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# MEXICO

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# 2014 ARTICLE IV CONSULTATION—STAFF REPORT; AND PRESS RELEASE

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 2014 Article IV consultation with Mexico, the following documents have been released and are included in this package:

- The Staff Report prepared by a staff team of the IMF for the Executive Board's consideration on November 7, 2014, following discussions that ended on September 23, 2014, 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 24, 2014.
- An Informational Annex prepared by the IMF.
- A Debt Sustainability Analysis prepared by the IMF.
- A **Press Release** summarizing the views of the Executive Board as expressed during its November 7, 2014 consideration of the staff report that concluded the Article IV consultation with Mexico.

The document listed below has been or will be separately released.

Selected Issues Paper

The policy of publication of staff reports and other documents allows for the deletion of market-sensitive information.

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### International Monetary Fund Washington, D.C.



# MEXICO

### **STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION**

October 24, 2014

### **KEY ISSUES**

**Outlook and risks**: Growth is projected to reach 2.4 percent in 2014, while core inflation remains close to the target. Strong export demand has boosted manufacturing production and employment, and construction activity is starting to recover, supported by an expansion of public infrastructure spending. The main external risk is a rise in capital flow volatility caused by uncertainties related to the unwinding of the U.S. monetary policy stimulus or heightened geopolitical tensions. The main domestic risk is the effectiveness of implementation of the structural reforms.

**Structural Reforms**: Major reforms in the areas of energy, education, anti-trust, telecommunications, and the financial sector have been approved in the past year and a half. The legislative process for the energy and telecommunications reforms has been completed recently, clearing the way for implementation. Staff estimates suggest that the reforms will boost potential output growth by <sup>3</sup>/<sub>4</sub> percentage points to 3<sup>1</sup>/<sub>2</sub>–4 percent per year.

**Macroeconomic Policies:** The current policy mix of easy monetary policy and broadly neutral fiscal policy has helped the recovery this year. The authorities plan to reduce the fiscal deficit gradually in the medium term, with the goal of setting public debt on a downward path. A steady and transparent implementation of the structural reforms will be critical to maintain investors' confidence and boost potential growth in the medium term.

Advice from previous Article IV Consultations: The ambitious structural reforms are consistent with Fund advice from previous consultations. A number of key recommendations in the 2011 FSAP Update have been implemented, including strengthening of consolidated supervision.

Robert Rennhack and Vivek Arora Mr Mr	scussions took place in Mexico City during September 8–23, 2014. e team comprised Dora Iakova (head), H. Kamil, A. Klemm, Valencia (WHD), P. de Imus (SPR), I. Rial (FAD), and J. Zhou (MCM). r. Rennhack (WHD) attended the concluding meetings. essrs. Zuñiga-Villaseñor and Ramos-Murillo (OED) also participated most meetings.
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### **RECENT DEVELOPMENTS**

### 1. Mexico has completed the legislative process underpinning its comprehensive

**structural reforms agenda.** Important reforms have been approved in the last year and a half in the areas of energy, telecommunications, anti-trust, labor markets, education, and the financial sector. Secondary laws for the energy and telecommunication reforms were recently approved by Congress, clearing the way for implementation. The energy reform opens the door to private investment in the sector, ending a 75-year state monopoly in oil and gas production and distribution. The first round of bidding for oil and gas fields will be launched in early 2015, with contracts expected to be awarded starting in the second half of that year. By enhancing competition, reducing labor market frictions, and encouraging investment, the reforms are expected to boost the annual growth in output over the medium term to 3½–4 percent.

2. After a sharp slowdown in 2013, growth is projected to recover to 2.4 percent this year. Real GDP grew 1.1 percent in 2013, reflecting weak external demand and a decline in construction activity. After a slow start of the year affected by a bad winter in the United States, economic activity has accelerated in recent months. The strong recovery in the US in the second quarter of 2014 has triggered a rebound in Mexico's manufacturing production and exports (especially in the automotive sector). In addition, construction activity is firming up, supported by a rebound of residential investment and an increase of government spending on infrastructure

(Figure 1). The recovery is increasingly broad-based, with activity in the service sectors picking up as well.

**3.** Labor market indicators suggest that the economy continues to operate below potential, helping to contain inflationary pressures. Total employment has grown only modestly, by about 1 percent year-on-year in the first half of 2014, although there has been a notable shift from informal to formal sector employment. The unemployment rate has inched up since early 2013, and real wage growth has been subdued. Headline inflation rose to 4½ percent year-on-year in January 2014, reflecting one-off effects from tax changes (estimated at about 40 basis points). It is expected to stay around 4 percent in the remainder of 2014, driven by increases in livestock and government-administered prices, before declining gradually in 2015. Core inflation remains close to 3 percent and long-term inflation expectations are well anchored (Figure 2).

**4. Macroeconomic policies have turned more accommodative.** The Bank of Mexico reduced the policy rate by 50 basis points to 3 percent in June 2014 in the context of limited inflationary pressures. Fiscal policy is projected to be neutral in 2014, with the structural fiscal balance broadly unchanged from 2013.<sup>1</sup> The fiscal outturn for the first half of 2014 has been broadly in line with the Public Sector Borrowing Requirement (PSBR) budget target of slightly over 4 percent of GDP. On the revenue side, stronger-than-expected VAT and import tax collection in the first half of the year has

<sup>&</sup>lt;sup>1</sup> The structural fiscal balance adjusts the overall balance for the effects of the economic and oil price cycles.

more than offset weaker oil revenues due to declining oil production. The higher revenue has been matched by higher-than-budgeted public investment spending (Figure 3 and Table 2b).

**5. Mexico's external position remains broadly consistent with fundamentals.** The current account deficit widened to 2.1 percent of GDP in 2013, reflecting higher net factor payments, while the trade balance remained stable and moderate. The current account balance and the real effective exchange rate are broadly in line with fundamentals and desirable policy settings according to staff's assessment (Box 1 and Annex I). In 2014, the current account deficit is projected to remain unchanged with an improving trade balance offset by a continued increase in factor payments. The nominal and real effective exchange rates have depreciated modestly since end-2013. The current level of foreign reserves is adequate for normal times according to a range of standard reserve coverage indicators (Table 6). Gross portfolio inflows have rebounded after a sharp slowdown in Q2 of 2013. Private corporations and the government have taken advantage of the renewed investors' risk appetite to issue foreign-currency bonds at favorable rates (Figures 4 and 5). In February, Moody's raised Mexico's foreign currency sovereign rating to Aa3, citing the expected positive impact of structural reforms on potential growth. Looking forward, the structural reforms in energy and telecommunications are expected to attract significant foreign direct investment.

6. Commercial bank credit growth has moderated. Commercial bank credit growth slowed down to about 8 percent year-on-year in nominal terms in the first half of 2014. Among corporate borrowers, the deceleration has been concentrated in construction: banks reduced sharply lending to the sector after financial difficulties of the three largest builders surfaced last year. On the household side, consumer credit growth moderated to 8 percent (from 16 percent last year) (Figure 6). Growth of mortgage credit by the publicly-owned institution Infonavit (which accounts for more than a half of the mortgage market) has decelerated to 2 percent in 2014, as lending for new low-income houses declined over the last year (Box 2).

**7. In contrast, lending by the publicly-owned development banks is growing rapidly.** The financial sector reform has given the development banks a new mandate of promoting more actively micro-financing and lending to underserved sectors, including small and medium-sized enterprises. As a result, credit and guarantees extended by these banks have grown rapidly though from a low base (currently development banks account for only 15 percent of total bank lending or 3¼ percent of GDP).

### **OUTLOOK AND POLICY DISCUSSIONS**

8. **Real GDP growth is projected to accelerate to 3.5 percent in 2015.** Export demand from the US is expected to remain strong, underpinning the recovery of manufacturing production and related services. Construction activity should continue to strengthen, supported by the expansion of public investment in infrastructure and changes in Infonavit's lending policies.<sup>2</sup> Business investment is expected to recover as spare capacity diminishes and business sentiment improves after the recent approval of secondary legislation for the energy and telecommunications reforms (Box 3). Consumption growth would be supported by strengthening labor demand as activity picks up. The negative output gap—estimated by staff at around 1 percent as of mid-2014—is expected to close gradually over the next year. Headline inflation should decline toward the 3-percent target in 2015 as tax-related base effects dissipate, food prices return to normal, and fuel price adjustments moderate.<sup>3</sup>

### A. Structural Reforms: Unlocking Potential Growth

**9.** The wave of structural reforms should increase potential output over the medium term. Overall, the broad package of reforms is expected to stimulate growth through increased investment, the introduction of new technologies, reduction of business costs, and a rise in productivity. Preliminary staff estimates, reflected in the baseline projection, suggest an increase in potential growth to  $3\frac{1}{2}$  to 4 percent in the medium term (potential growth is estimated at around  $2\frac{3}{4}$ –3 percent in 2014, while actual growth in Mexico has averaged  $2\frac{1}{2}$  percent over the last fifteen years), (Box 4). The external current account deficit is projected to deteriorate slightly in the coming years as inward foreign direct investment picks up, leading temporarily to higher imports of machinery and equipment, but should narrow in the medium term as export growth strengthens. Both oil and non-oil exports should see a boost, reflecting higher hydrocarbons production and more competitive manufacturing production in the context of lower electricity prices.<sup>4</sup>

**10.** The authorities believe that the reforms could have an even greater impact, boosting annual growth to the range 4–5 percent. They expect that the energy reform will have a more significant effect on energy costs and growth as investment is likely to increase rapidly and the entrance of private sector companies with new technologies would boost efficiency and productivity. The financial reform could have a large impact given Mexico's relatively low levels of

<sup>&</sup>lt;sup>2</sup> The large state mortgage lender Infonavit announced in July that it will raise the maximum amount it can lend by 76 percent (to US\$65, 700). It will also increase the maturity of its fixed-rate loans to 30 years. The resolution of the three large homebuilders is expected to be completed in 2015, which should reduce uncertainty and increase the availability of credit to the construction sector.

<sup>&</sup>lt;sup>3</sup> Starting in 2015 government-regulated gasoline prices will be raised broadly in line with expected inflation (with the discretion to apply faster increases if world prices rise above those in the domestic market). This is expected to reduce the rate of headline inflation by about 0.4 percentage points (in the past increases have averaged 10–11 percent a year).

<sup>&</sup>lt;sup>4</sup> See Selected Issues Paper, Chapters 1 and 2.

bank credit to GDP. Finally, the authorities expressed optimism that synergies across the various reforms will amplify their effects significantly.

### **B. Managing Risks**

**11.** The near-term growth outlook remains subject to significant risks. The U.S. economy appears to be on a steady path to recovery, which is positive for Mexico. However, the risk of renewed volatility in financial markets remains elevated, recovery in the euro area and Japan has stalled, growth in many large emerging economies is slowing down, and geopolitical tensions have increased.

- A surge in global financial market volatility. The baseline growth projection is predicated on a smooth process of U.S. monetary policy normalization, accompanied by strengthening activity in the United States (Box 5). However, a resurgence of financial market volatility cannot be ruled out. Potential triggers include an earlier or sharper-than-expected rise in U.S. interest rates (for example due to an unexpected rise in inflation or a rapid decompression of U.S. term premia),<sup>5</sup> increasing geopolitical risks, or investors' reassessment of sovereign risks more generally. A materialization of this risk could lead to capital flow reversals from emerging markets (including Mexico), reduction of market access, and a sharp increase in the volatility of asset prices. A protracted period of financial market instability could also affect the confidence of long-term investors, lead to lower-than-expected FDI inflows, and slow the implementation of structural reforms.
- *Domestic risks*. Domestic risks are mostly on the upside in the near term: business and consumer confidence may recover faster than expected, boosting domestic demand. In the medium term, the main risks relate to the implementation of structural reforms and their effect on growth.

**12. Staff and the authorities concurred that, while Mexico's integration in global financial markets confers important benefits, it also increases exposure to external shocks.** Gross capital inflows have increased significantly in recent years, particularly portfolio inflows. Foreigners now hold 37 percent of all local-currency public debt (and about 55 percent of the most liquid segment of local-currency denominated sovereign bonds, Mbonos, and short-term paper, Cetes). The rise of foreign participation in the local market has helped reduce funding costs for both the government and corporations, providing an impulse to growth. Nonetheless, staff analysis suggests that foreign mutual funds active in Mexico have been somewhat more prone to herding behavior during past episodes of market stress than domestic investors (Box 6).<sup>6</sup> Shifts in investors' portfolios could induce heightened volatility in asset prices.

## **13.** Nonetheless, Mexico's credible policy frameworks and adequate buffers strengthen its resilience and ability to deal with financial market stress. There was agreement that Mexico's

<sup>&</sup>lt;sup>5</sup> There is substantial uncertainty about the degree of slack in the U.S. labor markets, reflected in significant dispersion of the federal funds rate forecasts among FOMC participants.

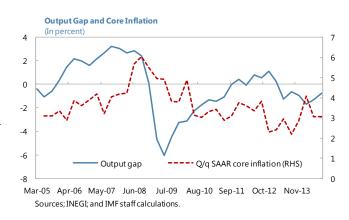
<sup>&</sup>lt;sup>6</sup> See Selected Issues Paper, Chapter 3.

bright growth prospects and prudent macroeconomic policies would help sustain investor confidence. The authorities reiterated that Mexico is fully committed to maintaining strong policy frameworks, including a flexible exchange rate and an open capital account, a credible inflation targeting regime, and fiscal discipline underpinned by the Fiscal Responsibility Law. In case of renewed bouts of volatility in financial markets, exchange rate flexibility will continue to act as an effective shock absorber. Staff agreed that foreign exchange intervention, liquidity provision, and debt duration management strategies would remain useful tools in cases of significant currency overshooting or dysfunctional market conditions. The current level of reserves (about US\$190 billion) can provide a buffer against temporary stress in foreign exchange markets. The FCL arrangement is an important complement to the country's buffers, providing insurance against tail risks. The authorities also highlighted their continued efforts to encourage the development of financial markets and provide a broad range of instruments to allow investors to hedge exchange and interest rate risks, which should reduce incentives to disinvest from Mexican assets.

### C. Monetary Policy

**14.** The stance of monetary policy remains appropriate. Despite the increase in headline inflation driven by temporary factors, the annualized quarter-on-quarter growth of core prices has

remained stable around 3 percent and long-term inflation expectations are well anchored (Figure 2). Continued weakness in the labor market suggests that demand pressures on prices remain contained. Headline inflation is expected to decline toward the 3-percent target in 2015 as taxrelated base effects dissipate and gasoline price increases moderate (the combined effect of these two factors would reduce annual inflation by about <sup>3</sup>/<sub>4</sub> percentage point next year).



**15. Staff noted that risks to the inflation outlook are mostly on the upside.** Slack in the economy may diminish faster than expected. In addition, an eventual increase in the minimum wage could affect wages more broadly, putting upward pressure on prices.<sup>7</sup> The central bank reaffirmed its commitment to adjust the policy rate as needed to keep inflation in line with the target. Following some temporary shocks, the authorities expected inflation to converge to the 3 percent target by mid-2015, in the absence of second round effects arising from the adjustment in relative prices and in view of the current slack in the economy. Nevertheless, going forward they expected

<sup>&</sup>lt;sup>7</sup> There have been proposals to raise the minimum wage up to 20 percent. A commission has been formed to consider the economic implications of a significant increase in the minimum wage. The commission will announce their official proposal in 2015. Meanwhile, bills have been submitted to Congress detailing plans to de-index various contracts (including social security and Infonavit mortgages) that are currently linked to the minimum wage.

the output gap to close as the ongoing economic recovery takes hold. They also noted that the credibility of the inflation targeting regime has brought important benefits, including greater stability of inflation expectations, lower exchange rate pass-through, and a reduction in inflation risk premia that have implied more degrees of freedom for monetary policy implementation.

### D. Strengthening the Fiscal Framework

**16.** The 2015 budget proposal implies a mild withdrawal of fiscal stimulus next year. In the budget proposal sent to Congress in September, the fiscal deficit in 2015 is projected to narrow slightly relative to 2014 (from 4.2 to 4.0 percent of GDP). The consolidation is smaller than envisaged in last year's medium-term budget projections, reflecting the authorities' decision to accommodate a decline in oil revenues of ½ percentage point of GDP. This decline is expected to be temporary as the energy reform is designed to stimulate oil production in the medium term. Improvements in the structural balance and the non-oil fiscal balance imply a mild tightening of the fiscal stance in 2015, with spending projected to decline as a share of GDP. Staff supported the decision to accommodate the temporary decline in oil production, while cautioning against further delays in consolidation plans.

**17. Staff strongly supported the authorities' intention to reduce the fiscal deficit gradually over the next four years.** The 2015 budget projects a reduction of the public sector borrowing requirement from 4 to 2½ percent of GDP over 2015–18, which will help stabilize gross public debt at about 49 percent of GDP and put it on a downward path thereafter. The consolidation relies on a gradual increase in tax revenues related to the 2014 tax reform. The reform has been very effective in improving tax collection and creating incentives for small enterprises to join the formal sector, resulting in greater-than-expected tax revenue in 2014. Further increases in the tax intake from newly formalized enterprises and income from an implicit excise tax on gasoline are expected to raise non-oil tax revenues by additional 1¾ percentage points of GDP by 2018.<sup>8</sup> Expenditure is projected to remain broadly stable in percent of GDP in the medium term, which implies a compression of the wage bill to compensate for rising pension expenditure. The consolidation plan is consistent with past staff advice as it broadens the tax base and prevents cuts in capital expenditure.

**18.** Strong commitment to fiscal prudence will help maintain investor confidence and keep financing costs low. In that context, staff emphasized that it will be important to adhere to the announced medium-term fiscal path, and adjust policies if needed. The fiscal projections assume that the oil production of PEMEX will stabilize at 2.4 million barrels per day starting in 2015, and that production by private companies will commence in 2016 and increase steadily thereafter. Total oil output is expected to reach 3 million barrels per day by 2019, but there are significant downside

<sup>&</sup>lt;sup>8</sup> The implicit tax on gasoline is the difference between the government-administered gasoline prices and international prices.

risks.<sup>9</sup> Staff and the authorities agreed that, if production levels continue to surprise on the downside, it will be necessary to adjust expenditure or raise non-oil revenues to prevent a trend increase in public debt. Measures would also be needed in the case of persistent shortfalls in tax revenues relative to current projections.

### **19.** Amendments to the Fiscal Responsibility Law, approved by Congress in 2014, strengthen the fiscal framework in several ways. First, the public sector herrowing require

**strengthen the fiscal framework in several ways.** First, the public sector borrowing requirement (PSBR), which is a broader measure of the public sector balance than the "traditional balance", was made an official target for fiscal policy. Second, current structural expenditure in real terms would be capped at 2 percent per year in 2015–16, and at the rate of potential output growth thereafter.<sup>10</sup> Finally, a new sovereign Oil Stabilization and Savings Fund was created to manage oil revenues. PEMEX and the private oil companies will transfer to the fund all government dues including profit sharing, royalties, and license fees (except for the corporate income tax which is paid directly to the central government). In turn, the fund will transfer up to 4.7 percent of GDP to the central government every year (equivalent to the amount of oil revenues in percent of GDP in 2013). Revenues in excess of that will be saved in the fund until the balance grows to 3 percent of GDP.<sup>11</sup> Staff welcomed the creation of the new fund, noting that it will provide greater stability in oil revenues for budget purposes, and will ensure that a large share of any future oil income windfall would be saved.

## 20. Staff recommended several further improvements to the framework to enhance fiscal discipline:

• It will be important to strengthen the budget approval and execution process to enforce more strictly expenditure appropriation limits set in the budget. In the past, positive growth and revenue surprises have not translated into an improved fiscal position because of expenditure overruns in the execution phase (actual expenditure has exceeded budget plans in each of the past 5 years). Going forward, any higher-than-expected oil revenues will be saved in the new sovereign wealth fund. Therefore, more realistic budgeting of expenditure, combined with stricter controls on execution, will be needed to ensure that limits on the

<sup>&</sup>lt;sup>9</sup> The baseline assumption for oil production implies that the proven reserve replacement rate rises to an average of 159 percent during 2016–19, significantly above the reported average replacement rate for PEMEX of 90 percent in the period 2010–13. In a selected issues paper, IMF staff shows an illustrative downside scenario with production 4½ percent below the baseline on average between 2016 and 2019. Such a scenario will result in a fiscal deficit gap of about ½ percent of GDP by 2019 relative to the current baseline.

<sup>&</sup>lt;sup>10</sup> Structural current expenditure, comprising about 50 percent of total public expenditure, is defined as indirect capital spending plus current spending minus pensions, electricity subsidies, transfers to states and municipalities from oil revenue-sharing agreements, and interest payments. It also excludes the expenditures of Pemex and the state electricity company.

<sup>&</sup>lt;sup>11</sup> After this balance is reached, 40 percent of any additional surplus income will continue to be saved and the rest will be earmarked for various spending categories (10 percent for the universal pension system, 10 percent for research and development and renewable energy projects, 30 percent for infrastructure and oil-related investment, and 10 percent for scholarships and regional development). Once the sovereign wealth fund reaches 10 percent of GDP, the return on investments will be transferred to the federal government, in addition to the 4.7 percent of GDP.

growth of spending are respected and that PSBR deficit targets will be met.<sup>12</sup> The authorities agreed that stricter control of expenditure is desirable, while noting that, given the cap on current expenditure, in the future positive revenue surprises could only be used to increase capital spending (within the limits of the PSBR target).

- There was agreement that the escape clause to both deficit targets envisaged in the Fiscal Responsibility Law should be invoked only in the case of a growth slowdown, and that deficit levels should be in line with the estimated output gap. Monetary policy is better-suited to respond to mild cyclical fluctuations. Staff suggested that stronger independent assessment of fiscal policy could also be beneficial. A first step in that direction could be to outsource the calculation of potential output growth and the output gap to an independent group of experts. The authorities explained that they have just published the methodology for calculating potential output growth (the average of actual growth for the last ten years and growth projections for the next five years), which increases transparency and results in a relatively conservative estimate of potential growth.
- Public communication strategies should aim to promote better understanding of the fiscal framework. Fiscal analysis and reporting will have to start giving more emphasis to the PSBR and the current expenditure targets. Staff welcomed the effort to compile and report historical fiscal data in accordance with international standards (GFSM 2001) in the 2015 budget, and encouraged the authorities to report the fiscal projections in line with these standards as well.

21. The greater independence granted to PEMEX and the Federal Electricity Company

(CFE) should help improve the efficiency of their operations. As part of the energy reform, the two large state enterprises will have greater operational independence starting in 2015, including more freedom in investment and operational decisions. They will be governed by Boards that will include representatives of the government as well as independent experts. Their tax regime will be aligned with the tax regime of private oil companies. The federal government has agreed to assume a share of the pension liabilities of PEMEX and CFE, if they reform their pension systems to reduce the net present value of future liabilities. Staff supported this plan, which is in line with past IMF advice, and noted that a gradual move to a defined-contribution pension for the two public companies would align their pension system with that of federal government employees.

**22.** There was agreement that the monitoring and control of state and municipal government finances need to be strengthened. Several highly-indebted states and municipalities have had to restructure their obligations in recent years. Although total subnational government debt is relatively modest at about 3 percent of GDP, deficits and debt have increased notably since 2008. Moreover, the reported debt understates the overall liabilities of subnational governments as

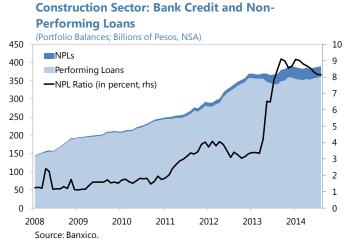
<sup>&</sup>lt;sup>12</sup> A technical assistance mission by the IMF's Fiscal Affairs Department in April 2014 suggested the introduction of a formal approval process for authorizing significant mid-year changes in the expenditure envelope to enforce compliance with budget appropriations.

it excludes credit from private sector providers of goods and services. Staff welcomed the introduction of a uniform accounting methodology (set in the General Government Accounting Law) for states' and municipalities' finances. Several states have already adopted the new methodology, and the rest are expected to do so by the end of 2015. Staff suggested that the reported data should be audited, consolidated, and made publicly available to provide better information on local government finances. It would also be desirable to adopt a more formal fiscal framework to constrain the deficits of local governments, along the lines of the Fiscal Responsibility Law for the federal government. The authorities agreed and responded that a law on local government finances (Ley Nacional de Responsabilidad Hacendaria y Deuda Pública), which aims to address most of the above issues, has been sent to Congress last year. Finally, staff noted that the pension system for state employees should also be reformed to reduce unfunded liabilities.

### E. Financial Sector Stability

**23. Mexico's commercial banks remain well capitalized and profitable.** Bank capital levels are well in excess of minimum Basel III requirements (Figure 6 and Table 6). The share of non-performing loans (NPLs) in total loans has stabilized, reaching 3<sup>1</sup>/<sub>4</sub> percent as of June from 2<sup>1</sup>/<sub>2</sub> percent in 2012. The increase reflected mostly a rise in impaired loans in the construction sector.

The non-performing loans remain fully provisioned. Vulnerability to external funding shocks is limited as banks are funded primarily by domestic deposits, and strict related-party lending limits contain exposure to foreign parent banks. The average liquidity coverage ratio (LCR) of the banking system exceeded 200 percent in 2013. The LCR will be introduced in 2015, in accordance with the gradual implementation schedule proposed by the Basel Committee on Banking



Supervision. Credit growth is expected to recover as economic activity accelerates. The authorities noted that ongoing stress tests—conducted by the bank supervisory authority (CNBV)—show that banks are expected to remain solvent under adverse economic scenarios, and that sensitivity to changes in interest rates is limited.

**24.** The non-bank financial sector is also sound. Pension funds, which are the most important player in local financial markets with assets of about 13 percent of GDP, maintain a conservative investment profile. Insurance companies, which hold assets of about 6 percent of GDP, are getting ready to adopt the Solvency II regime in 2015. Simulations done by the insurance regulator suggest that all insurance companies will satisfy comfortably the capital requirements under the new regime. Currently, capital in the insurance sector exceeds the minimum capital guarantee requirement by 75 percent, and the technical reserve requirement by 10 percent. Real estate investment trusts (FIBRAs) have grown in importance since 2011, and now have assets equivalent to about 1<sup>1</sup>/<sub>2</sub> percent

of GDP. The FIBRAs are mostly funded by equity, accounting for more than a third of funds raised in the domestic equity market in 2013. Staff welcomed the recent introduction of leverage limits and liquidity requirements for the FIBRAs to limit risks.

**25. Corporate balance sheets appear to be resilient, though there has been some increase in leverage since 2008.** Companies have taken advantage of easy global financing conditions in recent years to issue new bonds, particularly in external markets (Figure 7). The goal has been mainly to reduce financing costs and extend debt maturities. However, leverage and the share of debt denominated in foreign currency have also increased, especially in 2013. This could increase vulnerability to changes in exchange rates or global interest rates, particularly for companies without adequate natural or financial hedges. In addition, bond issuance by firms with low credit ratings have also increased in recent years. Staff emphasized that it will be important to continue to improve the collection and analysis of data on firms' foreign exchange exposures, including through derivatives.

26. With respect to the more active role of development banks, staff noted that care should be taken to avoid competition with commercial banks or undue relaxation of credit standards. Public development banks, which in recent years have had a very conservative investment policy, have been given a more active role in the provision of financial services in the context of efforts to improve financial inclusion and competition in the banking sector. They extend both direct loans to customers and subsidized guarantees for SME lending by commercial banks.<sup>13</sup> Development banks are subject to the same regulation and supervision as commercial banks (on their lending activities). At the same time, they are also overseen by the government (on compliance with procurement rules and public policy). Staff noted that the more active role these banks will play in reaching out to underserved customers is welcome, though caution should be taken to avoid deterioration in credit quality or direct competition with commercial banks. Staff emphasized that lending to subnational governments should be limited to projects with a clear developmental goal. The authorities responded that the risk that development banks could crowd out private lending is limited, since they are more active in market segments that tend to be underserved by commercial banks. They noted that the goal of entering a particular niche is to address market failures, including lack of competition in the provision of banking services.<sup>14</sup>

**27.** Staff welcomed progress on the implementation of the financial sector reform, including improvements to the bank resolution framework. The reform has enhanced the collection of credit information for individuals and businesses through extending reporting requirements to the credit bureaus to a wider set of entities. Staff noted that it will be important to ensure equal access to this information by all credit providers. In addition, the legal framework for

<sup>&</sup>lt;sup>13</sup> The guarantees are priced through an auction process and have a very small subsidy component; therefore fiscal contingent liabilities are small.

<sup>&</sup>lt;sup>14</sup> The 2011 FSAP found that the Mexican development banks played an important countercyclical role in response to the credit crunch prompted by the global financial crisis, but recommended reducing their balance sheets in an upturn, to prevent competition with commercial banks.

bank resolution has been strengthened in line with the 2011 FSAP recommendations (see Annex II). Another important aspect of the reform was the easing of legal hurdles for banks to repossess collateral through the creation of specialized federal courts. For the system to function effectively, sufficient funding needs to be made available for the new courts. The reform also gives new powers to the supervisors to evaluate bank credit expansion. Staff warned that these powers should be exercised judiciously to prevent misallocation of resources.

### 28. Important steps have been taken to improve the regulation and supervision of large

**financial groups.** The Financial Group Act was amended in January 2014, setting out new regulatory guidelines for consolidated supervision. Going forward, financial conglomerates will be overseen by a committee including all relevant supervisors. One of the supervisors will be designated as a lead supervisor in charge of monitoring financial accounts, activities, and risks at the group level.

**29.** The effects of international financial regulatory reforms on Mexico have been manageable so far. Over the next five years, commercial banks will phase in the Basel III minimum liquidity coverage ratio. Other reform initiatives with potential impact on Mexico are still in the process of discussion by international bodies. Staff noted that the upgrading of reporting requirements for foreign exchange operators, wire services, and unregulated SOFOMES, should strengthen anti-money laundering efforts. The authorities were concerned that as foreign banks decide to opt-out of cross-border transactions, including remittances, as part of de-risking decisions taken in response to stringent requirements imposed by regulators in connection with AML/CFT procedures, facilities available to Mexican banks to carry out such transactions will be more limited. They expressed hope that as banks involved in such transactions, with the support of the competent financial authorities, are able to establish clear compliance procedures, the restrictions will be alleviated.

### STAFF APPRAISAL

**30. Mexico's macroeconomic policies and policy frameworks remain very strong.** Monetary policy is guided by an inflation targeting framework in the context of a flexible exchange regime and fiscal policy is anchored by the fiscal responsibility law. The authorities remain committed to an open capital account and continuous development and deepening of financial markets. The external position is in line with economic fundamentals and desirable policy settings.

31. Mexico has made impressive progress in advancing its structural reform agenda.

Mexico is one of very few countries that have succeeded in achieving political consensus to tackle long-standing challenges in many critical areas such as energy, education, telecommunications, and labor. The recent approval of secondary legislation for the energy reform will transform the hydrocarbons sector by opening the door to private investment in oil and gas production and distribution, and liberalizing the electricity sector. The reforms should boost productivity and output growth over the medium term. Going forward, strong implementation is critical for the reforms to yield these benefits. **32.** After a few quarters of slow growth, economic activity has rebounded on the back of strong external demand. Real GDP is projected to grow at 2½ percent in 2014, and to reach 3½ percent in 2015. The U. S. recovery has provided a boost to manufacturing and related services, and construction activity is gathering pace supported by the pickup of government infrastructure spending.

**33.** As a highly open economy, Mexico remains susceptible to stress in global financial markets. A surge in financial market volatility, triggered for example by a disorderly normalization of U.S. monetary policy, could lead to a reversal of capital flows and an increase in risk premia. Nonetheless, Mexico's strong fundamentals, deep and liquid financial markets, and substantial reserve buffers should help it weather well a rise in volatility. The flexible exchange rate will continue to facilitate adjustment to shocks. Rules-based foreign exchange intervention and liquidity support would be useful tools in case of market dysfunction. Finally, the FCL arrangement provides valuable insurance against tail risks.

**34. Monetary policy will remain geared toward reaching the inflation target.** The current accommodative stance is appropriate as the economy is still operating below potential, and inflation pressures are contained. Headline inflation is projected to decline toward the target in 2015, as tax-related base effects dissipate and administered price increases moderate. With spare capacity expected to diminish gradually in the coming quarters, pressures on wages and prices need to be monitored carefully.

**35.** Further improvements in budget implementations practices would help increase the effectiveness of the new fiscal framework. The new Fiscal Responsibility Law strengthens the fiscal framework in important ways. It provides clear fiscal targets, consistent with a sustainable path for public debt. More realistic budgeting of expenditure, combined with stricter control on spending execution, will help ensure that PSBR and expenditure targets will be met. Progress on reporting public sector fiscal data in line with international accounting standards is welcome.

**36. Staff strongly supports the authorities' plans to reduce the PSBR to 2.5 percent of GDP by 2018.** The planned consolidation will help stabilize public debt and put it on a downward path. Strong fiscal discipline will help maintain investors' confidence, enhancing Mexico's resilience to external shocks, and would allow the government to cope better with long-term fiscal challenges related to population aging. Strict adherence to the announced fiscal path will strengthen the credibility of the new fiscal framework. If medium-term projections for oil production turn out to be on the optimistic side, resulting in persistent revenue shortfalls, measures should be taken to ensure that PSBR deficit targets will be met. In the spirit of the escape clauses in the Fiscal Responsibility Law, discretionary fiscal stimulus should be considered only in the case of a sharp decline in economic activity. Plans to reform the pension system for the two large state-owned companies (PEMEX and CFE) are welcome. The reform has the potential to reduce the net present value of future liabilities for the public sector.

37. The monitoring and control of state and municipal financing need to be strengthened.

finances would be an important first step. The reported data should be audited, consolidated, and made publicly available to facilitate analysis of state and municipal finances. It would also be advisable to introduce a formal legal framework to anchor fiscal policy-making at the local level, similar to the FRL for the federal government. The pension system for state employees should be reformed to align it with that for federal employees.

### 38. The balance sheets of banks and non-bank financial intermediaries remain strong.

Banks maintain high levels of liquidity and capital buffers and follow conservative lending practices. Corporate and household balance sheets also appear to be sound, though the rise in foreign exchange borrowing among some large companies needs to be monitored carefully. Insurance companies are also well capitalized and profitable. The progress in strengthening the regulation and consolidated supervision of large financial conglomerates is commendable. The increased role of development banks in improving financial inclusion and providing credit to underserved sectors is welcome, though caution is needed to avoid displacement of private bank lending or a significant relaxation of credit standards.

## **39.** It is proposed that the next Article IV Consultation with Mexico take place on the standard 12-month cycle.

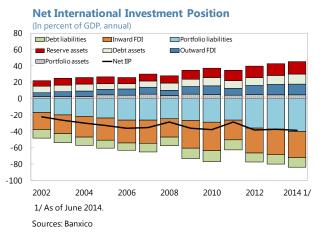
#### **Box 1. External Sector Assessment**

Mexico's external sector position is broadly consistent with medium-term fundamentals and desirable policies. The current account deficit widened to 2.1 percent of GDP in 2013, reflecting higher net factor payments (including higher interest payments, greater profit repatriation, and a rise in reinvested earnings), while the trade balance remained stable (Figure 4). According to the 2014 Pilot External Sector Report, the cyclically-adjusted current account deficit is 0.2 percentage points of GDP narrower than the norm consistent with fundamentals, calculated using the External Balance Assessment model (Annex I). The nominal exchange rate has remained relatively stable in 2014, and the implied exchange rate volatility from option prices has fallen to historical lows. The real effective exchange rate is assessed to be slightly undervalued (with a range of 0 to 10 percent undervaluation). External competitiveness remains strong. Mexico's share in U.S. manufacturing imports has increased from 10 to 13 percent over the last five years, and unit labor costs in manufacturing have declined.

Mexico has seen a surge in capital inflows since 2010, when it was included in Citigroup's World Government Bond Index. Favorable global financing conditions have played a role as a "push" factor, though "pull" factors have also been important. Mexico remains an attractive destination for investors due to its strong medium-term growth prospects, open and liquid capital markets, and predictable policies. Going forward, most of the growth in inflows is expected to come from FDI into energy exploration and telecommunications.

The net international investment liability position has remained stable at about 40 percent of GDP. Capital inflows since 2010 have not translated into external or domestic imbalances, as the accumulation of gross external liabilities has been matched by a rise in external asset holdings (residents' foreign assets stood at 45 percent of GDP in June 2014).

Mexico remains committed to a floating exchange rate and the central bank typically does not intervene in foreign exchange rate markets. The accumulation of reserves reflects



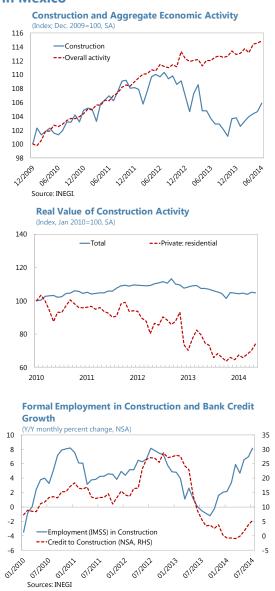
the net balance of the foreign exchange operations of PEMEX (the state-owned energy company) and the government, which are handled through accounts in the central bank. Mexico has maintained broadly stable measures of reserve adequacy over time (Table 6). Specifically, net international reserves in terms of months of imports and in percent of broad money have been stable or rising. However, as foreign holdings of domestic debt increased rapidly, reserves have declined as a share of foreign portfolio liabilities and particularly as a share of short-term external debt by residual maturity. Foreign exchange reserves amounted to 116 percent on the ARA metric in 2013.

### Box 2. Recent Developments in Residential Construction and Government Housing Policies in Mexico

The construction sector has been a key drag on growth over the last two years. Since entering a downturn in mid-2012, construction activity (which accounts for 7 percent of GDP) has contracted by 6½ percent. The decline was most pronounced in low-income housing construction. Construction employment also fell sharply, affecting consumer confidence, and spilling over to the rest of the economy.

Poor financial choices of the largest private homebuilders and changes in homeowner's location preferences led to a collapse in private residential investment. Between 2001 and 2011, the three largest developers in Mexico (GEO, HOMEX and URBI) took on heavy debt to build sprawls of low-rise houses in the city suburbs, fueled by government mortgage credit and subsidies that favored affordable single homes for low-income people. But the homes were built far away from jobs in city centers, and in areas that lacked the basic infrastructure, services, and amenities. Stuck in poor locations, many residents eventually abandoned their homes, moving to urban areas in search for better access to public services and lower commuting costs. Having over-spent on big outof-town developments where Mexicans no longer wanted to live, and facing large debt obligations, the large homebuilders were cut-off from bank credit, bringing residential construction to a halt. The bankruptcy of the large homebuilders rippled through the rest of the sector, as commercial banks retrenched from credit to other construction firms.

Changes in government housing subsidy policies, while in the right direction, exacerbated the contraction. In 2011 the government began to limit subsidies for developments that contributed to urban sprawl. In February 2013, the new administration announced it

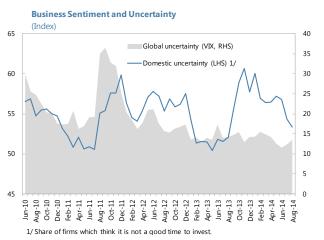


would redirect its subsidized housing program away from single-family homes on the outskirts to high-rise developments closer to urban centers. Around the same time, Infonavit, the state mortgage lender, changed its lending policy toward the purchase of existing—rather than new—houses. Hard hit from the new housing policies, all three homebuilders filed for bankruptcy in mid-2013.

In an effort to stimulate lending, in March 2013, the government announced guarantees for construction loans made by commercial banks to the country's homebuilders. In addition, Infonavit announced in July 2014 that it would broaden access to home mortgages by increasing the maximum amount it can lend to prospective home buyers by 76 percent and extending maturities of its mortgages. As a result of these measures, residential construction activity has started to recover in recent months, with a strong pickup in formal employment in the sector.

### **Box 3. The Effect of Market Concentration and Uncertainty on Corporate Investment**

Business sentiment and the willingness to invest deteriorated significantly between May 2013 and February 2014. A business confidence survey published by INEGI showed that the fraction of firms that perceived that it "was the right time to invest" fell from 50 percent to 40 percent during this period— the lowest level since late-2011. Unlike the end-2011 episode, the deterioration in sentiment in 2013 appeared to be driven by domestic factors, as there was no increase in global uncertainty.



The deterioration in business sentiment coincided with a weakening economy and with the initial period of discussion and adoption of a number of structural reforms. A plausible hypothesis is that a rise in uncertainty related to weaker growth and to the likely effects of the reforms may have contributed to the turn in sentiment. While the reforms laid the foundations for higher medium-term growth, in the initial stages, policy and regulatory uncertainty, particularly related to reforms in the fiscal, telecom, and antitrust areas, could have had adverse effects on economic activity.<sup>1</sup> Faced with an uncertain tax and investment climate, companies may choose to delay costly commitments that are hard to reverse, waiting for the final regulations to clarify the new rules. The negative sentiment could have affected particularly dominant firms in oligopolistic sectors as their market power was about to be contested in the context of the antitrust and telecom reforms.

Regression analysis suggests that: (i) firms in more concentrated sectors may tend to invest less on average; and (ii) deterioration in sentiment appears to be associated with larger decreases in investment rates for firms operating in less competitive industries. The analysis cannot distinguish among the different reasons for the deterioration in business sentiment. Even if uncertainty associated with the reforms was behind the deterioration in 2013 and early 2014, it has clearly dissipated after the approval of important secondary legislation, with investment intentions turning positive in recent months. In addition, the antitrust and telecom reforms aim at enhancing competition in concentrated industries, which should also give an impetus to investment.

<sup>&</sup>lt;sup>1/</sup> A large body of research, starting with Bernanke (1983), suggests that uncertainty has negative, measurable effects on corporate investment. Gulen and Ion (2013) estimate that about two-thirds of the 32 percent plunge in corporate investments in the U.S. during the 2007–10 crisis period was attributable to policy-related uncertainty.

(Concluded)									
Dependent Variable: Investment rate	(1)	(2)	(3)	(4)					
Revenue to total assets	0.042	0.040	0.039	0.040					
	(0.017)**	(0.018)**	(0.017)**	(0.017)**					
Domestic uncertainty perception	-0.291	0.154	0.159	0.177					
	(0.166)*	(0.243)	(0.240)	(0.248)					
Sector concentration	-0.885	-11.744	-11.835	-11.900					
	(1.673)	(5.842)**	(6.005)*	(6.046)*					
Global uncertainty	0.236	0.131	0.123	0.114					
-	(0.186)	(0.188)	(0.171)	(0.175)					
Change in real corporate interest rate	-0.040	-0.055	-0.056	-0.057					
5	(0.040)	(0.047)	(0.046)	(0.046)					
Concentration*Domestic uncertainty		-2.812	-2.840	-2.937					
		(1.317)**	(1.356)**	(1.410)**					
Reform dummy (=1 for 2013Q1- 2014Q1)			-0.026	0.103					
			(0.183)	(0.224)					
Concent.*Dom. Uncert.*Ref. Dummy			. ,	0.215					
, ,				(0.326)					
Constant	-1.091	0.986	1.034	1.078					
	(1.133)	(1.500)	(1.449)	(1.475)					
Sample period	2005Q2-	2005Q2-	2005Q2-	2005Q2-					
	2014Q2	2014Q2	2014Q2	2014Q2					
Firm-fixed effects	Yes	Yes	Yes	Yes					
$R^2$	0.01	0.01	0.01	0.01					
<i>N</i> * <i>p</i> <0.1; ** <i>p</i> <0.05. Fixed effects panel	3,207	3,119	3,119	3,119					

### **Box 4. Structural Reforms**

In less than 2 years, Mexico has enacted an impressive number of structural reforms covering energy, telecommunications, labor markets, antitrust legislation, financial, education, and the fiscal sector. In addition, an important political reform was adopted. The complexity of the enacted reforms makes it difficult to come up with precise calculations of their impact on growth. Staff estimates of the effect of the reforms over the medium term suggest an increase in potential growth of about 0.75 to 0.9 percentage points to reach  $3\frac{1}{2}$ -4 percent over 2016–19 (compared to an estimated potential growth of  $2\frac{3}{4}$ -3 percent in 2014). Synergies among reforms could yield additional benefits, which are difficult to quantify at this juncture.

### **Energy reform**

**The reform opens the energy sector to private investment.** The reform amended the constitution to end a 75-year old state monopoly in the oil and gas sector, and allows the state to enter into a wide range of risk-sharing contracts with the private sector—from production-sharing to licenses. The reform also increases the autonomy of PEMEX and CFE (the state-owned electricity company), which could help raise their productivity and efficiency. In addition, the reform encourages greater private participation in electricity generation and natural gas distribution, and improves the regulation and management of transmission and distribution.

**Impact on growth:** Three channels are considered: i) higher oil and gas production, relative to a baseline of constant production levels, ii) a boost to manufacturing production through lower electricity prices , and iii) additional value added from higher investment in related services (Annex 3). Staff estimates a cumulative growth by 2019 of about 1.4 percent, 0.6 percent, and 0.5 percent respectively due to each channel, which implies about 0.6 percentage point increase in growth on average per year over 2016–19.

### **Financial reform**

The reform aims to increase financial deepening by promoting competition and streamlining bankruptcy procedures. Specifically, the reform introduces new provisions for credit and checking account portability, allowing clients to switch banks more easily. It also strengthens the legal framework for consumer protection. Furthermore, the reform strengthens creditors' rights by creating specialized courts to allow for faster processing of collateral in case of default. The reform also increases the role of development banks in extending credit and credit guarantees to underserved sectors, including SMEs and small agriculture producers.

**Impact on growth:** Since 2007, financial deepening in Mexico, measured by the ratio of total domestic credit to the non-financial private sector to GDP, has increased at a rate of about 0.7 percentage points annually. Staff's baseline scenario assumes the pace accelerates to 1.5 percentage points of GDP starting in 2016. This implies closing the gap in domestic credit to the private sector between Mexico and the median for emerging countries in Latin America in about 12 years. Using coefficients found in the literature on the link between financial development and growth, staff estimates that this additional deepening could lead to 0.07 and 0.16 percentage points of additional growth per year over 2016–19.

### **Box 4. Structural Reforms (Concluded)**

#### **Telecommunication reform**

#### The goal of the telecommunication reform is to increase competition and improve access to services.

The reform created a new independent regulatory agency, Instituto Federal de Telecomunicaciones (IFETEL), and charged it with regulating broadcasting and telecommunications. IFETEL will have the power to impose asymmetric regulations on any dominant players in the telecom or broadcasting sectors in order to increase competition. The reform also opens the sector to foreign investment and creates specialized courts in broadcasting, telecommunications and economic competition matters. The reform also launched a major investment program to increase internet connectivity, with the goal of bringing internet connections to the whole territory of the country by 2018.

**Impact on growth:** To gauge the impact of the reform, Mexico is compared to the OECD average in terms of access to broadband internet. If the reform succeeds in closing <sup>1</sup>/<sub>4</sub> of the gap, real GDP would rise by 0.41 to 0.79 percentage point, based on elasticities found in the literature (Koutroumpis, 2009, *The economic impact of broadband on growth: a simultaneous approach*, Telecommunications Policy, Vol. 33). Assuming that the effect is evenly distributed over the next 5 years, the annual output growth rate would increase by 0.08–0.16 percentage points. The increase of fixed line phones and any price reductions in telephone and internet services would also be positive for growth, but the effects would be relatively small.

#### Other reforms

The growth effects of reforms in other areas, including labor, education, and antitrust are more difficult to quantify as they may take time to materialize, and because the main impact may come from synergies with other reforms. For instance, antitrust legislation is likely to play a crucial role in ensuring an efficient opening of various sectors to private investment. Similarly, more flexible labor markets may make it more attractive to foreign investors to invest in the telecom and energy sectors. The education reform introduces a competitive process for teaching appointments, and standardized evaluations and merit-based promotions for teachers. The reform should raise the quality of the public education system and, if well implemented, would help increase human capital and productivity in the long run, while improving the efficiency of public spending.

### **Box 5. Spillovers from United States**

Mexico has close ties to the global economy, and particularly to the United States. Mexico's manufacturing sector is highly integrated into the U.S. supply chain, with 80 percent of good exports going to the United States. The U.S. also accounts for over half of Mexico's foreign portfolio liabilities and foreign direct investment. Foreign-owned banks account for about 70 percent of banking system assets, with a large presence of Spanish banks. There has been a sizable increase in portfolio inflows into the domestic sovereign bond market since the inclusion of Mexico in the World Global Bond Index (WGBI) in 2010. Based on BIS data, the Mexican peso is the most actively traded emerging market currency in the world, with a daily global trading volume of US\$135 billion. International investors now hold 37 percent of local currency denominated sovereign bonds, and 52 percent of total public debt, exposing Mexico to abrupt changes in investor sentiment.

An orderly normalization of U.S. monetary policy, accompanied by stronger U.S growth would be positive for Mexico as the increase in trade and remittances will lift growth. The correlation between U.S. and Mexico's

growth is very strong. Staff analysis suggests that 1 percentage point increase in US growth would raise Mexico's growth by 0.8 percentage points (April 2013, *WHD Regional Economic Outlook*, Chapter 3). Model simulations suggest that even if the normalization of U.S. monetary policy is accompanied by a mild increase in the risk premia for emerging market debt (up to 100 basis points), the overall growth effect for Mexico is still likely to be positive.

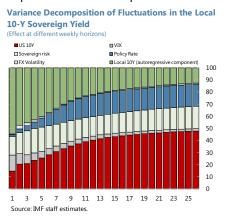
### Correlation Between U.S. and Mexico Growth

(year-on-year real growth rates)						
Pre-NAFTA	Post-NAFTA					
0.02	0.87					
0.23	0.65					
0.11	0.75					
-0.04	0.92					
-0.26	0.76					
-0.24	0.68					
0.16	0.75					
	0.02 0.23 0.11 -0.04 -0.26 -0.24					

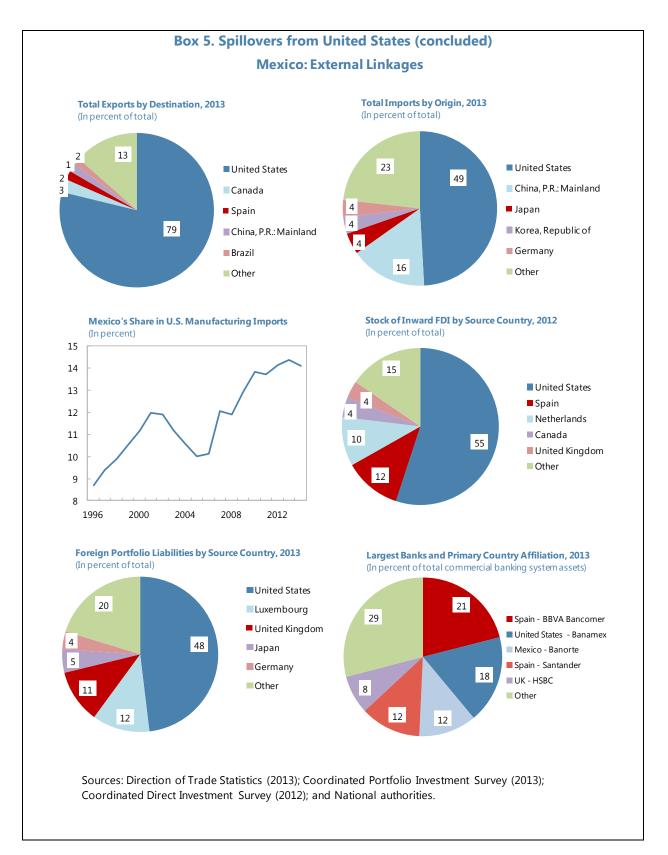
Sources: Haver Analytics; and IMF staff calculations.

However, a sharp increase in interest rates in the absence of higher U.S. growth could have significant adverse effects. An unexpected rise in U.S. interest rates (for example due to inflation pressures or renewed

worries about the debt ceiling), accompanied by an increase in emerging market risk premia would hit Mexico through both trade and financial channels. Staff analysis, using a vector error correction model suggests that changes in long-term U.S. interest rates transmit more than one-for-one to Mexican local sovereign bond yields. Specifically, 100 basis points shock to the 10-year U.S. Treasury rates translates into a 140 basis points increase in Mexico's 10-year sovereign yield.<sup>1</sup> Variance decomposition analysis shows that 50 percent of fluctuations in Mexico's 10-year sovereign yield is explained by innovations in the U.S. 10-year treasury yield. Non-linearities in the response of financial markets to shocks could exacerbate volatility further.



<sup>1/</sup> Mexico was one of the most affected countries in the immediate aftermath of the taper tantrum in June 2013, despite its strong fundamentals. As investors started to differentiate among countries based on fundamentals, spreads on Mexico's securities declined.



### **Box 6. Does Investor Behavior Amplify Volatile Capital Flows in Mexico?**

Foreign investors' exposure to Mexican financial assets has risen rapidly over the last decade, while the domestic investor base has steadily expanded and diversified. Staff analysis investigates how the volatility of gross capital flows in Mexico has been affected by the behavior of foreign and domestic investors during periods of market stress. Specifically, using available aggregate and fund-level data, this study (i) identifies extreme capital flow episodes in Mexico following the methodology developed by Forbes and Warnock (2012); (ii) examines the role of foreign and domestic investors (banks, pension and insurance funds, mutual funds) in amplifying or mitigating global shocks to 10-year Mbonos market during these episodes; and (iii) assesses whether local and global mutual funds active in Mexico behaved differently during periods of market stress.

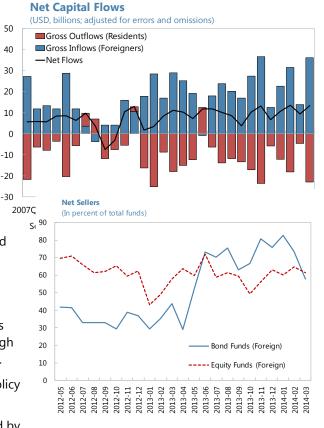
The main findings are as follows:

• OLS regressions and multivariate GARCH models suggest that foreign participation tended to amplify the impact of global financial shocks—measured by changes in the Vix or U.S. sovereign bond yields—on the volatility of Mexican sovereign bond yields, more so during periods of market stress. Domestic investors played some mitigating role, but the empirical evidence was mixed, depending on the type of investors and whether the global shock was an increase in the Vix or in U.S. sovereign bond yields.

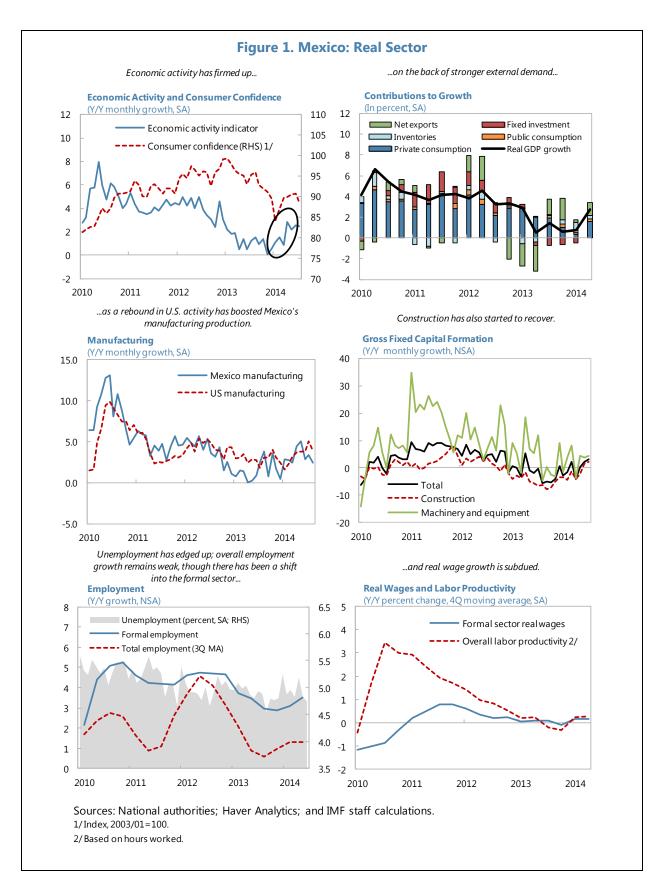
• We found strong evidence of herding and positive-feedback trading behavior among global bond funds active in Mexico, especially during market stress, which have contributed to the volatility of capital flows and can exacerbate tail events. Herding and positive trading behavior was also observed among domestic bond funds, though to a lesser degree than their foreign counterparts.

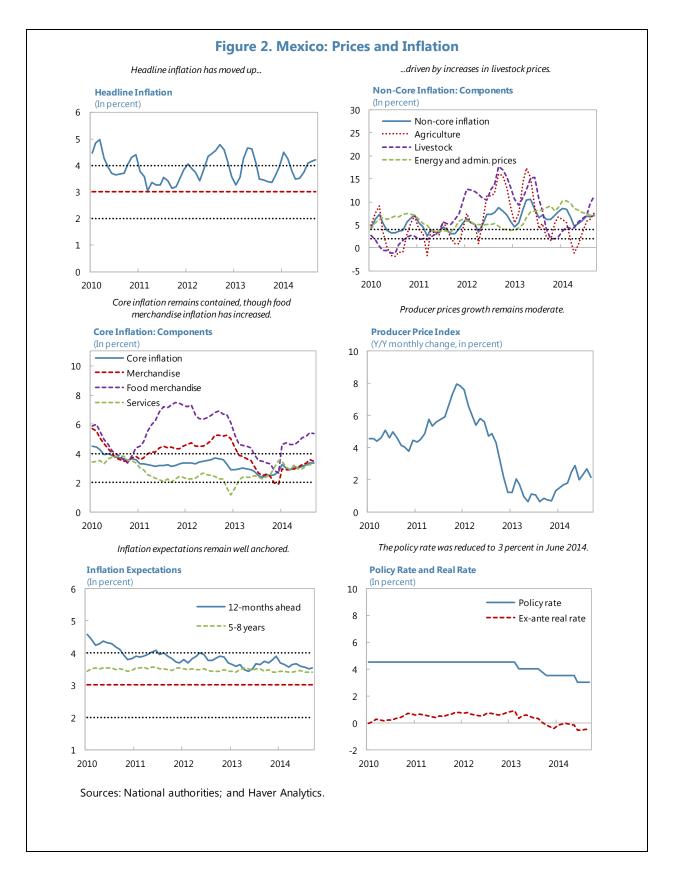
These findings have important implications for policy responses to volatile capital flows:

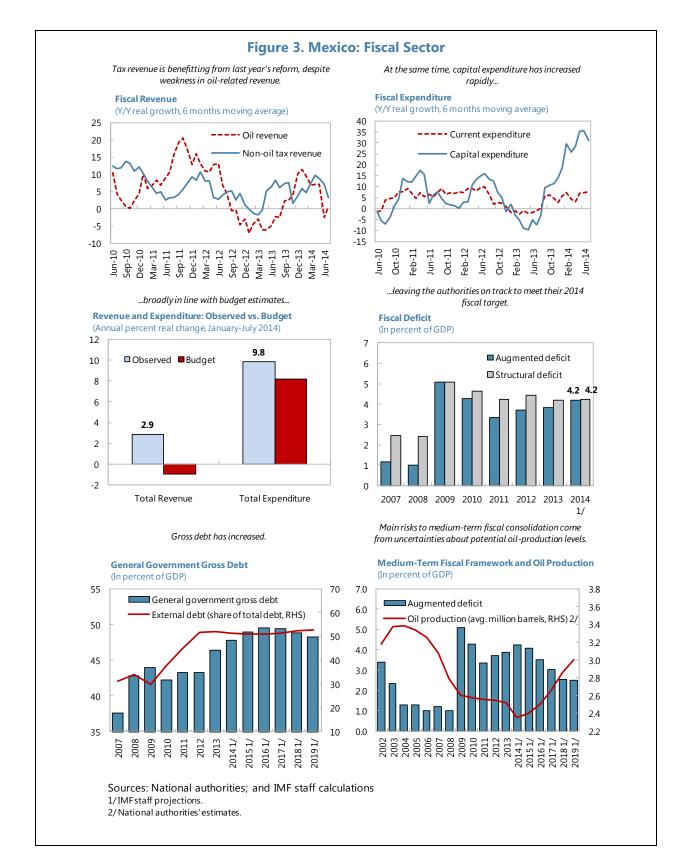
Policy credibility will continue to be key, anchored by



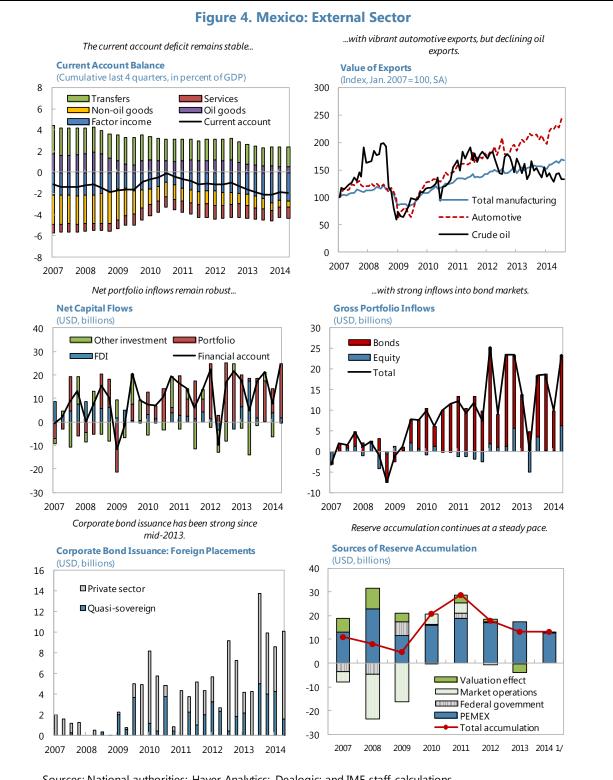
effective policy communication. A deep and diverse domestic investor base can help mitigate the effects of global shocks by absorbing excess supply of domestic assets in the face of a drop in demand by non-resident investors. In the context of ongoing regulatory reforms in the pension sector, the authorities should avoid regulations that could induce herding behavior among fund managers. At the same time, the insurance provided by the FCL remains important to maintain market confidence at times of stress.



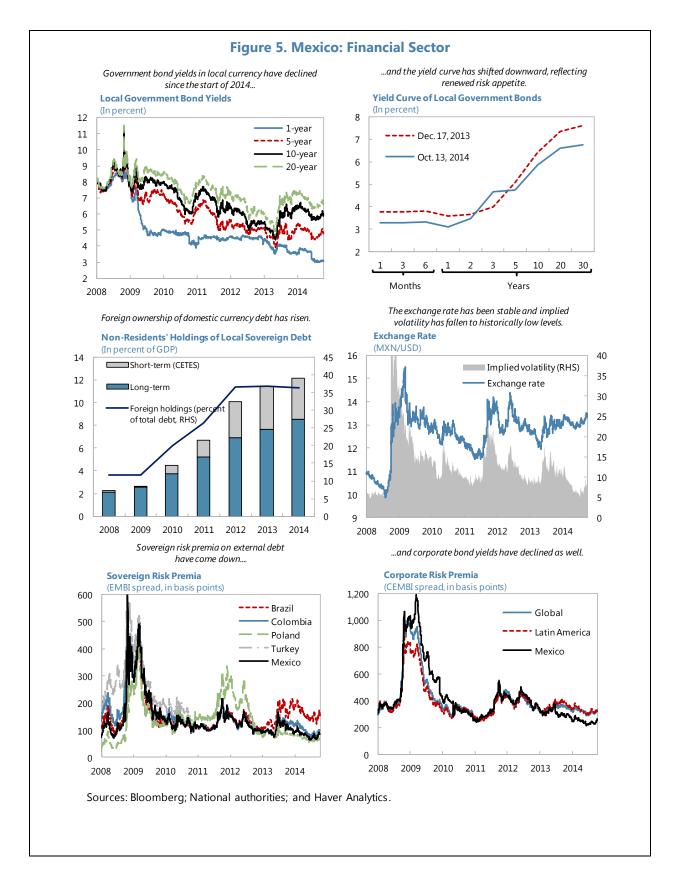


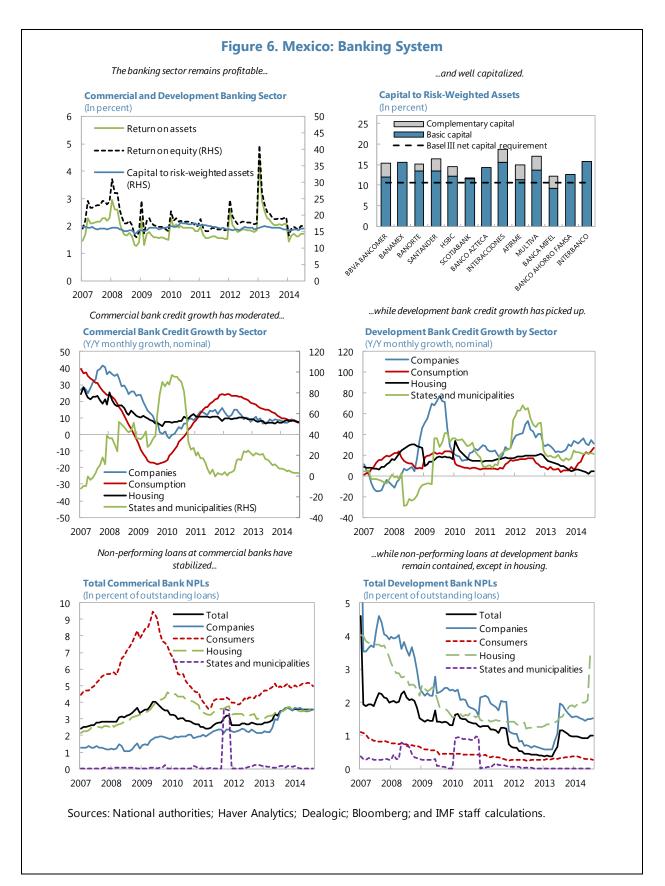


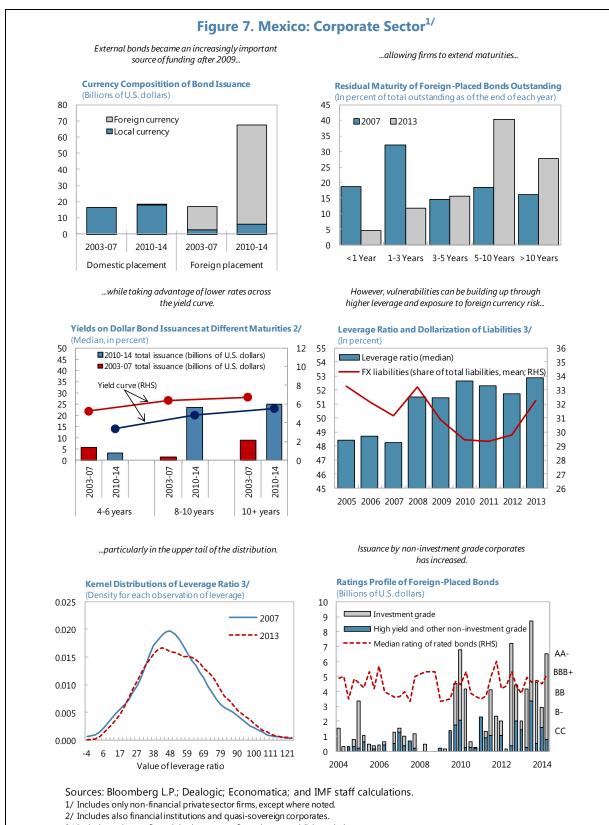
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Sources: National authorities; Haver Analytics; Dealogic; and IMF staff calculations. 1/Data through September 2014.







3/ Includes only non-financial private sector firms that are publicly traded.

45.5

11.4

5.8

105.0

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

#### I. Social and Demographic Indicators

74.5 Adult illiteracy rate (2012)12.8 Gross primary education enrollment rate (2012) 2/

10,650 Poverty headcount ratio (% of population, 2012) 1/

118.4 Income share of highest 20 percent / lowest 20 percent (2010)

#### II. Economic Indicators

				Proj.		
	2011	2012	2013	2014	2015	
(Annual percentage chan	ige, unless otherwis	e indicated)				
National accounts (in real terms)						
GDP	4.0	4.0	1.1	2.4	3.5	
Consumption	4.5	4.6	2.3	1.5	3.	
Private	4.8	4.9	2.5	1.6	2.	
Public	2.4	3.4	1.2	0.7	2.0	
Investment	5.4	5.5	-2.4	1.8	5.0	
Fixed	7.8	4.5	-1.8	0.4	5.2	
Private	12.1	8.8	-1.3	3.4	5	
Public	-4.1	-9.5	-3.6	-2.6	4.	
Inventories 3/	-0.5	0.2	-0.2	0.3	0.	
Exports of goods and services	8.2	5.9	1.2	6.8	4.4	
Imports of goods and services	8.0	5.5	1.5	5.6	5.1	
Exchange rates						
Nominal exchange rate (US\$/Mex\$)						
(average, appreciation +) 4/	1.7	-5.7	3.1	1.4		
Employment and inflation						
Consumer prices (average)	3.4	4.1	3.8	3.9	3.	
Formal sector employment, IMSS-insured workers (average) 5/	4.3	4.6	3.5	2.7		
National unemployment rate (annual average)	5.2	5.0	4.9	4.8	4.	
Unit labor costs: manufacturing (real terms, average) 6/	-1.8	-2.8	0.8	-0.2		
Money and credit						
Nominal bank credit to non-financial private sector 7/	17.1	11.0	12.0	10.7	11.	
Broad money (M4a) 8/	15.7	14.5	8.8	9.5	9.9	
Public sector finances (in percent of GDP)						
General government revenue	22.9	23.4	23.3	21.9	21.	
General government expenditure	26.2	27.1	27.1	26.1	25.	
Overall fiscal balance (public sector borrowing requirements) 9/	-3.3	-3.7	-3.8	-4.2	-4.	
Gross public sector debt	43.2	43.2	46.4	47.8	48.	
External sector						
External current account balance (in percent of GDP)	-1.1	-1.3	-2.1	-2.1	-2.	
Exports of goods, f.o.b.	17.1	6.1	2.5	3.9	6.	
Export volume	2.2	9.0	2.8	6.5	4.	
Imports of goods, f.o.b.	16.4	5.7	2.8	3.6	6.	
Import volume	8.5	4.6	3.0	5.9	5.	
Net capital inflows (in percent of GDP)	4.3	4.3	4.8	3.2	3.	
Real effective exchange rate (CPI based)						
(average, appreciation +)	0.4	-2.9	6.1	-0.7		
Terms of trade (improvement +)	6.8	-3.6	-0.1	-0.3	1.	
Memorandum items						
Output gap	-0.6	0.8	-0.7	-1.1	-0	

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 IMF staff estimates.

1/ CONEVAL uses a multi-dimensional approach to measuring poverty based on a "social deprivation index," which goes beyond the level of income and also factors in the level of education, access to health services, access to social security, quality and the size of one's home, access to basic services in the dwelling, and access to food.

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/ 2014 based on data available until September 2014.

5/ 2014 based on data available until June 2014.

6/ 2014 based on data available until July 2014.

7/ Includes commercial banks and direct credit by development banks.

8/ Includes money held by the public sector.

9/ Federal Government plus Social Security and State-owned Companies, excl. nonrecurring revenue and transfers to stabilization funds.

				Dual	Staff Projections					
	2010	2011	2012	Prel. 2013	2014	2015	2016	2017	2018	2019
Budgetary revenue, by type	22.3	22.5	22.5	23.6	22.4	22.0	23.0	23.6	24.0	24.2
Oil revenue	7.3	7.6	7.6	7.8	7.2	6.7	7.2	7.3	7.3	7.5
Non-oil tax revenue 1/	9.9	9.9	9.7	10.2	10.3	10.8	11.3	11.8	12.2	12.
Non-oil non-tax revenue	5.1	5.0	5.2	5.6	5.0	4.6	4.5	4.5	4.5	4.
Budgetary expenditure	25.1	25.0	25.1	25.9	25.9	25.5	26.0	26.1	26.0	26.
Primary	23.2	23.1	23.2	24.0	23.8	23.3	23.6	23.6	23.4	23.
Programmable	19.7	19.7	19.9	20.6	20.5	20.0	20.1	20.0	19.8	19.
Current	14.7	14.8	15.1	15.2	15.6	15.4	15.6	15.4	15.1	14.
Wages	6.0	5.9	5.9	6.0	6.0	5.9	5.9	5.8	5.8	5.
Pensions	2.6	2.7	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3.
Subsidies and transfers	2.8	3.0	3.1	3.3	3.5	3.5	3.5	3.5	3.2	3.
Other	3.3	3.2	3.3	3.0	3.0	2.9	2.9	2.7	2.5	2.
Capital	5.0	4.8	4.7	5.4	4.9	4.6	4.5	4.6	4.7	5.
Physical capital	4.7	4.5	4.4	4.6	4.7	4.4	4.3	4.4	4.5	4.
Of which: Pemex	2.0	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.
Financial capital 2/	0.3	0.4	0.4	0.9	0.2	0.2	0.2	0.2	0.2	0.
Nonprogrammable	3.5	3.4	3.3	3.4	3.3	3.3	3.4	3.6	3.6	3.
Of which: revenue sharing	3.3	3.3	3.2	3.3	3.2	3.2	3.4	3.5	3.5	3.
Interest payments 3/	1.9	1.9	2.0	2.0	2.1	2.2	2.4	2.5	2.6	2.
Traditional balance	-2.8	-2.5	-2.6	-2.3	-3.5	-3.5	-3.0	-2.5	-2.0	-2.
Adjustments to the traditional balance	1.5	0.9	1.1	1.5	0.7	0.5	0.5	0.5	0.5	0.
Public sector borrowing requirements 4/	-4.3	-3.3	-3.7	-3.8	-4.2	-4.0	-3.5	-3.0	-2.5	-2.
Augmented interest expenditure 5/	2.5	2.4	2.5	2.5	2.7	2.7	2.8	3.0	3.3	3.
Augmented primary balance	-1.7	-1.0	-1.1	-1.3	-1.5	-1.4	-0.7	0.0	0.8	0.
Memorandum items										
Total revenue 6/	22.4	22.9	23.4	23.3	22.1	21.4	22.6	23.2	23.6	23.
Total expenditure 7/	26.7	26.2	27.1	27.1	26.3	25.5	26.1	26.2	26.1	26.
Total primary expenditure 8/	24.2	23.9	24.6	24.6	23.7	22.8	23.3	23.2	22.8	22.
Structural current spending 9/	12.9	12.9	13.0	13.1	13.0	12.7	12.6	12.5	12.4	12.
Structural current spending real growth (y/y, in percent) 10/	-0.3	5.7	4.6	-0.1	1.7	1.0	2.1	3.2	3.7	3.
Crude oil export price, Mexican mix (US\$/bbl)	72	101	102	98	97	94	92	90	89	8
Non-oil augmented balance 11/	-8.4	-8.0	-8.2	-8.7	-8.3	-7.7	-7.6	-7.2	-6.7	-6.
Structural Primary Fiscal Balance	-2.1	-1.8	-1.9	-1.6	-1.5	-1.4	-0.7	0.1	0.9	1.
Fiscal Impulse 12/	-0.2	-0.3	0.0	-0.2	-0.1	-0.2	-0.7	-0.8	-0.8	-0.
Gross public sector debt	42.2	43.2	43.2	46.4	47.8	48.9	49.5	49.4	48.8	48.
Net public sector debt	36.2	37.5	37.7	40.4	42.0	43.1	43.7	43.6	43.0	42.
Nominal GDP (billions of Mexican pesos)	13,282	14,550	15,615	16,104	17,156	18,345	19,506	20,867	22,318	23,87

### Table 2a Mexico: Financial Operations of the Public Sector Authorities' Presentation

Sources: Mexican authorities and IMF staff estimates. Data refer to non-financial public sector, including PEMEX and other public entities but excluding state and local governments.

1/ From 2015 onwards, in line with the 2015 Income Law, excise on gasoline is classified as non-oil tax revenue.

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

3/ Includes transfers to IPAB and debtor support programs.

4/ Public Sector Borrowing Requirements excl. adjustments for net inflows to stabilization funds.

5/ Treats transfers to IPAB as interest payments.

6/ Budgetary revenue, excluding nonrecurrent revenue and gasoline subsidy.

7/ Budgetary expenditure, including adjustments to the traditional balance with the exception of adj. for nonrecurrent revenue and gasoline subsidy.

8/ Total expenditure minus augmented interest payments.

9/ The 2014 amendment to the FRL introduced a cap on structural current spending real growth. The latter is defined as total budgeary expenditure, excluding: (i) interest payments; (ii) non-programable spending; (iii) fuel costs of CFE; and (iv) direct physical and financial investment of the federal government.

10/ The cap on structural current spending real growth was set at 2.0 percent for 2015 and 2016, and equal to potential GDP real growth from 2017 onwards. 11/ Excludes oil revenue (oil extraction rights, PEMEX net income, oil excess return levies, excise tax on gasoline) and PEMEX operational and physical capital expenditure.

12/ Negative of the change in the structural primary fiscal balance, measured adjusting tax revenue for the cycle and oil net exports using a long-term moving average of oil prices.

### Table 2b. Mexico: Statement of Operations of Public Sector, GFSM 2001 Presentation<sup>1/</sup>

(In percent of GDP, except where noted)

				Prel.		Staff Projections				
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenue 2/	22.6	23.6	23.8	24.3	22.4	22.5	23.4	23.9	24.2	24.
Taxes	10.1	10.0	9.8	10.4	10.4	11.4	11.8	12.2	12.5	12.
Taxes on income, profits and capital gains	5.1	5.2	5.2	5.9	5.7	5.8	5.8	5.9	5.9	5.
Taxes on goods and services	4.4	4.3	4.3	4.1	4.4	5.3	5.5	5.8	6.0	6.
Value added tax	3.8	3.7	3.7	3.5	3.7	3.7	3.8	3.9	3.9	3.
Excises 2/	0.6	0.6	0.6	0.6	0.7	1.5	1.7	1.9	2.1	2.
Taxes on international trade and transactions	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.
Other taxes	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.
Social contributions	1.7	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1
Other revenue	10.8	11.8	12.2	12.2	10.3	9.3	9.8	9.9	9.9	10
Property income	4.8	5.8	5.9	5.3	4.7	3.7	4.0	4.0	3.8	3.
Other	6.0	6.0	6.3	6.8	5.6	5.7	5.9	6.0	6.1	6.
Total expenditure 2/	26.7	27.1	27.7	28.2	26.6	26.6	26.9	26.9	26.7	26
Expense	21.7	22.2	22.9	22.8	21.7	21.5	21.9	21.9	21.7	21
Compensation of employees	6.0	5.9	5.9	6.0	6.0	5.9	5.9	5.8	5.8	5
Purchases of goods and services	3.3	3.2	3.3	3.0	3.0	2.9	2.9	2.7	2.5	2
Interest 3/	2.5	2.4	2.5	2.5	2.7	2.7	2.8	3.0	3.3	3
Subsidies 2/	3.4	4.2	4.6	4.0	3.5	3.5	3.5	3.5	3.2	3
o/w fuel subsidy	0.6	1.1	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0
Grants 4/	3.3	3.3	3.2	3.3	3.2	3.3	3.3	3.3	3.2	3
Social benefits	2.6	2.7	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3
Other expense 5/	0.5	0.5	0.6	1.2	0.1	0.1	0.2	0.2	0.1	0
Net acquisition of nonfinancial assets 6/	5.1	4.9	4.8	5.4	4.9	5.1	4.9	5.0	5.0	5
Gross Operating Balance 7/	0.9	1.4	1.0	1.5	0.7	1.0	1.4	2.0	2.5	2
Overall Fiscal Deficit (Net lending/borrowing) 8/	-4.1	-3.4	-3.8	-4.0	-4.2	-4.1	-3.5	-3.0	-2.5	-2
Primary net/lending borrowing	-1.6	-1.1	-1.3	-1.5	-1.5	-1.4	-0.7	0.0	0.8	0.
Memo items:										
Oil revenue	7.3	7.6	7.6	7.8	7.1	6.6	7.1	7.2	7.2	7
Non-oil tax revenue	9.9	9.9	9.7	10.2	10.3	11.4	11.7	12.2	12.5	12
Non-oil non-tax revenue	5.1	5.0	5.2	5.6	5.0	4.6	4.5	4.5	4.5	4
Structural primary balance	-2.1	-1.8	-1.9	-1.6	-1.5	-1.3	-0.6	0.1	0.9	1
Fiscal impulse 9/	-0.2	-0.3	0.0	-0.2	-0.1	-0.2	-0.7	-0.7	-0.8	-0
Gross public sector debt 10/	42.2	43.2	43.2	46.4	47.8	48.9	49.5	49.4	48.8	48
Net public sector debt 11/	36.2	37.5	37.7	40.4	42.0	43.1	43.7	43.6	43.0	42
Authorities presentation:										
Total budgetary revenue	22.3	22.5	22.5	23.6	22.4	22.5	23.4	23.9	24.2	24
Total budgetary expenditure	25.1	25.0	25.1	25.9	25.9	26.0	26.4	26.4	26.2	26
Traditional balance	-2.8	-2.5	-2.6	-2.3	-3.5	-3.5	-3.0	-2.5	-2.0	-2
Adjustments to Traditional balance 12/	1.5	0.9	1.1	1.5	0.7	0.5	0.5	0.5	0.5	0
Public Sector Borrowing Requirements (PSBR)	-4.3	-3.3	-3.7	-3.8	-4.2	-4.0	-3.5	-3.0	-2.5	-2.
Structural current spending 13/	12.9	12.9	13.0	13.1	13.0	12.8	12.6	12.5	12.5	12
Structural current spending real growth (y/y, in percent) 14/	-0.3	5.7	4.6	-0.1	1.7	1.8	1.8	3.0	3.7	3.

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

2/ Revenue and expenditure figures differ from official data due to differences in the treatment of the subsidy excise on gasoline, which is included here as expense (subsidies).

3/Interest payments differ from official data due to adjustments to account for changes in valuation and interest rates.

4/Includes revenue sharing between federal government and state and local governments.

5/ Includes Adefas and other expenses, as well as the adjustments to the "traditional" balance not classified elsewhere.

6/ This category differ from official data on physical capital spending due to adjustment to account for Pidiregas amortizations included in budget figures.

7/ Represents the change in public sector net worth due to transactions; calculated as revenue minus expense (i.e., excluding net acquisition of non-financial assets).

8/ This balancing item is equivalent to the public sector borrowing requirements (PSBR) as defined by Mexican authorities, except for the adjustment to net inflows of stabilization funds.

9/ Negative of the change in the structural primary fiscal balance, measured adjusting tax revenue for the cycle and oil net exports using a long-term moving average of oil prices.

10/ Corresponds to the gross stock of public sector borrowing requirements. It is calculated as gross debt, as published by the authorities, plus adjustments to reflect additional public sector's liabilities not included in the headline official figures.

11/ Corresponds to the net stock of public sector borrowing requirements (i.e., net of public sector financial assets) as published by the authorities.

12/ Includes: Pidiregas, IPAB, budgetary adjustments, net inflows of stabilization funds, FARAC/FONADIN, debtor support, change in capital of development banks, and nonrecurring revenue.

13/ The 2014 amendment to the FRL introduced a cap on structural current spending real growth. The latter is defined as total budgeary expenditure, excluding: (i) interest payments; (ii) non-programable spending; (iii) fuel costs of CFE; and (iv) direct physical and financial investment of the federal government. 14/ The cap on structural current spending real growth was set at 2.0 percent for 2015 and 2016, and equal to potential GDP real growth from 2017 onwards.

### Table 3. Mexico: Central Government's Public Sector Financial Balance Sheet<sup>1/</sup>

					(In billio	ons of	pesos)								
		2009			2010			2011			2012			2013	
	Opening balance	Transactions		Opening balance	Transactions		Opening balance	Transactions		Opening balance	Transactions		Opening balance	Transactions	Other flows
Net worth															
Nonfinancial assets															
Net financial assets	-4,063.4			-4,382.3			-4,813.2			-5,450.6			-5,890.8		
Financial Assets 4/	1,185.9	-209.9	-46.1	929.9	-47.7	-86.5	795.7	98.7	-59.5	834.9	94.0	-73.5	855.4	212.2	-101.5
Liabilities	5,249.3	103.5	-40.7	5,312.1	404.0	-107.2	5,608.9	487.7	188.8	6,285.5	596.1	-135.4	6,746.3	696.6	28.2
Memorandum items:															
Net financial worth (in % of GDP)	-33.2			-36.2			-36.2			-37.5			-36.6		
Financial assets (in % of GDP)	9.7			7.7			6.0			5.7			5.3		
Liabilities (in % of GDP)	42.8			43.9			42.2			43.2			41.9		
GDP nominal prices	12,257			12,094			13,282			14,550			16,104		

Sources: Mexico authorities; and Fund staff estimates and projections.

1/ Excludes state and local governments.

2/ Includes exchange rate and various accounting adjustments.

3/ Includes Mex\$ 291.9 billion in new liabilities due to the ISSSTE Law Reform that took place in 2008.

4/ Liquid financial assets excluding those classified as financial assets with policy purposes by official authorities.

2014

Opening

balance

-6,504.9

966.1

7,471.0

-37.9

5.6

43.5

17,156

							Project	ions		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
						.S. dollars)				
Current account	-4.1	-12.8	-15.3	-26.3	-27.0	-27.9	-33.9	-34.3	-35.4	-36.
Merchandise trade balance	-3.0	-1.4	0.0	-1.2	0.5	1.1	-2.1	0.7	-0.2	3.
Exports	298.5	349.4	370.8	380.0	395.7	423.1	463.0	510.9	558.2	613.
o/w Manufactures 1/	246.1	279.2	302.7	315.3	330.6	354.9	381.4	411.2	441.5	470.
Imports	-301.5	-350.8	-370.8	-381.2	-395.2	-422.1	-465.1	-510.2	-558.4	-609.
o/w Petroleum and derivatives	30.2	42.7	41.1	40.9	38.8	38.9	39.3	39.5	38.9	39
Net other goods 2/	0.1	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0
Net services	-10.6	-14.8	-14.6	-12.0	-11.9	-12.3	-12.7	-13.2	-13.6	-14
Net factor income	-12.1	-19.7	-23.6	-35.5	-38.4	-40.7	-44.0	-47.9	-48.5	-53
o/w Gross Repatriation of Profits and Interest Payments Abroad	-22.9	-30.3	-36.7	-45.1	-48.4	-52.6	-58.3	-65.0	-68.8	-75
Net transfers (Remittances)	21.5	23.0	22.6	22.1	22.9	24.1	25.0	26.0	27.0	27
Financial Account	44.5	50.9	51.4	61.0	41.7	41.3	47.6	48.9	51.6	56
Foreign direct investment, net	8.4	11.1	-4.7	26.0	14.0	18.5	28.0	29.3	30.6	37
Direct investment into Mexico	23.5	23.7	17.8	39.2	22.8	27.5	37.3	38.9	40.6	48
Direct investment abroad	-15.0	-12.6	-22.5	-13.2	-8.7	-9.0	-9.3	-9.6	-9.9	-10
Portfolio investment, net	31.4	45.9	72.7	49.0	30.9	33.8	32.2	29.2	30.1	29
Liabilities	37.3	40.6	81.2	51.1	30.9	33.8	32.2	29.2	30.1	29
Public Sector	28.1	37.0	56.9	33.2	22.7	23.9	23.2	24.5	25.9	25
o/w Local currency domestic-issued bonds	23.1	31.6	46.6	22.0	16.7	17.2	15.8	16.4	17.1	15
Private sector	9.2	3.6	24.3	17.9	8.2	9.9	9.0	4.7	4.2	3
Assets	-5.9	5.3	-8.5	-2.1	0.0	0.0	0.0	0.0	0.0	0
Other investments, net	4.6	-6.1	-16.6	-14.0	-3.2	-11.1	-12.6	-9.6	-9.1	-10
Liabilites	31.6	-2.5	-10.3	13.3	5.4	2.5	1.0	5.0	7.5	6
Assets	-27.0	-3.7	-6.3	-27.3	-8.6	-13.6	-13.6	-14.6	-16.6	-16
Errors and Omissions	-19.8	-10.0	-18.7	-16.9	0.0	0.0	0.0	0.0	0.0	0
Change in net international reserves	20.7	28.6	17.8	13.2	14.7	13.3	13.7	14.6	16.2	17
Valuation adjustments	-0.1	-0.4	-0.3	4.6	0.0	0.0	0.0	0.0	0.0	0
				(Ir	n percent o	of GDP)				
Current account balance	-0.4	-1.1	-1.3	-2.1	-2.1	-2.0	-2.3	-2.2	-2.2	-2
o/w Hydrocarbons trade balance	1.1	1.2	1.0	0.7	0.1	0.0	0.1	0.2	0.6	0
o/w Non-hydrocarbons trade balance 3/	-1.4	-1.3	-1.0	-0.8	-0.1	0.0	-0.2	-0.2	-0.6	-0
Net capital inflows	4.2	4.3	4.3	4.8	3.2	3.0	3.3	3.2	3.1	3
Net FDI inflows	0.8	0.9	-0.4	2.1	1.1	1.3	1.9	1.9	1.9	2
Net portfolio inflows	3.0	3.9	6.1	3.9	2.4	2.4	2.2	1.9	1.8	1
Net other investment inflows	0.4	-0.5	-1.4	-1.1	-0.2	-0.8	-0.9	-0.6	-0.6	-0
Memorandum items										
Hydrocarbons exports volume growth (in percent)	11.2	-1.7	-6.1	-2.8	0.0	-4.8	0.0	0.0	0.0	0
Non-hydrocarbons exports volume growth (in percent)	17.3	3.3	8.4	5.5	7.3	5.0	5.4	7.5	7.5	6
Hydrocarbons imports volume growth (in percent)	15.4	7.4	-4.6	-8.1	5.0	3.6	3.1	2.6	-0.2	3
Non-hydrocarbons imports volume growth (in percent)	24.1	8.6	6.5	4.4	5.9	5.3	10.2	8.7	7.6	7
Crude oil export volume (millions of bbl/day)	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1
Gross domestic product (in billions of U.S. dollars)	1,052	1,172	1,186	1,261	1,310	1,388	1,461	1,548	1,640	1,73

### Table 4 Mexico: Summary Balance of Payments

1/ Total exports are defined net of imports by the maquila sector. Correspondingly, total imports do not include maquila sector imports.
 2/ Goods procured in ports by carriers.
 3/ Excluding oil exports, petroleum products and natural gas imports.

Table 5. Mexico: Financial Soundness Indicators									
	2009	2010	2011	2012	2013	2014 1/			
Capital Adequacy									
Regulatory capital to risk-weighted assets	16.2	17.6	16.5	16.0	16.2	15.9			
Regulatory Tier 1 capital to risk-weighted assets	14.0	15.1	14.3	13.8	14.5	14.0			
Capital to assets	9.8	10.8	10.0	10.5	10.8	10.4			
Gross asset position in financial derivatives to capital	82.3	65.1	72.8	78.4	72.7	82.8			
Gross liability position in financial derivatives to capital	85.5	65.8	72.6	78.1	72.2	83.3			
Asset Quality									
Nonperforming loans to total gross loans	3.1	2.3	2.4	2.5	3.3	3.2			
Provisions to Nonperforming loans	173.3	200.0	191.0	185.4	147.6	142.3			
Earnings and Profitability									
Return on assets	1.6	2.0	1.6	1.9	2.4	1.7			
Return on equity	17.2	18.1	15.9	18.3	22.1	16.6			
Liquidity									
Liquid assets to short-term liabilities	56.7	56.8	56.9	50.9	47.0	47.7			
Liquid assets to total assets	41.5	41.8	42.5	37.7	35.2	35.7			
Customer deposits to total (noninterbank) loans	88.8	85.9	82.8	88.6	86.9	90.0			
Sources: Financial Soundness Indicators									
1/ As of June 2014.									

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

							Proj.
	2008	2009	2010	2011	2012	2013	2014
Financial market indicators 2/							
Exchange rate (per U.S. dollar, average)	11.1	13.5	12.6	12.4	13.2	12.8	13.2
(year-to-date percent change, + depreciation)	1.8	21.4	-6.5	-1.7	6.0	-3.0	2.6
28-day treasury auction rate (percent; period average)	7.7	5.4	4.4	4.2	4.2	3.8	2.8
EMBIG Mexico (basis points; period average)	254	302	187	186	188	189	180
Sovereign 10-year local currency bond yield (period average)	8.3	8.0	7.0	6.8	5.7	5.6	6.0
Stock exchange index (period average, year on year percent change)	-9.6	-5.8	31.5	9.2	10.2	5.1	11.9
Financial system							
Bank of Mexico net international reserves (US\$ billion)	85.4	90.8	113.6	142.5	163.5	176.5	191.2
Nominal bank credit to the non-financial private sector (year on year percent change) 3/ 4/	5.5	-0.2	10.3	17.1	11.0	12.0	10.7
Nonperforming loans to total gross loans 3/	2.7	3.1	2.3	2.4	2.5	3.3	3.2
External vulnerability indicators							
Gross financing needs (billions of US\$)	86.8	70.8	77.4	113.0	109.4	136.1	170.5
Gross international reserves (end-year, billions of US\$) 5/	95.3	99.9	120.6	149.2	167.1	180.2	194.9
Change (billions of US\$)	8.1	4.6	20.7	28.6	17.8	13.2	14.7
Months of imports of goods and services	3.7	5.1	4.8	5.1	5.4	5.7	5.9
Months of imports plus interest payments	3.9	5.4	5.0	5.4	5.7	6.0	6.3
Percent of broad money	18.4	17.2	17.5	21.2	19.3	19.2	19.1
Percent of foreign portfolio liabilities	34.9	41.6	39.6	48.2	39.0	38.0	38.6
Percent of short-term debt (by residual maturity)	181.5	207.8	222.1	156.7	174.0	145.8	133.7
Percent of ARA Metric 6/	105.4	117.1	109.4	129.0	118.1	115.9	117.2
Percent of GDP	8.7	11.2	11.5	12.7	14.1	14.3	14.9
Gross total external debt (in percent of GDP)	18.6	21.7	24.7	25.5	31.1	33.3	34.9
Of which: In local currency	1.8	2.7	5.8	7.3	12.0	12.9	13.7
Gross total external debt (billions of US\$)	205.0	194.5	260.1	298.9	369.2	420.5	457.5
Of which: In local currency	19.6	24.0	60.5	85.7	142.1	162.9	179.6
External debt service (in percent of exports and net transfers)	19.4	22.1	17.6	24.4	25.9	32.6	36.8

Sources: Bank of Mexico; National Banking and Securities Commission; National Institute of Statistics and Geography; Secretary of Finance and Public Credit; and IMF staff estimates

1/ All data for 2014 are projections, unless otherwise specified.

2/ As of September 2014.

3/ As of June 2014.

4/ Includes commercial banks and direct credit from development banks.

5/ Excludes balances under bilateral payments accounts. For 2009, includes the allocation of SDR 2.337 billion in the general allocation implemented on August 28, 2009, and another SDR 0.224 billion in the special allocation on September 9.

6/ The ARA metric was developed by the Strategy and Policy Review Department at the IMF to assess reserve adequacy.

							Staff pro	ojections		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
			(Ann	ual percent	age change,	unless othe	erwise indica	ited)		
National accounts (in real terms)										
GDP	5.1	4.0	4.0	1.1	2.4	3.5	3.8	3.8	3.8	3.8
Consumption	5.1	4.5	4.6	2.3	1.5	3.3	4.1	3.6	3.4	3.2
Private	5.7	4.8	4.9	2.5	1.6	2.8	4.4	3.8	3.4	3.1
Public	1.7	2.4	3.4	1.2	0.7	2.0	2.4	2.7	3.5	4.4
Investment	4.5	5.4	5.5	-2.4	1.8	5.0	9.3	5.8	5.0	6.8
Fixed	1.3	7.8	4.5	-1.8	0.4	5.2	9.6	6.0	5.1	7.0
Private	1.9	12.1	8.8	-1.3	3.4	5.4	10.5	6.1	5.2	7.5
Public	-0.5	-4.1	-9.5	-3.6	-2.6	4.2	6.3	4.8	4.9	4.6
Inventories 2/	0.7	-0.5	0.2	-0.2	0.3	0.0	0.0	0.0	0.0	0.0
Exports of goods and services	20.5	8.2	5.9	1.2	6.8	4.4	5.4	7.6	7.6	6.9
Imports of goods and services	20.5	8.0	5.5	1.5	5.6	5.1	10.1	8.5	7.5	7.5
Consumer prices										
End of period	4.4	3.8	3.6	4.0	4.0	3.2	3.0	3.0	3.0	3.0
Average	4.2	3.4	4.1	3.8	3.9	3.5	3.1	3.0	3.0	3.0
external sector										
Current account balance (in percent of GDP)	-0.4	-1.1	-1.3	-2.1	-2.1	-2.0	-2.3	-2.2	-2.2	-2.1
Non-hydrocarbon current account balance (in percent of GDP) 1/	-1.5	-2.3	-2.3	-2.8	-2.3	-2.1	-2.5	-2.5	-2.8	-2.8
Exports	29.9	17.1	6.1	2.5	3.9	6.9	9.4	10.4	9.3	9.8
Imports	28.6	16.4	5.7	2.8	3.6	6.8	10.2	9.7	9.4	9.2
Terms of trade (improvement +)	7.6	6.8	-3.6	-0.1	-0.3	1.3	4.1	2.2	0.4	1.7
Crude oil export price, Mexican mix (US\$/bbl)	72.5	101.1	101.8	98.5	97.2	94.0	92.1	90.3	89.1	88.2
New fire side while sector					(in percer	nt of GDP)				
<b>Non-financial public sector</b> Overall balance	-4.3	-3.3	-3.7	-3.8	-4.2	-4.0	-3.5	-3.0	-2.5	-2.5
	-4.5	-3.3	-3.7	-3.8	-4.2	-4.0	-3.3	-3.0	-2.3	-2.5
Primary balance	-1.7	-1.0	-1.1	-1.5	-1.5	-1.4	-0.7	0.0	0.8	0.9
Saving and investment 3/										
Gross domestic investment	22.1	22.3	23.1	21.5	21.6	22.0	23.3	23.7	23.9	24.6
Fixed investment	21.1	21.7	22.4	21.0	20.9	21.3	22.6	23.1	23.4	24.1
Public	5.6	5.2	4.6	4.3	4.0	4.0	4.1	4.2	4.2	4.3
Private	15.5	16.5	17.8	16.7	16.9	17.3	18.5	18.9	19.2	19.8
Gross domestic saving	21.7	21.2	21.8	19.5	19.5	19.9	20.9	21.4	21.7	22.4
Public	0.9 20.7	1.4 19.8	0.4 21.4	0.2 19.3	0.0 19.6	0.4 19.6	0.6 20.3	0.8 20.6	0.7 21.0	0.5 21.9
Private	20.7	19.9	21.4	19.3	19.0	19.0	20.3	20.6	21.0	21.9
Memorandum items										
Output gap	-2.1	-0.6	0.8	-0.7	-1.1	-0.4	0.0	0.0	0.0	0.0

1/ Excluding oil exports and petroleum products imports.

2/ Contribution to growth. Excludes statistical discrepancy.

3/ Reported numbers may differ from authorities' due to rounding.

# Annex I. External Sustainability Assessment

Background. Mexico's NIIP is about -39 percent of GDP (gross foreign assets and liabilities are roughly 45 percent and B4 percent of GDP, respectively). Foreign-held portfolio liabilities are about 40 percent of GDP, of which around one third are holdings of local-currency government bonds. With projected current account deficits averaging less than 2.5 bercent of GDP, the NIIP to GDP ratio is projected to remain broadly stable over the medium term. Assessment. While the NIIP is sustainable, gross foreign portfolio liabilities could be a channel of vulnerability to global inancial volatility, especially through the domestic sovereign bond market. Background. The current account (CA) deficit widened to 2.1 percent of GDP in 2013 (-1.7 percent cyclically adjusted), amid larger net factor payments. In 2014, the current account deficit is projected to remain unchanged with an improving rade balance offset by a continued increase in factor payments. The deficit is projected to rise to about 2.2 percent of GDP, on the back of imports associated with increased FDI in the energy and telecom sectors. Investment is projected to	Overall Assessment: Mexico's external sector position is broadly consistent with medium-term fundamentals and desirable policy settings. The staff assesses the current account as having been only slightly on the strong side, and correspondingly the REER to have been slightly on the weak side. The FCL
amid larger net factor payments. In 2014, the current account deficit is projected to remain unchanged with an improving rade balance offset by a continued increase in factor payments. The deficit is projected to rise to about 2.2 percent of	side, and correspondingly the REER to have
ise by about 3 percentage points of GDP over the medium term, supported by an increase in public and private saving.	provides an added buffer against global tail risks.
Assessment. Mexico's CA appears to be slightly stronger than the level consistent with medium term fundamentals and desirable policy settings. The EBA model estimates a cyclically-adjusted current account norm of -1.9 percent, implying a positive CA gap of +0.2 percent of GDP (including the upward influence on the CA of fiscal policies of other countries). The staff assessment is similar, within a gap range centered on that estimate plus or minus 1 percent of GDP. The small projected increase in Mexico's CA deficit is consistent with fundamentals, desirable policy settings, and the expected effects of the growth-enhancing structural reforms on FDI.	<b>Potential policy responses:</b> As the external sector position is broadly consistent with medium-term fundamentals, there is no reason to alter the current and planned policy settings.
<b>Background.</b> The floating exchange rate has been a key shock absorber in an unsettled global environment. <sup>1/</sup> In 2013, he peso became the most widely-traded emerging market currency. As such, it often serves as a port-of-call for nvestors taking positions in other EM currencies with less liquid markets or capital account restrictions. <b>Assessment.</b> The EBA REER regression estimates a small undervaluation of about 6 percent in 2013; this is also consistent with the EBA estimate that the current account is slightly on the strong side. The staff assesses Mexico's real effective exchange rate to be broadly consistent with fundamentals and desirable policy settings (slightly undervalued with a gap tentered on -5 percent, in a range of 0 to -10 percent).	The authorities have committed to reducing the public sector borrowing requirement from 4.2 percent of GDP in 2014 to 2.5 percent of GDP in 2018. The consolidation relies on a gradual increase in tax revenues related to the 2014 tax reform. The central bank will set monetary policy to ensure that the inflation converges towards
<b>Background</b> . Gross capital inflows by non-residents in the period following the global crisis were broadly offset by purchases of assets abroad, particularly by the resident private sector. <sup>27</sup> Net capital inflows are expected to continue to be in excess of the external current account deficit; since 2010, a large share of these flows have been purchases of ocally-issued government paper and other portfolio investments by non-residents. <sup>37</sup> Going forward, the structural eforms could raise overall inflows and FDI.	the 3 percent permanent target within the horizon at which monetary policy operates, while maintaining a flexible exchange rate policy.
he nv As vit exc cer Ba ou oc oc ref	e peso became the most widely-traded emerging market currency. As such, it often serves as a port-of-call for estors taking positions in other EM currencies with less liquid markets or capital account restrictions. <b>sessment</b> . The EBA REER regression estimates a small undervaluation of about 6 percent in 2013; this is also consistent the the EBA estimate that the current account is slightly on the strong side. The staff assesses Mexico's real effective change rate to be broadly consistent with fundamentals and desirable policy settings (slightly undervalued with a gap intered on -5 percent, in a range of 0 to -10 percent). <b>ckground</b> . Gross capital inflows by non-residents in the period following the global crisis were broadly offset by rchases of assets abroad, particularly by the resident private sector. <sup>27</sup> Net capital inflows are expected to continue to in excess of the external current account deficit; since 2010, a large share of these flows have been purchases of ally-issued government paper and other portfolio investments by non-residents. <sup>37</sup> Going forward, the structural

# Annex I. External Sustainability Assessment (concluded)

FX intervention and reserves level	<b>Background</b> . The central bank remains committed to a floating exchange rate, using rules-based intervention only to prevent disorderly market conditions. The central bank did not conduct any discretionary foreign exchange intervention in 2013 and 2014; it will continue to build its reserve buffer mostly through purchases of the net foreign currency proceeds of the state oil company.
	<b>Assessment</b> The current level of foreign reserves is adequate for normal times according to a range of standard reserve coverage indicators, and falls in the lower end of the 100-150 percent range of the IMF's composite reserve adequacy metric. The current policy of reserve accumulation is broadly consistent with the expected gradual rise in foreign-held portfolio liabilities. The Fund FCL arrangement has been an effective complement to international reserves against global tail risks.
Technical Background Notes	1/ Following the tapering announcement by Ben Bernanke in May 21, 2013, Mexico's currency experienced one of the sharpest depreciations across emerging markets, falling by nearly 8.4 percent by end-June 2013. By the end of April 2014 it had depreciated 6 percent with respect to May 21 <sup>st</sup> 2013—significantly less than for other emerging market countries. The nominal and real effective exchange rates have depreciated modestly since end-2013.
	2/ Capital inflows by non-residents in the period after the global crisis did not lead to a significant widening of the current account deficit. Rather, they translated (in a BOP accounting sense) into a strong accumulation of hard-currency assets abroad, particularly by the private sector. Outward FDI, foreign bond and equity purchases, deposits abroad and domestic banks' loans to non-residents represented two-thirds of the economy's foreign asset accumulation over this period.
	3/ In the second quarter of 2013, gross capital inflows from non-residents, especially portfolio investment, fell sharply from a peak in the first quarter. Residents helped cushion the effects of this shift by repatriating part of their assets invested abroad, thus leading to a smaller decline in overall net capital inflows. Portfolio inflows bounced back strongly in the second half of 2013 and first half of 2014.

### **Annex II. Implementation of Key FSAP Recommendations**

#### **Short Term**

Increase budget autonomy for CNBV and CNSF; increase resources commensurate with new responsibilities (wider regulatory perimeter).

**Partly implemented.** The CNBV's budget resources have risen by 10 percent a year over the last three years, although the number of supervised entities has tripled to 5,000 over the same period.

Extend scope of CNBV regulatory and supervisory powers to financial and mixed-activity groups.

**Partly implemented.** The new Mexican Financial Groups Law establishes that supervision of financial groups will be conducted on a consolidated basis by a Supervisory Commission (i.e. CNBV, CNSF or CONSAR) appointed by the Mexican Finance Ministry (SHCP) for each financial group. The Ministry and the Supervisory Commissions share regulation powers. The former is focused on capitalization requirements and intra-group activities, among other aspects. The latter will implement regulations related to accountability, financial information, and disclosure. Additionally, the banking law extends the CNBV's supervisory and regulatory powers to mixed-activity groups. The new framework is expected to be fully implemented by year end.

*Fully implement Pillar 2 supervisory processes, including ICAAP and criteria to require buffers above regulatory minima.* 

**In progress.** The CNBV has strengthened its powers to require credit institutions to maintain capital above the regulatory minimum based on the credit institution's own stress scenarios. To determine such scenarios, credit institutions must comply with the regulations established by the CNBV, expected to be issued by year end.

*Tighten concentration limits (including applicable standards) and introduce capital charge for concentration risk under Pillar 2.* 

**In progress.** The regulation regarding capital charges for concentration risk under Pillar 2 is intended to be implemented by year end.

*Establish emergency contingency funding mechanism for IPAB, guaranteed by SHCP; transfer IPAB's debt to the Federal Government.* 

**Not implemented.** The authorities noted that under the current Central Bank Law, Bank of Mexico can grant credit to IPAB without the *need* for any special arrangement. However, IPAB and the Bank of Mexico have to work on a Memorandum of Understanding.

Change pension fund investment guidelines and regulatory tools to encourage focus on long term returns, including using long-term benchmarks.

**In progress.** The AFOREs' investment regime has been changed over the years to enhance medium- and long-term investment policies. Recent changes include: First, a distinction in the Net Return Index horizon (performance measure) by fund type; second, new criteria for benchmark portfolios as well as SIEFORE's VaR parameters; and, finally, a new SIEFORE (SB0) specialized on workers close to retirement.

Establish program to address weak and not yet regulated cooperatives.

**Implemented.** Currently the cooperatives are supervised by the CNBV and subject to prudential regulation, accounting and corporate governance rules.

*Revisit the structure of commissions and ensure bank account contestability to promote access to finance.* 

**Partly implemented.** The financial reform established the joint power of Bank of Mexico and CNBV to regulate fees and commissions related to card payments networks (regulation issued last March), ATMs, checks and electronic transfers. A regulation networks other than card payments is expected by early 2015.

#### Improve legal framework for derivatives.

**In progress.** In May 2014, The SHCP, Bank of Mexico, and CNBV jointly issued amendments to existing regulations aimed at strengthening and improving transparency in the derivatives market. These amendments incorporate some of the principles for Financial Market Infrastructures published by CPSS-IOSCO. Specifically, they aim at: 1) allowing central counterparties to clear over-the-counter (OTC) derivatives; 2) strengthening corporate governance and risk management for central counterparties; and 3) allowing central counterparties to offer additional services, such as trade reporting. The new rules also delineate responsibilities for the CNBV and Bank of Mexico, which jointly oversee clearing members.

#### **Medium Term**

Enhance independence and accountability of the CNBV and CNSF (including by revisiting supervisory architecture) and strengthen the legal protection of supervisors.

#### Not implemented.

Strengthen powers and increase resources at CONDUSEF and study allocation of responsibilities with PROFECO.

#### In progress.

Pension contribution rates for private employees should be set to achieve reasonable replacement rates at retirement.

#### Not implemented.

Promote greater competition for mutual fund providers by facilitating entry by independent operators.

**Implemented.** The January 2014 amendment to the Mutual funds law aimed at allowing access to more market players, in line with the recommendation. Also, the CNBV could authorize electronic platforms for the trading of all mutual funds, in order to ease entry by independent distributors.

Promote regional integration of capital markets; prepare a medium-term strategy for capital market development.

**In progress.** Since August 18th 2014, Mexico has become a member of the Integrated Latin American Market (MILA). The amendments introduced in May 30, 2013 to the securities exchanges regulations allow for agreements between the Mexican securities exchange (BMV) and other exchanges, to facilitate access to each other's trading systems. The CNBV is also working together with NAFIN and BMV to promote the participation of SME's in capital markets.

### Annex III. Growth Impact of the Energy Reform

To measure the impact of the energy reform, staff considered three components: i) the direct impact through increases in oil and gas production, ii) the value added from foreign investment flows, and iii) the impact on manufacturing activity through lower electricity prices.

**1.** The no-reform scenario assumes constant oil and gas production while the reform scenario factors in gradual production increases. Crude oil production remains constant at the estimated levels for PEMEX for 2015 of 2.4 million barrels a day (see selected issues paper). The critical assumption is that PEMEX will be able to achieve a 100 percent reserve replacement ratio so that new discoveries and extraction technologies compensate for declining production in maturing fields. The reform scenario assumes instead that production of oil reaches 3 million barrels a day and natural gas 8.3 millions of cubic feet per day by 2019 as new entrants add to Pemex's output.

Oil and Natu	iral Gas Proc	luction with	n a <mark>nd with</mark> o	out Energy	/ Reform	
	2014	2015	2016	2017	2018	2019
Baseline						
Oil (mmb/d)	2.35	2.40	2.55	2.70	2.85	3.00
Natural Gas (mmcf/d)	6,520	6,890	7,260	7,630	8,000	8,343
Without reform						
Oil (mmb/d)	2.35	2.40	2.40	2.40	2.40	2.40
Natural Gas (mmcf/d)	6,520	6,890	6,890	6,890	6,890	6,890
	Cum	nulative percer	nt increase			
Oil (mb/d)	0	0	6.25	12.50	18.75	25.00
Natural Gas (mmcf/d)	0	0	5.37	10.74	16.11	21.09
Real GDP	0	0	0.36	0.72	1.09	1.44

Source: 2015 Budget documents and staff calculations. The impact on GDP is calculated assuming that the weight of oil and gas extraction in GDP, of about 6 percent, remains constant.

2. FDI flows starting in 2016 would include a large import component. There is large uncertainty about the size of the import component, which staff assumes at 50 percent, since it can vary widely depending on the type of oil field (i.e., shallow waters, deep waters, shale). Total FDI flows are backed out from industry-based comparables of investment costs of achieving the production scenarios (see selected issues paper). The increase in investment is not uniform across years reflecting different phases of exploration and extraction.

Projected FDI	Flows into	Oil and Gas	Exploratio	on and Ext	raction	
	2014	2015	2016	2017	2018	2019
	In b	illions of U.S.	Dollars			
Foreign Direct Investment	0	0	8.57	8.91	10.15	18.37
Of which local component	0	0	4.29	4.45	5.07	9.19
	Cumu	lative percent	increase			
Real GDP	0	0	0.29	0.29	0.31	0.53

Source: staff calculations. The impact on GDP is calculated as the percent increase in total GDP from higher private investment, excluding imports of machinery and equipment.

**3. Substitution of fuel oil for natural gas in electricity generation would lower electricity prices and boost manufacturing activity.** Staff analysis in the companion selected issues paper estimates an elasticity of manufacturing output to electricity prices of up to -0.28, and a potential reduction of about 13 percent in electricity tariffs for industrial consumers. This reduction would follow from increased availability of natural gas derived from increased gas pipeline capacity to import natural gas from the United States, which can be used to substitute fuel oil in electricity generation<sup>1</sup> The estimated reduction in electricity prices and elasticity of manufacturing output to those prices imply an impact on GDP of up to 0.6 percent, given the current weight of manufacturing output in GDP. Staff analysis suggests that it is feasible for GDP to exhibit these gains over the period 2016-2019. These estimates are subject to upside risks from efficiency gains in the electricity sector that could yield further reductions in tariffs and bring them eventually to U.S. levels.

Economic Impact of a Reduction in Ele	ctricity i	rices			
	Lowest	Highest			
Elasticities (Table 2, selected issues paper)	-0.11	-0.28			
	In pe	rcent			
Scenario 1: Substitution of fuel for natural gas					
Increase in manufacturing output	1.4	3.6			
Increase in overall GDP	0.2	0.6			
Scenario 2: Convergence to U.S. Levels					
Increase in manufacturing output	5.5	14.0			
Increase in overall GDP	0.9	2.2			
Note: Scenario 1 assumes a reduction in electricity prices of 13					

**Economic Impact of a Reduction in Electricity Prices** 

Note: Scenario 1 assumes a reduction in electricity prices of 1 percent, consistent with fuel oil being substituted by natural gas. Scenario 2 assumes convergence of electricity prices for industrial and commercial users to U.S. levels. Source: National authorities and staff calculations.

<sup>&</sup>lt;sup>1</sup> Natural gas has been on average for the past year 70 percent cheaper than fuel oil.

# Annex IV. Risk Assessment Matrix<sup>1</sup> Potential Deviations from Baseline

Source of Risk	Up/Do wnside	Risk	Impact	Policy Response
		Low, Medium, High	Low, Medium, High	
Abrupt surge in global financial market volatility, as investors reassess underlying risk.	ţ	Н	н	Exchange rate flexibility, and provision of liquidity to alleviate potential dysfunction in the government bond market.
Protracted period of slower growth in advanced and emerging economies.	t	н	н	Exchange rate flexibility coupled with automatic fiscal stabilizers. Steadfast implementation of structural reforms to increase competitiveness.
Sustained decline in energy prices triggered by a deceleration in global demand and/or coming-on-stream of excess capacity.	Ļ	М	М	Exchange rate flexibility, while maintaining energy reform momentum.
Bond market stress from a reassessment of sovereign risk in the US, the euro area, or Japan	Ļ	L	н	Exchange rate flexibility; provision of liquidity to alleviate market dysfunction.
Implementation problems with the structural reforms, which could delay the process and undermine investor confidence.	Ļ	L	н	Ensure transparent and rules- based implementation; strengthen capacity-building in the new regulatory bodies.

1/ The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most ne relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline (low is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.



# MEXICO

STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

October 24, 2014

Prepared By The Western Hemisphere Department

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# FUND RELATIONS (AS OF AUGUST, 2014)

**The 2014 Article IV discussions were held in Mexico City during September 8–23.** The staff team comprised Dora Iakova (head), Herman Kamil, Alexander Klemm, Fabian Valencia (all WHD); Jianping Zhou (MCM); Isabel Rial (FAD); and Phil de Imus (SPR). Robert Rennhack participated in the concluding meetings. The mission met with the Deputy Minister of Finance, the Governor of the Bank of Mexico, senior staff of several government ministries and agencies, representatives of regulatory agencies, and private sector representatives. Messrs. Gerardo Zúñiga and Erick Ramos-Murillo (OED) attended most meetings.

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

#### Membership Status: Joined December 31, 1945

General Resources Account:	SDR Million	Percent of Quota
Quota	3,625.70	100.00
Fund holdings of currency	2,605.65	71.87
Reserve position in Fund	1,020.09	28.14
New Arrangement to Borrow	686.39	

SDR Department:	SDR Million	Percent of Allocation
Net cumulative allocation	2,851.20	100.00
Holdings	2,690.42	94.36

#### Outstanding Purchases and Loans: None

#### **Latest Financial Arrangements**

Туре	Arrangement	Expiration	Amount Approved	Amount Drawn
	Date	Date	(SDR Million)	(SDR Million)
FCLC	Nov 30, 2012	Nov. 29, 2014	47,292.00	0.00
FCLC	Jan 10, 2011	Nov 29, 2012	47,292.00	0.00
FCLC	Mar 25,2010	Jan 09, 2011	31,528.00	0.00
FCLC	Apr 17, 2009	Mar 24, 2010	31,528.00	0.00

#### Projected Payments to the Fund (SDR million):

		Fo	rthcoming		
	2012	2013	2014	2015	2016
Principal					
Charges / Interest	0.03	0.13	0.13	0.13	0.13
Total	0.03	0.13	0.13	0.13	0.13

**Exchange Rate Arrangement**: Mexico has a free floating exchange rate regime since November 2011. 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 25, 2013. The relevant staff report was IMF Country Report No. 13/334.

#### **Technical Assistance**

Year	Dept.	Purpose
2014	FAD	Tax Policy and Compliance
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
2012	FAD	Treasury
2012	FAD	Tax Regimes for PEMEX
2011	FAD	Custom Administration
2011	FAD	Tax Policy
2010	FAD	Fiscal Risks Management
2010	FAD	Treasury
2010	LEG	AML/CFT Risk Based Supervision
2009	STA	National Accounts
2009	FAD	Fiscal Framework
2009	LEG	AML/CFT Risk Based Supervision
2008	FAD	Customs Administration

Resident Representative: None

# RELATIONS WITH THE WORLD BANK AND BANK-FUND COLLABORATION UNDER THE JMAP

### A. Relations with the World Bank

Mexico has had a longstanding partnership with the World Bank Group. The Board discussed in December 2013 the new Country Partnership Strategy (CPS) covering FY14–19—which was jointly prepared with the Government of Mexico. This new CPS focuses on the World Bank Group's twin goals (ending extreme poverty and promoting shared prosperity) and is fully aligned with the Mexico's National Development Plan (NDP) for 2013–18. It describes the Bank's engagement with Mexico as a partnership to achieve development results through selective and tailored packages of financial, knowledge, and convening services. IBRD lending has remained an important part of this engagement throughout the years.

As a member of the OECD and the G20, Mexico has maintained economic stability through times of recent crisis, and increased economic and social well-being over the last two decades. Mexico's exposure to the IBRD increased with the onset of the global financial crisis as lending surged to US\$10.6 billion in FY10–12. As of July 31, 2014, the World Bank's exposure was US\$15.15 billion which positioned Mexico as the largest borrower in the world in terms of IBRD debt outstanding. The active portfolio consists of 10 IBRD projects and 7 GEF operations for a net commitment of US\$1.4 billion. In FY14, the World Bank prepared the first sub-national results-based loans to Oaxaca (US\$55 million), one of the poorest states in Mexico, which is bound to be used as a model for other states. For FY15 the pipeline includes five operations in support of Mexico's social protection system, the education sector and energy efficiency. The recent increase of the Single Borrower Limit up to US\$19.0 billion provided the Bank with further financial space to support Mexico's efforts in achieving its development agenda.

### **B. Bank-Fund Collaboration under the JMAP**

The Bank and Fund teams have discussed the following priorities:

- A well-funded and effective government. Falling oil revenues and rising public spending needs require increased tax revenue and more efficient and targeted public spending. This includes policies that broaden the tax base, narrow special regimes or preferential rates and generate information flows that facilitate tax compliance and boost tax revenue. Increasing transparency, operational efficiency and progressivity of public expenditures, improving public sector performance through better budget and financial management as well as a systemic coverage and mitigation strategy of fiscal risks are some other areas that require additional attention.
- Comprehensive reforms to boost productivity and potential output growth. To increase
  productivity and assure that such gains are widespread, focus should be placed on policies and
  programs that foster sound financial sector development generate a competitive business
  environment, foster innovation and upgrade infrastructure. Sound financial sector development

includes continued financial sector surveillance, an area in which the latest joint Bank-Fund FSAP took place in the second half of 2011.

- Social protection. Mexico's social security, social assistance and labor market programs face important equity and efficiency challenges due to fragmentation, weak design and coverage gaps. Reforms are needed to build a more inclusive, effective and integrated social protection system that provides protections from income shocks and helps smooth consumption over the life cycle with due attention for their impact on the labor market. In addition, measures to increase labor productivity and wages focus on regulations (increasing the benefits of formality), skills development and employment services.
- Climate change and environmental protection. Increasing risks posed by climate change and the cost of environmental degradation highlight the importance of efforts to reduce Mexico's environmental and carbon footprint of growth, including in areas such as energy efficiency and renewable energy, water management, urban planning, solid waste and natural resource use.

# STATISTICAL ISSUES

Data provision is adequate for surveillance. Mexico observes the Special Data Dissemination Standards (SDDS) and its metadata are posted on the Dissemination Standards Bulletin Board (DSBB). In a number of cases, the periodicity and timeliness of disseminated data exceed SDDS requirements. A data ROSC update was completed on October 8, 2010 and was published as IMF Country Report No. 10/330. There are various areas where improvements could be made, as detailed below. The authorities are aware of this situation and are continuing work in this regard.

The national accounts statistics generally follow the recommendations of the *System of National Accounts, 1993 (1993 SNA).* Source data and statistical techniques are sound and most statistical outputs sufficiently portray reality. A broad range of source data are available, with economic censuses every five years and a vast program of monthly and annual surveys. For most surveys, scientific sampling techniques are used. Nonetheless, most samples exclude a random sample of small enterprises. Some statistical techniques need enhancement. For example, taxes and subsidies on products at constant prices are estimated by applying the GDP growth rate, a deviation from best practice.

During 2014 STA conducted a reassessment of the data module of the ROSC that covered national accounts. As compared with the 2010 ROSC, the reassessment was based on the newest (May 2012) vintage of the Data Quality Assessment Framework (DQAF) and against those specified in the Special Data Dissemination Standard (SDDS). The data ROSC reassessment found that national accounts statistics are generally of a high quality, adequate to conduct effective surveillance and adequately meet users' needs. Since 2010, Mexico has made significant improvements on the methodological and dissemination aspects of data quality. Nevertheless, areas for further improvement and refinement exist, in particular, on the resources devoted to collecting state and local government source data and seasonally-adjusted data, explaining data revisions, and on compiling data on changes in inventories and on the volume of taxes on products.

INEGI has published annual sectoral accounts and balance sheets following the System of National Accounts 2008 (2008 SNA) classifications of assets and sectors for the period 2003–2012 in November 2013. These accounts were revised recently and published on June 30, 2014. STA conducted a mission during 2014 to assess the possibility for developing quarterly sectoral accounts and balance sheets and agreed with the Mexican authorities on a work plan for developing these accounts. INEGI and Banxico agreed to collaborate in the compilation of quarterly stocks and flows of financial assets and liabilities by institutional sectors.

The concepts and definitions for both the CPI and PPI meet international standards. The PPI is only compiled by product and not by economic activity. A ROSC mission on prices was conducted in November 2012.

Although some items of the balance of payments statistics conform to the *Fifth edition of the Balance of Payments Manual*, a full transition has not yet been completed.<sup>1</sup> Several measures to improve external debt statistics have been carried out, including the compilation of data on external liabilities of the private sector and publicly traded companies registered with the Mexican stock exchange (external debt outstanding, annual amortization schedule for the next four years broken down by maturity, and type of instrument). In 2014, STA conducted a technical assistance on external sector statistics. The main purpose of the mission was to assist the balance of payment statistics compilers in further strengthening their data collection and compilation system for external sector statistics. In particular, the mission focused on foreign direct investment, financial derivatives, bank accounts used in foreign exchange operations, capital account, and financial intermediation services indirectly measured. The mission also assisted in addressing specific issues related to the adoption of the methodology of the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6).

The authorities compile fiscal statistics following national concepts, definitions, and classifications that make international comparison difficult. The statistics are comprehensive and timely, except for states and municipalities. The new government accounting law mandates accounting standards that follow international standards for all levels of government, and that take into account the information needs of international organizations and national accounts. A full adoption of uniform accounting standards at the sub-national level will be crucial to obtain a precise measure of public fixed investment in national accounts, among others.

The authorities are committed to reporting government financial statistics in GFSM 2001 format, as well as data for the GFS Yearbook.

The methodological foundations of monetary statistics are generally sound. However, the recording of financial derivative and, to a lesser extent, repurchase agreements transactions are overstating the aggregated other depository corporations (ODC) balance sheet and survey. 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 is reporting Financial Soundness Indicators (FSIs) for Deposit Takers on a monthly basis.

<sup>&</sup>lt;sup>1</sup> Since the release of the balance of payments figures for the second quarter of 2010 (August, 25, 2010), Banco de Mexico has been publishing a new format that follows the guidelines of the Fifth edition of the Balance of Payments Manual.

	Mexico: Tabl	e of Commo	n Indicators I	Required for Su	rveillance		
As of Nov. 6, 2014							
	Date of latest observation	Date received	Frequency of Data <sup>7</sup>	Frequency of Reporting <sup>7</sup>	Frequency of Publication <sup>7</sup>	Data Quality- Methodological Soundness <sup>8</sup>	Data Quality Accuracy and Reliability <sup>9</sup>
Exchange Rates	Oct. 2014	Oct. 2014	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities <sup>1</sup>	Sept. 2014	Sept. 2014	М	М	М		
Reserve/Base Money	Sept. 2014	Sept. 2014	М	D, M	W	LO, O, O, LO	LO, O, O, O, O
Broad Money	Sept. 2014	Sept. 2014	М		W		
Central Bank Balance Sheet	Oct. 2014	Oct. 2014	W	W	W		
Consolidated Balance Sheet of the Banking System	Sept. 2014	Sept. 2014	М	М	М		
Interest Rates <sup>2</sup>	Oct. 2014	Oct. 2014	D	D	D		
Consumer Price Index	Oct. 2014	Oct. 2014	Bi-W	Bi-W	Bi-W	O, O, LNO, O	LO, LNO, O, O, LNO
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> –Gen. Government <sup>4</sup>	Sept. 2014	Sept. 2014				LO, LNO, LNO, O	0, 0, 0, 0, 0
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> –Central Government	Sept. 2014	Sept. 2014	М	М	М		
Stocks of Central Government and Central Government-Guaranteed Debt <sup>5</sup>	Sept. 2014	Sept. 2014	М	NA	М		
External Current Account Balance	Q2 2014	Q2 2014	Q	Q	Q	LO, LO, LNO, LO	LO, O, O, O,

00

							LO
Exports and Imports of Goods and	Caret 2014	Sept.	M	N 4			
Services	Sept. 2014	2014	М	М	М		
GDP/GNP	Q2 2014	Q2 2014	Q	Q	Q	0, 0, 0, L0	LO, O, LO, LO, O
Gross External Debt	Sept. 2014	Sept.	М	М	М		
	0000	2014					
International Investment Position <sup>6</sup>	Q2 2014	Q2 2014	Q	Q	Q		

<sup>1</sup> 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.

<sup>2</sup> Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes, and bonds.

<sup>3</sup> Foreign, domestic bank, and domestic nonbank financing.

<sup>4</sup> The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

<sup>5</sup> Including currency and maturity composition.

<sup>6</sup> Includes external gross financial asset and liability positions vis-à-vis nonresidents.

<sup>7</sup> Daily (D); Weekly (W); Monthly (M); Quarterly (Q); Annually (A); Irregular (I); Not Available (NA).

<sup>8</sup> Reflects the assessment provided in the data ROSC completed on July, 2014, except consumer prices which is based on the ROSC completed on 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).

<sup>9</sup> 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.



# MEXICO

October 24, 2014

# STAFF REPORT FOR THE 2014 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

Approved By	Prepared by the Staff of the International Mone	tary Fund
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# **PUBLIC DEBT SUSTAINABILITY ANALYSIS**

Mexico's gross public debt is projected to reach 47.8 percent of GDP by end-2014, remaining below the 50 percent of GDP threshold that calls for higher scrutiny according to the new DSA criteria.<sup>1</sup> Gross financing needs are about 11 percent of GDP, declining to 8.3 percent at the end of the forecasting period. The DSA suggests that Mexico's government debt is sustainable even under severe shocks. Given Mexico's debt structure, the direct interest and exchange rate pass-through to the budget is relatively low. Only the impact of sustained lower GDP growth rates represents a threat to debt dynamics; yet, even under such scenario gross debt remains below 60 percent of GDP without showing signs of an explosive trajectory. While public debt profile indicators are below upper early warning benchmarks, main risks arise from the large share of debt held by non-residents—about 52 percent of total debt.

### **Baseline and Realism of Projections**

- **Debt-levels**. A higher primary deficit explains the increase in gross debt levels in 2014 relative to 2013; only partially compensated by a higher pace of growth and lower sovereign yields. As fiscal consolidation plans kick in from 2016 onwards, gross debt levels are projected to decline from the peak of 49.6 percent of GDP in 2016 to 48.2 of GDP by 2019. Staff projects that gross financing needs will be 10.9 percent of GDP in 2014—down from 12.2 percent in the previous year—and will decrease to 8.3 percent of GDP by 2019.
- **Growth.** Past projections of growth outcomes suggest moderate forecast errors, with the only exception of 2009 and 2010 as a result of the global financial crisis and the stronger-than-expected recovery that followed. There is no apparent systematic bias in the growth outlook that could undermine the DSA assessment. On the contrary, current growth projections at 2.4 percent for 2014 remain below official estimates, which could imply a positive impact on debt dynamics if growth turns out to be higher than expected.<sup>2</sup> Nonetheless, Mexico's debt dynamics are highly sensitive to sudden changes in GDP growth, as indicated by the relevance of growth shocks under the DSA stress tests.
- **Sovereign yields**. Despite the volatility observed in most emerging markets last year, Mexico's sovereign yields remain low, with the 10-year local currency bond yield at around 572 basis points as of August 29, only 130 basis points higher than the historical low. The spread between this bond and US government bonds of the same maturity has remained on average at 328 basis points for the last three months. In particular, spreads on foreign currency-denominated bonds have narrowed and the local-currency sovereign yield curve has shifted down since January. Given the upward projections for the US Libor rates over the medium-term, the effective nominal

<sup>&</sup>lt;sup>1</sup> The new DSA framework is described in (<u>http://www.imf.org/external/np/pp/eng/2013/050913.pdf</u>).

<sup>&</sup>lt;sup>2</sup> The SHCP projects growth for 2014 at 2.7 percent.

interest rate on Mexico's sovereign debt is forecasted to rise from 6.1 percent in 2014 to 7.4 percent by 2019.

- **Fiscal adjustment.** Under the baseline, the structural primary balance (adjusted by the cycle and oil prices) improves between 2014 and 2019. The consolidation effort is driven by higher oil and non-oil revenues that follow from the effects of the 2014 tax and energy reform. On the spending side, the 2014 amendments to the fiscal responsibility law introduced a cap on the growth of almost 50 percent of total spending (the so called "structural current spending") applicable from 2015 onwards. Considering the distribution of fiscal adjustment episodes provided in the DSA template and pre-2009 Mexican evidence, the maximum projected 3-year adjustment of the structural primary balance of 1.5 percent of GDP seems feasible.
- Maturity and rollover. Given current debt structure (average maturity just under 8 years, 82 percent share of government securities at fixed interest, and only 24 percent of debt denominated in foreign currency), the direct interest pass-through to the budget is very low. A 100 basis points shock to the yield curve across maturities is estimated to raise the interest bill by just 0.1 percentage points of GDP. Similarly, a shock to the real exchange rate would only marginally impact the debt stock, given the large share of debt denominated in local currency. During the whole period, around 52 percent of marketable debt is held by non-residents, which keeps rollover risks at a reasonable level.

### **Shocks and Stress Tests**

- **Primary balance shock**. A deterioration of 0.8pp of GDP in the primary balance in 2015–16 shifts up public debt by a similar amount, reaching 49.7 percent of GDP by the end of the projection period. The gross financing needs also increase moderately. Yet, effective interest rates on public debt do not deviate significantly from the baseline.
- **Growth shock**. Real output growth rates are lowered by 1 standard deviation, or 2.9 percent, for 2 years starting in 2015. The decline in growth leads to a deterioration of nominal primary balance compared to the baseline—as nominal revenues fall against unchanged expenditure plans—reaching -2.4 percent of GDP by 2016. Accordingly, the debt-to-GDP ratio increases to about 56 percent and then stabilizes around 54 percent at the end of the projection period. Gross financing needs climb up to 12.3 percent of GDP in 2017 and then stabilize around 10 percent at the end of period.
- Interest rate shock. Market concerns about medium-term debt sustainability intensify increasing spreads by 200 bps starting in 2015. The government's interest bill climbs reaching an implicit average interest rate of almost 8.4 percent by 2019, about 1 percent higher than in the baseline. Similarly, the debt-to-GDP ratio and gross financing needs increase, reaching 49.4 and 8.9 percent of GDP by 2019.
- 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). In this case, debt would stabilize at around 59 percent of GDP without showing signals of an explosive trajectory.

### Figure 1. Mexico Public Sector Debt Sustainability Analysis (DSA)—Baseline Scenario

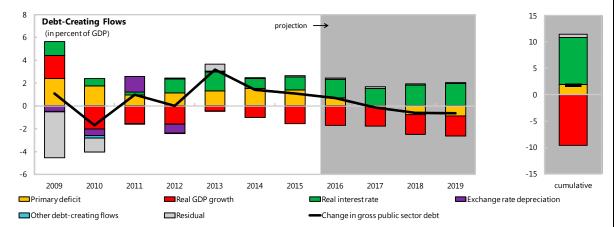
#### (In percent of GDP unless otherwise indicated)

#### Debt, Economic and Market Indicators <sup>1/</sup>

	Actual			Projections						As of September 15, 2014		
	2003-2011 2/	2012	2013	2014	2015	2016	2017	2018	2019	Sovereign	Spreads	
Nominal gross public debt	41.3	43.2	46.4	47.8	48.9	49.6	49.5	48.9	48.2	EMBI (bp)	3/	173
Public gross financing needs	10.7	11.4	12.2	10.9	10.0	9.7	11.0	9.4	8.3	CDS (bp)		78
Real GDP growth (in percent)	2.5	4.0	1.1	2.4	3.5	3.8	3.8	3.8	3.8	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	5.6	3.2	2.0	4.0	3.3	2.5	3.1	3.0	3.0	Moody's	A3	A3
Nominal GDP growth (in percent)	8.3	7.3	3.1	6.5	6.9	6.3	7.0	7.0	7.0	S&Ps	BBB+	А
Effective interest rate (in percent) 4/	7.1	6.3	6.0	6.1	6.0	6.1	6.5	7.0	7.4	Fitch	BBB+	A-

#### **Contribution to Changes in Public Debt**

	Actual			Projections							
	2003-2011	2012	2013	2014	2015	2016	2017	2018	2019	cumulative	debt-stabilizing
Change in gross public sector debt	0.0	0.00	3.19	1.4	1.1	0.7	-0.1	-0.6	-0.6	1.8	primary
Identified debt-creating flows	-0.5	-0.06	2.57	1.4	1.1	0.7	-0.1	-0.6	-0.6	1.9	balance <sup>9/</sup>
Primary deficit	-0.4	1.1	1.3	1.5	1.4	0.7	0.0	-0.8	-0.9	1.9	0.3
Primary (noninterest) revenue and grants	21.7	23.4	23.3	22.1	21.6	22.5	23.0	23.4	23.8	136.4	
Primary (noninterest) expenditure	21.3	24.6	24.6	23.6	23.0	23.2	23.0	22.6	22.9	138.3	
Automatic debt dynamics 5/	0.0	-1.2	1.3	-0.1	-0.3	0.0	-0.1	0.2	0.3	0.0	
Interest rate/growth differential 6/	-0.4	-0.4	1.2	-0.2	-0.4	-0.1	-0.2	0.0	0.2	-0.7	
Of which: real interest rate	0.5	1.2	1.7	0.9	1.1	1.6	1.5	1.8	1.9	8.9	
Of which: real GDP growth	-0.9	-1.6	-0.4	-1.0	-1.6	-1.7	-1.7	-1.8	-1.7	-9.6	
Exchange rate depreciation 7/	0.4	-0.8	0.1								
Other identified debt-creating flows	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
General government net privatization proceeds (negative)	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(Specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes <sup>8/</sup>	0.5	0.1	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.6	



Source: IMF staff.

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

2/ Based on available data.

3/ EMBI.

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

5/ Derived as [(r - p(1+g) - g + ae(1+r)]/(1+g+p+gp)) times previous period debt ratio, with r = interest rate; p = growth rate of GDP deflator; g = real GDP growth rate;

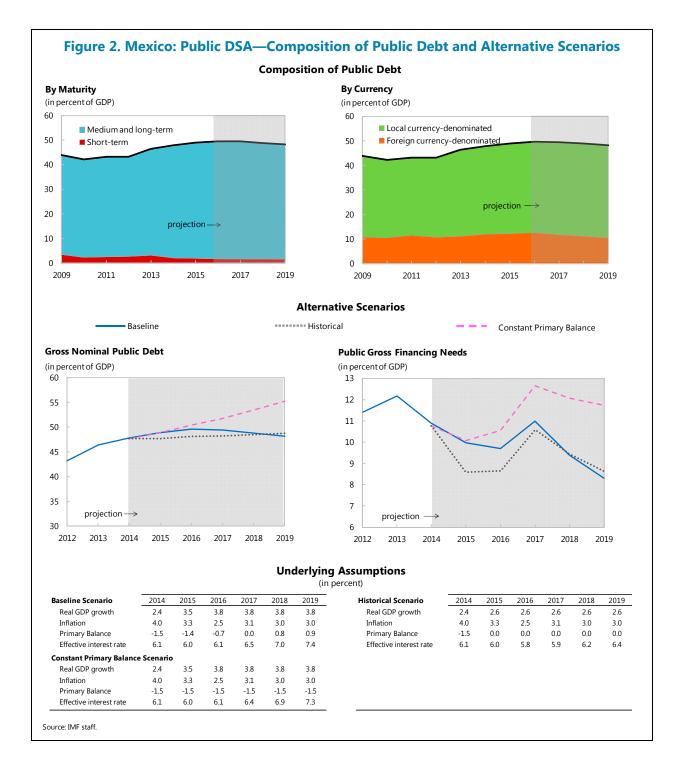
a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

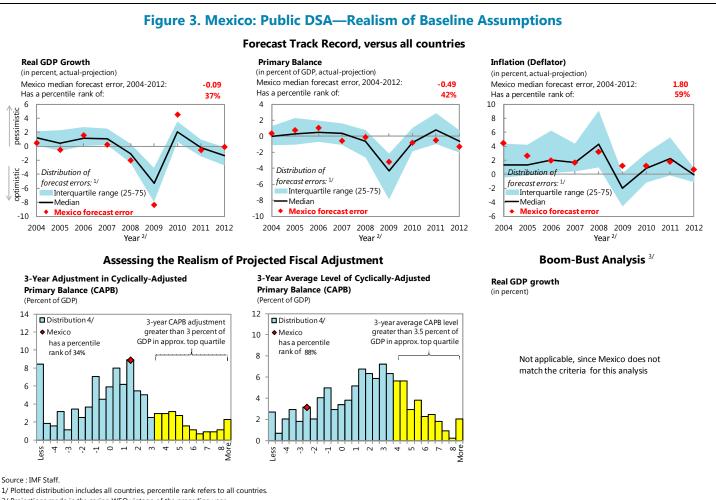
6/ The real interest rate contribution is derived from the denominator in footnote 4 as r -  $\pi$  (1+g) and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 2/ as ae(1+r).

8/ For projections, this line 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.

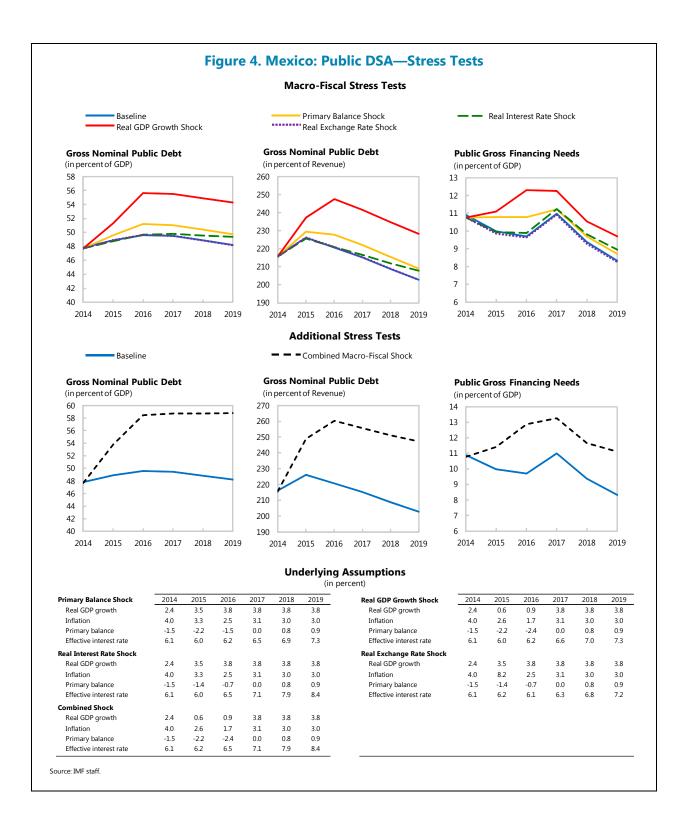




2/ Projections made in the spring WEO vintage of the preceding year.

3/ Mexico has had a cumulative increase in private sector credit of 3 percent of GDP, 2010-2013. For Mexico, t corresponds to 2014; for the distribution, t corresponds to the first year of the crisis... 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.

6

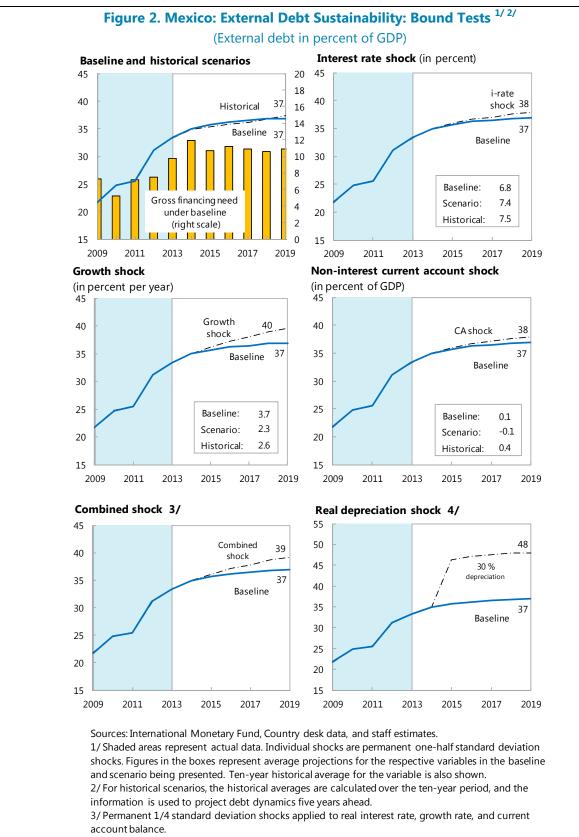




200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt. 4/ An average over the last 3 months, 17-Jun-14 through 15-Sep-14.

# **EXTERNAL DEBT SUSTAINABILITY ANALYSIS**

Mexico's external-debt-to GDP ratio continues to be low and sustainable (35 percent projected for end-2014), and is expected to remain stable over the medium-term. However, stress tests suggest that some caution is warranted. Under an extreme shock scenario—a 30 percent real exchange rate depreciation—the debt-to-GDP ratio would increase to 48 percent. Some mitigating factors include the fact that a larger share of Mexico's (public) debt is now denominated in pesos, and Mexico has taken advantage of low interest rates. Moreover, the recognition of its strong macroeconomic fundamentals by foreign investors has allowed it to lengthen the maturity structure of its external debt in recent years. However, the large share of foreign holdings of the peso-denominated government bonds exposes Mexico to sudden shifts in investor sentiment. Other shocks, including to interest rates, current account and growth, have only a marginal impact on Mexico's external debt-to-GDP ratio.



4/One-time real depreciation of 30 percent occurs in 2014.

#### **Table 1. Mexico: External Debt Sustainability Framework**

(In percent of GDP, unless otherwise indicated)

			Actual					Projections						
	2009	2010	2011	2012	2013			2014	2015	2016	2017	2018	2019	Debt-stabilizin
														non-interest
														current account
Baseline: External debt	21.7	24.7	25.5	31.1	33.3			34.9	35.6	36.2	36.4	36.8	36.9	-2.0
2 Change in external debt	3.1	3.0	0.8	5.6	2.2			1.6	0.7	0.6	0.2	0.3	0.1	
3 Identified external debt-creating flows (4+8+9)	3.6	-3.5	-1.7	0.1	-1.4			0.2	-0.5	-0.9	-0.9	-1.0	-1.4	
4 Current account deficit, excluding interest payments	-0.5	-1.0	-0.4	-0.4	0.2			0.1	-0.1	0.1	0.0	-0.2	-0.2	
5 Deficit in balance of goods and services	1.7	1.3	1.4	1.2	1.0			0.9	0.9	1.1	0.9	0.9	0.7	
6 Exports	27.4	29.9	31.2	32.7	31.8			31.8	32.0	33.3	34.6	35.6	36.8	
7 Imports	29.0	31.2	32.6	33.9	32.8			32.7	32.9	34.3	35.4	36.5	37.5	
8 Net non-debt creating capital inflows (negative)	-1.3	-0.8	-0.4	-0.4	-2.0			-1.1	-1.4	-2.0	-2.0	-1.9	-2.2	
Automatic debt dynamics 1/	5.5	-1.7	-0.9	1.0	0.4			1.3	1.0	1.0	1.0	1.1	1.1	
O Contribution from nominal interest rate	1.4	1.3	1.5	1.7	1.8			2.0	2.1	2.3	2.3	2.4	2.4	
1 Contribution from real GDP growth	1.1	-0.9	-0.9	-1.0	-0.3			-0.8	-1.2	-1.3	-1.3	-1.3	-1.3	
2 Contribution from price and exchange rate changes 2/	3.0	-2.1	-1.5	0.3	-1.2									
3 Residual, incl. change in gross foreign assets (2-3) 3/	-0.5	6.5	2.5	5.5	3.6			1.4	1.2	1.4	1.2	1.3	1.5	
External debt-to-exports ratio (in percent)	79.5	82.8	81.8	95.2	104.9			109.9	111.2	108.9	105.5	103.4	100.1	
Gross external financing needs (in billions of US dollars) 4/	65.4	54.7	84.1	88.4	123.1			155.8	147.7	163.1	167.7	173.5	188.9	
in percent of GDP	7.3	5.2	7.2	7.5	9.8	10-Year	10-Year	11.9	10.6	11.2	10.8	10.6	10.9	
Scenario with key variables at their historical averages 5/								34.9	35.4	35.8	36.1	36.6	37.3	-1.3
						Historical	Standard							
Key Macroeconomic Assumptions Underlying Baseline						Average	Deviation							
Real GDP growth (in percent)	-4.7	5.1	4.0	4.0	1.1	2.6	2.9	2.4	3.5	3.8	3.8	3.8	3.8	
GDP deflator in US dollars (change in percent)	-15.3	11.6	7.1	-2.7	5.2	3.4	7.4	1.4	2.4	1.4	2.1	2.0	2.0	
Nominal external interest rate (in percent)	6.3	7.3	6.8	6.8	6.3	7.5	1.2	6.4	6.5	6.8	6.8	7.0	6.9	
Growth of exports (US dollar terms, in percent)	-20.9	28.3	16.4	6.0	3.4	9.2	12.7	4.0	6.9	9.2	10.2	9.1	9.6	
Growth of imports (US dollar terms, in percent)	-22.5	26.0	16.5	5.4	3.0	8.9	12.8	3.5	6.7	9.8	9.4	9.1	8.9	
Current account balance, excluding interest payments	0.5	1.0	0.4	0.4	-0.2	0.4	0.4	-0.1	0.1	-0.1	0.0	0.2	0.2	
Net non-debt creating capital inflows	1.3	0.8	0.4	0.4	2.0	1.6	0.8	1.1	1.4	2.0	2.0	1.9	2.2	

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 affator).
 For projection, line includes the impact of price and exchange rate changes.

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### IMF Executive Board Concludes 2014 Article IV Consultation with Mexico

On November, 7, 2014, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation<sup>1</sup> with Mexico.

Mexico has completed the legislative process underpinning its comprehensive structural reforms agenda. More than a dozen reforms have been approved over the last year and a half including on energy, telecommunications, anti-trust, labor markets, education, and the financial sector. By enhancing competition, reducing labor market frictions, and encouraging investment, the reforms are expected to boost productivity and output over the medium term.

After a sharp slowdown in 2013—reflecting weak external demand and a decline in construction activity—growth is projected to recover to 2.4 percent this year. The strong recovery in the U.S. in the second quarter of 2014 has triggered a rebound in Mexico's manufacturing production and exports (especially in the automotive sector). In addition, construction activity is firming up, supported by a rebound of residential investment and an increase of government spending on infrastructure.

Labor market indicators suggest that the economy continues to operate below potential, helping to contain inflationary pressures. The unemployment rate has inched up since early 2013, and real wage growth has been subdued. Headline inflation rose to 4½ percent year-on-year in early 2014, reflecting one-off effects from tax changes. It is expected to stay around 4 percent in the remainder of 2014, driven by increases in livestock and government-administered prices, before declining gradually in 2015. Core inflation remains close to 3 percent and long-term inflation expectations are well anchored.

The Bank of Mexico cut the policy rate by 50 basis points to 3 percent in June in the context of limited inflationary pressures and a weak economy while fiscal policy remains broadly neutral.

<sup>&</sup>lt;sup>1</sup> 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.

The fiscal outturn for the first half of 2014 has been broadly in line with the Public Sector Borrowing Requirement (PSBR) budget target of slightly over 4 percent of GDP.

Commercial bank credit growth slowed down in the first half of 2014 for households and firms. Among corporate borrowers, the deceleration has been concentrated in construction: banks reduced sharply lending to the sector after the financial difficulties of the three largest builders surfaced last year. On the household side, consumer credit growth moderated to 8 percent (from 16 percent last year). In contrast, lending by the public-owned development banks is growing rapidly, although from a low base, as the financial sector reform gave development banks a new mandate of promoting micro-financing and lending to underserved sectors, including SME's.

The share of non-performing loans (NPLs) in total loans by commercial banks has stabilized, reaching 3<sup>1</sup>/<sub>4</sub> in June up from 2<sup>1</sup>/<sub>2</sub> percent in 2012, reflecting mostly a rise in impaired loans in the construction sector. However, NPLs have been fully provisioned, and profitability and capitalization of the banking sector remains strong.

Mexico's external position remains broadly consistent with fundamentals and desirable policy settings. The current account deficit widened to 2.1 percent of GDP in 2013, reflecting higher net factor payments, while the trade balance remained stable. In 2014, the current account deficit is projected to remain unchanged with an improving trade balance offset by a continued increase in factor payments. The nominal and real effective exchange rates have depreciated modestly since end-2013. The current level of foreign reserves is adequate for normal times according to a range of standard reserve coverage indicators. Gross portfolio inflows have rebounded after a sharp slowdown in Q2 of 2013. In February, Moody's raised Mexico's foreign currency sovereign rating to Aa3, citing the expected positive impact of structural reforms on potential growth. Looking forward, the structural reforms in energy and telecommunications are expected to attract significant foreign direct investment.

### **Executive Board Assessment**<sup>2</sup>

Executive Directors welcomed the rebound in economic activity in Mexico, boosted by strong external demand and a recovery in the construction sector. They also commended the completion of the legislative process underpinning the country's comprehensive structural reform agenda. Directors noted that a potential surge in volatility in global financial markets poses risks. They expressed confidence in Mexico's strong policy fundamentals and noted that the FCL arrangement has provided insurance against tail risks.

<sup>&</sup>lt;sup>2</sup> 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: <u>http://www.imf.org/external/np/sec/misc/qualifiers.htm</u>.

Directors considered that the current stance of monetary policy remains appropriate. They welcomed the Bank of Mexico's commitment to adapting monetary policy in case of upward pressure on prices. Directors took note of the staff assessment that the real exchange rate and the current account balance are broadly consistent with underlying fundamentals. They observed that a high level of international reserves in the context of Mexico's free floating exchange rate regime, as well as Mexico's deep and liquid financial markets, should help the country weather well a rise in volatility.

Directors supported the authorities' plans to reduce the public sector borrowing requirement to 2.5 percent of GDP by 2018. They emphasized that strict adherence to the announced fiscal path will strengthen the credibility of the new fiscal framework. Some Directors stressed that boosting non oil revenues would be needed, especially if oil revenues are lower than anticipated. Directors encouraged the authorities to improve budget implementation further through more realistic expenditure budgeting and stricter control of budget execution. Directors welcomed the creation of an oil stabilization and saving fund, and the plan to reform the pension system of the two large state owned companies.

Directors observed that the monitoring and control of state and municipal finances need to be strengthened. Full adoption of the uniform accounting methodology for reporting local government finances and introduction of a formal legal framework to anchor fiscal policymaking at the local level would be important.

Directors commended Mexico's sound financial sector and the progress in strengthening the regulation and consolidated supervision of large financial conglomerates. They advised careful monitoring of the rise in non performing loans in housing and foreign currency borrowing among some large companies. While welcoming the increased role of development banks in improving financial inclusion, they recommended caution to avoid displacing private bank lending or relaxing credit standards.

Directors underscored the importance of strong and steady implementation of the structural reform agenda. Properly sequenced and executed, these reforms would boost productivity and output growth over the medium term.

	2010	2011	2012	2013	2014 <sup>2</sup>
(Annual percentage changes, unless oth	nerwise indicated)				
National accounts and prices					
Real GDP	5.1	4.0	4.0	1.1	2.4
Real GDP per capita 3/	3.6	2.8	2.8	-0.1	 1.4
Gross domestic investment (in percent of GDP)	22.1	22.3	23.1	21.5	21.6
Gross domestic savings (in percent of GDP)	22.1	21.2	21.8	19.5	20.6
Consumer price index (period average)	4.2	3.4	4.1	3.8	3.9
External sector					
Exports, f.o.b.	29.9	17.1	6.1	2.5	3.9
Imports, f.o.b.	28.6	16.4	5.7	2.8	3.6
External current account balance (in percent of GDP)	-0.4	-1.1	-1.3	-2.1	-2.1
Change in net international reserves (end of period, billions of U.S. dollars)	20.7	28.6	17.8	13.2	14.7
Outstanding external debt (in percent of GDP)	24.7	25.5	31.1	33.3	34.9
Nonfinancial public sector (in percent of GDP)					
Government Revenue	22.4	22.9	23.4	23.3	22.1
Government Expenditure	26.7	26.2	27.1	27.1	26.3
Augmented overall balance	-4.3	-3.3	-3.7	-3.8	-4.2
Money and credit					
Bank credit to the non-financial private sector (nominal) 4/	10.0	17.2	12.0	10.4	9.7
Broad money (M4a, nominal)	12.0	17.2	14.5	8.8	9.5

## Mexico: Selected Economic and Financial Indicators <sup>1/</sup>

2/ Staff projections.

3/ IMF staff estimates.

4/ Total bank credit outstanding plus non-performing loans from commercial and development banks.