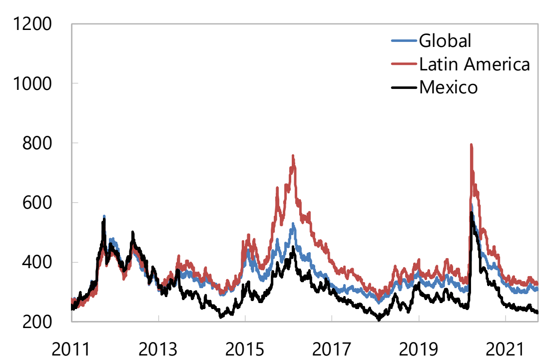
Credit spreads eased since April of last year and have been durable under tight policy settings...

Sovereign Risk Spreads
(5Y CDS spread, in basis points; as of September 30, 2021)



...with a similar pattern for corporate debt.

Corporate Risk Spread
(CEMBI spread, in basis points; as of September 30, 2021)

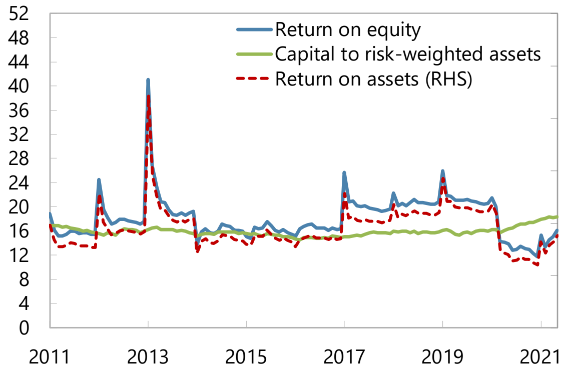


Sources: Bloomberg, Haver Analytics; and, National authorities.
1/ Flows associated with Pemex transaction on 11/20/2020 have been removed.

Figure 9. Mexico: Banking System

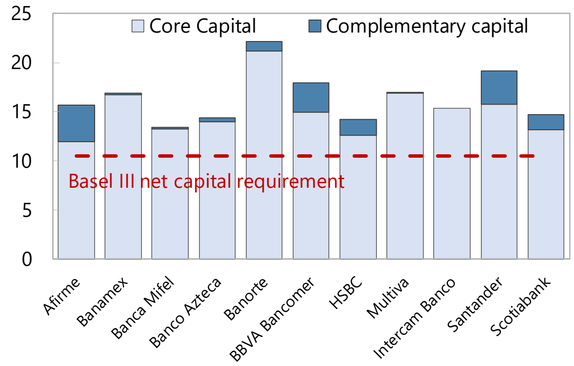
Banking profitability proved resilient…

Commercial and Development Banking Sector
(In percent; as of August, 2021)



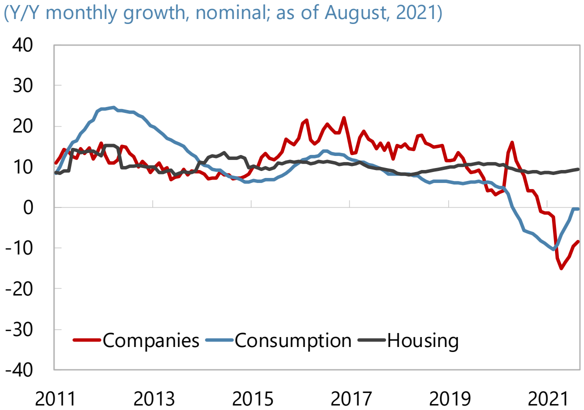
…and banks remains well capitalized.

Capital to Risk-Weighted Assets
(In percent; as of July, 2021)



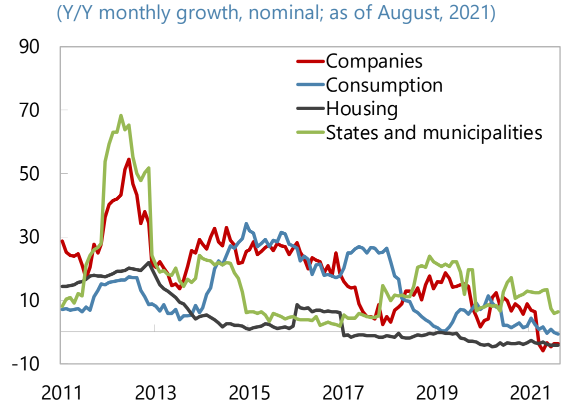
Credit contraction is decelerating for companies and is set to resume growth for consumption…

Commercial Bank Credit Growth by Sector
(Y/Y monthly growth, nominal; as of August, 2021)



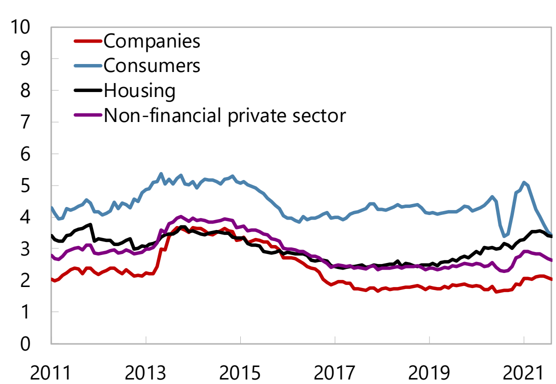
…while development bank credit growth continues a long decline.

Development Bank Credit Growth by Sector
(Y/Y monthly growth, nominal; as of August, 2021)



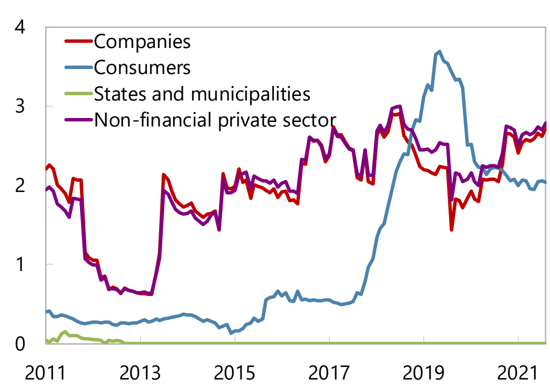
Non-performing loans at commercial banks…

Total Commercial Bank NPLs
(In percent of oustanding loans; as of August, 2021)



…and development banks remained contained.

Total Development Bank NPLs
(In percent of oustanding loans; as of August, 2021)

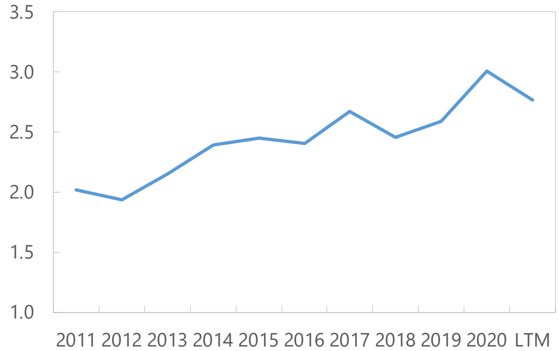


Sources: Bloomberg, Haver Analytics, National authorities; and, IMF staff estimates.

Figure 10. Mexico: Nonfinancial Corporate Sector 1/

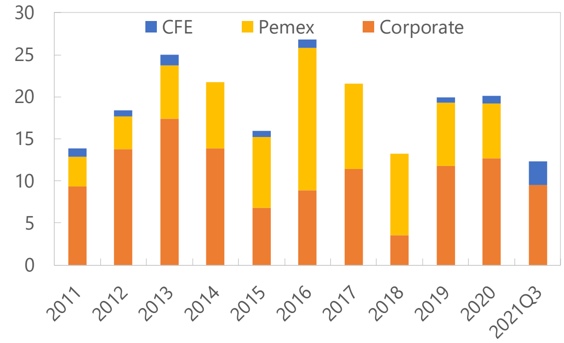
Nonfinancial corporate leverage has seen a reprieve in 2021…

Total Debt to Total EBITDA
(In percent, median)



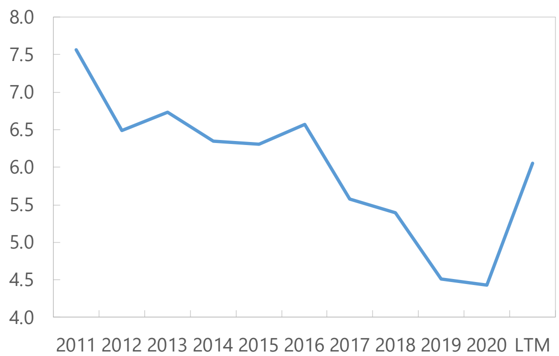
…while bond issuance and market access has been strong for most firms

Hard Currency Issuance 1/
(In US$ billion)



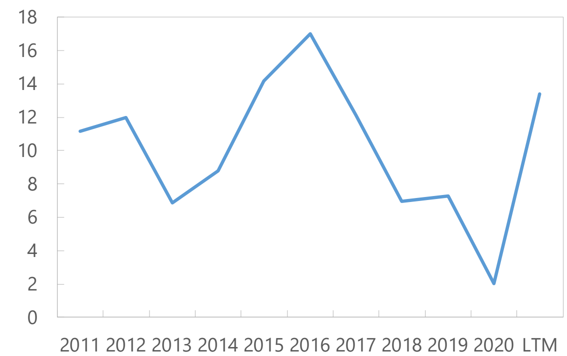
Debt servicing capacity has reversed recent declines …

Interest Coverage Ratio
(Earnings in multiples of Interest Expense, median)



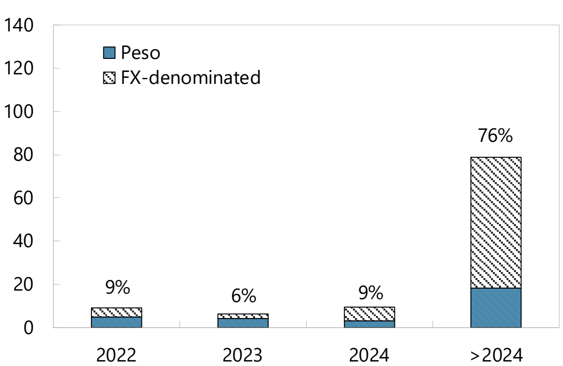
…as has profitability.

EBITDA Growth
(year-on-year percent change, median)



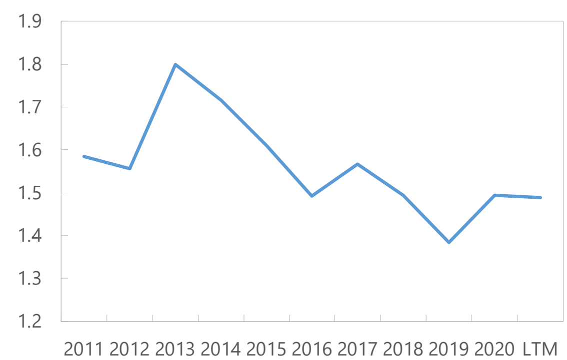
The maturity structure of borrowing is weighted toward longer maturities…

Nonfinancial Corporate Bond Maturity Profile
(In US$ billion)



…and corporate liquidity remains strong.

Current ratio: Current Assets to Current Liabilities
(Multiples, median)

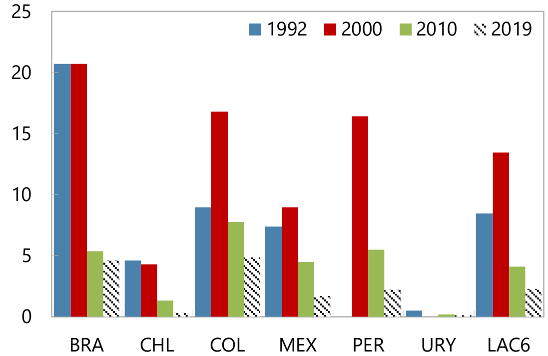


Sources: Bloomberg, Haver Analytics, National authorities; and, IMF staff estimates.
1/ Totals exclude any hard currency issuance in local law
LTM= Last 12 months, Q2 2020 data

Figure 11. Mexico: Social Indicators in Regional Context

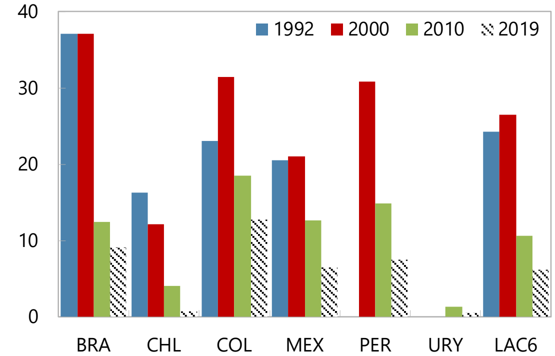
Extreme poverty has declined over the past 25 years.

Poverty Headcount Ratio at $1.90
(2011 PPP, % of population)



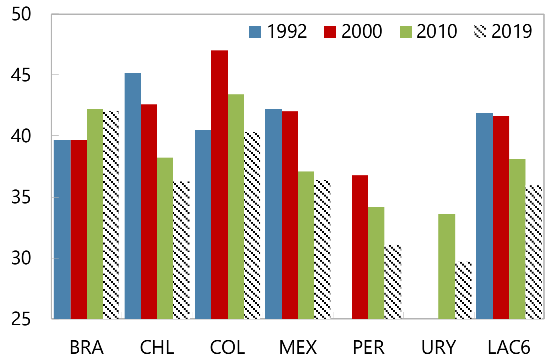
Still, poverty in Mexico remains higher than the LAC6 average.

Poverty Headcount Ratio at $3.20
(2011 PPP, % of population)



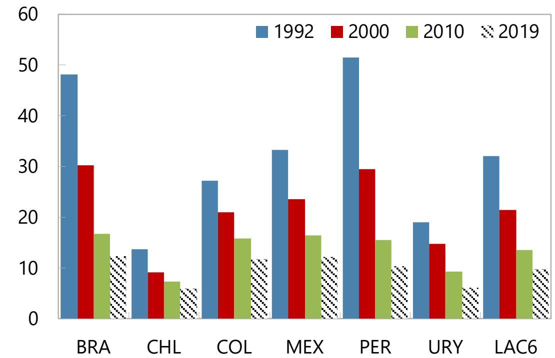
Income inequality is slightly above the regional average.

Income Share Held by Highest 10%



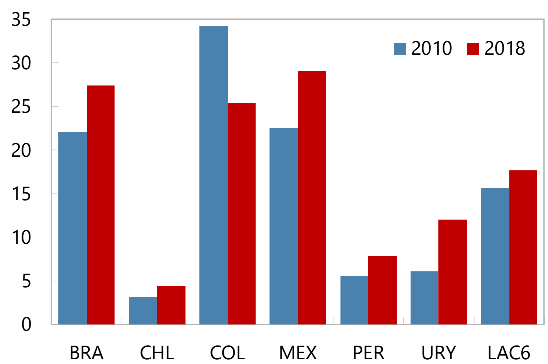
High poverty and inequality go along with higher than average infant mortality rates.

Infant Mortality Rate
(per 1,000 live births)



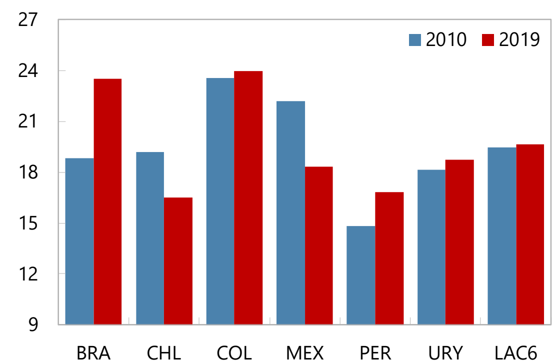
The homicide rate remains high.

Intentional Homicides
(Per 100,000 people)



A large share of youth is excluded from education or employment.

Share of Youth not in Education, Employment or Training
(Total, % of youth population)



Sources: World Development Indicators.

Table 1. Mexico: Selected Economic, Financial, and Social Indicators

I. Social and Demographic Indicators

GDP per capita (U.S. dollars, 2020)	8,403.6	Poverty headcount ratio (% of population, 2020) 1/	43.9
Population (millions, 2020)	127.8	Income share of highest 20 perc. / lowest 20 perc. (2020)	9.1
Life expectancy at birth (years, 2019)	75.1	Adult literacy rate (2018)	95.4
Infant mortality rate (per thousand, 2019)	12.2	Gross primary education enrollment rate (2017) 2/	105.8

II. Economic Indicators

					Proj.	
	2017	2018	2019	2020	2021	2022
(Annual percentage change, unless otherwise indicated)						
National accounts (in real terms)						
GDP	2.1	2.2	-0.2	-8.3	6.2	4.0
Consumption	2.8	2.6	0.1	-8.6	7.7	4.4
Private	3.2	2.6	0.4	-10.5	9.1	4.9
Public	0.7	2.9	-1.3	2.3	0.8	2.0
Investment	-1.2	0.4	-5.3	-18.1	15.1	8.4
Fixed	-1.2	0.8	-4.7	-18.3	14.0	8.8
Private	0.9	1.2	-3.2	-19.7	15.8	9.1
Public	-11.9	-1.3	-13.6	-8.6	4.3	6.8
Inventories 3/	0.0	-0.1	-0.2	-0.1	0.2	0.0
Exports of goods and services	4.2	6.0	1.5	-7.3	7.8	5.7
Imports of goods and services	6.4	6.4	-0.7	-14.6	17.3	7.3
GDP per capita	1.0	1.1	-1.2	-9.2	5.3	3.1
External sector						
External current account balance (in percent of GDP)	-1.8	-2.1	-0.3	2.4	0.0	-0.3
Exports of goods, f.o.b. 4/	9.5	10.1	2.2	-9.5	15.7	2.2
Export volume	3.8	6.3	1.2	-4.7	8.7	5.7
Imports of goods, f.o.b. 4/	8.6	10.4	-2.0	-15.9	25.7	1.6
Import volume	6.1	6.3	-0.7	-13.4	17.6	7.3
Net capital inflows (in percent of GDP)	-2.5	-2.7	-1.5	0.6	-1.0	-1.0
Terms of trade (improvement +)	3.0	-0.4	2.2	-2.1	-0.4	2.1
Gross international reserves (in billions of U.S. dollars)	175.4	176.4	183.0	199.1	211.8	221.5
Exchange rates						
Real effective exchange rate (CPI based, IFS)						
(average, appreciation +)	2.3	0.1	3.3	-7.6	...	...
Nominal exchange rate (MXN/USD)						
(end of period, appreciation +)	4.6	0.5	4.3	-5.9	...	...
Employment and inflation						
Consumer prices (end-of-period)	6.8	4.8	2.8	3.2	5.9	3.1
Core consumer prices (end-of-period)	4.9	3.7	3.6	3.8	4.7	3.1
Formal sector employment, IMSS-insured workers (average)	4.4	4.1	2.3	-2.5	...	...
National unemployment rate (annual average)	3.4	3.3	3.5	4.4	4.1	3.7
Unit labor costs: manufacturing (real terms, average)	2.2	3.6	4.2	10.3	...	...
Money and credit						
Financial system credit to non-financial private sector 5/	10.8	8.9	3.0	1.5	3.3	5.9
Broad money	11.2	4.5	4.7	13.4	9.2	6.6
Public sector finances (in percent of GDP) 6/						
General government revenue	24.6	23.5	23.6	24.5	24.0	23.2
General government expenditure	25.7	25.7	26.0	29.0	28.3	26.8
Overall fiscal balance	-1.1	-2.2	-2.3	-4.5	-4.2	-3.5
Gross public sector debt	54.0	53.6	53.3	61.0	59.8	60.1
Memorandum items						
Nominal GDP (billions of pesos)	21,934.2	23,524.4	24,453.9	23,073.7	25,876.7	27,676.0
Output gap (in percent of potential GDP)	0.4	0.8	-1.0	-5.6	-4.0	-2.2

Sources: World Bank Development Indicators, CONEVAL, National Institute of Statistics and Geography, National Council of Population, Bank of Mexico, Secretariat of Finance and Public Credit, and Fund staff estimates.

1/ CONEVAL uses a multi-dimensional approach to measuring poverty based on a "social deprivation index," which takes into account the level of income; education; access to health services; to social security; to food; and quality, size, and access to basic services in the dwelling.

2/ Percent of population enrolled in primary school regardless of age as a share of the population of official primary education age.

3/ Contribution to growth. Excludes statistical discrepancy.

4/ Excludes goods procured in ports by carriers.

5/ Includes domestic credit by banks, nonbank intermediaries, and social housing funds.

6/ Data exclude state and local governments and include state-owned enterprises and public development banks.

Table 2. Mexico: Statement of Operations of the Public Sector, Authorities' Presentation 1/
(In percent of GDP)

				Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Budgetary revenue, by type	**21.7**	**22.0**	**23.1**	**22.7**	**21.8**	**21.5**	**21.5**	**21.6**	**21.6**
Oil revenue	4.2	3.9	2.6	4.3	3.6	3.3	3.3	3.3	3.3
Non-oil tax revenue	13.0	13.1	14.5	13.6	14.0	14.0	14.0	14.1	14.1
Non-oil non-tax revenue	4.6	5.0	6.0	4.7	4.1	4.2	4.2	4.2	4.3
Budgetary revenue, by entity	**21.7**	**22.0**	**23.1**	**22.7**	**21.8**	**21.5**	**21.5**	**21.6**	**21.6**
Federal government revenue	16.5	16.4	17.7	16.6	16.0	16.0	16.1	16.1	16.2
Tax revenue, *of which:*	13.0	13.1	14.5	13.6	14.0	14.0	14.0	14.1	14.1
Excises (including fuel)	1.5	1.9	2.0	1.6	1.8	1.9	1.9	1.9	2.0
Nontax revenue	3.4	3.3	3.2	2.9	2.1	2.1	2.0	2.1	2.1
Public enterprises	5.3	5.6	5.4	6.1	5.7	5.4	5.4	5.5	5.5
PEMEX	1.9	2.1	1.8	2.8	2.5	2.1	2.1	2.1	2.1
Other	3.4	3.5	3.7	3.4	3.3	3.3	3.3	3.3	3.4
Budgetary expenditure	**23.8**	**23.7**	**26.0**	**25.8**	**24.9**	**24.2**	**23.9**	**23.9**	**23.9**
Primary	21.1	21.0	23.0	23.1	22.5	22.1	21.8	21.9	22.0
Programmable	17.3	17.3	19.3	19.4	18.8	18.4	18.2	18.3	18.4
Current	14.2	14.3	15.9	15.1	15.3	15.4	15.5	15.6	15.6
Wages	5.2	5.0	5.6	5.4	5.3	5.3	5.3	5.3	5.3
Pensions 2/	3.4	3.6	4.1	4.1	4.2	4.3	4.4	4.5	4.6
Subsidies and transfers	2.7	2.9	3.3	3.2	3.3	3.4	3.5	3.5	3.5
Other	2.9	2.8	2.8	2.4	2.5	2.4	2.3	2.2	2.2
Capital	3.1	3.0	3.4	4.3	3.5	3.1	2.7	2.7	2.8
Physical capital	2.6	2.3	2.8	3.0	3.2	3.0	2.7	2.7	2.7
Financial capital 3/	0.4	0.7	0.6	1.3	0.4	0.0	0.0	0.0	0.0
Nonprogrammable	3.9	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6
Of which: revenue sharing	3.6	3.6	3.7	3.6	3.6	3.5	3.5	3.5	3.5
Interest payments	**2.6**	**2.7**	**3.0**	**2.8**	**2.7**	**2.6**	**2.7**	**2.8**	**2.8**
Unspecified measures	**0.0**	**0.0**	**0.0**	**0.0**	**-0.3**	**-0.5**	**-0.6**	**-0.8**	**-1.0**
Traditional balance	**-2.1**	**-1.6**	**-2.9**	**-3.1**	**-3.1**	**-2.7**	**-2.4**	**-2.3**	**-2.3**
Adjustments to the traditional balance	**-0.1**	**-0.7**	**-1.5**	**-1.1**	**-0.4**	**-0.5**	**-0.5**	**-0.5**	**-0.5**
Public Sector Borrowing Requirements 4/	**2.2**	**2.3**	**4.5**	**4.2**	**3.5**	**3.2**	**2.9**	**2.8**	**2.8**
Memorandum items									
Structural current spending	9.9	9.6	10.9						
Structural current spending real growth (y/y, in percent)	-0.2	-2.6	4.0						

Sources: Ministry of Finance and Public Credit; and IMF staff estimates.

1/ Data exclude state and local governments, and include state-owned enterprises and public development banks.

2/ Includes social assistance benefits.

3/ Due to lack of disaggregated data this item includes both financing and capital transfers.

4/ The 2020 PSBR is adjusted for some statistical discrepancies between above-the-line and below-the-line numbers.

Table 3. Mexico: Statement of Operations of the Public Sector, GFSM 2014 Presentation 1/

(In percent of GDP)

				Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Revenue	**23.5**	**23.6**	**24.5**	**24.0**	**23.2**	**22.9**	**23.0**	**23.0**	**23.1**
Taxes	**13.0**	**13.1**	**14.5**	**13.6**	**14.0**	**14.0**	**14.0**	**14.1**	**14.1**
Taxes on income, profits and capital gains	7.1	6.9	7.6	7.1	7.2	7.2	7.2	7.2	7.2
Taxes on goods and services	5.4	5.7	6.3	6.0	6.3	6.3	6.3	6.4	6.4
Value added tax	3.9	3.8	4.3	4.4	4.4	4.4	4.4	4.4	4.4
Excises	1.5	1.9	2.0	1.6	1.8	1.9	1.9	1.9	2.0
Taxes on international trade and transactions	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Other taxes	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Social contributions	**2.1**	**2.2**	**2.5**	**2.3**	**2.3**	**2.3**	**2.3**	**2.4**	**2.4**
Other revenue	**8.3**	**8.3**	**7.6**	**8.1**	**6.9**	**6.6**	**6.6**	**6.6**	**6.6**
Property income	3.5	3.4	3.4	3.1	2.2	2.2	2.2	2.2	2.2
Other	4.8	5.0	4.2	4.9	4.7	4.4	4.5	4.4	4.4
Total expenditure	**25.7**	**26.0**	**29.0**	**28.3**	**26.8**	**26.2**	**25.9**	**25.9**	**25.9**
Expense	**24.1**	**24.6**	**27.2**	**26.1**	**24.7**	**24.5**	**24.7**	**24.8**	**25.0**
Compensation of employees	3.4	3.2	3.6	3.5	3.4	3.4	3.4	3.4	3.4
Purchases of goods and services	3.6	3.7	3.8	3.3	3.3	3.2	3.1	3.0	2.9
Interest 2/	4.1	4.2	4.4	4.1	3.8	3.7	3.8	3.9	4.0
Subsidies and transfers	1.8	1.9	2.3	2.5	2.5	2.7	2.8	2.8	2.8
o/w fuel subsidy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants 3/	8.2	7.9	8.5	8.5	8.4	8.4	8.4	8.4	8.4
Social benefits	3.4	3.6	4.1	4.1	4.2	4.3	4.4	4.5	4.6
Other expense	-0.4	0.1	0.4	0.2	-1.0	-1.2	-1.2	-1.2	-1.2
Net acquisition of nonfinancial assets 4/	**1.6**	**1.3**	**1.8**	**2.2**	**2.4**	**2.2**	**1.8**	**1.8**	**1.9**
Unspecified measures	**0.0**	**0.0**	**0.0**	**0.0**	**-0.3**	**-0.5**	**-0.6**	**-0.8**	**-1.0**
Gross Operating Balance	**-0.6**	**-1.0**	**-2.7**	**-2.1**	**-1.5**	**-1.5**	**-1.7**	**-1.8**	**-1.9**
Overall Fiscal Balance (Net lending/borrowing) 5/	**-2.2**	**-2.3**	**-4.5**	**-4.2**	**-3.5**	**-3.2**	**-2.9**	**-2.8**	**-2.8**
Primary net lending/borrowing	**1.6**	**1.4**	**-0.5**	**-0.6**	**-0.1**	**0.2**	**0.6**	**0.7**	**0.9**
Memorandum items									
Primary expenditure	21.5	21.8	24.6	24.2	22.9	22.4	22.1	22.0	21.9
Current expenditure	24.1	24.6	27.2	26.1	24.4	24.0	24.1	24.0	24.0
Structural fiscal balance	-2.3	-2.1	-2.9	-3.5	-3.3	-3.0	-2.8	-2.8	-2.8
Structural primary balance 6/	1.5	1.6	1.0	0.2	0.2	0.4	0.7	0.8	0.9
Fiscal impulse 7/	0.0	-0.2	0.6	0.8	0.1	-0.2	-0.3	-0.1	-0.1
Gross public sector debt 8/	53.6	53.3	61.0	59.8	60.1	60.5	60.9	61.2	61.5
In domestic currency (percentage of total debt)	67.5	69.7	67.6	67.3	66.0	65.8	65.3	65.3	65.3
In foreign currency (percentage of total debt)	32.5	30.3	32.4	32.7	34.0	34.2	34.7	34.7	34.7
Net public sector debt 9/	44.9	44.5	52.4	51.1	51.4	51.9	52.2	52.5	52.8

Sources: Ministry of Finance and Public Credit; and Fund staff estimates and projections.
1/ Data exclude state and local governments, and include state-owned enterprises and public development banks.
2/ Interest payments differ from official data due to adjustments to account for changes in valuation and interest rates.
3/ Includes transfers to state and local governments under revenue-sharing agreements with the federal government.
4/ This category differs from official data on physical capital spending due to adjustments to account for Pidiregas amortizations included in budget figures and the reclassification of earmarked transfers to sub-national governments.
5/ The 2020 PSBR is adjusted for some statistical discrepancies between above-the-line and below-the-line numbers.
6/ Adjusting revenues for the economic and oil-price cycles and excluding one-off items (e.g. oil hedge income and Bank of Mexico transfers).
7/ Negative of the change in the structural primary fiscal balance.
8/ Corresponds to the gross stock of public sector borrowing requirements, calculated as the net stock of public sector borrowing requirements as published by the authorities plus public sector financial assets.
9/ Corresponds to the net stock of public sector borrowing requirements (i.e., net of public sector financial assets) as published by the authorities.

Table 4a. Mexico: Summary Balance of Payments 1/

(In billions of U.S. dollars)

				Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Current account	**-25.1**	**-3.9**	**26.1**	**0.4**	**-3.5**	**-6.4**	**-9.5**	**-13.8**	**-16.8**
Merchandise goods trade balance	-13.6	5.4	34.0	0.8	3.4	4.2	4.6	4.1	4.3
Exports, f.o.b. 3/	450.7	460.6	417.0	482.4	492.8	524.1	552.3	581.8	612.5
o/w Manufactures	397.3	410.8	373.8	441.0	452.5	482.8	515.5	549.8	584.6
o/w Petroleum and derivatives 2/	30.6	25.8	17.5	26.8	27.5	27.1	26.8	27.4	27.6
Imports, f.o.b. 3/	464.3	455.2	383.0	481.6	489.4	519.9	547.7	577.7	608.3
o/w Petroleum and derivatives 2/	53.8	47.2	31.4	55.5	58.2	54.1	52.6	53.7	54.8
Services, net	-11.5	-8.3	-11.1	-12.7	-14.3	-15.0	-15.9	-16.7	-17.5
Primary income, net	-33.3	-37.0	-36.9	-39.7	-41.3	-45.1	-50.0	-55.3	-59.9
Secondary income (mostly remittances), net	33.4	36.2	40.1	52.1	48.7	49.5	51.8	54.1	56.5
Capital Account, net	**-0.1**	**-0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Financial Account (Net lending (+)/Net borrowing (-))	**-31.9**	**-15.9**	**18.6**	**0.4**	**-3.5**	**-6.4**	**-9.5**	**-13.8**	**-16.8**
Foreign direct investment, net	-25.6	-23.6	-24.9	-24.5	-25.6	-26.8	-28.4	-30.0	-31.7
Net acquisition of financial assets	12.1	5.8	6.1	8.4	9.0	9.4	9.7	9.9	10.2
Net incurrence of liabilities	37.7	29.4	31.0	32.9	34.5	36.2	38.0	39.9	41.9
Portfolio investment, net	-8.3	-6.1	10.6	11.6	-1.9	-0.3	-6.0	-9.0	-10.5
Net acquisition of financial assets	1.2	3.5	16.7	12.5	13.0	13.0	9.0	6.0	6.0
Net incurrence of liabilities	9.5	9.6	6.1	0.9	14.9	13.3	15.0	15.0	16.5
Public Sector	10.7	3.2	0.3	-1.0	12.3	10.3	12.0	12.0	13.6
o/w Local currency domestic-issued bonds	0.1	1.3	-10.6	-6.4	4.4	4.6	5.1	5.8	6.7
Private sector	-1.2	6.4	5.9	1.9	2.6	2.9	2.9	2.9	2.9
Securities issued abroad	-3.6	6.4	5.7	1.9	2.1	2.4	2.4	2.4	2.4
Equity	2.4	0.0	0.2	0.0	0.5	0.5	0.5	0.5	0.5
Pidiregas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives, net	0.4	1.7	-1.8	0.0	0.0	0.0	0.0	0.0	0.0
Other investments, net	1.0	9.4	22.6	0.6	14.3	10.5	14.5	14.7	15.1
Net acquisition of financial assets	7.9	13.0	19.0	13.2	16.7	13.0	17.0	17.1	17.5
Net incurrence of liabilities	6.9	3.5	-3.6	12.6	2.4	2.4	2.4	2.4	2.4
Change in Reserves Assets	0.5	2.6	12.0	12.8	9.6	10.1	10.3	10.5	10.4
Total change in gross reserves assets	0.9	6.6	16.0	12.8	9.6	10.1	10.3	10.5	10.4
Valuation change	0.5	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Errors and Omissions	**-6.8**	**-11.9**	**-7.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
International Investment Position, net	**-583.5**	**-648.5**	**-591.4**	**-590.9**	**-594.4**	**-600.9**	**-610.3**	**-624.2**	**-640.9**
Memorandum items									
Hydrocarbons exports volume growth (in percent)	1.8	-5.9	5.8	-5.7	4.2	3.6	2.8	2.2	0.8
Non-hydrocarbons exports volume growth (in percent)	6.5	1.4	-5.0	9.1	5.7	2.0	1.7	1.7	1.7
Hydrocarbons imports volume growth (in percent)	4.8	-12.9	-28.5	-9.5	4.0	2.2	1.7	2.3	2.0
Non-hydrocarbons imports volume growth (in percent)	6.4	-0.4	-13.0	18.2	7.4	2.2	2.0	2.0	2.0
Crude oil export volume (in millions of bbl/day)	1.2	1.1	1.1	1.0	1.0	1.1	1.1	1.1	1.1
Gross international reserves (in billions of U.S. dollars)	176.4	183.0	199.1	211.8	221.5	231.6	241.9	252.5	262.8
Gross domestic product (in billions of U.S. dollars)	1,222.4	1,269.4	1,073.9	1,285.5	1,371.6	1,446.8	1,518.9	1,591.4	1,665.6

Sources: Bank of Mexico, National Institute of Statistics and Geography, and Fund staff estimates.

1/ The new general SDR allocation in August 2021 is included in these figures.

2/ Crude oil, derivatives, petrochemicals, and natural gas.

3/ Excludes goods procured in ports by carriers.

Table 4b. Mexico: Summary Balance of Payments 1/
(In percent of GDP)

				Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Current account	**-2.1**	**-0.3**	**2.4**	**0.0**	**-0.3**	**-0.4**	**-0.6**	**-0.9**	**-1.0**
Merchandise goods trade balance	-1.1	0.4	3.2	0.1	0.2	0.3	0.3	0.3	0.3
Exports, f.o.b. 3/	36.9	36.3	38.8	37.5	35.9	36.2	36.4	36.6	36.8
o/w Manufactures	32.5	32.4	34.8	34.3	33.0	33.4	33.9	34.5	35.1
o/w Petroleum and derivatives 2/	2.5	2.0	1.6	2.1	2.0	1.9	1.8	1.7	1.7
Imports, f.o.b. 3/	38.0	35.9	35.7	37.5	35.7	35.9	36.1	36.3	36.5
o/w Petroleum and derivatives 2/	4.4	3.7	2.9	4.3	4.2	3.7	3.5	3.4	3.3
Services, net	-0.9	-0.7	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1
Primary income, net	-2.7	-2.9	-3.4	-3.1	-3.0	-3.1	-3.3	-3.5	-3.6
Secondary income (mostly remittances), net	2.7	2.9	3.7	4.1	3.6	3.4	3.4	3.4	3.4
Capital Account, net	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Financial Account (Net lending (+)/Net borrowing (-))	**-2.6**	**-1.3**	**1.7**	**0.0**	**-0.3**	**-0.4**	**-0.6**	**-0.9**	**-1.0**
Foreign direct investment, net	-2.1	-1.9	-2.3	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9
Net acquisition of financial assets	1.0	0.5	0.6	0.6	0.7	0.7	0.6	0.6	0.6
Net incurrence of liabilities	3.1	2.3	2.9	2.6	2.5	2.5	2.5	2.5	2.5
Portfolio investment, net	-0.7	-0.5	1.0	0.9	-0.1	0.0	-0.4	-0.6	-0.6
Net acquisition of financial assets	0.1	0.3	1.6	1.0	0.9	0.9	0.6	0.4	0.4
Net incurrence of liabilities	0.8	0.8	0.6	0.1	1.1	0.9	1.0	0.9	1.0
Public Sector	0.9	0.3	0.0	-0.1	0.9	0.7	0.8	0.8	0.8
o/w Local currency domestic-issued bonds	0.0	0.1	-1.0	-0.5	0.3	0.3	0.3	0.4	0.4
Private sector	-0.1	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
Securities issued abroad	-0.3	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.1
Equity	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pidiregas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives, net	0.0	0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Other investments, net	0.1	0.7	2.1	0.0	1.0	0.7	1.0	0.9	0.9
Net acquisition of financial assets	0.6	1.0	1.8	1.0	1.2	0.9	1.1	1.1	1.1
Net incurrence of liabilities	0.6	0.3	-0.3	1.0	0.2	0.2	0.2	0.2	0.1
Change in Reserves Assets	0.0	0.2	1.1	1.0	0.7	0.7	0.7	0.7	0.6
Total change in gross reserves assets	0.1	0.5	1.5	1.0	0.7	0.7	0.7	0.7	0.6
Valuation change	0.0	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Errors and Omissions	**-0.6**	**-0.9**	**-0.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
International Investment Position, net	**-47.7**	**-51.1**	**-55.1**	**-46.0**	**-43.3**	**-41.5**	**-40.2**	**-39.2**	**-38.5**

Sources: Bank of Mexico, National Institute of Statistics and Geography, and Fund staff estimates.

1/ The new general SDR allocation in August 2021 is included in these figures.

2/ Crude oil, derivatives, petrochemicals, and natural gas.

3/ Excludes goods procured in ports by carriers.

Table 5. Mexico: Financial Soundness Indicators
(In percent)

	2018	2019	2020	2021	Latest data available 1/
Capital Adequacy					
Regulatory capital to risk-weighted assets	15.9	16.0	17.7	18.4	May
Regulatory Tier 1 capital to risk-weighted assets	14.2	14.4	16.1	16.8	May
Capital to assets	10.7	11.0	10.7	11.2	May
Gross asset position in financial derivatives to capital	63.3	51.6	83.1	54.1	May
Gross liability position in financial derivatives to capital	63.9	52.8	85.1	54.6	May
Asset Quality					
Nonperforming loans to total gross loans	2.1	2.1	2.4	2.4	July
Provisions to Nonperforming loans	152.4	147.0	160.1	149.5	May
Earnings and Profitability					
Return on assets	2.2	2.2	1.2	1.8	May
Return on equity	20.9	20.6	11.7	16.1	May
Liquidity					
Liquid assets to short-term liabilities	42.3	41.0	48.0	47.6	May
Liquid assets to total assets	31.6	31.2	35.7	36.9	May
Customer deposits to total (noninterbank) loans	89.3	90.5	100.2	102.1	May
Trading income to total income	4.5	5.8	5.5	6.3	May

Sources: Financial Soundness Indicators.
1/ End of period.

Table 6. Mexico: Financial Indicators and Measures of External Vulnerabilities

	2018	2019	2020	2021	Latest data available
Financial market indicators					
Exchange rate (per U.S. dollar, period average)	19.2	19.3	21.5	20.1	Aug-21
(year-to-date percent change, + appreciation)	-1.7	-0.1	-11.5	7.6	Aug-21
28-day treasury auction rate (percent; period average)	7.6	7.8	5.3	4.2	Aug-21
EMBIG Mexico spread (basis points; period average)	272.8	318.2	474.4	353.5	Oct-21
Sovereign 10-year local currency bond yield (period average)	7.9	7.6	6.3	6.7	Oct-21
Stock exchange index (period average, year on year percent change)	-3.8	-8.8	-9.0	27.2	Oct-21
Financial system					
Bank of Mexico net international reserves (US$ billion)	174.8	180.9	195.7	198.4	Proj.
Financial system credit on non-financial private sector (year on year percent change) 1/	8.9	3.0	1.5	3.3	Proj.
Nonperforming loans to total gross loans (deposit takers)	2.1	2.1	2.4	2.4	Jul-21
External vulnerability indicators					
Gross financing needs (billions of US$) 2/	97.1	102.8	77.3	74.7	Proj.
Gross international reserves (end-year, billions of US$) 3/	176.4	183.0	199.1	200.5	Jul-21
Change (billions of US$)	0.9	6.6	16.0	0.1	Jul-21
Months of imports of goods and services	4.2	4.4	5.8	4.9	Proj.
Months of imports plus interest payments	4.0	4.2	5.5	4.7	Proj.
Percent of broad money	39.4	37.3	37.9	37.3	Proj.
Percent of portfolio liabilities	36.5	35.1	38.3	40.7	Proj.
Percent of short-term debt (by residual maturity)	191.2	209.3	313.5	416.3	Proj.
Percent of ARA Metric 4/	118.2	116.2	130.8	134.2	Proj.
Percent of GDP	14.4	14.4	18.5	15.5	Jun-21
Gross total external debt (in percent of GDP)	36.5	36.5	43.1	36.8	Proj.
Of which: In local currency	8.9	9.0	8.8	6.9	Proj.
Of which: Public debt	25.0	24.6	29.0	24.2	Proj.
Of which: Private debt	11.5	11.9	14.1	12.6	Proj.
Financial sector	1.7	2.1	2.1		
Nonfinancial sector	9.8	9.8	12.0		
Gross total external debt (billions of US$)	446.8	463.8	462.9	472.9	Proj.
Of which: In local currency	108.5	114.0	95.0	88.6	Proj.
Of which: Public debt	306.0	312.4	311.7	311.0	Proj.
Of which: Private debt	140.8	151.4	151.1	161.9	Proj.
Financial sector	20.6	26.4	22.5		
Nonfinancial sector	120.1	125.0	128.6		
External debt service (in percent of GDP)	7.7	9.4	10.4	6.9	Proj.

Sources: Bank of Mexico, National Banking and Securities Commission, National Institute of Statistics and Geography, Ministry of Finance and Public Credit, and Fund staff estimates.

1/ Includes domestic credit by banks, nonbank intermediaries, and social housing funds.

2/ Corresponds to the sum of the current account deficit, amortization payments, and the change in gross international reserves.

3/ Excludes balances under bilateral payments accounts. Includes SDR2.337 billion of the general SDR allocation and SDR 0.224 billion of the special SDR allocation in 2009, and SDR 8.542 billion in the general SDR allocation in 2021.

4/ The ARA metric was developed by the Strategy and Policy Review Department at the IMF to assess reserve adequacy. Weights to individual components were revised in December 2014 for the whole time series.

Table 7. Mexico: Baseline Medium-Term Projections

	2018	2019	2020	2021	2022	2023	2024	2025	2026
				Proj.					
National accounts (in real terms, contributions to growth) 1/									
GDP	2.2	-0.2	-8.3	6.2	4.0	2.2	2.0	2.0	2.0
Consumption	2.1	0.1	-6.8	6.1	3.6	1.4	1.7	1.7	1.7
Private	1.7	0.3	-7.1	6.0	3.3	1.1	1.4	1.4	1.4
Public	0.3	-0.2	0.3	0.1	0.2	0.3	0.3	0.3	0.3
Investment	0.1	-1.1	-3.6	2.7	1.6	0.9	0.5	0.4	0.4
Fixed	0.2	-0.9	-3.5	2.4	1.6	0.9	0.5	0.4	0.4
Private	0.2	-0.6	-3.3	2.3	1.5	0.8	0.4	0.3	0.3
Public	0.0	-0.4	-0.2	0.1	0.2	0.1	0.1	0.1	0.1
Inventories	-0.1	-0.2	-0.1	0.3	0.0	0.0	0.0	0.0	0.0
Exports of goods and services	2.1	0.5	-2.7	2.9	2.2	0.8	0.7	0.7	0.6
Oil exports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-oil exports	2.1	0.6	-2.8	3.0	2.1	0.8	0.6	0.6	0.6
Imports of goods and services	2.3	-0.3	-5.4	6.0	2.8	0.9	0.8	0.8	0.8
Oil imports	0.0	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0
Non-oil imports	2.3	-0.1	-5.1	6.0	2.8	0.8	0.8	0.8	0.8
Net exports	-0.2	0.8	2.7	-3.1	-0.6	-0.1	-0.1	-0.1	-0.1
Consumer prices									
End of period	4.8	2.8	3.2	5.9	3.1	3.0	3.0	3.0	3.0
Average	4.9	3.6	3.4	5.4	3.8	3.0	3.0	3.0	3.0
External sector									
Current account balance (in percent of GDP)	-2.1	-0.3	2.4	0.0	-0.3	-0.4	-0.6	-0.9	-1.0
Non-hydrocarbon current account balance (in percent of GDP)	-0.2	1.4	3.7	2.3	2.0	1.4	1.1	0.8	0.6
Exports of goods, f.o.b.	10.1	2.2	-9.5	15.7	2.2	6.4	5.4	5.3	5.3
Imports of goods, f.o.b.	10.4	-2.0	-15.9	25.7	1.6	6.2	5.3	5.5	5.3
Terms of trade (improvement +)	-0.4	2.2	-2.1	-0.4	2.1	0.2	0.3	0.2	0.3
Crude oil export price, Mexican mix (US$/bbl)	61.7	56.1	35.8	60.9	59.7	56.7	54.6	54.6	54.6
Non-financial public sector									
Overall balance	-2.2	-2.3	-4.5	-4.2	-3.5	-3.2	-2.9	-2.8	-2.8
Primary balance	1.6	1.4	-0.5	-0.6	-0.1	0.2	0.6	0.7	0.9
Saving and investment 2/									
Gross domestic investment	22.7	21.2	19.3	20.7	21.8	22.1	22.1	22.1	22.0
Fixed investment	22.0	20.6	18.8	19.9	21.0	21.4	21.4	21.3	21.3
Public	3.0	2.6	2.5	2.6	2.7	2.8	2.7	2.7	2.7
Private	19.0	18.0	16.2	17.2	18.3	18.6	18.6	18.6	18.5
Gross domestic saving	20.7	20.9	21.7	20.7	21.5	21.7	21.5	21.2	21.0
Public	0.8	0.2	-1.9	-1.6	-0.8	-0.5	-0.2	-0.1	-0.1
Private	19.8	20.6	23.7	22.3	22.3	22.1	21.7	21.3	21.1
Memorandum items									
Financial system credit to non-financial private sector (nominal y/y growth)	8.9	3.0	1.5	3.3	5.9	7.5	7.5	7.4	7.5
Output gap (in percent of potential GDP)	0.8	-1.0	-5.6	-4.0	-2.2	-1.5	-0.9	-0.4	0.0
Total population	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8
Working-age population 3/	1.3	1.3	1.2	1.1	1.1	1.0	0.9	0.9	0.8

Sources: Bank of Mexico, National Institute of Statistics and Geography, Ministry of Finance and Public Credit, Bloomberg, and IMF staff projections.
1/ Contribution to growth. Excludes statistical discrepancy.
2/ Reported numbers may differ from authorities' due to rounding.
3/ Based on United Nations population projections.

Table 8. Mexico: Monetary Indicators 1/
(In billions of Pesos)

	2017	2018	2019	2020	Proj. 2021
Banco de México					
Net foreign assets	3,392	3,408	3,397	3,876	4,162
Net international reserves	3,457	3,471	3,457	3,966	4,259
Gross international reserves 2/	3,458	3,472	3,457	3,966	4,259
Reserve liabilities	1	1	0	0	0
Other net foreign assets	-65	-63	-60	-90	-96
Net domestic assets	-1,846	-1,734	-1,654	-1,758	-1,962
Net domestic credit	-1,627	-1,622	-1,706	-1,640	-2,028
Net credit to non-financial public sector	-1,516	-1,525	-1,640	-1,778	-1,994
Credit to non-financial private sector	0	0	0	0	0
Net credit to financial corporations	-112	-97	-66	138	-34
Net claims on other depository corporations	-112	-97	-66	138	-34
Net claims on other financial corporations	0	0	0	0	0
Capital account	153	54	-113	53	-129
Other items net	-65	-59	-61	-64	-62
Monetary base	1,546	1,674	1,742	2,118	2,201
Other Depository Corporations					
Net foreign assets	92	-32	-92	107	117
Foreign assets	771	860	738	940	1,027
Foreign liabilities	679	893	830	833	910
Net domestic assets	7,794	8,160	8,678	9,265	10,212
Net credit to the public sector	3,071	3,190	3,750	4,197	4,748
Claims on non-financial public sector	3,526	3,688	4,214	4,602	5,203
in pesos	3,374	3,528	4,037	4,400	4,981
in FX	152	160	178	202	222
Liabilities to the nonfinancial public sector	455	499	464	405	454
Credit to the private sector	5,896	6,304	6,976	6,708	6,931
Local Currency	5,173	5,538	6,198	5,984	6,193
Foreign Currency	723	766	778	724	738
Net credit to the financial system	967	929	868	689	865
Other	-2,140	-2,262	-2,916	-2,329	-2,333
Liabilities to the private sector	7,886	8,128	8,586	9,372	10,328
Liquid liabilities	7,067	7,327	7,688	8,572	9,501
Local currency	6,373	6,710	7,112	7,905	8,820
Foreign currency	694	617	575	667	681
Non liquid liabilities	819	801	898	800	827
Local currency	786	765	861	762	788
Foreign currency	33	36	38	38	39
Total Banking System					
Net foreign assets	3,483	3,375	3,304	3,982	4,279
Net domestic assets	5,947	6,426	7,024	7,507	8,250
Liquid liabilities	8,613	9,001	9,430	10,691	11,702
Non-liquid liabilities	819	801	898	800	827
Memorandum items					
Monetary base (percent change)	8.8	8.3	4.1	21.6	3.9
Currency in circulation (percent change)	8.8	8.9	3.6	21.6	3.9
Broad money (percent change)	11.2	4.5	4.7	13.4	9.2
Bank credit to the non-financial private sector (growth rate)	13.0	6.9	10.7	-3.8	3.3
Bank credit to the non-financial private sector (as percent of GDP)	26.9	26.8	28.5	29.1	26.8

Source: Bank of Mexico, National Institute of Statistics and Geography and Fund staff estimates.
1/ Data of the monetary sector are prepared based on the IMF's methodological criteria and do not necessarily coincide with the definitions published by Bank of Mexico.
2/ Excludes balances under bilateral payments accounts. Includes SDR2.337 billion of the general SDR allocation and SDR 0.224 billion of the special SDR allocation in 2009, and SDR 8.542 billion in the general SDR allocation in 2021.

Annex I. External Sector Assessment

(Updated as of September 30, 2021)

Overall Assessment: *The external position in 2020 was stronger than the level implied by medium-term fundamentals and desirable policies.* Mexico's external position strengthened in 2020 owing to the impact of the large fiscal expansions in other major economies (whose actual fiscal balances are relatively further below their desirable medium-term levels) compared with Mexico's muted fiscal response to the pandemic and continued weakening of the domestic investment climate. The assessment remains subject to considerable uncertainty around how temporary is the nature of COVID-19 and its implications for imports and fiscal policies.

Potential Policy Responses: Further domestic fiscal support is needed in the near term to ease the strains of the pandemic, mitigate scarring, and secure the recovery. Steadfast implementation of structural reforms to deliver stronger investment would help lower the saving-investment balance and, hence, bring the external position closer to the level implied by medium-term fundamentals and desirable policies. Such policies should be part of a comprehensive package focused on pursuing strong, durable, and inclusive growth, which should also include credible medium-term tax reform. The floating exchange rate should continue to serve as the main shock absorber, with FX interventions used only to prevent disorderly market conditions. The IMF's Flexible Credit Line provides an added buffer against global tail risks.

Foreign Asset and Liability Position and Trajectory

Background. Mexico's NIIP is projected to improve from about −55 percent of GDP in 2020 to −40 percent of GDP over the medium term, driven mainly by the decline in foreign liabilities. Foreign assets are mostly direct investment (21 percent of GDP) and reserves (18 percent of GDP). Foreign liabilities are mostly FDI (60 percent of GDP) and portfolio investment (49 percent of GDP). Gross public external debt was 29 percent of GDP, of which about one-third was holdings of local currency government bonds.

Assessment. While the NIIP is sustainable and the local currency denomination of a large share of foreign-held public liabilities reduces FX risks, the large gross foreign portfolio liabilities could be a source of vulnerability in case of global financial volatility. Exchange rate vulnerabilities are moderate as most Mexican firms with FX debt have natural hedges and actively manage their FX exposures.

2020 (% GDP)	NIIP: −54.9	Gross Assets: 62.6	Res. Assets: 18.5	Gross Liab.: 117.5	Debt Liab.: 45.6

Current Account

Background. In 2020, the CA balance improved sharply to 2.4 percent of GDP from −0.3 percent in 2019, driven by a dramatic contraction in imports amid lower capital inflows (17 percent), a smaller export contraction owing to the relatively larger fiscal expansion in major partners, the global household consumption composition shift, trade diversion (Annex VII) related to the US–China trade dispute (12 percent), and soaring worker remittances (11 percent in US dollar terms). In terms of saving and investment, the increase in saving contributed one-third and the decline in investment contributed two-thirds of the improvement in the CA-to-GDP balance; the private sector saving-investment balance rose by 5 percent of GDP, more than offsetting the dissaving by the public sector of 2.2 percent of GDP. The 2021 CA balance is projected at 0 percent of GDP and is subject to considerable uncertainty. Over the medium term, the CA balance is projected to deteriorate toward −1 percent of GDP as the temporary COVID-19 impact on US household consumption composition, remittances, and trade diversion effects dissipate.

Assessment. The EBA model estimates a cyclically adjusted CA norm of −1.9 percent of GDP in 2020. This implies a CA gap of 3.6 percent of GDP, with a range of 2.6 to 4.6 percent of GDP. The relative policy gap contribution is estimated at 2.6 percent of GDP, mainly led by COVID-19–driven accommodation of fiscal policy in the rest of the world. IMF staff adjustments were made to account for the transitory impact of the pandemic on the travel services sector, including tourism; the global household consumption shift; and remittances (adjustments of 0.4 percent of GDP, −0.6 percent of GDP, and −0.3 percent of GDP, respectively) as well as trade diversion effects related to the US-China trade dispute (adjustment of about −0.3 percent of GDP). Including these adjustments, the IMF staff assesses the CA gap at 2.8 percent of GDP, with a range of 1.8 to 3.8 percent of GDP.

2020 (% GDP)	CA: 2.4	Cycl. Adj. CA: 1.7	EBA Norm: −1.9	EBA Gap: 3.6	COVID-19 Adj.: −0.5	Other Adj.: −0.3	Staff Gap: 2.8

Real Exchange Rate

Background. In 2020, the peso fluctuated considerably in a range of 18–25 percent vis-à-vis the US dollar. The average REER in 2020 was about 7.6 percent lower than the 2019 average, mostly driven by a nominal depreciation. As of end-July 2021, the REER had appreciated by 7.0 percent compared to the 2020 average.

Assessment. The IMF staff CA gap implies an REER gap of −21.8 percent of GDP (applying an elasticity of 0.13). The EBA REER level and index models estimate an undervaluation of 10.0 and 20.9 percent, respectively, in 2020. The IMF staff's overall assessment, based on the CA gap, is an REER gap in the range of −29.8 to −13.8 percent, with a midpoint of −21.8 percent.

Capital and Financial Accounts: Flows and Policy Measures

Background. In 2020, net portfolio and other investment flows were negative, driven by residents' increased acquisition of overseas assets and nonresidents' lower acquisition of Mexican assets. Meanwhile, net FDI inflows remained relatively strong despite the pandemic.

Assessment. While the long maturity of sovereign debt and the high share of local-currency-denominated debt reduce the exposure of government finances to depreciation risks, high foreign ownership of sovereign bonds could contribute to vulnerabilities. The banking sector is broadly resilient. Nonfinancial corporate debt is low, and FX risks are generally covered by natural and financial hedges. But the strong presence of foreign investors leaves Mexico exposed to capital flow reversals and risk premium increases.

FX Intervention and Reserves Level

Background. The central bank remains committed to a free-floating exchange rate, whereas discretionary intervention is used solely to prevent disorderly market conditions. At end-2020, gross international reserves amounted to US$199 billion (18.5 percent of GDP), up from US$183 billion at the end of 2019, mostly owing to the federal government's debt management operations and valuation changes. In 2020, two non-deliverable forward auctions were conducted, alongside further US dollar liquidity provision measures, in response to large external shocks.

Assessment. At 128 percent of the ARA metric and 281 percent of short-term debt (at remaining maturity), the end-2020 level of foreign reserves was adequate. The IMF staff recommends that the authorities continue to maintain reserves at an adequate level over the medium term. The Flexible Credit Line arrangement continues to provide an additional buffer.

Annex II. Risk Assessment Matrix

Source of Risk	Relative[1] Likelihood	Impact[1]	Policy Response
Global resurgence of the COVID-19 pandemic. Local outbreaks lead to a global resurgence of the pandemic (possibly due to vaccine-resistant variants), which requires costly containment efforts and prompts persistent behavioral changes rendering many activities unviable.	Medium	**Medium.** The economic impact of COVID-19 waves is declining, but renewed lockdown measures and social distancing will adversely affect growth and may deepen scarring in affected sectors.	*Risk mitigation*: Ensure adequate vaccine procurement, anticipating potential boosters and variants. Strengthen testing and contact-tracing. *On impact*: Loosen fiscal and monetary policy settings to dampen economic consequences and minimize scarring. Reinstate financial sector policies if necessary.
De-anchoring of inflation expectations in the U.S. leads to rising core yields and risk premia. A fast recovery in demand (supported by excess private savings and stimulus policies), combined with COVID-19-related supply constraints, leads to sustained above-target inflation readings and a de-anchoring of expectations. The Fed reacts by signaling a need to tighten earlier than expected.	Medium	**High.** Mexico continues to import US inflation while rising U.S. yields increase Mexican yields with higher risk premia across the curve. Economic activity deteriorates and economic scars deepen. While Mexico benefits when inflation is growth-driven, risk premia rises would be net negative.	Maintain flexible exchange rate to help absorb shock. Monetary policy should see past temporary inflation but may need to tighten aggressively if risk premia rise sharply and persistently. Fiscal policy may also need to tighten if financing costs rise sharply, although credible medium-term fiscal and structural policies would create more near-term space, enhance economic flexibility, and improve investor confidence.
Rising commodity prices amid bouts of volatility. Commodity prices increase by more than expected against a weaker U.S. dollar, post-pandemic pent-up demand and supply disruptions, and for some materials, accelerated plans for renewable energy adoption. Uncertainty surrounding each of these factors leads to bouts of volatility, especially in oil prices.	Medium	**Medium.** Domestic inflation would rise, reinforcing existing trends.	Maintain flexible exchange rate to help absorb shock. Monetary policy should see past temporary price shocks but remain vigilant for potential second round effects. Clearly communicate the nature of inflation drivers as well as the policy reaction function.
Deterioration in Pemex's financial condition. A bout of lower oil prices, a resumption of the fall in oil production, or higher losses in downstream activities could lead to greater financial strains.	High	**Medium.** Further downgrades and higher yields could entail larger public support, increasing the burden on Pemex and potentially on sovereign spreads.	Change Pemex's business strategy: sell non-core assets, refocus on high-return activities, prioritize maintenance and long run production, collaborate with the private sector in areas of limited technical ability, and reform its costly special pension scheme.
Rise in Mexico-specific risk aversion. Sharp increase in capital outflows, depreciation, and a rise in spreads due to perceptions of deteriorating institutional quality or long-run outlook.	Low	**High.** Lower domestic demand and growth, higher yields, increased fiscal pressures, and financial system stress.	Announce credible and upfront structural and fiscal policy reform agenda to better anchor expectations and improve the long-run growth outlook.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" indicates a probability below 10 percent, "medium" between 10 and 30 percent, and "high" between 30 and 50 percent). The RAM reflects staff views as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Annex III. Debt Sustainability Analysis

Public Debt Sustainability

Public debt is forecast to decline slightly to about 60 percent of GDP in 2021. Owing largely to the stronger-than-expected economic rebound, debt is lower than had been forecast at the last consultation. Debt should broadly stabilize at around this ratio over the medium term, with gross financing needs at 11–13 percent of GDP, assuming that the fiscal targets are met. But debt would rise if growth underperforms or there are fiscal slippages, including from Pemex. The long average maturity and favorable currency composition of debt mitigate risks arising from the relatively high foreign ownership.

1. The baseline projections:

- *Debt and gross financing needs (GFNs)*. Gross public debt levels are projected to remain broadly stable at around 60 percent of GDP over the medium term, while GFNs are projected to average around 12 percent of GDP. The debt to GDP ratio is lower than at the last Article IV consultation owing largely to the overperformance of near-term GDP growth. In staff's proposed fiscal package, debt rises very modestly in the near term but declines below the baseline over time.

- *Fiscal balances*. The public sector borrowing requirement (PSBR) is projected at 4.2 percent of GDP in 2021, in line with the authorities' revised target. Their PSBR target is 3.5 percent of GDP in 2022 and 2.8 percent over the medium term. Correspondingly, the primary balance is projected to increase from -0.6 percent of GDP in 2021 to -0.1 percent of GDP in 2022, and further to 0.9 percent of GDP in 2026.

- *Growth assumptions*. Past GDP growth projections generally exhibit modest errors, with the median forecast error in line with other EMs. There is no evidence of a systematic projection bias in the baseline assumption for growth that could undermine the DSA assessment. Staff projects a recovery of 6.2 percent in 2021 and 4 percent in 2022. Over the medium term, staff projects growth of about 2 percent.

- *Sovereign yields*. The sovereign (United Mexican States, UMS) spread, i.e., the difference between 10-year UMS and U.S. Treasury yields, has gradually normalized after the March–April 2020 spike (peak at 426 basis points) to 171 basis points as of October 15, 2021. The effective nominal interest rate on sovereign debt is projected to decline from 7.9 percent in 2020 to 7.5 percent in 2021, decline further in 2022–24, and then increase to 6.9 percent in 2026. The long average maturity of public debt mitigates the effect of the policy rate increase in the short run.

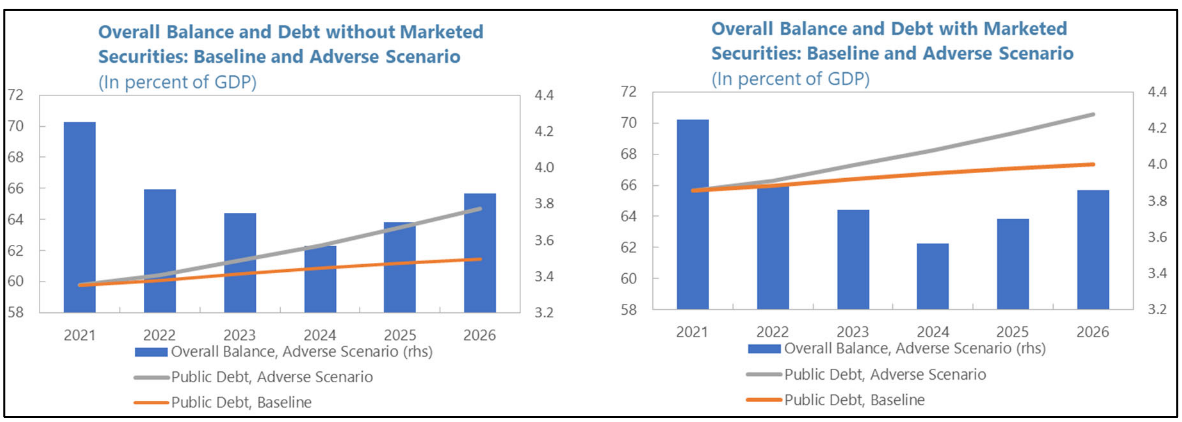
2. Rollover and exchange rate risks: the long maturity structure of public debt reduces rollover risks, including for the large share of public debt held by non-residents. The real interest rate and exchange rate shocks have a moderate impact on the debt stock, given the gradual interest rate passthrough to the budget and the large share of debt denominated in local currency (around 68 percent). Also, the non-resident share of Mbonos (part of local currency debt) has declined from 47 percent at end-2020 to 41 percent at end-August. Last year, the authorities curtailed MBono issuance and met demand for shorter-dated issuance (as well as foreign currency denominated bonds; see main text, ¶13). However, so far in 2021, Mbono and Udibono issuance comprise a significant portion of net issuance, with no net new issuance of the short-dated Cetes.

3. Stochastic simulations: fan charts illustrate the possible evolution of debt over the medium term based on symmetric and asymmetric distributions of risk. Under a symmetric distribution, debt is projected to remain below 70 percent of GDP (the benchmark for EMs in the 2013 IMF Staff Guidance Note for Public Debt Sustainability Analysis in Market Access Countries) over the medium term with a probability above 97 percent. If restrictions are imposed—i.e., an asymmetric scenario where it is assumed that there are no positive shocks to the primary balance—debt will remain below 70 percent of GDP over the projection horizon with a probability of around 80 percent.

4. Stress tests:

- *Individual shocks*. The debt ratio would remain below 70 percent of GDP in all individual shock scenarios, except the growth scenario. However, if fiscal gaps ¼–1 percent of GDP are not closed, debt could rise to 65 percent of GDP by 2026 (left-hand-side text chart). If marketed securities held by the central bank for liquidity management purposes are added to debt statistics, debt could reach 67 percent of GDP by 2026 under the baseline. But if fiscal gaps are not closed and marketed Treasury securities held by the central bank are added to the debt statistics, debt could rise to 71 percent of GDP by 2026 (right-hand-side-text chart).

- *Combined shock*. A combined shock incorporates the largest effect of individual shocks on all relevant variables (real GDP growth, inflation, primary balance, exchange rate and interest rate). Under this scenario, debt would increase to 80 percent of GDP by 2026. Gross financing needs would reach 16.2 percent of GDP in 2026.



5. Debt coverage: Treasury securities held by the central bank for liquidity management purposes are not included in general government debt. The central bank has been using T-bonds issued directly by the Treasury for liquidity management. At end 2020, a stock of 5.9 percent of GDP in T-bonds had been marketed. The proceeds from the securities are held in a special government Monetary Regulation Deposit (MRD) that is ringfenced according to Art. 7 and 9 of Banco de México's Law. The government cannot access the MRD before the bonds mature. As such, the government earns no financing benefit from the securities; it also incurs no direct cost given that the central bank remunerates the MRD with the exact payment terms as is the case for the securities. In the authorities' official debt statistics, these securities are not considered general government (GG) debt while, in the Cuenta Pública, they are reported under a specific liability line item (but not under the debt heading).[1] Mexico received technical assistance in 2021 from the IMF's Statistics Department and the IMF's Fiscal Affairs Department to improve observance of standards and strengthen transparency of the fiscal and debt statistics and to adopt the public sector balance sheet analytical framework.

6. Net public debt: In their communication on public debt, the authorities focus on the concept of Historical Balance of the Public Sector Borrowing Requirements (HBPSBR), which is analogous to a net debt concept. Consistent with the present public debt stability analysis, staff estimates that net public debt (defined as gross debt minus public assets) would reach around 53 percent of GDP over the medium term.

External Debt Sustainability

External debt is projected to decline to its pre-pandemic share of GDP in 2021 owing largely to the strong economic rebound. Risks relate to growth underperformance, higher risk premia, and large currency depreciation. Their potential impact is mitigated by several factors, especially the favorable maturity and currency structure of sovereign and private external debt.

7. The baseline projections: gross external debt is expected to return to its pre-pandemic share of GDP at about 37 percent in 2021, mainly driven by the expansion in nominal GDP. Over the medium term, it is expected to decline to around 35 percent of GDP.

8. Risks and mitigating factors: the major downside risks are an underperformance of growth owing to protracted pandemic-related stress or policy slippages, and changes in risk sentiment that increase risk premia, weaken the peso, and contribute to volatile capital flows. Currency depreciation is a significant risk; for example, a 30 percent depreciation could raise external debt about 50 percent of GDP. However, several factors mitigate the impact of potential shocks on external debt. Rollover risks for the public sector, which constitute around two-thirds of Mexico's external debt, are mitigated by a favorable maturity structure (nearly 90 percent of debt has maturity above one year), currency composition (around 20 percent of debt is denominated in peso), and prudent debt management by the government. Private sector external debt, concentrated in the non-financial corporate sector, is mostly medium and long term while foreign exchange risks are well-covered by natural and financial hedges. The banking sector is well-capitalized and liquid and assessed to be resilient to large shocks.

[1] The coverage of debt statistics in Mexico is limited to two of the required six debt instruments, namely, debt securities and loans.

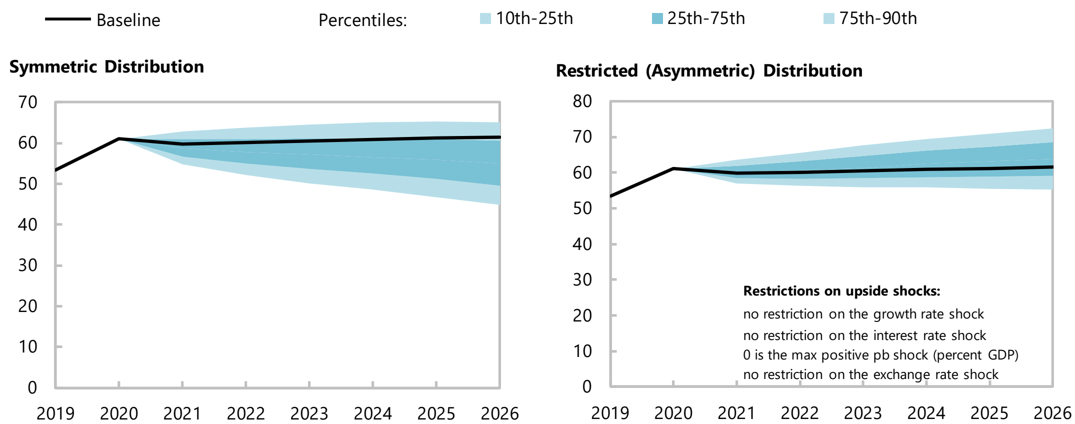
Annex III. Figure 1. Mexico: Public DSA Risk Assessment

Heat Map

Debt level [1/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs [2/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile [3/]	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

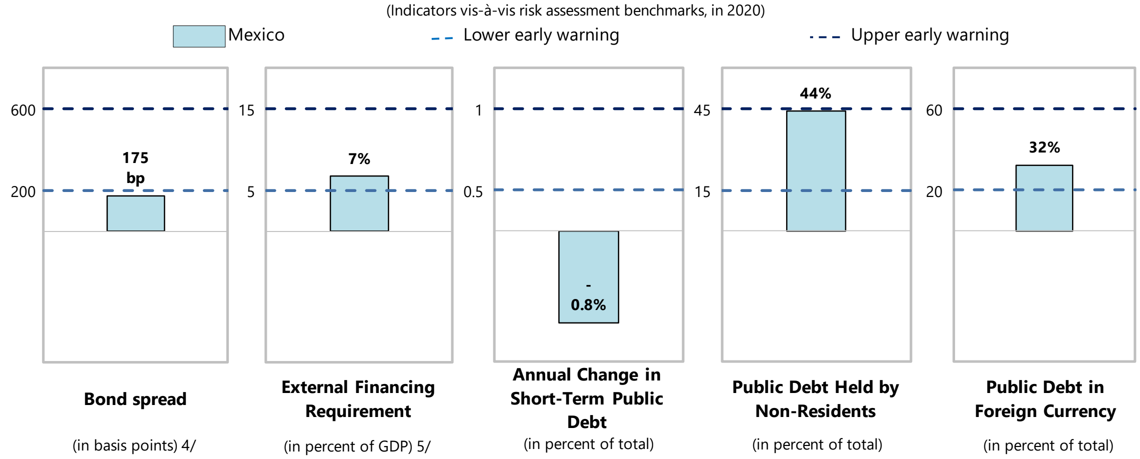
Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2020)



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

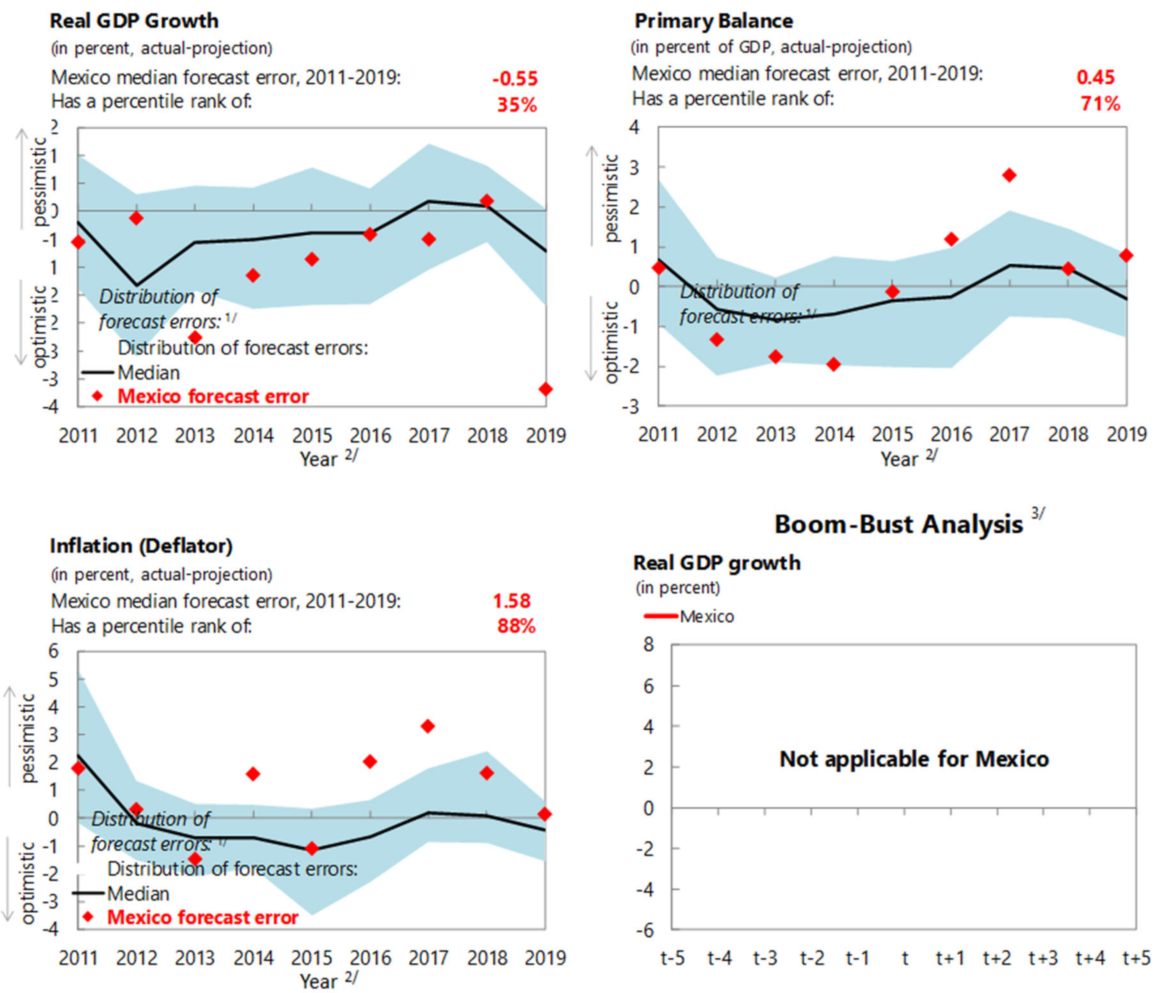
200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ Long-term bond spread over U.S. bonds, an average over the last 3 months, 25-Jun-21 through 23-Sep-21.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Annex III. Figure 2. Mexico: Public DSA—Realism of Baseline Assumptions

Forecast Track Record, versus all countries



Source : IMF staff.

1/ Plotted distribution includes all countries, percentile rank refers to all countries

2/ Projections made in the spring WEO vintage of the preceding year

3/ Not applicable for Mexico, as it meets neither the positive output gap criterion nor the private credit growth criterion.

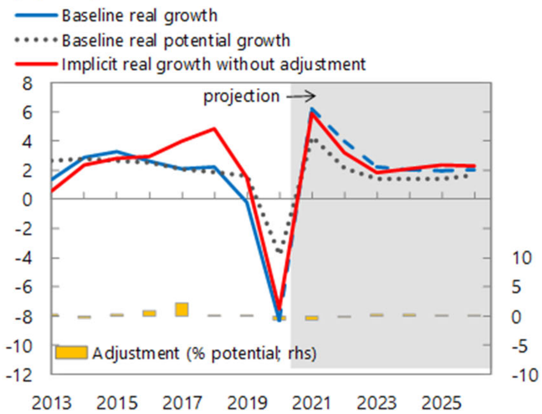
Annex III. Figure 2. Mexico: Public DSA—Realism of Baseline Assumptions (concluded)

Growth and Level of Output in Absence of Fiscal Adjustment

Assumed multiplier of 1, persistence of 0.6

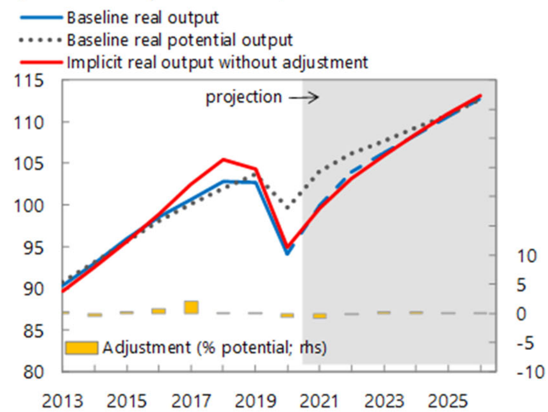
Real GDP Growth

(in percent)



Real Output Level

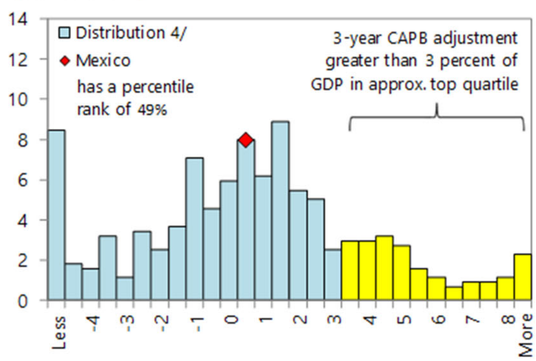
(Baseline real output in 2021=100)



Assessing the Realism of Projected Fiscal Adjustment

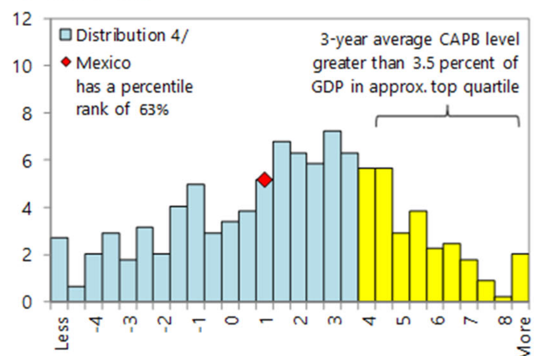
3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)

(Percent of GDP)



3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)

(Percent of GDP)



Source : IMF staff.

4/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Annex III. Figure 3. Mexico: Public Sector Debt Sustainability Analysis (DSA)—Baseline Scenario

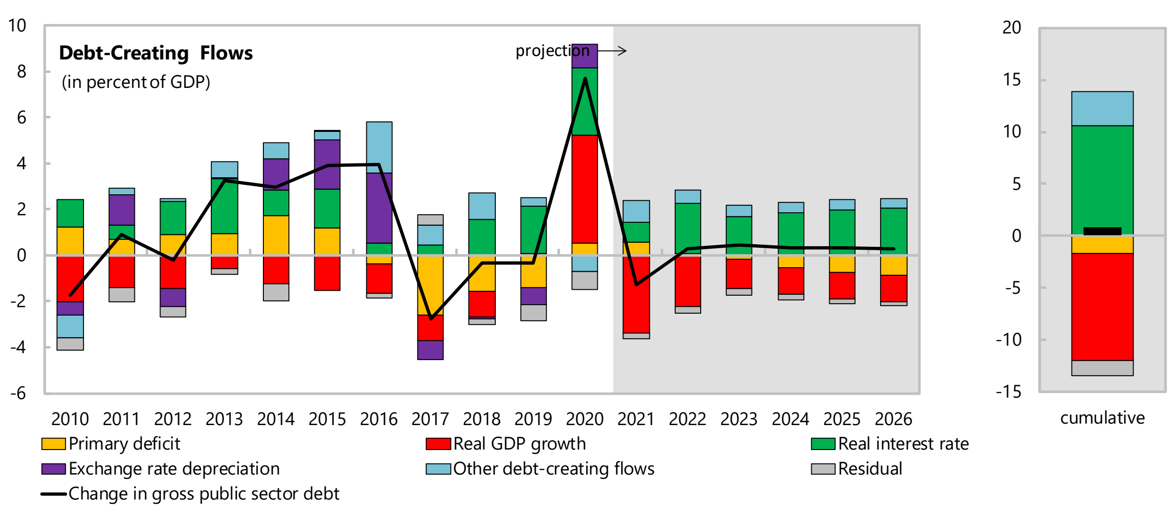
(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

	Actual			Projections						As of October 15, 2021		
	2010-2018 [2/]	2019	2020	2021	2022	2023	2024	2025	2026	Sovereign Spreads		
Nominal gross public debt	48.8	53.3	61.0	59.8	60.1	60.5	60.9	61.2	61.5	EMBIG (bp) 3/		171
Public gross financing needs	10.9	10.5	13.2	13.0	11.3	12.2	12.0	11.8	11.7	5Y CDS (bp)		97
Real GDP growth (in percent)	3.0	-0.2	-8.3	6.2	4.0	2.2	2.0	2.0	2.0	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	4.5	4.1	2.9	5.6	2.8	3.5	3.3	3.2	3.3	Moody's	Baa1	Baa1
Nominal GDP growth (in percent)	7.6	4.0	-5.6	12.1	7.0	5.8	5.4	5.3	5.3	S&Ps	BBB	BBB+
Effective interest rate (in percent) [4/]	7.4	8.1	7.9	7.5	6.8	6.6	6.6	6.7	6.9	Fitch	BBB-	BBB-

Contribution to Changes in Public Debt

	Actual			Projections							
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026	cumulative	debt-stabilizing
Change in gross public sector debt	1.1	-0.3	7.7	-1.3	0.3	0.5	0.3	0.3	0.3	0.4	primary
Identified debt-creating flows	1.4	0.4	8.5	-1.0	0.6	0.7	0.6	0.5	0.5	1.9	balance [9/]
Primary deficit	0.2	-1.4	0.5	0.6	0.1	-0.2	-0.6	-0.7	-0.9	-1.7	1.3
Primary (noninterest) revenue and grants	23.7	23.2	24.0	23.6	22.8	22.6	22.6	22.7	22.8	137.2	
Primary (noninterest) expenditure	24.0	21.8	24.6	24.2	22.9	22.4	22.1	22.0	21.9	135.6	
Automatic debt dynamics [5/]	0.5	1.4	8.7	-2.5	-0.1	0.4	0.7	0.8	0.9	0.2	
Interest rate/growth differential [6/]	-0.1	2.2	7.6	-2.5	-0.1	0.4	0.7	0.8	0.9	0.2	
Of which: real interest rate	1.2	2.1	2.9	0.9	2.2	1.7	1.8	2.0	2.0	10.6	
Of which: real GDP growth	-1.3	0.1	4.7	-3.4	-2.2	-1.3	-1.1	-1.2	-1.2	-10.4	
Exchange rate depreciation [7/]	0.6	-0.7	1.1	…	…	…	…	…	…	…	
Other identified debt-creating flows	0.6	0.4	-0.7	0.9	0.6	0.5	0.4	0.4	0.4	3.3	
Change in assets	0.6	0.4	-0.7	0.9	0.6	0.5	0.4	0.4	0.4	3.3	
Residual, including asset changes [8/]	-0.3	-0.7	-0.8	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2	-1.5	



Source: IMF staff.

1/ Public sector is defined as the Central government, state-owned enterprises, public sector development banks, and social security funds. Excludes local governments.

2/ Based on available data.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[(r - \pi(1+g) - g + ae(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi(1+g)$ and the real growth contribution as $-g$.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

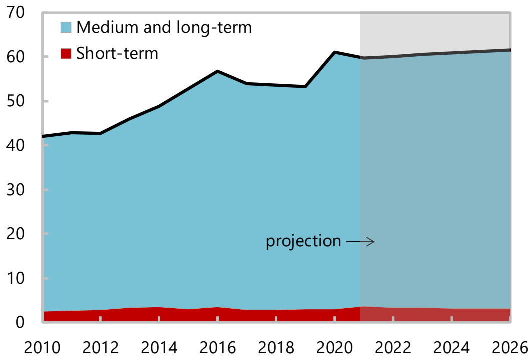
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Annex III. Figure 4. Mexico: Public DSA—Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

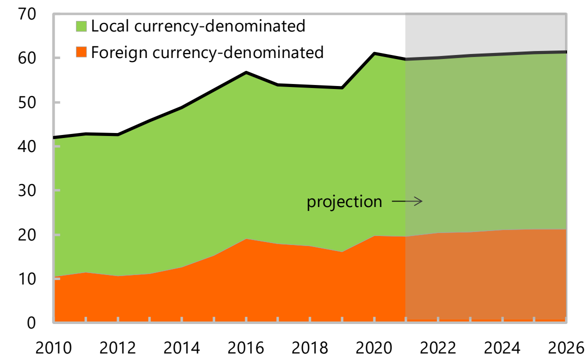
By Maturity

(in percent of GDP)



By Currency

(in percent of GDP)

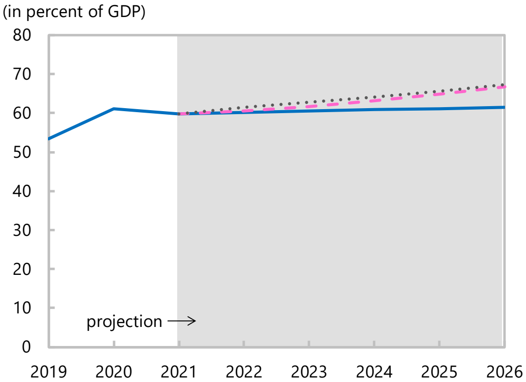


Alternative Scenarios

Baseline   Historical   Constant Primary Balance

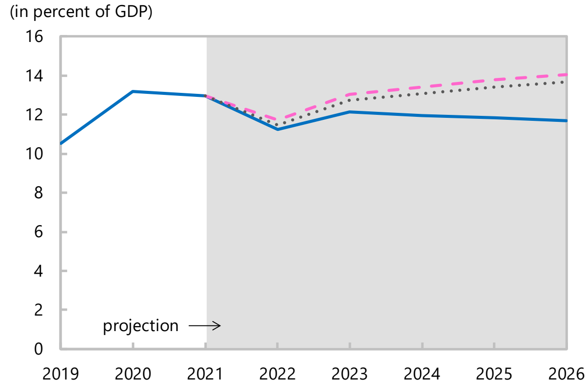
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

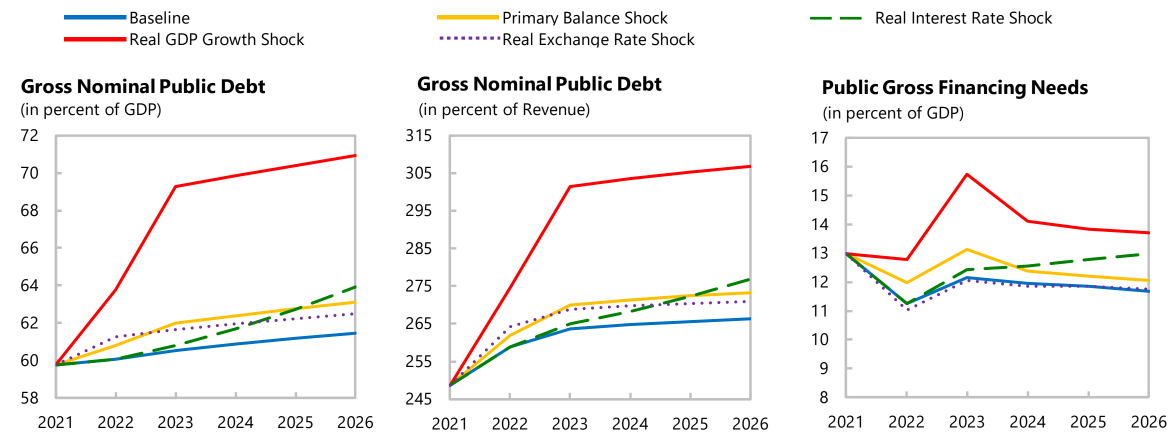
(in percent)

Baseline Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	6.2	4.0	2.2	2.0	2.0	2.0
Inflation	5.6	2.8	3.5	3.3	3.2	3.3
Primary Balance	-0.6	-0.1	0.2	0.6	0.7	0.9
Effective interest rate	7.5	6.8	6.6	6.6	6.7	6.9
Constant Primary Balance Scenario						
Real GDP growth	6.2	4.0	2.2	2.0	2.0	2.0
Inflation	5.6	2.8	3.5	3.3	3.2	3.3
Primary Balance	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Effective interest rate	7.5	6.8	6.6	6.6	6.7	6.9

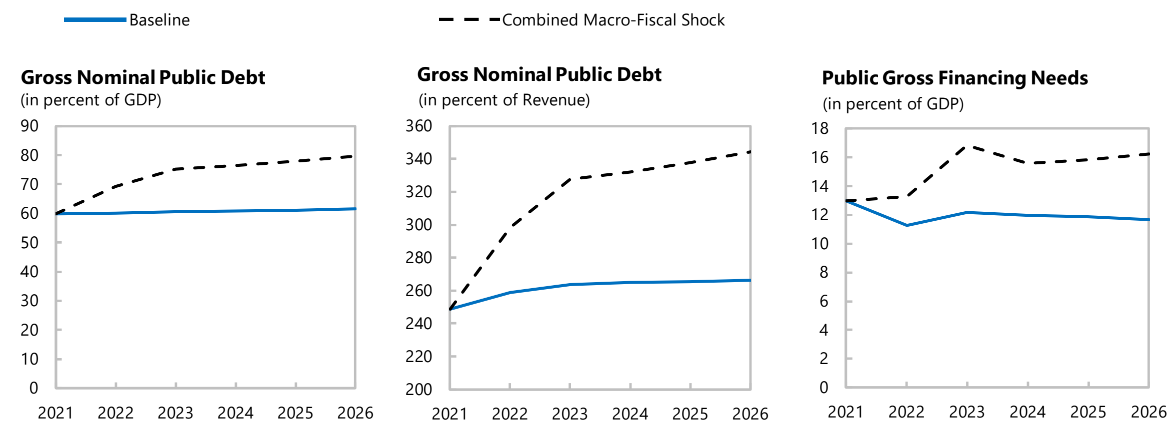
Historical Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	6.2	1.3	1.3	1.3	1.3	1.3
Inflation	5.6	2.8	3.5	3.3	3.2	3.3
Primary Balance	-0.6	0.0	0.0	0.0	0.0	0.0
Effective interest rate	7.5	6.8	6.6	6.6	6.7	6.9

Annex III. Figure 5. Mexico: Public DSA—Stress Tests

Macro-Fiscal Stress Tests



Additional Stress Tests



Underlying Assumptions

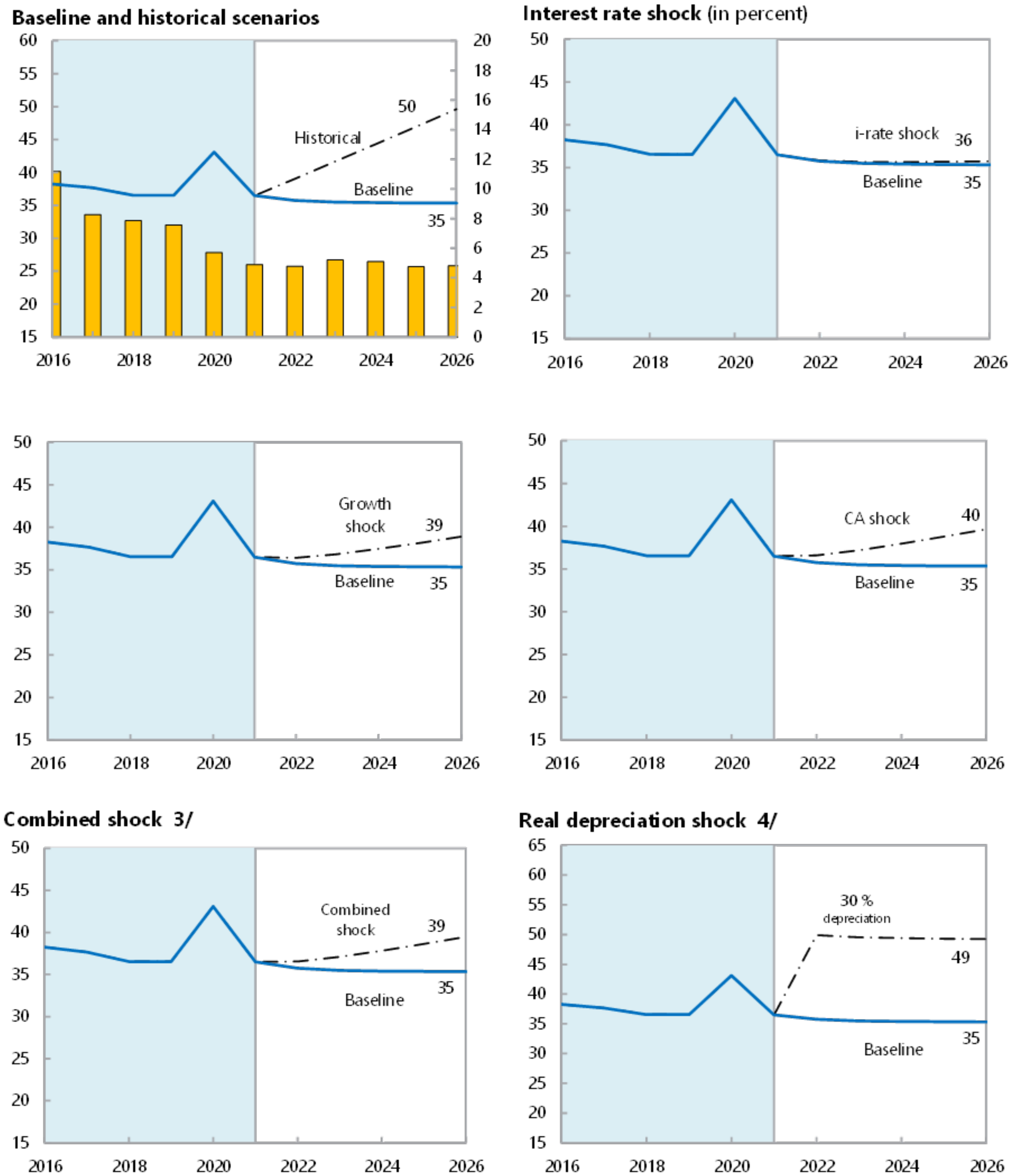
(in percent)

	2021	2022	2023	2024	2025	2026
Primary Balance Shock						
Real GDP growth	6.2	4.0	2.2	2.0	2.0	2.0
Inflation	5.6	2.8	3.5	3.3	3.2	3.3
Primary balance	-0.6	-0.8	-0.5	0.6	0.7	0.9
Effective interest rate	7.5	6.8	6.6	6.7	6.8	6.9
Real Interest Rate Shock						
Real GDP growth	6.2	4.0	2.2	2.0	2.0	2.0
Inflation	5.6	2.8	3.5	3.3	3.2	3.3
Primary balance	-0.6	-0.1	0.2	0.6	0.7	0.9
Effective interest rate	7.5	6.8	7.1	7.5	7.9	8.4
Combined Shock						
Real GDP growth	6.2	0.4	-1.4	2.0	2.0	2.0
Inflation	5.6	1.9	2.6	3.3	3.2	3.3
Primary balance	-0.6	-1.1	-1.9	0.6	0.7	0.9
Effective interest rate	7.5	7.3	7.0	7.5	7.9	8.3

	2021	2022	2023	2024	2025	2026
Real GDP Growth Shock						
Real GDP growth	6.2	0.4	-1.4	2.0	2.0	2.0
Inflation	5.6	1.9	2.6	3.3	3.2	3.3
Primary balance	-0.6	-1.1	-1.9	0.6	0.7	0.9
Effective interest rate	7.5	6.8	6.6	6.8	6.8	7.0
Real Exchange Rate Shock						
Real GDP growth	6.2	4.0	2.2	2.0	2.0	2.0
Inflation	5.6	9.7	3.5	3.3	3.2	3.3
Primary balance	-0.6	-0.1	0.2	0.6	0.7	0.9
Effective interest rate	7.5	7.3	6.5	6.5	6.6	6.8

Source: IMF staff.

Annex III. Figure 6. Mexico: External Debt Sustainability: Bound Tests 1/ 2/
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.
1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.
3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.
4/ One-time real depreciation of 30 percent occurs in 2021.

Annex III. Table 1. Mexico: External Debt Sustainability Framework

(In percent of GDP, unless otherwise indicated)

	Actual							Projections						
	2016	2017	2018	2019	2020			2021	2022	2023	2024	2025	2026	Debt-stabilizing non-interest current account 6/
1 **Baseline: External debt**	38.3	37.7	36.5	36.5	43.1			**36.5**	**35.8**	**35.5**	**35.4**	**35.4**	**35.3**	**-1.6**
2 Change in external debt	2.7	-0.6	-1.1	0.0	6.6			-6.6	-0.7	-0.3	-0.1	0.0	0.0	
3 Identified external debt-creating flows (4+8+9)	0.6	-4.0	-2.3	-3.5	0.9			-4.1	-3.0	-2.2	-1.9	-1.7	-1.6	
4 Current account deficit, excluding interest payments	0.4	-0.1	0.2	-1.8	-4.7			-1.9	-1.6	-1.4	-1.2	-1.0	-0.9	
5 Deficit in balance of goods and services	-75.9	-77.3	-80.6	-77.9	-78.7			-79.2	-75.8	-76.3	-76.6	-77.0	-77.5	
6 Exports	37.0	37.7	39.3	38.8	40.4			39.1	37.5	37.8	37.9	38.1	38.3	
7 Imports	-39.0	-39.5	-41.3	-39.1	-38.3			-40.1	-38.3	-38.5	-38.7	-38.9	-39.1	
8 Net non-debt creating capital inflows (negative)	-2.9	-3.0	-2.2	-2.5	-2.1			-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	
9 Automatic debt dynamics 1/	3.1	-0.9	-0.2	0.7	7.8			-0.3	0.5	1.1	1.2	1.2	1.3	
10 Contribution from nominal interest rate	1.9	1.9	1.9	2.1	2.3			2.0	1.8	1.8	1.8	1.9	1.9	
11 Contribution from real GDP growth	-1.0	-0.8	-0.8	0.1	3.6			-2.2	-1.4	-0.7	-0.7	-0.7	-0.7	
12 Contribution from price and exchange rate changes 2/	2.3	-2.0	-1.3	-1.4	1.9			...	...	...	...	...	...	
13 Residual, incl. change in gross foreign assets (2-3) 3/	2.1	3.4	1.1	3.5	5.6			-2.5	2.3	2.0	1.8	1.6	1.5	
External debt-to-exports ratio (in percent)	103.5	99.8	93.1	94.2	106.6			93.3	95.3	94.0	93.4	92.8	92.2	
Gross external financing needs (in billions of US dollars) 4/	120.6	95.8	96.2	96.1	61.3			62.9	65.5	75.4	77.5	75.7	80.2	
in percent of GDP	11.2	8.3	7.9	7.6	5.7	10-Year	10-Year	4.9	4.8	5.2	5.1	4.8	4.8	
Scenario with key variables at their historical averages 5/								**36.5**	**39.0**	**41.7**	**44.3**	**46.9**	**49.6**	**0.0**
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation							
Real GDP growth (in percent)	2.6	2.1	2.2	-0.2	-8.3	1.3	3.6	6.2	4.0	2.2	2.0	2.0	2.0	
GDP deflator in US dollars (change in percent)	-10.3	5.2	3.2	4.0	-7.7	-0.8	7.4	12.7	2.7	3.2	2.9	2.7	2.6	
Nominal external interest rate (in percent)	4.8	5.2	5.3	5.9	5.3	5.4	0.5	5.5	5.4	5.4	5.4	5.6	5.7	
Growth of exports (US dollar terms, in percent)	-1.3	9.8	9.8	2.6	-11.9	3.6	7.9	15.8	2.4	6.3	5.3	5.3	5.2	
Growth of imports (US dollar terms, in percent)	-1.8	8.9	10.3	-1.9	-17.0	2.6	9.1	25.4	1.9	6.1	5.4	5.4	5.2	
Current account balance, excluding interest payments	-0.4	0.1	-0.2	1.8	4.7	0.4	1.7	1.9	1.6	1.4	1.2	1.0	0.9	
Net non-debt creating capital inflows	2.9	3.0	2.2	2.5	2.1	2.3	0.6	1.9	1.9	1.9	1.9	1.9	1.9	

1/ Derived as [r - g - r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock. r increases with an appreciating domestic currency (e > 0) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period, excluding reserve accumulation.

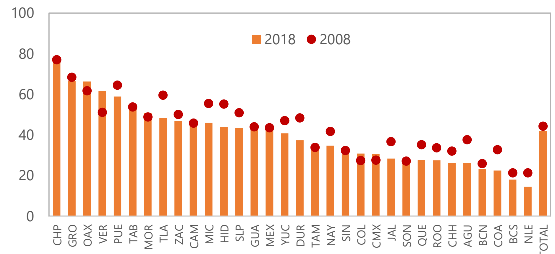
5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Annex IV. Social Needs, Priorities, and Reforms[1]

1. Socioeconomic disparities in Mexico were high prior to the pandemic. About 42 percent of the population was in poverty, with notable heterogeneity across states. For example, the three poorest states, which are in the South, had poverty rates over 65 percent compared to below 23 percent among the three least poor states. There had been a reduction in poverty during the decade prior to the pandemic. Poverty is generally higher among women; domestic and gender violence are high. Based on OECD data, the elderly experience higher poverty rates and a greater intensity of poverty. The incidence of obesity, hypertension, diabetes is also high. In 2018, the share of consumption or income of the poorest was relatively low compared to many EMs. About 40 percent of households with children/adolescents and a head of working age did not have social protection (ECLAC-UNICEF, 2020).

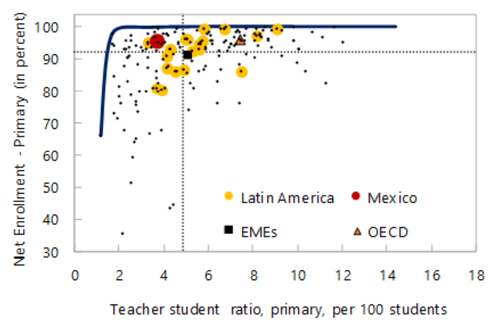
Poverty Rates



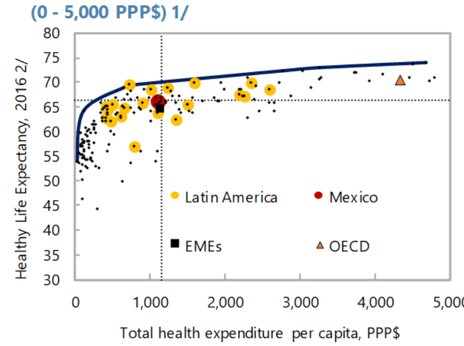
Source: CONEVAL.

2. There were also notable shortfalls in education and health. Spending per student was well below the OECD average and somewhat below the EM average, as were the teacher-to-student ratio and the PISA score. There is substantial variation in education outcomes and quality across states, with a strong correlation between income per capita and literacy rates. Similarly in health, public spending was well below the OECD and somewhat below the EM average, with substantial variation in access to health care across states. A frontier analysis that relates inputs to outputs suggest that there is room to improve quality and efficiency in both areas.[2]

Teachers and Outcome, primary, Latest Value Available 1/



Health Efficiency Frontier, Latest Value Available (0 - 5,000 PPP$) 1/



Sources: IMF FAD Expenditure Assessment Tool (EAT), World Bank, World Health Organization.
1/ Dash lines are the average of Latin America.
2/ Healthy life expectancy (HALE) is a measure of health expectancy that applies disability weights to health states to compute the equivalent number of years of life expected to be lived in full health.

3. The pandemic has exacerbated these gaps. As noted in the main text (¶2), socioeconomic disparities worsened across many indicators. CONEVAL (2021) estimates that the number of people in poverty increased from 51.9 to 55.7 million. National figures mask large state-level variation; for example, poverty in three states increased by over 8 percentage points. However, old-age and rural poverty declined. Domestic and gender violence worsened. According to UN/ECLAC projections, Mexico witnessed one of the highest increases in poverty in 2020.

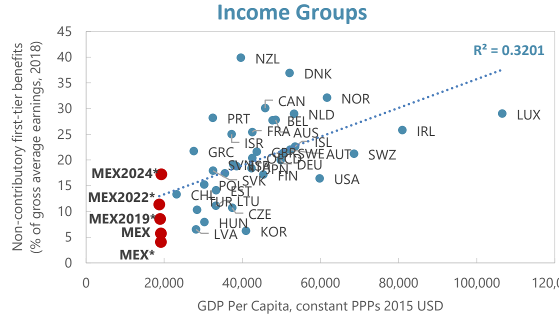
[1] Prepared by Juan Pablo Cuesta Aguirre and Swarnali Ahmed Hannan (WHD), based on IMF WP/21/244.

[2] The efficiency frontier is calculated using Data Envelopment Analysis (DEA) technique. For further details, see IMF Expenditure Assessment Tool (EAT) and the underlying technical note.

4. Scarring risks are high. Azevedo et al. (2021) and Engzell et al. (2020) estimate sizable learning losses from school closures and dropouts owing to the pandemic, with potentially larger impacts on marginalized and vulnerable groups (girls, minorities, children whose parents' education is low, and persons with special needs). Mexico has among the largest gaps in internet coverage for children across income groups in the region, which could exacerbate learning losses, school dropouts, and education gaps. In that context, the authorities would need to ensure that their social programs (see below) effectively reduce education losses among the poor and the vulnerable.

5. The government's social programs since 2019 have focused on universal coverage and social (non-contributory) pensions. They have emphasized support to indigenous groups, the elderly, and people with special needs. Prior to the pandemic, overall spending on social assistance was raised from 1.8 percent of GDP in 2018 to 2.1 percent of GDP in 2019. Resources were also reallocated, notably to increase social pensions in the program Pensión para el Bienestar de las Personas Adultas Mayores over three-fold from MXN 36 billion in 2018 and MXN 129 billion in 2020. The share of spending in this program among social programs increased from 8 percent in 2018 to around 20 percent in 2019-20. Monthly payments were more than doubled from MXN 580 per month in 2018 to MXN 1275 per month in 2019, and as of July 2021 was at MXN 1550 per month. Going forward, the authorities plan to increase monthly payments to MXN 3000 by 2024 and the eligibility age has been lowered from 68 to 65 years.[3] The emphasis on social pensions partly reflects the prevalence of old-age poverty as well as limited coverage of the pension system, particularly for women, and low replacement rates. However, note that while the 2018 social pensions were low in OECD comparison, the planned 2024 levels are relatively high (text chart).

Non-Contributory Pension Benefits Across Income Groups



Source: OECD, WEO, and IMF Staff calculations. Includes residence-based and targeted non-contributory first-tier benefits. The datapoints marked in asterisks are staff estimations using government's announced social pension increases.

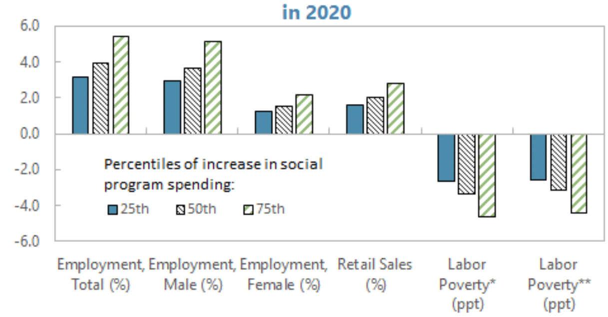
6. This has marked a shift from the earlier approach that emphasized targeted and conditional transfers. Two signature social programs—Prospera and Seguro Popular—were discontinued and replaced. Prospera provided cash transfers to poor families, conditional on school attendance and regular health checks for children. Prospera's predecessors Progresa and Oportunidades positively impacted school enrolment, education and health levels, and nutritional status, and helped reduce poverty in rural areas (World Bank, 2014, Parker and Vogl 2018). However, these programs could have been further improved as some concerns were raised about targeting, exclusion errors, and corruption (Bearman 2019, Covarrubias 2018). Seguro Popular provided public health insurance to cover a wide range of services without co-pays for uninsured low-income citizens. It was replaced by the Institute for Health for Wellbeing (INSABI) that aims to establish fully funded, integrated public health networks, cancelling all private subcontracting and offering free, universal services.

7. Higher spending on social programs, which was predominantly budgeted before the pandemic, helped to reduce poverty—highlighting the helpful role policy could have played

[3] Previously, the minimum age was 65 years for indigenous population and 68 years for other adults.

to ameliorate COVID-19's impact. Cross-sectional regressions using state-level data suggest that the increase in social program spending across states in 2020 mitigated the pandemic's negative effects on employment, retail sales, and poverty.[4] All else equal, a state that increased spending by 0.27 percentage points of GDP (75th percentile) increased employment by 5.4 percent, while a state that increased spending by 0.15 percentage points of GDP (25th percentile) increased employment by 3.1 percent. The effects are higher for male than female employment. Similarly, labor poverty outcomes improved with greater policy support. Although Mexico provided very limited support in response to the pandemic, these results suggest that higher support could have further mitigated COVID-19's effects on the economy and poverty.

Impact of Social Programs Across States in 2020



* Average of Q1, Q3, Q4 of 2020 versus Q1-Q4 of 2019. ** Average of Q1, Q3, Q4 of 2020 versus same quarters of 2019. All the results are statistically significant (at least 10 percent level) except female employment and retail sales.

8. Higher spending is needed for social programs, education, and health to mitigate the effects of COVID-19 and reduce socioeconomic gaps. Higher spending would need to be calibrated to potential tax collections. For instance, a medium-term tax reform that targets 3 percent of GDP could finance spending of around 2 percent of GDP over the medium term for social programs, education, and health. Although more resources are likely needed to make satisfactory progress toward the SDG goals, such spending would constitute a meaningful and pragmatic start.

9. Greater efficiencies should also be sought, drawing on lessons learned. Higher spending should be a part of a comprehensive approach that assesses the needs of all vulnerable groups and is part of a coherent policy package that addresses various challenges (e.g., gaps, overlaps, and fragmentation across social programs, high labor market informality). Targeting should be improved to seal leakage of benefits to high-income groups and could be made more progressive. Due attention should be paid to evidence-based programming, sound operational design, and coordination across agencies; according to CONEVAL, these appear to be lacking.

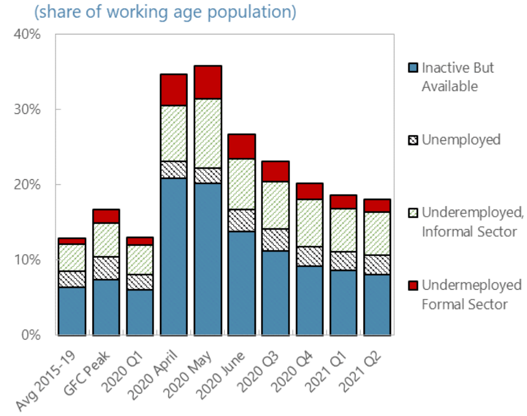
[4] The 2020 change in economic activity (employment, retail sales) and poverty (labor poverty) were regressed on the change in social program spending in 2020 (actual 2020 minus actual 2019, divided by 2019 GDP), controlling for state-level income per capita, tourism and export exposures, population density, mobility, cases per capita, and a lagged dependent variable. Social programs include social assistance and labor market.

Annex V. Labor Market Dynamics and Scarring Risks[1]

1. The pandemic has caused a historic disruption in the labor market, with distress concentrated in inactivity and underemployment and sizable slack persisting.

- In 2020Q2, more than 10 million jobs were lost, a rate not seen before. The share of the working age population that was inactive but available to work, typically about 6½ percent with a standard deviation of one half, jumped above 20 percent.[2] The share of the underemployed, typically 4½ percent with similarly small variation, jumped above 13 percent. In many cases, workers may have been waiting on temporarily closed or furloughed jobs, while many others may have been constrained by family and childcare needs as schools and other facilities closed. The share of unemployed, underemployed, and inactive but available people of working age spiked above 35 percent—17 standard deviations from the pre-pandemic mean.

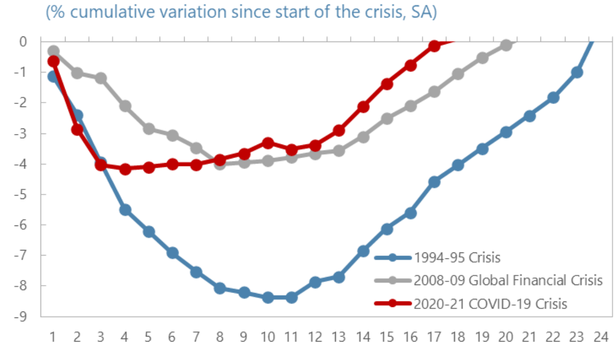
Vulnerable Workers
(share of working age population)



Source: INEGI ENOE and ETOE, IMF Staff calculations

- Since then, employment has recovered faster than in previous major contractions. Despite the second and third waves of the pandemic, total employment recovered in absolute numbers by late spring 2021 and as a share of the working age population by late summer 2021. The number of formal jobs exceeded its early 2020 level by August 2021.

Workers Affiliated to IMSS
(% cumulative variation since start of the crisis, SA)



Note: The relative loss of each curve is calculated taking as reference the months of December 1994, September 2008 and February 2020, respectively.
Source: IMSS and IMF Staff calculations.

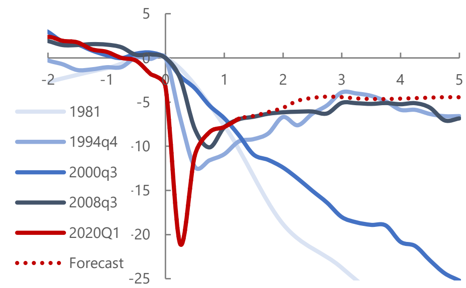
- Nonetheless, slack remains substantial. Nearly 1½ years into the pandemic, the share of the underemployed remains above 12 percent, a threshold exceeded for only one month during the global financial crisis. The share of workers who are inactive but available for work has subsided but remains 3 standard deviations above its historical average. These shares have been declining much slower than implied by their historical processes (IMF 2020, Annex IV).

[1] Prepared by Kevin Wiseman (WHD).

[2] Quarterly data since 2005 are from Mexico's labor survey (ENOE). This survey went telephone-only for 2020Q2 and is known as the ETOE for that quarter. Some caution is needed in comparing results from 2020Q2 with the rest of the sample, but the smooth transition of these series with the resumption of in-person interviews suggests that the effects are not predominantly due to the change in methods.

2. Protracted labor market slack raises the specter of permanent economic damage. Economic scarring is defined as a permanent reduction in output following a recession. The extent of the reduction depends on features such as pre-existing economic imbalances and policy space deployed. While certain types of natural disasters show notably limited scarring, large pandemics appear to induce meaningful long run reductions in output, especially when fiscal support is limited (IMF WP 21/181).

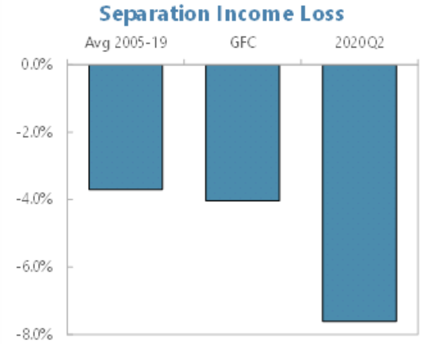
Real GDP vs Pre-Crisis Trend



Source: INEGI, IMF Staff Calculations.

3. The cost of unemployment during the pandemic has been unusually large. Wage developments and job quality suggest that unemployed workers turned to lower paying and lower quality jobs in the absence of adequate fiscal support, heightening scarring risks. The longer workers remain underemployed and in jobs that do not realize their full productivity, the more these losses will become permanent.

Separation Income Loss

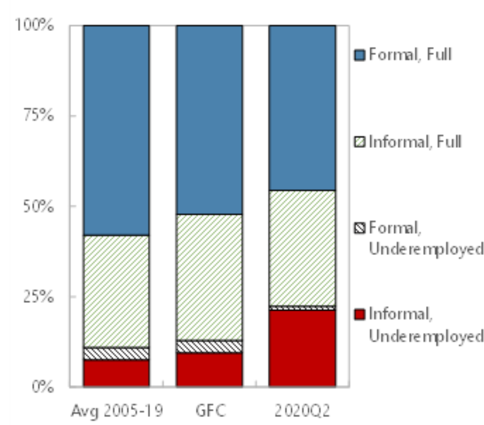


Reduction in income following a one-quater unemployment spell for those initially fully employed and subsequently finding any employment.
Source: INEGI ENOE and ETOE, staff calculations.

- *Wages.* Workers who were fully employed before the pandemic—but experienced a bout of unemployment in the following quarter and found some employment (possibly underemployed) in the subsequent quarter—typically saw substantially larger 'separation income loss' in their new work compared to earlier downturns. Workers who became unemployed at the peak of the pandemic saw their income decline nearly 8 percent on average as compared to about 4 percent during the peak quarters of the global financial crisis (GFC) and on average.

- *Job quality.* Job quality also deteriorated more dramatically. Fully employed formal workers experiencing a bout of unemployment returned to jobs that were more frequently informal and were more frequently underemployed than in a typical unemployment spell or during the GFC.

Next Jobs



New employment category of formerly fully-employed formal workers experiencing one quarter of unemployment (unemployed in any month of Q2 for the 2020Q2 sample.
Source: INEGI ENOE and ETOE, staff calculations.

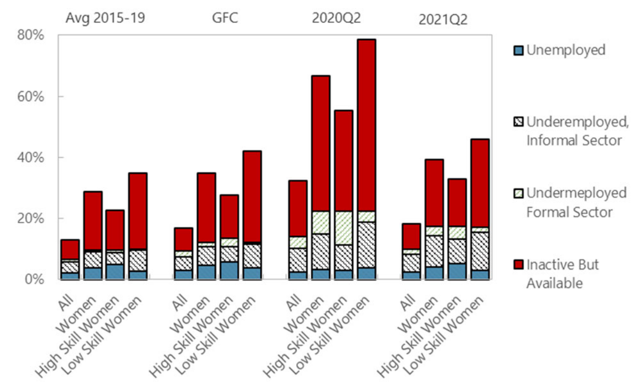
4. Female workers, particularly low-skilled workers, have been hit particularly hard.

- As has been the case for women in many places globally, women in Mexico have been more intensively employed in contact-intensive services and have disproportionately borne the burden of childcare as schools and other childcare centers have closed (IMF WP 21/95 and World Bank 2021). Female employment fell 23 percent in 2020Q2, and inactivity spiked. Although employment has substantially recovered since then, enduring underemployment, especially informal underemployment, has been concentrated among women.

- Low-skilled women[3] saw the worst consequences, with inactivity and under-employment even now above the peak rates witnessed during the GFC. Mexico has a large, positive tele-workability gap among female workers (IMF 2020), suggesting that high-skilled female workers would be relatively insulated. Relative to higher-skilled women, higher underemployment among low-skilled women is offset by lower unemployment, but the underemployment is also concentrated in the informal sector further eroding employment quality.

Vulnerable Workers by Gender

(share of 2020Q1 employment)



Source: INEGI ENOE and ETOE, IMF Staff calculations

5. Labor market scarring can be reduced through further fiscal support and well-calibrated reforms. The longer workers remain underemployed and in jobs that do not realize their full productivity, the more their human capital will atrophy, losses become permanent, and hysteresis or scarring materialize. Additional policy support to underpin the recovery would reduce these risks. Consideration should be given to adjusting minimum wages in line with labor productivity, as recent sharp hikes risk dis-incentivizing formal work. To facilitate female labor force participation, improvements to childcare provision is recommended, alongside measures to tackle relatively high teenage pregnancy and gender violence that would improve well-being and growth (World Bank 2019 and 2021).

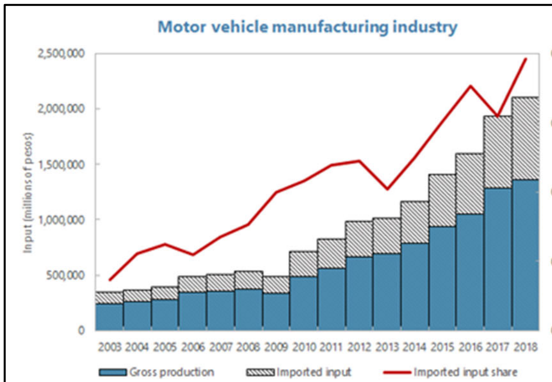
[3] Defined as those with an education up to a secondary education in the Mexican system, through age 15.

Annex VI. The Role of Semiconductors in Mexico's Trade[1]

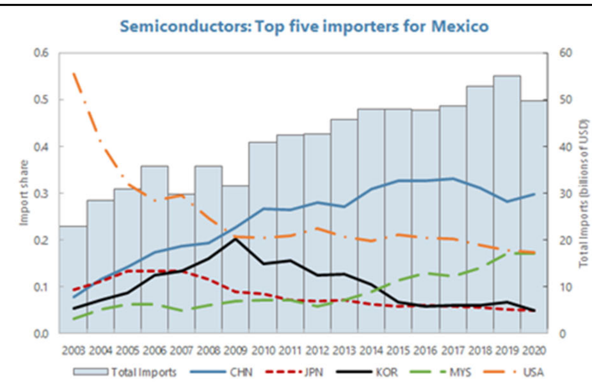
1. The U.S. remains Mexico's pre-eminent trade partner, although China's role has increased over the past two decades.[2] The export share to the U.S.—the largest destination and sourcing market—has declined from 88 percent in 2003 to 79 percent in 2020, while the import share has declined from 62 percent in 2003 to 44 percent in 2020 (UN Comtrade). Over the same period, the export share to China has tripled in the past two decades from 0.6 percent to 1.9 percent, while the import share from China has increased nearly fourfold from 5.5 percent to 19.2 percent. This is broadly in line with the increase in China's trade shares globally.

2. Mexico's trade relies heavily on the auto sector, but semiconductors play an important role.[3] Motor vehicle and motor vehicle parts are the two largest exporting sectors comprising 32 percent of exports in 2018, followed by computers and semiconductors comprising 12 percent of exports. The U.S. is the largest export market, comprising 41 percent of motor vehicle exports in 2014. Semiconductors and other electrical component manufacturing was the largest importing industry in 2018, accounting for about 9 percent of total imports, followed by motor vehicle parts and engine, turbine, and power transmission to produce motor vehicles.

3. In both the auto and semiconductor sectors, Mexico's reliance on external markets for sourcing inputs has increased. The imported input share in the production of motor vehicles increased from 39 percent in 2003 to 55 percent in 2018. This reflects rising imported input shares of almost all top inputs, for example, of motor vehicles parts from 50 percent in 2003 to 68 percent in 2018, and of motor vehicle body and trailers from 43 percent in 2003 to 54 percent in 2018. Similarly, the share of imported input value in semiconductor production went up from 77 percent in 2003 to 92 percent in 2018. While the U.S. supplied above half of semiconductors to Mexico



Source: Input-output tables from INEGI.



Source: UN Comtrade.

[1] Prepared by Mengqi Wang and Swarnali Ahmed Hannan (WHD). Mengqi Wang was a summer intern at WHD.

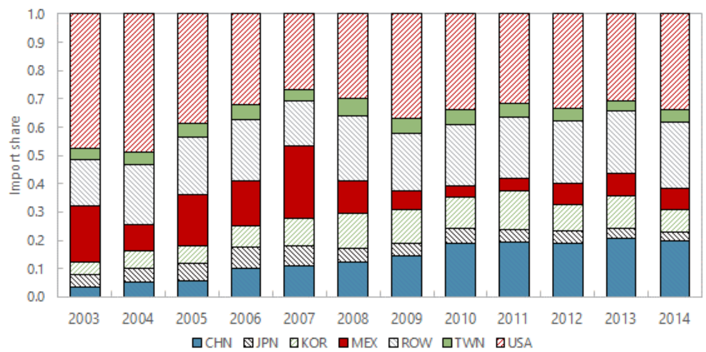
[2] In this analysis, three databases are combined: INEGI's input-output tables for Mexico covering 2003–18 (which provides information on production and input-output linkages across industries in the Mexican economy), cross-country input-output tables from World Input-Output Database (WIOD) covering 2003–14 (which provides information on input sourcing and output destination across countries for each industry), and product-level trade flow data from UN Comtrade covering 2003–20 (which provides information on trade flows of products that can be aggregated at the industry level). Using these three databases, a panel dataset is constructed at the industry level comprising 258 industries at the NAICS 4-digit level as coded in INEGI dataset at the annual or monthly frequency.

[3] Data source: product-level trade flow data from UN Comtrade aggregated to industry level as coded in INEGI.

before 2007, China has been the largest supplier since 2010. Besides semiconductor final goods, China's share of input sourcing for semiconductor production increased from 3.5 percent in 2003 to about 20 percent in 2014.

4. Semiconductors used in motor vehicle production are mostly imported. In 2018, semiconductors used in the motor vehicle parts sector were valued at 75 billion pesos and accounted for 6.2 percent of inputs.[4] Above 95 percent were imported. As of 2014, when the latest WIOD data are available, the U.S. was the largest importing country of semiconductors used in motor vehicle parts, even though its share decreased from 48 percent in 2003 to 34 percent in 2014. China's share increased from 3 percent in 2003 to 20 percent in 2014. Meanwhile, Mexico's domestic supply of semiconductors decreased from 20 percent in 2003 to 8 percent in 2014.

Import share from top sourcing countries for semiconductors to produce motor vehicle parts manufacturing industry



Source: WIOD and INEGI.
Note: The industry codes from WIOD were converted into NAICS to match INEGI's data, at both input (semiconductors) and output (motor vehicle parts) levels. The matching process was based on the authors' judgment.

5. While continued strong U.S. growth constitutes an important tailwind for Mexico, supply chain shortages, notably of semiconductors, are a headwind. Since Mexico imports most of the semiconductors used in motor vehicle production and largely sources supplies for its own domestic semiconductor production, relatively speedy resolution of current supply chain constraints will be essential for manufacturing and export growth to continue supporting Mexico's recovery. The recent literature also suggests that semiconductor shortages would have negative impact on motor vehicle production and economic growth. Attinasi et al. (2021) find that the motor vehicle sector is the most affected industry by the chip shortage, with an 11.3 percent decline in global production of passenger vehicles from 2020Q4 to 2021Q1. For Mexico, this decline is about 19 percent. The Mexican central bank's 2021Q2 Quarterly Report estimates a loss in GDP growth rate of 0.71-0.99 p.p. in 2021 owing to the impact of semiconductor supply on automotive production.

[4] Data source: input-output tables from INEGI during 2003–18. Semiconductors used in the motor vehicle sector were valued at 8.0 billion pesos and accounted for 0.6 percent of total inputs in 2018. Semiconductors are not particularly used in the motor vehicle body and trailers sector, being worth 0.2 billion pesos and accounting for 0.3 percent of total inputs.

Annex VII. Trade Diversion Effects for Mexico from Global Trade Tensions[1]

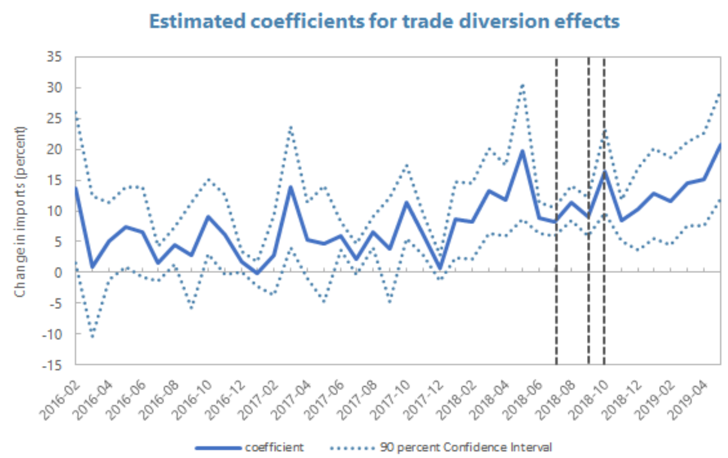
1. **An often-cited thesis in support of Mexico's growth prospects is that it could benefit from a relocation of supply chains in the context of global trade tensions.** Specifically, heightened trade and technology tensions between the U.S. and China could imply some positive spillovers to Mexico insofar as trade is diverted toward it. In the 2020 Article IV consultation report for Mexico, staff had noted that taking fuller advantage of the benefits of trade integration within North America (from NAFTA and subsequently the USMCA) would require implementing structural reforms to unlock productivity, e.g., tackling informality, facilitating financial deepening, and further liberalizing product markets.

2. **This annex augments previous staff analysis by assessing the impact on Mexico's trade from the first three rounds of U.S. tariffs on China.**[2] The output and input U.S.-China tariff for each industry in Mexico is calculated at the NAICS 4-digit level. The output tariff in an industry is defined as the weighted average of U.S. import tariff on Chinese products over all products (Bown, 2021) in that industry, where the weight is the U.S. import value from China of one product as a share in total value of all related products. The input tariff is constructed based on output tariffs and input-output linkage across industries in Mexico (fixed in 2015). After the three rounds, the output and input tariffs increased four-fold, affecting almost all industries in Mexico through input-output linkages.

3. **Using a difference-in-differences method, a positive and significant trade diversion effect is noted, coming mainly from the output tariff increase.** This methodology identifies the trade diversion effect based on the industry variation in tariff exposure to the U.S.-China trade tensions, which is measured by output and input tariff changes during the tariff increase episode. Compared with industries that were not affected by the trade tensions, U.S. imports from affected industries in Mexico increased on average by 16.1 percent owing to the trade tensions. If one industry's total tariff change during the period of heightened trade tensions increased by one standard deviation (10.3 percent), then its U.S. imports grew 7.2 percent higher owing to the trade tensions. Both output and input tariff changes have a positive impact, but the sign of the latter could depend upon the specification. Using a flexible specification to estimate the coefficient of each month, the difference in U.S. import levels between more-affected and less-affected industries start to appear in early 2018, confirming the presence of trade diversion.

[1] Prepared by Mengqi Wang and Swarnali Ahmed Hannan (WHD). Mengqi Wang was a summer intern at WHD.

[2] The first round of tariffs (known as List 1, imposed on July 6, 2018) comprised 25 percent duties, covered US$34 billion of imported products. The second round (List 2, August 23, 2018) comprised 25 percent duties, covered $16 billion of imports. The third round (List 3, September 24 2018) comprised 10 percent tariffs on $200 billion of imports. There were two additional rounds that are not covered by this study. Source: Bown (2021).



Notes: This figure plots the estimated coefficients (solid line) and 90 percent confidence intervals (dashed lines) in each month. The coefficient in each month measures the average difference in the U.S. (log) import values in this month between industries that are exposed to tariff increase during the U.S.-China trade tensions and industries that are not affected by the tensions. The coefficient is estimated by a difference-in-differences method; hence, we control for the average difference in the U.S. import values between the treated and control groups in January 2016. We consider industries to be exposed to the U.S.-China trade tensions when the output or input tariff imposed by the U.S. on Chinese products increased. Vertical lines indicate the first three rounds of tariffs imposed by the U.S.

4. **The estimated trade diversion effects vary across industries and are positively correlated with changes in industry-level tariff exposures.** The industry-specific trade diversion effect is estimated as the difference in average U.S. industrial import values for each industry before and after the U.S.-China trade tensions materialized, using time-series data and controlling for several macroeconomic variables (GDP growth rates of the U.S. and Mexico, inflation rates of the two countries, and the peso-U.S. dollar exchange rate). Over 75 percent of industries expanded their exports to the U.S. after the U.S.-China trade tensions, with a mean increase in exports of 7.8 percent. These industry-specific trade diversion effects are found to be positively correlated with the change in tariff exposures in both extensive and intensive margins. For the extensive margin, a positive correlation between the estimated trade diversion effect and the dummy variable indicates that industries exposed to U.S.-China trade tensions experienced a larger increase in U.S. import values, compared with those unexposed. For the intensive margin, a positive correlation between the estimated effect and the size of tariff change implies that industries with a larger increase in tariff of U.S. on China experienced a greater increase in US import values after the U.S.-China trade tensions, compared to those with lower increase in tariff.

Although Mexico's exports benefitted from trade diversion, important caveats should be borne in mind. As discussed in IMF WEO (April 2019, Ch. 4), higher tariffs would leave the global economy worse off, even if some countries may benefit from trade diversion. Further, negative confidence effects and tighter financial conditions triggered by trade tensions would affect all countries negatively. Moreover, using a sample of 35 countries and 13 manufacturing sectors, the chapter found that, while there is a positive and significant effect on value added and employment, trade diversion did not have a significant effect on labor productivity and total factor productivity. This reinforces the need for structural reforms to harness the benefits of trade agreements to enhance growth.

INTERNATIONAL MONETARY FUND

MEXICO

October 20, 2021

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By

The Western Hemisphere Department
(in consultation with other departments)

CONTENTS

FUND RELATIONS

(As of August 31, 2021)

The 2021 Article IV discussions were held virtually during September 13 – October 1, 2021. The team comprised Rishi Goyal (head), Swarnali Ahmed Hannan and Kevin Wiseman (all WHD), Carolina Claver (LEG), Jean-Marc Fournier (FAD), Misa Takebe (SPR), and Jeffrey Williams (MCM). Nigel Chalk (WHD) attended the concluding meetings. Alfonso Guerra and Andrea Arevalo Arroyo (OED) also participated. The team met with Finance Secretary Ramírez de la O, Governor Díaz de León, Labor Secretary Alcalde, other government officials, and representatives of the financial and private sectors. The team was supported by Simon Black, Boele Bonthuis, Koralai Kirabaeva, Ian Parry, Mehdi Raissi, Alpa Shah, and Karlygash Zhunussova (all FAD), Keiko Honjo (RES), and Laila Azoor and Juan Pablo Cuesta Aguirre (WHD).

Mexico has accepted the obligations of Article VIII, sections 2, 3, and 4. Comprehensive economic data are available for Mexico on a timely basis and economic data are adequate for surveillance. It subscribes to the SDDS.

Membership Status: Joined December 31, 1945

General Resources Account:	**SDR Million**	**Percent of Quota**
Quota	8,912.70	100.00
Fund holdings of currency	6,533.22	73.30
Reserve position in Fund	2,379.51	26.70
New Arrangement to Borrow	72.59	

SDR Department:	**SDR Million**	**Percent of Allocation**
Net cumulative allocation	11,393.62	100.00
Holdings	11,694.98	102.65

Outstanding Purchases and Loans: None

Latest Financial Arrangements:

Type	**Arrangement Date**	**Expiration Date**	**Amount Approved (SDR Million)**	**Amount Drawn (SDR Million)**
FCL	Nov. 22, 2019	Nov. 21, 2021	44,563.50	0.00
FCL	Nov. 29, 2017	Nov. 21, 2019	53,476.20[1]	0.00
FCL	May 27, 2016	Nov. 28, 2017	62,388.90	0.00
FCL	Nov 26, 2014	May 26, 2016	47,292.00	0.00
FCL	Nov. 30, 2012	Nov. 25, 2014	47,292.00	0.00
FCL	Jan. 10, 2011	Nov. 29, 2012	47,292.00	0.00
FCL	Mar. 25,2010	Jan. 09, 2011	31,528.00	0.00
FCL	Apr 17, 2009	Mar. 24, 2010	31,528.00	0.00

[1] Access was reduced from 62,388.90 to 53,476.20 SDR million on November 26, 2018.

Projected Payments to the Fund (SDR million):

	Forthcoming				
	2021	2022	2023	2024	2025
Principal					
Charges / Interest	0.00	0.19	0.19	0.19	0.19
Total	0.00	0.19	0.19	0.19	0.19

Exchange Rate Arrangement: Mexico's de-jure and de-facto exchange rate arrangements are free-floating. Mexico maintains an exchange system that is free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions.

Article IV Consultation: The last Article IV consultation was concluded by the Executive Board on November 2, 2020. The staff report was published as IMF Country Report No. 20/293.

Technical Assistance

Year	Dept.	Purpose
2021	FAD	Public Assets and Liabilities Management
2020	FAD	Fiscal Framework and Council
2018	FAD	Public Investment Management Assessment
2018	FAD	Tax policy and Compliance
2018	FAD	Fiscal Transparency Evaluation
2017	STA	Government Financial Statistics
2017	FAD	Tax policy
2017	MCM	Central Securities Depositories
2017	FAD	Revenue Administration
2016	FAD	Revenue Administration
2016	FAD	Workshop on Supervision of Subnational Finances
2015	STA	Balance of Payments
2015	FAD	Supervision of Subnational Finances
2014	FAD	Tax Policy and Compliance
2014	FAD	Treasury
2014	STA	Sectoral Balance Sheets
2014	STA	National Accounts
2014	STA	Balance of Payments
2013	MCM	Post-FSAP Follow Up
2012	FAD	Pension and Health Systems

Resident Representative: None

RELATIONS WITH THE WORLD BANK

https://www.worldbank.org/en/country/mexico

STATISTICAL ISSUES

I. Assessment of Data Adequacy for Surveillance
General: Data provision is adequate for surveillance.
National accounts: The national accounts follow the recommendations of the *System of National Accounts, 2008 (2008 SNA)*. Economic activities, products, household final consumption expenditure, and government final consumption expenditure are classified according to updated international classifications. Data sources and statistical techniques are robust. A wide range of source data is available, including economic censuses conducted every five years and a vast program of monthly and annual surveys, administrative data, as well as a business register of economic units that is regularly updated. INEGI (the National Statistical Office) publishes annual and quarterly GDP statistics, sectoral accounts, and balance sheets. The 2021 data ROSC update found that the national accounts are of a high quality. Since 2015, Mexico has made significant improvements on the methodological and dissemination aspects of data quality. There are still some areas for further improvement, such as implementing chained GDP volume indices with previous period annual weights, the treatment of goods for processing abroad, and the coverage of illegal activities. In addition, some government transactions on a quarterly basis are recorded on a cash basis rather than on an accrual basis. The ROSC mission identified the need for greater consistency in data recording between the Bank of Mexico, and the Ministry of Finance (SHCP) and for regular reconciliation exercises among compilers to resolve some discrepancies involving data on the public sector.
Prices: The concepts and definitions for both the CPI and PPI meet international standards. The CPI reference period is the second half of July 2018, and the basket is based on information from the National Survey of Household Expenditure 2012 and 2013 and the 1999 COICOP classification. The PPI reference period is July 2019, and the basket of goods and weighting structure is based on the Economic Censuses and the System of National Accounts. The PPI covers agricultural, manufacturing, construction, and services sectors, which account for 79.2 percent of Mexican production. It excludes trade and some services.
Government finance statistics: Fiscal statistics are comprehensive and timely, except for the subnational sector. The authorities compile fiscal statistics following national concepts, definitions, and classifications to support domestic policy needs. The authorities also compile fiscal statistics in alignment with the Government Finance Statistics Manual 2014, including for reporting to the IMF's annual GFS database. The 2021 Data ROSC mission pointed out that, while source data used for the national and international (GFSM2014) presentations are the same, differences in the classification of transactions and coverage of institutional units make it difficult for users to reconcile the different presentations. It recommended publishing a table of all institutional units in the public sector and its subsectors, clearly grouping them according to: 1) the coverage of units used in the national presentation; 2) the coverage used in the international presentation; and 3) the subsectors of the public sector as described in the GFS

Manual 2014. A full adoption of uniform accounting standards at the sub-national level would help obtain an improved measure of public fixed investment in the national accounts. Pension liabilities are partially reported, while government securities are reported at face value. The official debt statistics do not include the stock of T-bonds issued to the Bank of Mexico (Banxico) for liquidity management purposes, while the accounting practices adopted by the federal government and Banxico differ.
Monetary and financial statistics: The methodological foundations of monetary statistics are generally sound. Availability of data on other financial intermediaries such as insurance companies and pension funds allow for the construction of a financial corporation's survey with full coverage of the Mexican financial system, which is published on a monthly basis in International Financial Statistics. Mexico reports data on some indicators of the Financial Access Survey (FAS), including gender disaggregated data on the use of basic financial services and the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals. **Financial sector surveillance:** Mexico regularly reports quarterly Financial Soundness Indicators (FSIs) to the IMF for publication. Currently, Mexico reports 11 core and 23 encouraged indicators. FSIs on the non-financial corporations sector are not reported.
External sector statistics (ESS): The 2021 data ROSC update found that ESS are of a high quality. In 2017, Banxico migrated the BOP and IIP statistics to the *Balance of Payments and International Investment Position Manual (BPM6*), sixth edition, with the publication of *BPM6*-based BOP data for the period 2006-the present; and IIP data for 2002-the present (annual data), and 2009-present (quarterly information). The *External Debt Statistics, Guide for Compilers and Users, 2013* (*EDS Guide*) is yet to be fully implemented. Issues that could be addressed relate to: (i) including the intercompany external debt and SDR allocations in external debt statistics disseminated by Banxico; (ii) extending the market valuation of liabilities to all financial institutions (some external debt are presented at face value); and (iii) recording the interest of the public sector external debt on an accrual basis. Consistency could be improved between the IIP and external debt. There are differences between the balance of payments and national accounts, notably in the financial account transactions and positions. The authorities report data for the coordinated direct investment survey , coordinated portfolio investment survey, data template on international reserves and foreign currency liquidity (reserve template), and quarterly external debt statistics.

II. Data Standards and Quality	
Mexico subscribes to the Special Data Dissemination Standards (SDDS) since August 1996 and its metadata are posted on the Dissemination Standards Bulletin Board. In a number of data categories, the periodicity and timeliness of disseminated data exceed SDDS requirements.	A data ROSC update was undertaken during June 7-21, 2021.

Table 1. Mexico: Table of Common Indicators Required for Surveillance

As of October 7, 2021	Date of latest observation	Date received	Frequency of Data[7]	Frequency of Reporting[7]	Frequency of Publication[7]	Data Quality-Methodological Soundness[8]	Data Quality Accuracy and Reliability[9]
Exchange Rates	Oct. 2021	Oct. 2021	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	Sep. 2021	Sep. 2021	W	W	W		
Reserve/Base Money	Oct. 2021	Oct. 2021	D	D	D	LO, O, O, LO	LO, O, O, O, O
Broad Money	Aug. 2021	Sep. 2021	M	M	M		
Central Bank Balance Sheet	Sep. 2021	Sep. 2021	W	W	W		
Consolidated Balance Sheet of the Banking System	Aug. 2021	Sep. 2021	M	M	M		
Interest Rates[2]	Oct. 2021	Oct. 2021	D	D	D		
Consumer Price Index	Sep. 2021	Sep. 2021	Bi-W	Bi-W	Bi-W	O, O, LNO, O	LO, LNO, O, O, LNO
Revenue, Expenditure, Balance and Composition of Financing[3]–Gen. Government[4]	Aug. 2021	Sep. 2021	M	M	M	LO, LNO, LNO, O	O, O, O, O, O
Revenue, Expenditure, Balance and Composition of Financing[3]–Central Government	Aug. 2021	Sep. 2021	M	M	M		
Stocks of Central Government and Central Government-Guaranteed Debt[5]	Aug. 2021	Sep. 2021	M	NA	M		

Table 1. Mexico: Table of Common Indicators Required for Surveillance (concluded)

External Current Account Balance	Q2 2021	Aug. 2021	Q	Q	Q	LO, LO, LNO, LO	LO, O, O, O, LO
Exports and Imports of Goods and Services	Aug. 2021	Sep. 2021	M	M	M		
GDP/GNP	Q2 2021	Aug. 2021	Q	Q	Q	O, O, O, LO	LO, O, LO, LO, O
Gross External Debt	Q1 2021	Jun. 2021	Q	Q	Q		
International Investment Position[6]	Q2 2021	Sep. 2021	Q	Q	Q		

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

[2] Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes, and bonds.

[3] Foreign, domestic bank, and domestic nonbank financing.

[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

[5] Including currency and maturity composition.

[6] Includes external gross financial asset and liability positions vis-à-vis nonresidents.

[7] Daily (D); Weekly (W); Monthly (M); Quarterly (Q); Annually (A); Irregular (I); Not Available (NA).

[8] Reflects the assessment provided in the data ROSC completed on July 2014, except consumer prices which is based on the ROSC completed in 2012. For the dataset corresponding to the variable in each row, the assessment indicates whether international standards concerning (respectively) concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O), largely observed (LO), largely not observed (LNO), or not observed (NO).

[9] Same as footnote 8, except referring to international standards concerning source data, assessment and validation of source data, statistical techniques, assessment and validation of intermediate data and statistical outputs, and revision studies.