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FISCAL TRANSPARENCY EVALUATION

October 2018

This Fiscal Transparency Evaluation on Mexico was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in September 2018.

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F I S C A L A F F A I R S D E P A R T M E N T

Mexico
Fiscal Transparency Evaluation

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September 2018

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PREFACE

In response to a request from the Ministry of Finance and Public Credit (SHCP) of Mexico, a mission from the IMF's Fiscal Affairs Department (FAD) visited Mexico City during the period February 1-16, 2018 to carry out a Fiscal Transparency Evaluation (FTE) covering all pillars of the IMF's Fiscal Transparency Code, including Pillar IV, as petroleum revenues are materially significant in Mexico. The mission included Mr. Sailendra Pattanayak (Mission Head), Ms. Eliko Pedastsaar, Ms. Alpa Shah, Ms. Concha Verdugo Yepes (all FAD), Mr. Richard Allen, Mr. Felipe Bardella, and Mr. Rolando Ossowski (all FAD experts). Mr. Costas Christou, the IMF Western Hemisphere Department (WHD) mission chief for Mexico, also participated in the concluding meetings with the authorities.

The mission met with senior officials of the SHCP including Dr. Miguel Messmacher Linartas, Undersecretary of Finance and Public Credit, and senior officials of the following departments: Legal Department of Expenditures (DGJE); Performance Evaluation Unit (UED); Budget Policy Unit (UPCP); Government Accounting Unit (UCG); Investment Unit (UI); Tax Legislation Unit (ULT); Fiscal Coordination Unit with Sub-National Governments (UCEF); Tax Revenue Policy Unit (UPIT); SHCP Economic Planning Unit (UPEHP); SHCP Public Credit Unit (UCP); SHCP Insurance Pensions and Social Security Unit (USPSS); Fiscal Prosecutor's Office (PFF); Nom-tax Revenue Policy Unit (UPINT); Revenue on Hydrocarbons Unit (UIH); Treasury of the Federation (TESOFE); SHCP Banking, Securities, and Savings Units (UBVA); and SHCP Development Banking Unit (UBD).

The mission also met with officials from the Ministry of Energy (SENER); PEMEX, the national petroleum company; National Hydrocarbons Commission (CNH); Ministry of the environment and natural resources (SEMARNAT); Ministry of the Interior (SEGOB); Central Bank of Mexico (Banco de México); Public Finance Studies Center of the Chamber of Deputies (CEFP); Belisario Dominguez Institute of the Chamber of Senators (IBD); National Bank of Public Works (BANOBRAS); Development Bank NAFIN; Development Bank BANSEFI; Mexico City Secretariat of Finance (SF de la CDMX); Mexico´s Supreme Audit Institution (ASF); National Banking and Securities Commission (CNBV); Institute for the Protection of Bank Savings (IPAB); and Fondo Mexicano del Petróleo (FMP).

This FTE is based on information available at the time it was completed in February 2018. The findings and recommendations represent the views and advice of the IMF mission team and do not necessarily reflect those of the Mexican government. Unless otherwise specified, the data included in the text, figures, and tables in the report are estimates made by the IMF mission team and not official estimates of the Mexican government. The mission would like to thank the Mexican authorities and other participants for their excellent collaboration in the conduct of this FTE and for the frank and open exchanges of views on all matters discussed. Particular thanks go to Mr. Julio Cesar Ruiz Alvarez and Mr. David Francisco Morales Ruiz from the SHCP for their support to the mission before and during its visit to Mexico City, as well as to Ms. Florencia Leyson for coordinating the finalization of the report after the mission.

ABBREVIATIONS AND ACRONYMS

ABP	Annual Borrowing Plan
ASEA	Agencia de Seguridad, Energía y Ambiente
ASF	Auditoria Superior de la Federación
BCG	Budgetary Central Government
BFRL	Budget and Fiscal Responsibility Law
BDI	Belisario Dominguez Institute
CaR	Cost at Risk
CEFP	Centro de Estudios de las Finanzas Públicas
CFE	Comisión Federal de Electricidad
CG	Central Government
CIEP	Contratos Integrales de Exploración y Producción
CNBV	Comisión Nacional Bancaria y de Valores
CNH	Comisión Nacional de Hidrocarburos
COFOG	Classification of the Functions of Government
CONAC	Consejo Nacional de Armonización Contable
CONAGUA	Comisión Nacional del Agua
CONEVAL	Consejo Nacional de Evaluación de la Política de Desarrollo Social
COPF	Contratos de Obra Pública Financiada
DB	Defined Benefits
DC	Defined Contribution
DRFI	Disaster Risk Financing and Insurance
EBU	Extra-Budgetary Unit
ECLAC	Economic Commission for Latin America and the Caribbean
EITI	Extractive Industry Transparency Initiative
E&P	Exploration and Production
ESA95	European System of Accounts
EU	European Union
FAD	Fiscal Affairs Department
FARAC	Fideicomiso de Apoyo al Rescate de Autopistas Concesionadas
FARP	Fondo de Apoyo para la Reestructura de Pensiones
FEIEF	Fondo de Estabilización de Ingresos de las Entidades Federativas
FEIP	Fondo de Estabilización de los Ingresos Petroleros
FEIPEMEX	Fondo de Estabilización para la Inversión en Infraestructura de Petróleos Mexicanos
FINFRA	Fondo de Inversión en Infraestructura
FND	Financiera Nacional de Desarrollo Agropecuario, Rural, Forestal y Pesquero
FONADIN	Fondo Nacional de Infraestructura
FONDEN	Fideicomiso Fondo de Desastres Naturales
FOPREDEN	Fondo para la Prevención de Desastres Naturales
FSAP	Financial Sector Assessment Program
FTC	Fiscal Transparency Code
FTE	Fiscal Transparency Evaluation

FY	Financial Year
FMP	Fondo Mexicano del Petróleo
FPC	Financial Public Corporation
GDP	Gross Domestic Product
GEPC	General Economic Policy Criteria
GFSM	Government Finance Statistics Manual
HBPSBR	Historical Balance of the Public Sector Borrowing Requirements
IDB	Inter-American Development Bank
IFRS	International Financial Reporting Standards
ILIF	Iniciativa de Ley de Ingresos de la Federación
IMF	International Monetary Fund
IMSS	Instituto Mexicano del Seguro Social
INEGI	Instituto Nacional de Estadística y Geografía
IPAB	Instituto para la Protección al Ahorro Bancario
IPSAS	International Public Sector Accounting Standards
ISSSTE	Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado
ISSFAM	Instituto de Seguridad Social para las Fuerzas Armadas Mexicanas
LGCG	Ley General de Contabilidad Gubernamental
LFPRH	Ley Federal de Presupuesto y Responsabilidad Hacendaria
Mbd	Millions of Barrels Per Day
MCCG	Marco Conceptual de Contabilidad Gubernamental
MMBTU	Millions of British Thermal Units
MTBF	Medium Term Budget Framework
MTFF	Medium Term Fiscal Framework
MTPF	Medium Term Performance Framework
MXN	Mexican Peso
NAFIN	Nacional Financiera
NFPC	Nonfinancial Public Corporation
NIFD-3	Norma de Información Financiera D-3
NPV	Net Present Value
OBI	Open Budget Initiative
OECD	Organization for Economic Cooperation and Development
PAF	Plan Anual de Financiamiento
PAYGO	Pay as you go
PC	Public Corporations
PEMEX	Petróleos Mexicanos
PFN	Posición Financiera Neta
PIMA	Public Investment Management Assessment
PPEF	Proyecto del Presupuesto de Egresos de la Federación
PPP	Public-Private Partnership
PRMS	Petroleum Revenues Management System
PSC	Production Sharing Contract
QFA	Quasi Fiscal Activities
R/P	Reserve/Production ratio
RRR	Reserve-Replacement Ratio
SAA	Strategic Asset Allocation

SAT	Servicio de Administración Tributaria
SCT	Secretaría de Comunicaciones y Transportes
SDDS	Special Data Dissemination Standard
SEC	Securities and Exchange Commission
SEGOB	Secretaría de Gobernación
SENER	Secretaría de Energía
SFP	Secretaría de la Función Pública
SHCP	Secretaría de Hacienda y Crédito Público
SHF	Sociedad Hipotecaria Federal
SHRFSP	Saldo Histórico de los Requerimientos Financieros de Sector Publico
SIPAC	Sistema de Información para el Pago de las Asignaciones y Contratos
SME	Small and Medium Enterprises
SNG	Subnational Government
SPE	Society of Petroleum Engineers
TC	Technical Committee
UCG	Unidad de Contabilidad Gubernamental
UCP	Unidad de Crédito Público
UPEHP	Unidad de Planeación Económica de la Hacienda Pública
UK	United Kingdom
USA	United States of America
USD	United States Dollars
USPSS	Unidad de Seguros, Pensiones y Seguridad Social
VAT	Value Added Tax
WGA	Whole of Government Accounts
WEO	World Economic Outlook
WTI	West Texas Intermediate

EXECUTIVE SUMMARY

This report assesses Mexico's fiscal transparency practices against the IMF's Fiscal Transparency Code (FTC), including the draft pillar on resource revenue management. Mexico scores relatively well when compared to other Latin American countries and emerging market economies that have undergone a fiscal transparency evaluation (FTE). Out of the 48 principles across four pillars in the FTC, Mexico meets 16 principles at the basic level, 9 principles at the good level and 15 principles at the advanced level, while one principle does not apply. Fiscal transparency practices are strongest in the areas of resource revenue management and fiscal forecasting and budgeting, while the scores on fiscal risks analysis and management are lower. Mexico's fiscal transparency practices do not currently meet basic practice for seven principles.

Pillar I: Fiscal reporting

Mexico's fiscal reporting practices meet good or advanced standards in several areas. Fiscal statistics are disseminated every month, and financial statements are published four months after the end of the fiscal year. Fiscal statistics are comparable with fiscal forecasts and budget plans. Mexico has complied with the IMF's special data dissemination standards (SDDS) for fiscal statistics since 2000. Tax expenditures are fully disclosed on an annual basis, broadening the analytical scope of fiscal indicators.

In other areas, however, practices could be improved, notably the coverage of institutions, stocks and flows in fiscal reports. A major gap is the subnational sector, not covered by any consolidated fiscal report (except for quarterly reports on their expenditure financed through federal government transfers), even though states and municipalities represent 35 percent of total public sector spending (net of transfers). Some assets and liabilities and transactions (flows) of the federal government are omitted from the financial statements and fiscal statistics—for example, subsoil assets (11 percent of GDP) and PPP liabilities[1] (0.2 percent of GDP). Pension liabilities (47 percent of GDP) are partially reported, while government securities are only reported at face value. If these missing items were included, the net worth of the federal government would increase by about 7 percentage points of GDP. Financial statements are also not consolidated, undermining their usefulness for undertaking a comprehensive analysis of the public sector financial position. The supreme audit institution (ASF)'s findings reveal a number of concerns related to accounting practices. The lack of compliance with international standards on the classification of revenues and expenditures is another weakness that could be addressed by using already-developed bridging tables to produce reports by economic classification consistent with the *GFSM*. These changes would improve the quality of fiscal data for decision making and facilitate international comparisons.

Pillar II: Fiscal Forecasting and Budgeting

Fiscal forecasting and budgeting practices in Mexico have several strengths. The legal framework is comprehensive though complex, and the budget documentation is also

[1] In Mexico, there are distinct legal and operational frameworks for PPPs at the federal (Executive Branch) and subnational levels, which impose constraints on assessing PPP liabilities in accordance with international standards.

comprehensive and timely. The timetable for the submission and approval of budget documents to the Congress is observed. The fiscal policy framework is anchored in a fiscal consolidation plan and three fiscal rules that have been in place since 2014 are adhered to, though pressures for further fiscal consolidation in coming years may put the rules under strain. The performance information and evaluation system is well developed. The management of investment projects is generally transparent, but about one-third of contracts are not tendered openly. The government publishes a citizen's guide to the budget and maintains an informative Transparency Portal.

However, there are areas where fiscal transparency needs to be improved. Few elements of a modern medium-term budget framework have been put in place. Macroeconomic and fiscal forecasts are prepared, but focus mainly on one year ahead, and are subject to substantial deviations compared to outturns. Mechanisms for the independent evaluation of macroeconomic and fiscal forecasts, or for validating the compliance with fiscal targets and fiscal rules, have not been well developed. No information is currently published on the reconciliation of current forecasts with their previous vintages.

Pillar III: Fiscal Risk Analysis and Management

Fiscal risk analysis and management practices in Mexico are in their infancy and need to be further strengthened. The Ministry of Finance (SHCP) publishes a basic level of macroeconomic risk analysis, with small changes in variables to elicit sensitivities, as well as a stochastic projection of the net public debt in the medium term. Several specific fiscal risks are disclosed, though the disclosure is not comprehensive, and the relationship of these risks to the fiscal forecasts is unclear. There is no information on the long-term sustainability of public finances and the projected evolution of overall net worth in budget documents. The analysis of fiscal risks surrounding non-debt liabilities and financial and non-financial assets is not publicly available, including any potential risks associated with the assets and liabilities of the 246 federal non-organic trust funds whose net worth represents about 2.7 percent of GDP. Fiscal risks from public development banks, with aggregate liabilities of 4 percent of GDP in 2016, need to be closely monitored given their large size, and the exposure of the central government. Sub-national governments constitute a substantial part of the public sector, representing about 11 percent of GDP, but comprehensive information on their financial condition and performance are not regularly collected and published. No comprehensive framework for the financial oversight of public corporations has yet been developed.

Nevertheless, Mexico has some strengths in managing fiscal risks. The oil hedging program has been an important element of short-term macroeconomic risk mitigation. Statistics on the volume of oil and gas reserves, including long-term projections for oil and gas production, are published every year. There is a legal cap on government borrowing authorized by Congress. Specific debt rules are also set for subnational governments. The issuance of guarantees is controlled by law and the government's gross exposure to guarantees is published. The regulatory framework for Public Private Partnerships (PPPs) has been strengthened recently, and there is a quantitative limit on new PPP obligations. The Financial Stability Council regularly monitors the banking sector and publishes biannual reports, with indicators of the soundness of the financial sector. The risks of natural disasters are quantified, although this information is not published. Information is also available on the national disaster risks financing strategy.

Pillar IV: Resource Revenue Management

The evaluation shows a high level of transparency in petroleum revenue management. Mexico has a clear and comprehensive legal and fiscal framework for the petroleum sector, and follows open and competitive rights allocation and disclosure practices. All petroleum revenues accrue to the federal budget and the Mexican Petroleum Fund (FMP), and although allocation rules are complex, petroleum revenues that finance spending are allocated through the annual budget. The FMP also has clear governance arrangements and operational rules, and publishes quarterly and annual reports and financial statements. As private sector activity and petroleum revenues increase, it will be important to maintain these high levels of transparency with respect to rights allocation and revenue management.

At the same time, the assessment highlights several areas that need attention. Mexico should continue its implementation of the EITI standards. There is scope for more detailed reporting and oversight of PEMEX's activities under the entitlement regime. The possibility of larger future petroleum revenues underscores the importance of a clear and public operational investment guidelines for the FMP.

Key Recommendations

Based on this evaluation, this report provides 10 key recommendations aimed at further enhancing fiscal transparency practices in Mexico. Specifically, these are as follows.

- Consolidate the general government and the public sector in the fiscal reports to enhance the usefulness of the reports for fiscal analysis and policy making (*Recommendation 1.1*).
- Improve the coverage of stocks and flows in fiscal reports, by including missing assets, liabilities, and fiscal flows which will allow the reports to provide an accurate view of the overall financial position (*Recommendation 1.2*).
- Start publishing fiscal statistics by economic and functional classifications compliant with international standards (*Recommendation 1.3*).
- Strengthen the medium-term fiscal framework and the medium-term budget framework to enhance the government's ability to plan public expenditure over the medium term (*Recommendation 2.1*).
- Strengthen mechanisms for the independent validation of the government's macroeconomic and fiscal forecasts, and compliance with fiscal targets/rules (*Recommendation 2.2*).
- Strengthen macroeconomic risks analysis, with alternative macroeconomic scenarios and other specific risks, to better inform fiscal policy making (*Recommendation 3.1*).
- Prepare and publish a summary report quantifying and disclosing the main specific fiscal risks, and a strategy to manage them (*Recommendation 3.2*).
- Establish a comprehensive framework for the financial governance and oversight of non-financial public corporations (*Recommendation 3.3*).
- Strengthen oversight and reporting on activities under PEMEX's entitlements (*Recommendation 4.1*).

- Publish the benchmark portfolio that operationalizes the FMP's investment guidelines after issuance by the FMP's Technical Committee, as well as the risk management policy to limit deviations from the benchmarks. (*Recommendation 4.2*).

The remainder of this report provides a detailed evaluation of Mexico's fiscal transparency practices against the standards of the FTC. It is organized as follows:

- Chapter I evaluates the coverage, timeliness, quality, and integrity of fiscal reporting;
- Chapter II evaluates the comprehensiveness, orderliness, policy orientation, and credibility of fiscal forecasting and budgeting;
- Chapter III evaluates arrangements for the disclosure and management of fiscal risks; and
- Chapter IV evaluates arrangements for managing revenues from natural resources using a draft of the Fourth Pillar of the FTC, released in April 2016 for public consultation.

Table 0.1 represents a summary of Mexico's performance against the FTC, and Table 0.2 presents a preliminary and partial estimate of the Mexico public sector financial overview for FY 2016.

Table 0.1. Mexico: Summary Assessment Against Fiscal Transparency Code

I. Fiscal Reporting	II. Fiscal Forecasting & Budgeting	III. Fiscal Risk Analysis & Management	IV. Natural Resource Management
1.1. Coverage of Institutions	1.1. Budget Unity	1.1. Macroeconomic Risks	1.1. Legal Framework
1.2. Coverage of Stocks	1.2. Macroeconomic Forecasts	1.2. Specific Fiscal Risks	1.2. Fiscal Regime
1.3. Coverage of Flows	1.3. Medium-term Budget Framework	1.3. Long-term Fiscal Sustainability Analysis	2.1. Allocation of Rights
1.4. Coverage of Tax Expenditures	1.4. Investment Projects	2.1. Budgetary Contingencies	2.2. Disclosure of Holdings
2.1. Frequency of In-Year Reporting	2.1. Fiscal Legislation	2.2. Asset and Liability Management	2.3. Assessment & Collection of Revenue
2.2. Timeliness of Annual Financial Statements	2.2. Timeliness of Budget Documents	2.3. Guarantees	2.4. Audit & Verification of Revenue
3.1. Classification	3.1. Fiscal Policy Objectives	2.4. Public-Private Partnerships	3.1 Reporting on Domestic Payments
3.2. Internal Consistency	3.2. Performance Information	2.5. Financial Sector Exposure	3.2. Reporting on Worldwide Payments
3.3. Historical Revisions	3.3. Public Participation	2.6. Natural Resources	3.3. Operational, Social & Env'tal Reporting
4.1. Statistical Integrity	4.1. Independent Evaluation	2.7. Environmental Risks	4.1. Budgeting of Resource Revenue
4.2. External Audit	4.2. Supplementary Budget	3.1. Sub-national Governments	4.2. Resource Fund Operations & Oversight
4.3. Comparability of Fiscal Data	4.3 Forecast Reconciliation	3.2. Public Corporations	4.3. Resource Fund Investment Strategy

LEGEND	LEVEL OF PRACTICE				
	Not Met	Basic	Good	Advanced	Not Applicable

Table 0.2. Public Sector Financial Overview, 2016

(in percent of GDP)

	Central Government				State Government	Local Government	General Government	Non Fin. Corporations	Financial Corporations	Central Bank	Consol.	Public Sector
	Budgetary Central Gov.	EBU	Social Security	Consolidated Central Gov.								
Total Transactions												
Revenue	17.7	1.3	4.4	20.5	10.1	1.9	23.7	9.9	1.5	0.2	-6.6	28.8
Expenditure	20.6	1.7	4.2	23.6	9.9	1.9	26.4	11.2	1.4	0.5	-6.6	32.9
Expense	20.0	1.7	4.1	22.9	9.4	1.4	24.8	9.3	1.4	0.5	-6.6	29.3
Investment in NFA	0.6	0.0	0.0	0.6	0.5	0.5	1.6	1.9	0.0	0.0	0.0	3.5
Net operating balance	-2.2	-0.4	0.2	-2.4	0.7	0.6	-1.1	0.7	0.1	-0.2	0.0	-0.6
Net lending/borrowing	**-2.8**	**-0.4**	**0.2**	**-3.0**	**0.2**	**0.1**	**-2.7**	**-1.2**	**0.1**	**-0.2**	**0.0**	**-4.0**
Total Assets	**52.0**	**1.8**	**2.6**	**54.7**	**7.8**	**na**	**62.5**	**20.5**	**10.1**	**40.2**	**-59.3**	**73.9**
Non-Financial Assets	18.2	0.7	0.7	19.6	5.5	na	25.0	14.7	0.1	0.0	...	39.9
o/w: Unreported Subsoil Assets	11.3	...	...	11.3	...	...	11.3	...	...	...	...	11.3
Financial Assets	33.9	1.1	1.8	35.1	2.3	na	37.4	5.7	10.0	40.2	-59.3	34.0
o/w: Mon. Reg. Restricted Acc.	25.3	...	...	25.3	...	...	25.3	...	...	...	-25.3	0.0
o/w: Mon. Reg. T-Bonds	...	...	...	...	...	...	...	...	...	20.3	-20.3	0.0
Total Liabilities (a)+(b)	**65.1**	**5.3**	**37.0**	**105.7**	**3.3**	**0.3**	**109.3**	**23.3**	**10.6**	**40.2**	**-59.3**	**123.9**
Reported Liabilities (a)	64.9	5.3	0.5	68.9	3.3	0.3	72.6	23.3	8.9	40.2	-59.3	85.6
Debt Securities	59.2	4.8	0.0	64.0	0.0	0.0	64.0	9.2	1.4	0.5	-22.9	52.3
Loans	4.4	0.0	0.0	4.4	2.3	0.3	6.9	3.1	4.0	0.0	-1.4	12.7
Accounts Payable	1.2	0.5	0.5	0.5	1.0	na	1.5	2.3	0.5	0.4	-4.5	0.2
Pensions	0.0	0.0	0.0	0.0	0.0	na	0.0	8.7	0.0	0.0	0.0	8.7
Other (mainly equity/deposits)	0.0	0.0	0.0	0.0	0.1	na	0.1	0.0	3.0	39.2	-30.6	11.7
Unreported Liabilities (b)	0.2	...	36.5	36.7	na	na	36.7	...	1.6	...	...	38.3
Unreported Pensions	...	...	36.5	36.5	na	na	36.5	...	1.6	...	...	38.1
Unreported PPP Liabilities	0.2	...	0.0	0.2	na	na	0.2	...	...	...	...	0.2
Net Financial Worth	**-31.2**	**-4.2**	**-35.2**	**-70.5**	**-1.0**	**-0.3**	**-71.8**	**-17.6**	**-0.5**	**0.0**	**0.0**	**-89.9**
Net Worth	**-13.0**	**-3.5**	**-34.5**	**-51.0**	**4.5**	**-0.3**	**-46.8**	**-2.8**	**-0.4**	**0.0**	**0.0**	**-50.0**
Memorandum: *Requerimientos Financieros* - RFSP (Public Sector Borrowing Requirements - PSBR)												
Total Transactions												
Revenue	17.7	1.3	4.4	20.5	...	...	...	9.9	1.5	...	-6.6	28.8
Expenditure	19.2	1.7	4.2	22.2	...	...	...	11.2	1.4	...	-6.6	31.6
Expense	18.7	1.7	4.1	21.6	...	...	...	9.3	1.4	...	-6.6	28.0
Investment in NFA	0.6	0.0	0.0	0.6	...	...	...	1.9	0.0	...	0.0	3.5
Net operating balance	-0.9	-0.4	0.2	-1.1	...	...	...	0.7	0.1	...	0.0	0.8
Net lending/borrowing	**-1.5**	**-0.4**	**0.2**	**-1.7**	**...**	**...**	**...**	**-1.2**	**0.1**	**...**	**0.0**	**-2.8**

Sources: Annual financial statements 2016; Quarterly fiscal report fourth quarter 2016; Annual GFS questionnaire 2016; Individual financial statements for the states 2016; Financial statements for public corporations; Banxico's annual financial statements 2016; *Estadísticas Oportunas* database; INEGI database on subnational finances 2016; and staff estimates.
Note: This table presents estimates in accordance with the GFSM 2014, and adopts the accrual basis of recording for transactions to the extent possible. Transactions figures in the main table and PSBR (memorandum) differ due to expanded coverage and cash-to-accrual adjustments (section 1.1.3). It does not cover transactions related to the accrual of public employees' pension entitlements, and incurrence of liabilities related to PPP contracts.

I. FISCAL REPORTING

Fiscal reports should provide a comprehensive, relevant, timely, and reliable overview of the government's financial position and performance.

1. This chapter assesses the quality of fiscal reporting in Mexico against the principles set out in the first pillar of the IMF's FTC. It focuses on the following four dimensions:

i. Coverage of public sector institutions, stocks and flows;

ii. Frequency and timeliness of reporting;

iii. Quality, accessibility, and comparability of fiscal reports; and

iv. Reliability and integrity of reported fiscal data.

2. Fiscal reports in Mexico are mainly compiled and disseminated by the SHCP in accordance with the LRPRH guidelines. Articles 106 to 109 of the LFPRH define the content and frequency of the various fiscal reports that SCHP must prepare for submission to Congress. These reports are regularly published online[2]. Mexico's main fiscal reports (Table 1.1) include:

- ***Monthly fiscal bulletin,*** which presents main aggregates of budget execution (revenues and expenditures), budget fiscal balance (the main fiscal indicator used for policy analysis), PSBR balance,[3] and debt position for the central government and public corporations. It also compares budget estimates and outturn of revenues and expenditures on a cash basis, using the budget classification.
- ***Monthly fiscal report,*** which presents more detailed information on budget outturn (revenues and expenditures), fiscal balances (traditional and PSBR) and debt (stock and flows). It includes a section on executed grants to subnational governments and individual tables containing budget execution by subsector in national presentation: federal government, parastatals, social security and productive public corporations.
- ***Monthly report on grants to subnational governments,*** which presents detailed data on actual grants by state and by type.
- ***Quarterly fiscal report***, which presents an analysis of the macroeconomic environment (production, prices, external sector, etc.) and the government's fiscal performance, covering the central government, and its subsectors, and public corporations. It includes administrative,

[2] Although LFPRH does not establish the obligation to publish the reports, the General Law on Transparency and Access to Public Information (Article 70, fractions XXI, XXII, XXXIX, XXX and XXXI) mandates the disclosure of all official documents produced by the government.

[3] Public Sector Borrowing Requirements - PSBR (*Requerimientos Financieros del Sector Publico - RFSP)*: fiscal indicator with wider coverage in Mexico. It expands the budget coverage to include the EBU's and other public sector entities (see paragraph 5).

functional and economic classification of expenditure, describes changes in the budget appropriations and analyses the performance of several government programs. The report also presents the various fiscal balance indicators (primary balance, traditional fiscal balance, PSBR) and debt indicators (gross debt, net debt, HBPSBR[4]), including detailed information on stocks and flows (issuance/redemption) of debt instruments, with a breakdown by counterpart residency, currency, and maturity. This report introduced for the first time in the fourth quarter of 2016 the information on the financial net worth.

- ***Annual fiscal report,*** which corresponds to end-year quarterly fiscal report, presenting the same content but on an annual perspective.
- ***Semi-annual financial statements,*** which present the accounts up to June 30th of the current fiscal year. The statements are produced by the UCG based on the accounting data generated by the various public entities[5]. The statements are prepared on an accrual basis under the national accounting standards. It includes bridge tables between accounting data and budget revenue and expenditure aggregates.
- ***Financial statements and budget execution report,*** which are organized around 8 chapters comprising accounting, budget, and programmatic information. The financial statements follow the same structure and practices as in the semi-annual publication. The chapter on budget execution contains the most comprehensive information on budget performance, including the initial budget figures, in-year modifications to the budget, and end-year outturns (commitment and payment). Data is presented using administrative, functional and economic classification, taking into account the greater level of detail of the budget structure, but not aligned with international standards (COFOG and GFSM 2014). These reports cover the budgetary central government, extra-budgetary units, financial and non-financial corporations, but sectorization follows the national presentation.
- ***Annual report on subnational finances,*** produced by INEGI. The report presents revenue and expenditure data for states and municipalities, has a long lag, and seems to have been discontinued by the institute. The last available edition was published in 2014 containing data for 2011 fiscal year. Information is collected through paper-based forms filled by subnational authorities, which raises concern on data reliability. INEGI maintains a database on its website with more recent statistics.[6]

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[4] Historical Balance of the Public Sector Borrowing Requirements – HBPSBR (*Saldo Histórico de los Requerimientos Financieros del Sector Público* - RFSP): it's a measure of the net stock position consistent with the PSBR fiscal indicator.

[5] According to the Public Sector Accounting Law (*Ley General de Contabilidad Gubernamental* - LGCG) every public entity is responsible for recording and monitoring its own accounts.

[6] In 2016, it published a methodological note (*Síntesis Metodológica*) describing the online data-base.

Table 1.1. Main Fiscal Reports

		Coverage			Accounting		Publication	
	Agency	Flows	Stocks	Institutions	Basis	Class	Frequency	Lag
In-year Reporting								
Monthly Fiscal Bulletin (Las Fin. Publicas y la Deuda)	SHCP/UPEHP	R, E	Debt	CG, NFPC, FPC	M-cash	Nat	M	30d
Monthly Fiscal Report (Información de Fin. Publicas y Deuda)	SHCP/UPEHP	R,E, Fin	Debt	CG, NFPC, FPC	M-cash	Nat	M	30d
Monthly Report on Grants to Subnational Governments (Participaciones a Entidades Federativas)	SHCP	E	…	CG	M-cash	Nat	M	30d
Quarterly Fiscal Report (Informes Sit. Económica, Fin. Públicas y Deuda)	SHCP/UPEHP	R,E, Fin	Fin. Assets, Debt	CG, NFPC, FPC	M-cash	Nat	Qt	30d
Semi Annual Financial Statements and Budget Execution Report (Informe de Avance de Gestión Financiera)	SHCP/UCG	R, E, Fin	A, L	CG, NFPC, FPC	Accrual	Nat	Ann	30d
Annual Reporting								
Annual Fiscal/Budget Framework (Paquete Económico)	SHCP	R,E, Fin	…	CG, NFPC, FPC	M-cash	Nat	Ann	
General Criteria for Economic Policy (Criterios Generales de Política Económica)	SHCP	R,E, Fin	…	CG, NFPC, FPC	M-cash/ Accrual	Nat	Ann	
Budget Law (ILIF y PPEF)	SHCP	R,E	…	CG, NFPC, FPC	M-cash	Nat	Ann	
Annual Fiscal Report (Informes Sit. Económica, Fin. Públicas y Deuda)	SHCP/UPEHP	R,E, Fin	Fin. Assets, Debt	CG, NFPC, FPC	M-cash	Nat	Ann	30d
Financial Statements and Budget Execution (Cuenta Pública)	SHCP/UCP	R, E, Fin	A, L	CG, NFPC, FPC	Accrual	Nat	Ann	4m
Report on Tax Expenditures (Presupesto de Gastos Fiscales)	SHCP	E	…	CG	Accrual	Nat	Ann	
INEGI Fiscal Report on Subnational Finances (Finanzas Públicas Estatales y Municipales)	INEGI	R, E, Fin	…	Subnational gov.	Cash	Nat	Ann	2y
Annual Borrowing Plan (Plano Anual de Financiamiento)	SHCP/UCP	Fin	Debt	CG, NFPC, FPC	Cash	Nat	Ann	

Note: Fin = Financing, R =Revenue, E = Expenditure, A = Assets, L = Liabilities, M = Monthly, Q = Quarterly, S = Semiannual, A = Annual, M-cash = Modified Cash, Nat = National.

1.1. Coverage

1.1.1.	Coverage of Institutions	Basic

3. **In 2016, the public sector in Mexico comprised 2,693 institutional units of various legal forms of which the total expenditure accounted for about 33 percent of GDP (Table 1.2).** These entities can be grouped into various sectors in accordance with international standards as follows:

- ***Budgetary central government (BCG)***: comprising 32 executive, legislative and judicial bodies (including 18 secretariats, the agrarian court, 2 commissions, 2 councils and the presidential office), 7 autonomous agencies and the *Instituto Nacional de Estadística y Geografia – INEGI* (bureau of statistics).

- ***Extra-budgetary central government (EBU)***: comprising 119 entities which include 33 institutes, 22 research centers, 10 commissions, 9 "organic" trust funds, 9 hospitals, 6 national councils and 6 regional schools.
- ***Social security sector***: comprising 3 social security institutions (pension and health benefits), the *Instituto Mexicano del Seguro Social* – IMSS, the *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* – ISSSTE, and the *Instituto de Seguridad Social de las Fuerzas Armadas Mexicanas* – ISSFAM (see Box 1.1).
- ***State and local governments:*** comprising the legislative, judiciary and executive bodies of 32 states (including the Ciudad de Mexico) and 2,457 municipalities. There are 65 trust funds at the state level.
- ***Public corporations:*** comprising 19 financial and 49 non-financial corporations, including 6 development banks, 2 insurance companies, PEMEX - the Mexican oil company, CFE – the electricity company, and 17 ports administration companies (See Section 3.3.2). It also includes the Mexican Central Bank (Banxico).

4. Fiscal reports in Mexico have traditionally covered only entities fully included in the federal budget, which includes the BCG's entities, two social security funds[7] (IMSS and ISSSTE) and the two major non-financial public corporations (PEMEX and CFE). Monthly and quarterly fiscal reports focus on budget execution and financing. The budget fiscal balance, nationally known as "traditional balance", is still the main indicator for assessing the impact of fiscal policy on the economy.

5. More recently, a fiscal indicator with wider coverage was introduced in fiscal documents, but still does not cover the entire general government or public sector. This indicator, named Public Sector Borrowing Requirements - PSBR (*Requerimientos Financieros del Sector Publico - RFSP)*[8], expands the federal budget coverage to include the EBUs (including the non-organic funds[9]: FEIP, FEIEF, FIES, FMP, Fonadin, FEIPEMEX, FARP), the development banks, the IPAB, the PIDIREGAS and debt support program. In the fiscal reports, this indicator is derived from the traditional balance by adding the above-mentioned units and applying some accounting adjustments. In addition, SHCP publishes online[10] PSBR tables, containing breakdowns of revenues and expenditures by economic classification using high-level GFSM 2014 codes. The data is also

[7] ISSFAM is classified as a decentralized agency outside the federal budget coverage.

[8] The RFSP was introduced by the Fiscal Responsibility Law (*Ley Federal de Presupuesto y Responsabilidad Hacendária – LFPRH)* in 2006.

[9] Non-organic funds are trust funds which comprise essentially a set of accounts within a government ministry or entity which processes transactions but has no separate legal/corporate identity.

[10] It is published on a platform called *Estadísticas Oportunas de Finanzas Públicas*, hosted on SHCP's website.

displayed by sector, using international presentation, including a consolidated central government table; however, those tables have not yet been fully included in the fiscal reports[11]. The major gaps in terms of coverage are the subnational governments and the central bank.

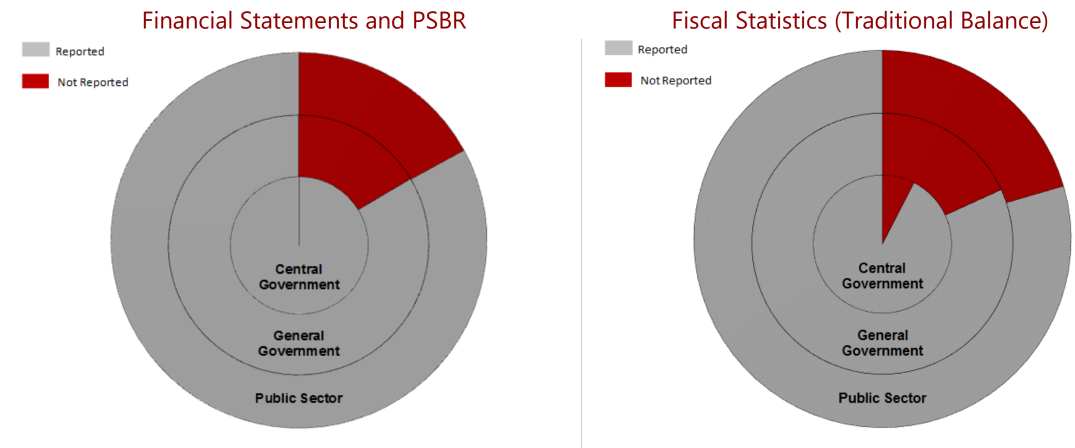
6. The annual financial statements (*Cuenta Pública*) are the most comprehensive fiscal report, but there is no consolidation of the subsectors. It includes all the BCG's entities, the majority of the trust funds, extra-budgetary units, the 3 social security funds and the financial and non-financial corporations. The statements are presented in eight volumes: (i) summary fiscal performance, including budgetary revenues and expenditures and debt position; (ii) the federal government financial statements, which consolidates volumes (iii); (iv); and (v), that include a balance sheet, a statement of operations, and notes, as well as detailed budget execution tables; (iii) the executive branch financial statements; (iv) the legislative branch financial statements; (v) the judicial branch financial statements; (vi) the autonomous agencies' financial statements; (vii) the parastatal sector financial statements, which comprises the EBUs, the social security sector, the financial and non-financial public corporations; and (viii) the PEMEX and CFE financial statements. There is no consolidation (nor aggregation) of subsectors[12], each volume being an independent financial statement.

7. In 2016, the financial statements covered 89 percent of gross public sector expenditures, but a major part of it are transfers to subnational governments (Figure 1.1). The major omissions are the subnational governments, the Central Bank and the non-organic funds: FEIP, FEIEF, FIES, FMP, Fonadin, FEIPEMEX, FARP, among others.

[11] Monthly fiscal reports include a single summary table decomposing the PSBR indicator by central government, and public corporations, but the more detailed PSBR sectoral tables with breakdowns of revenue and expenditure are only available online.

[12] Except volume (ii) that consolidates volumes (iii), (iv), and (v).

Figure 1.1. Coverage of Public Sector Institutions in Fiscal Reports
(in percent of expenditure)



Source: Staff estimates.
Note: "Not Reported" refers to expenditures of units not consolidated in fiscal reports. The major gaps in financial statements and PSBR are subnational governments and the central bank while the traditional fiscal statistics also do not cover EBUs and financial public corporations.

8. **Subnational governments account for around 35 percent of the net public sector expenditure, but are not consolidated in any fiscal report (Table 1.2).[13]** States and municipalities finance their operations with federal transfers in the form of revenue sharing mechanisms (*participaciones y aportaciones*[14]), voluntary transfers, and co-financed projects (*convenios*). Transfers to subnational governments represented around 40 percent of the federal budgetary expenditures in 2016 (MXN 1.7 trillion); although this figure is shown in budget documents, the final utilization[15] of these resources is disclosed partially due to the absence of a fiscal report consolidating the subnational finances[16].

[13] Only about 20.2 percent of their resources is reported in the quarterly fiscal reports.

[14] The *Participaciones* and *aportaciones* are revenue sharing mechanisms regulated by the General Law on Fiscal Coordination (*Ley de Coordinación Fiscal*). *Participaciones* are grants to states and municipalities based on a fixed share (around 20%) of the federal tax revenues while *aportaciones* are earmarked transfers to fund subnational programs on education, health, social assistance and infrastructure sectors.

[15] Article 85 of the Federal Budget and Fiscal Responsibility Law mandates the states and municipalities to submit to SHCP information on performance of the federal *aportaciones* on a quarterly basis. Such information is incorporated as Annex XXIII to the quarterly fiscal report, including an online database. The annex (and the database) presents information on financial execution by fund, on project management, and on performance of program indicators. However, there is no information on resource utilization by economic categories to allow the disclosure of the final allocation of such resources.

[16] SHCP publishes online tables containing the subnational debt by state with some additional breakdowns by debt instrument but it is not included in any fiscal report: http://disciplinafinanciera.hacienda.gob.mx/

Table 1.2. Public Sector Institutions and Finances, 2016

(in percent of GDP, unless otherwise stated)

	Number of entities	Revenue	Expenditure	Balance	Intra-PS expenditure	Net expenditure	percent net expenditure
Public Sector	2,693	28.8	32.9	-4.0	0.0	32.9	100.0
General government	2,624	23.7	26.4	-2.7	1.8	24.6	75.0
Central government	160	20.5	23.6	-3.0	10.6	12.9	39.3
Budgetary central government	38	17.7	20.6	-2.8	13.5	7.1	21.5
Extrabudgetary units and funds	119	1.3	1.7	-0.4	0.0	1.7	5.1
Social Security	3	4.4	4.2	0.2	0.0	4.2	12.7
State governments	32	10.1	9.9	0.2	0.0	9.9	30.0
Local governments	2,432	1.9	1.9	0.1	0.0	1.9	5.6
Central Bank	1	0.2	0.5	-0.2	0.0	0.5	1.4
Nonfinancial public corporations	49	9.9	11.2	-1.2	3.6	7.6	23.0
Other financial public corporations	19	1.5	1.4	0.1	1.2	0.2	0.6

Sources: Annual financial statements 2016; Quarterly fiscal report fourth quarter 2016; Annual GFS questionnaire 2016; Individual financial statements for the states 2016; Individual financial statements for public corporations; Banxico's annual financial statements 2016; *Estadísticas Oportunas* database; INEGI database on subnational finances 2016; and staff estimates.

9. **The national definition of subsectors differs from the international standards (GFSM 2014), undermining the usefulness of fiscal reports in supporting public debate and international comparison.** The public sector is organized under the national classification into two subsectors: (i) federal budgetary public sector, comprising BCG's units, the social security funds, PEMEX and CFE; and (ii) parastatal sector, comprising the EBUs, "organic" trust funds, financial and non-financial corporations except PEMEX and CFE. The stabilization funds, the subnational governments and the Central Bank are not taken into account. Volume (vii) of the financial statements has a second classification layer that can be used to sectorize the parastatals according to international standards. This exercise is being applied by SHCP to disseminate the PSBR by sector (under international standards) on its website, and authorities intend to gradually introduce this presentation in the in-year fiscal reports. Nevertheless, the current national presentation makes it difficult for an outsider to have a clear view of the public sector fiscal stance and the interactions between the corresponding subsectors.

Box 1.1. The Mexican Pension System

The Mexican pension system is fragmented and complex. Multiple pension schemes covering private sector employees and different categories of civil servants and military personnel coexist. There are two main schemes, IMSS and ISSSTE, and several special regimes covering public sector employees (PEMEX, CFE, IMSS-*patrón*, ISSFAM, Development Banks, other government agencies, universities, subnational governments) and few closed special regimes (LyFC, Ferronales). The main features of these schemes are described below.

Two main schemes cover the majority of the population:

- IMSS (*Instituto Mexicano del Seguro Social*): The IMSS covers private sector workforce. The scheme was reformed in 1997 to replace a defined-benefit Pay-as-You-Go (PAYGO) system by a defined-contribution regime with individual retirement accounts. Each worker contributes 1.125% of the quotation base wage, employer contributes 5.150%, and government pays 0.225% (total contribution reaches 6.5%) plus 5% for housing and a social fee depending on the salary level for workers with salary below a threshold equivalent to 15 times the monthly UMA (Unit of Measure and Updating – monthly UMA in 2016 was MXN 2,220.42), all of which are remitted to the individual account balance to finance pension payments upon retirement. Individuals who contributed before 1997 were grandfathered—at retirement, they can choose their pension to be calculated under the old PAYGO regime if this is higher than their entitled pension in the individual account. Those who choose the old system must return part of the balance of their individual account to the government at retirement.

- ISSSTE (*Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado*): The ISSSTE covers public sector employees. It was reformed ten years later, in 2007, with the same approach of a defined-contribution regime replacing the previous PAYGO system. Worker's contributions are 6.125% of the quotation wage, and government contributions are: 5.175% for retirement, (total contribution 11.3%) plus 5% of housing, and 5.5% of a minimum wage as a social fee, regardless of the salary. In addition, there are voluntary savings "*Ahorro solidario*" which increases the contribution of the workers. Individuals who contributed before 2007 had the option, but not the obligation to join the new system. Those who migrated were given a recognition bond to account for contributions prior to the reform and those who stayed in the old regime will receive pension payments under the PAYGO rules, but with parametric changes on eligibility criteria.

Other special regimes covering public sector employees:

- Regimes of PEMEX and CFE: They cover workers of the two largest public corporations. These two PAYGO schemes provide more generous benefits and laxer eligibility requirements relative to other systems, but both were subject to a change towards a defined-contribution approach and to parametric reforms[1] in 2015 to reduce the corresponding unfunded pension liabilities. In return, government issued pension bonds to these companies to the magnitude of the net present value of future pension savings.
- ISSFAM (*Instituto de Seguridad Social para las Fuerzas Armadas Mexicanas*): The ISSFAM covers military personnel and pension payments are mainly funded/covered by the federal budget.
- Other schemes include schemes for Development Banks, other government agencies, universities, IMSS-*patrón*; and closed special regimes (*LyFC, Ferronales*). These regimes generally provide more generous benefits than the main systems and are mainly funded by the federal budget.

There are also pension schemes at the subnational level that are generally funded by state and local budgets.

The actuarial pension liability in Mexico considering the ISSSTE and the special regimes reached MXN 9.2 trillion (46.9 percent of GDP) in 2016. Actuarial calculations for IMSS-PAYGO are not available.

Pension Scheme	Actuarial Liability	
	MXN trillion	% of GDP
Liability	**9,166**	**46.9**
ISSSTE - PAYGO	5,409	27.7
PEMEX	1,220	6.2
CFE	499	2.6
IMSS-patrón	1,722	8.8
Other	316	1.6
Contingency	**na**	**na**
IMSS - PAYGO	na	na
TOTAL	**9,166**	**46.9**

According to the GFSM 2014, the statistical treatment of pension schemes depends on whether the scheme is contributory or not, whether it is a defined-benefit or defined-contribution, and whether it is a social security or employment-related scheme. For defined-benefit schemes, the statistical treatment depends on the type of beneficiaries: when the beneficiary is the general population, or a large segment of the general population, the scheme is considered a social security scheme; whereas if individuals, households, or a group of employees are eligible to receive social benefits, the scheme would be considered an employment-related social insurance scheme. Under social security schemes, the link between benefits and contributions is not considered sufficiently strong to give rise to a financial claim on the part of contributors. As a result, no liabilities are recorded, but an estimate equal to the net implicit obligations for future social security benefits should be presented as a memorandum item to the balance sheet. Employment-related pension schemes are, on the contrary, considered to involve a contractual liability towards employees and registered as liabilities.

According to this criterion, the actuarial liabilities of the ISSSTE (old PAYGO scheme), and the special regimes in Mexico would be recognized in the public sector financial statements as firm liabilities, while the old PAYGO IMSS scheme would be considered as contingent liabilities.

Source: Annual Consolidated Financial Statements, 2015; and GFSM 2014

[1] CFE's pension system switched from defined-benefit to defined-contribution in 2008, and it was subject to additional parametric reforms in 2015.

1.1.2.	**Coverage of Stocks**	**Basic**

10. The *Cuenta Pública* and the quarterly fiscal reports cover cash and debt positions; the information provided on other financial assets and liabilities is not comprehensive. The financial statements also present a balance sheet containing data on financial and non-financial assets and liabilities by subsector without consolidation, but the existence of relevant unreported items and recording problems prevents Mexico from meeting more advanced practices under the FTC. These weaknesses in the financial statements have been constantly highlighted by the ASF since 2012 (see section 1.4.2) and some improvements have been achieved so far, but important gaps persist. Figure 1.2 illustrates the size of the missing items:

- ***Subsoil assets are not reported (11 percent of GDP):*** PEMEX regularly produces estimates[17] of the monetary value of proved petroleum reserves (covering about 90-95 percent of Mexico's proved reserves) but it is not incorporated in the financial statements. For end-2016, the value PEMEX's estimates reached 11 percent of GDP (see section 3.2.6).
- ***Nonfinancial assets are not properly recorded:*** the valuation of fixed assets (property, plant, equipment) and land is based on historic cost instead of market values. Where an entity reports an item using historic cost, international standards often encourage disclosure of market values if there is a material difference between the reported cost and the item's market value. More importantly, CONAC[18] has established that nonfinancial assets held by the Executive Branch are not subject to depreciation,[19] which tends to overvalue such assets. In the 2016 auditing cycle, ASF has found unverified stocks of around 2.5 percent of GDP in highways infrastructure. Finally, the General Law on National Assets defines non-financial assets that are considered to be on "public domain" (roads, bridges, highways, ports, among others); therefore, those assets are not recorded in the financial statements according to the General Law on Governmental Accounting. This regulation is still not operational – 2016 financial statements include public domain assets, but the balance sheet will be materially affected by the time UCP decides to fully adopt such rule.
- ***Employment-related pension liabilities are partially reported (47 percent of GDP - see Box 1.1):*** international standards require the liabilities under employment-related pension schemes to be fully reflected in the public sector balance sheet. The national accounting regulation on employment-related benefits (NIFD-3, *Norma de Información Financiera D-3)* seems to be broadly aligned to IPSAS, but it is still not reflected in *Cuenta Pública*. IMSS and ISSSTE adopted, for the first time, NIFD-3 practices to prepare their financial statements 2016. They both presented two sets of statements, one including the pension liability estimated following NIFD-3, and the other not; the latter was taken to compose the *Cuenta Pública*. Liabilities related to the special pension schemes (armed forces, courts, development banks) are also not reported in

[17] PEMEX uses internationally accepted financial accounting methods for reserves valuation – which may differ in some respects from the methodology recommended in the UN's System of Environmental-Economic Accounting for Energy.

[18] The General Law of Governmental Accounting 2008 created the National Council of Accounting Harmonization (*Consejo Nacional de Armonización Contable* – CONAC) as the accounting standard setter for the public sector.

[19] CONAC's regulation allows defining assets with indefinite useful life, which implies they are not subject to depreciation.

Cuenta Pública, except for PEMEX and CFE, which have already incorporated in their statements the liabilities derived from their respective pension schemes. The total public sector pension liability amounted to 47 percent of GDP, of which only 8.7 percent of GDP is reported in the statements.

- ***Financial liabilities related to PPPs are not reported (0.2 percent of GDP):*** there is currently a portfolio of 22 projects being executed under PPP arrangements, which accounts for liabilities of around 0.2 percent of GDP. Despite the relative small amount, government has plans to foster PPPs contracts in the coming years. There is currently no reporting on PPPs in financial statements and fiscal reports. International standards (IPSAS 32 and GFSM 2014) require recognition of assets and corresponding liabilities as assets are constructed. Federal and local governments are working to enhance the accounting framework for PPPs to make it broadly aligned with IPSAS 32.
- ***Debt securities are mainly registered[20] at face value rather than market value or nominal value[21] (6 percent of GDP).*** The *Cetes*[22] (T-bills) and *Udibonos Segregados* are the only debt instruments registered at nominal value. The long-term T-bonds (*Bondes "D", Bonos de Desarrollo, Udibonos*) are all registered at face-value, which represents 87% of total stock of debt securities. The difference between the discounted issue price of T-bonds and their face value is recorded as an asset in *Cuenta Pública*, which accounted for 6 percent of GDP by end-2016. Following international standards, debt securities issued at a discount (or premium) are recorded at the issue price (nominal value). The difference between the discounted issue price of such debt securities and their price at maturity (face value or redemption price) is treated as interest accruing over the life of the debt security.
- ***Treasury securities used by the Banxico for liquidity management are only partially reported (25 percent of GDP – see APPENDIX 1).*** Banxico has been using T-bonds issued directly by the Treasury for liquidity management. At end 2016, a stock of about 4.9 percent of the GDP in T-bonds has been placed in the market through the Banxico monetary policy management arrangement, and an additional 20 percent in treasury securities is held by the bank to be used in monetary open market operations. In the official debt statistics[23] (traditional, SHRFSP and PFN), these securities are not considered as central government (or general government, GG) debt while in *Cuenta Pública* it is reported under a specific liability line item, not under the debt heading. This contrasts with the treatment in the GFSM, where Treasury

[20] Government securities accounting practices follow national regulations: General Law on Governmental Accounting, CONAC's resolutions, and Federal Government Accounting Manual (*Manual de Contabilidad Gubernamental para el Poder Ejecutivo Federal*).

[21] Banxico publishes online a single table of all government securities by counterparty sector at nominal value, but this information is not included in any fiscal report.

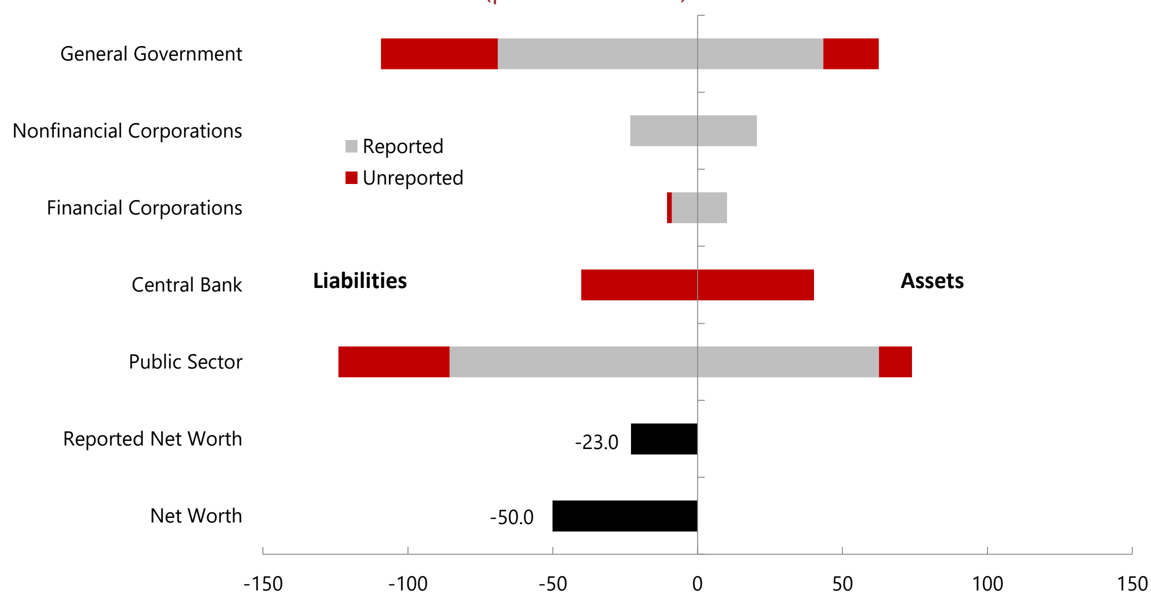
[22] *Certificados de la Tesorería de la Federación*.

[23] The Banxico publishes online the stock of T-bonds sold by the bank to the market in liquidity management operations but the information is not included in the official debt statistics: http://www.banxico.org.mx/valores/PresentaResumenPosicionGub.faces?BMXC_resumen=GOBFED&BMXC_lang=es_MX

securities are considered a debt liability of the CG and GG, regardless if it's issued to the market through the Central Bank or directly by the Treasury. In addition, the Central Bank is considered a public financial institution, and, as such, its Treasury securities holdings are also considered a debt liability of the GG. Moreover, in Mexican framework, the treasury is responsible for repaying the bonds at maturity, although the bank bears the interest costs over the period.

- ***Assets and liabilities at the subnational level are not reported (assets: 7.8 percent of GDP; liabilities: 3.6 percent of GDP).*** Subnational finances are not included in any fiscal report. Based on available information, states have assets of around 7.8 percent of GDP, mainly non-financial assets, while the total liabilities of states and municipalities amounted for 3.6 percent of GDP, three-fourth of it being credit loans.

Figure 1.2. Public Sector Balance Sheet Coverage in Fiscal Reports, 2016
(percent of GDP)



Sources: Quarterly fiscal report, *Cuenta Pública* 2016 and staff estimates.

11. The published volume II (*Tomo II*) of the *Cuenta Pública* of the Federal Government shows a negative net worth of 21 percent of the GDP by December 2016, whereas the missing items would have improved the financial position by 7.8 percent of GDP (Table 1.3). Total reported assets amounted to 50.4 percent of GDP, of which 6.9 percent of GDP were in the form of fixed assets (buildings, machinery and infrastructure), 25.3 percent correspond to deposits in the Treasury restricted account held in the Banxico under the monetary regulatory framework (see APPENDIX 1), 7.0 percent in equity on parastatals and public corporations, and 1.7 percent in equity on non-organic trust funds. There is an accounting asset record related to the discount on issuance of long term T-bond (6.3 percent of GDP), since face value is applied as valuation method of debt securities on the liability side of the balance sheet. Reported Liabilities accounted for 71.2 percent of GDP, of which 65.5 percent of GDP corresponds to T-bonds (at face value), including 25.3 percent of

GDP on the monetary regulatory framework, 4.4 percent of GDP on loans and 1.2 percent of GDP on accounts payable. Table 1.3 presents the published balance sheet position and the adjustments in line with international standards, which would increase the net worth by 7.8 percent of GDP.

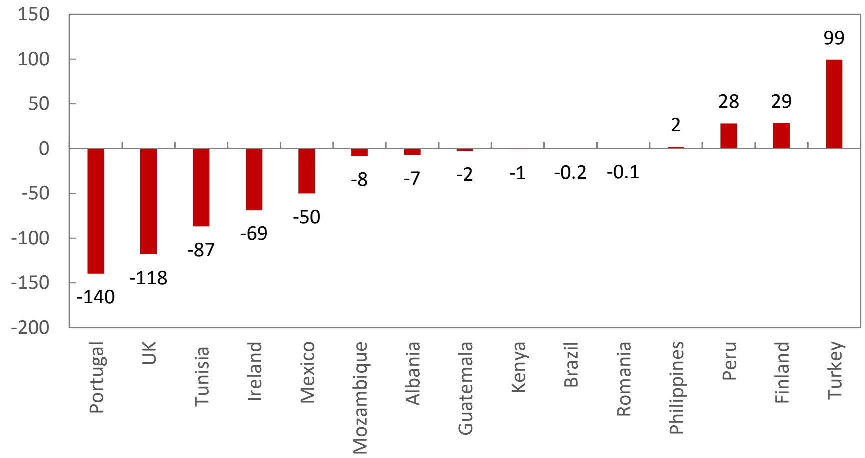
Table 1.3. Public Sector Balance Sheet Coverage in Fiscal Reports, 2016
(percent of GDP)

	MXN billion		percent of GDP	
	Cuenta Pública Tomo II	GFSM Budgetary Central Gov.	Cuenta Pública Tomo II	GFSM Budgetary Central Gov.
Total Assets	**9,852**	**10,170**	**50.4**	**52.0**
Non-Financial Assets	1,343	3,553	6.9	18.2
o/w: Unreported Subsoil Assets	...	2,210	...	11.3
Financial Assets	8,509	6,617	43.5	33.9
o/w: Monetary Reg.	4,938	4,938	25.3	25.3
o/w: Trust funds	332	332	1.7	1.7
o/w: Equity in parastatals	1,369	1,044	7.0	...
o/w: Discount in T-bonds	1,235	...	6.3	...
Total Liabilities (a)+(b)	**13,911**	**12,718**	**71.2**	**65.1**
Reported Liabilities (a)	13,911	12,676	71.2	64.9
Debt Securities	12,806	11,571	65.5	59.2
o/w: Monetary Reg.	4,938	4,938	25.3	25.3
Loans	862	862	4.4	4.4
Accounts Payable	243	243	1.2	1.2
Pensions	0	0	0.0	0.0
Other (mainly equity/deposits)	0	0	0.0	0.0
Unreported Liabilities (b)	...	42	...	0.2
Unreported Pensions	...	...	...	...
Unreported PPP Liabilities	...	42	...	0.2
Net Financial Worth	**-5,402**	**-6,101**	**-27.6**	**-31.2**
Net Worth	**-4,059**	**-2,548**	**-20.8**	**-13.0**

Source: *Cuenta Pública* 2016 and staff estimates.

12. Taking a consolidated view of the public sector balance sheet, however, the net worth reaches a negative 50 percent of GDP, which is lower in comparison to Mexico's peers in the region and other comparable emerging economies (Figure 1.3). Total public sector estimated liabilities amounted to about 123.9 percent of GDP of which 52.3 percent of GDP are in the form of debt securities; including T-bills, T-bonds and treasury securities sold by Banxico for monetary policy operations (see APPENDIX 1). Pension liabilities accounted for 46.9 percent of GDP and loans for 12.7 percent of GDP. Estimated assets amounted to 73.9 percent of GDP of which 39.9 percent of GDP in fixed assets, 11.3 percent of GDP in petroleum reserves, and 34.0 percent of GDP in financial assets (deposits, international reverses and financial investments).

Figure 1.3. Public Sector Net Worth in Selected Countries
(percent of GDP)



Sources: FTE reports.

1.1.3.	**Coverage of Flows**	**Basic**

13. Fiscal reports widely used for policy discussions are compiled on a cash basis of recording, including revenues, expenditures and financing. Revenue is recorded when cash is collected by SAT, the Treasury or local tax agencies, and expenditure by the time payment is made by spending units. Budget execution also records expenditure data on a modified cash basis (*devengado*), i.e., registered when the obligation for payment is recognized[24], but this information is not used to compile the fiscal balance (traditional and PSBR) and other fiscal indicators. Some minor in-kind fiscal transactions are incorporated in the fiscal reports on market value basis. Although IMSS, ISSSTE, PEMEX, and CFE produce financial information on accrual basis, only cash flows are submitted[25] to SHCP for compiling the monthly and quarterly fiscal reports. The data for IPAB, FONADIN and development banks are taken on a modified-cash basis in the PSBR compilation methodology.

14. The statistical treatment of the capital payments from the Banxico (ROBM) is not in line with the international standards. In the last three years the SHCP received significant capital payments from the Banxico in the form of distribution of operational gains of the bank.[26] These transfers were treated as dividends in fiscal statistics, positively affecting the fiscal balances (traditional and PSBR). However, the Banxico's gains mainly reflected unrealized profits due to the effect of MXN's depreciation on the valuation of the large stock of international reserves, which is denominated in foreign currencies (mainly US$). In accordance with the GFSM 2014, the transfer of

[24] The Legal Framework establishes that expenditure should be recorded at three stages: *compromisso, devengado, and pagado*.

[25] Cash revenue, expenditure and financing is transmitted to SHCP through an online platform named *Sistema e Sistema Integral de Información de los Ingresos y Gasto Público – SII*. www.sii.hacienda.gob.mx.

[26] It should be noted that the use of the ROBM is reported in different documents with explanation of the use of the operating surplus of the central bank.

unrealized gains/losses from exchange rate valuation associated with international reserves is treated as other economic flows, not affecting the fiscal balance (see APPENDIX 1). (An adjustment approach is illustrated on Figure 1.4 below).

15. The statistical treatment of the transactions related to FEIP's investment in financial instruments for hedging oil-price risks should also be revised. FEIP is one of the revenue stabilization funds outside of the federal budget boundaries. Therefore, the budgetary transfers to the fund (based on proceeds from oil sales) and the withdraws from the fund (to compensate for a reduction in budget revenues) are both captured in the traditional balance indicator. Furthermore, the fund is included in the coverage of the wider PSBR indicator, but the transactions it performs in the international financial markets have an asymmetric treatment in the calculation of such fiscal indicator. The fund operates by acquiring financial instruments for hedging oil-price volatility, mainly option contracts. GFSM 2014 recommends that such transactions (including the execution of the option) should be treated below-the-line (net acquisition of financial assets). Authorities claim that the fund, regardless of the financial instrument used, operates under a revenue insurance mechanism, which justifies the above-the-line recording. Apart from this debate, a major issue to be addressed is the fact that the two sides of such transaction are being treated asymmetrically in the PSBR indicator: the outflows from the fund to acquire the option/insurance are taken below-the-line while the inflows from executing the option/calling the insurance are recorded above-the-line. As a result, the PSBR indicator has been positively distorted (Table 1.4). The proper statistical treatment could be further investigated[27], but a symmetric approach should be immediately implemented – the short-run pragmatic alternative would be to record the payments from the fund as expenses above-the-line (this approach is taken on Figure 1.4 below).

Table 1.4. FEIP's Oil Hedging Program
(percent of GDP)

	percent of GDP												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cash Outflow	0.08	0.08	0.05	0.06	0.08	0.13	0.08	0.10	0.08	0.03	0.07	0.06	0.09
Cahs Inflow	-	-	-	-	-	0.53	-	-	-	-	-	0.59	0.25
Recorded impact on PSBR	-	-	-	-	-	0.53	-	-	-	-	-	0.59	0.25
Adjusted impact on PSBR	-0.08	-0.08	-0.05	-0.06	-0.08	0.40	-0.08	-0.10	-0.08	-0.03	-0.07	0.53	0.16

Source: SHCP.

16. The annual financial statements present some flows on accrual-basis; however, significant accrued transactions are omitted. The *Cuenta Pública* contains a statement of operations with accrued revenues and expenditures, including accounts payable/receivable, depreciation (except for the Executive Branch), revaluations of assets (including equity holdings) and liabilities, and other economic flows generated by changes in currency exchange rates. The major omission is the unreported annual net accrual of employment–related pension liabilities, which was

[27] IMF's statistics department could be consulted to support this technical investigation.

estimated[28] at 2.3 percent of GDP in 2016 for all special pension schemes (PEMEX, CFE, IMSS-patrón, development banks) and ISSSTE. Depreciation of fixed assets held by the executive branch[29] (around half of total public sector fixed assets) is another significant gap as well as the lack of accrual recording of interest on discounted long-term T-bonds (see paragraph 10 above). Finally, flows related to PPP contracts are not recorded because IPSAS 32 has not yet been adopted.

17. National accounting practices are still in an early stage of development, since IPSAS have not yet been implemented. The Government Accounting Conceptual Framework (*Marco Conceptual de Contabilidad Gubernamental – MCCG*) issued by CONAC establishes that the national regulations take precedence over international standards. There are over 70 regulations on accounting practices and standards issued by CONAC to date, which are of mandatory compliance for government agencies. Although some IPSAS elements have been taken as general references by CONAC, IPSAS have not yet been adopted.[30] The ongoing initiative of federal and local governments to enhance the accounting framework for PPPs in line with IPSAS 32 is most welcome. Such initiative should be considered as a first step towards a gradual implementation of IPSAS in Mexico.

18. Cash-to-accrual and coverage adjustments would increase the Mexican public sector deficit by 3.5 percent of GDP in 2016, mainly due to ROBM and FEIP oil hedging program adjustments and accrual of pension entitlements. Adjusting the statistical treatment of the ROBM and FEIP oil hedging program would increase the cash deficit to 4.1 percent of GDP, 1.3 percent higher than currently reported in fiscal reports. The balance does not alter in the case where Banxico and subnational governments (on cash-basis) are included in the coverage; nevertheless, the public sector net borrowing reaches 6.3 percent of GDP when the accrued expenses related to pension entitlements and PPP contracts are taken into account (Figure 1.4).

19. Despite being broadly covered in fiscal reports, cash transactions within public sector entities are difficult to follow through in the reports, which poses a challenge for fiscal transparency. There is a complex system of transfers within public sector entities in Mexico, some of which are driven by multiple-tiers earmarking mechanisms (see section 2.1.1) and the multiplicity of trust funds (revenue stabilization and spending funds). This system also reflects the unique national sectorization of public entities that applies to the federal budget allocation and to the dissemination of fiscal statistics (Figure 2.1). These transfers are reported in several tables in multiple reports, but each one with a different presentation format and coverage. Reconciliation of the figures between the tables is not easy and there is no guidance on how to interpret the data.

[28] Staff estimates based on limited data in accordance with GFSM 2014 methodology.

[29] National accounting regulation establishes that depreciation does not apply to fixed assets held by the executive branch (see paragraph 10). Information available is not sufficient to estimate the magnitude of this flow.

[30] IPSAS 1 (Presentation of financial statements) and IPSAS 17 (Property, Plant and Equipment) were taken as general references in one CONAC accounting agreement. IFAC states in its website that Mexico has not adopted IPSAS so far.

Figure 1.4. Cash to Accrual and Coverage Adjustments, 2016

(Percent of GDP, unless otherwise stated)

	2016
Traditional Balance (modified-cash, Quarterly Report)	**-2.5**
Coverage adjustments	
FONADIN	-0.1
IPAB	-0.02
Development Banks	0.1
Methodological adjustements	
PIDIREGAS	-0.1
Debtor support program	0.02
Other	-0.1
PSBR Balance (modified-cash, Quarterly Report)	**-2.8**
Cash adjustments	
ROBM	-1.2
FEIP oil hedging program	-0.09
PSBR Balance (cash, adjusted)	**-4.1**
Cash-accrual adjustments (Cuenta Pública)	
Change in arrears (accounts payable)	-0.02
Accrued interest on discounted T-bonds	na
PSBR Balance (accrued, Quarterly Report)	**-4.1**
Coverage adjustments	
Central Bank (Banxico)	-0.2
State governments	0.2
Local governments	0.1
Public Sector Net Lending/Borrowing	**-4.0**
Additional accrual adjustments	
Accrual of pension entitlements	-2.3
PPP investment	0.00
Augmented Public Sector Net Lending/Borrowing FTE	**-6.3**

Sources: Quarterly fiscal report, *Cuenta Pública* 2016 and staff estimates.
Note: Depreciation of fixed assets reached 1.0 percent of GDP, affecting the operating balance, but not deteriorating the net lending.

1.1.4.	Tax Expenditures	Good

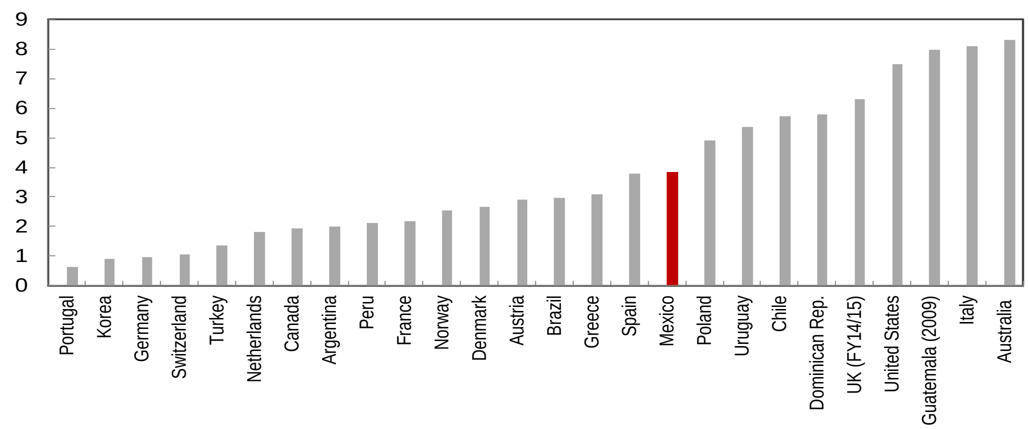
20. **The federal government has been publishing an annual report on the estimated revenue loss from tax expenditures since 2002.** In compliance with the provisions of Article 30 of the Federal Revenue Law, this report on tax expenditures is delivered to the Congress[31] by June 30 each year. The report is published on the SHCP's website. It covers the current year and the coming fiscal year. The report defines tax expenditures, explains the methodology used for calculating revenue losses, and breaks down the information by category of tax (e.g., corporate and personal income tax, VAT, etc.), by expenditure (e.g., deductions, exemptions, deferrals, etc.) and by economic

[31] Specifically, to the Committees of Treasury and Public Credit, of Budget and Public Account, and the Center of Public Finance Studies (CEFP) of the Chamber of Deputies, and to the Committee of Treasury and Public Credit of the Senate.

sector (e.g., agriculture, mining, construction, etc.). However, the budgetary goal and target for the size of tax expenditures is not defined in a policy statement issued by the government.

21. Tax expenditures in Mexico are relatively moderate compared to other countries (Figure 1.5). Total tax expenditure in 2018 is estimated to be around 3.5 percent of GDP (Figure 1.6). However, the tax expenditures as a share of total tax revenues is relatively high at 26.6 percent. After the income tax reform in 2014, the overall level of tax expenditures fell, particularly for corporations, but increased slightly in 2017 and 2018. This change is largely related to the implementation of the energy reform package which provided a fiscal stimulus during the transition to market-based fuel rates. Almost 45 percent of all tax expenditures, corresponding roughly to 1.5 percent of GDP (Figure 1.7), relate to VAT, the largest of which are revenue losses due to reduced rates. A similar share relates to corporate and personal income taxation, including employment subsidies and exemptions of personal income tax.

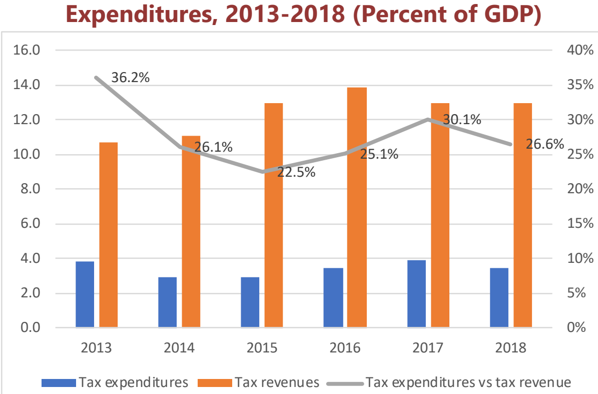
Figure 1.5. Revenue Loss from Tax Expenditures in Selected Countries (Percent of GDP)



Source: IMF Staff Estimates (IMF Fiscal Monitor, April 2011, for other countries.; UK Fiscal Transparency Evaluation 2016 for UK).
Note: Estimates are for 2010, except for Guatemala (2009) and UK (FY 14/15)

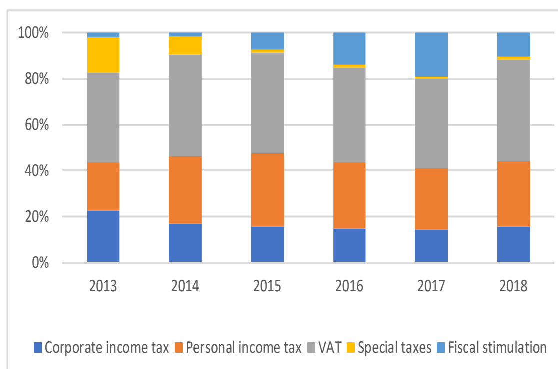
Tax expenditures

Figure 1.6. Mexico: Level of Tax Revenues and Tax Expenditures, 2013-2018 (Percent of GDP)



Source: Annual report on tax expenditures and Public Account (SHCP website)

Figure 1.7. Mexico: Tax Expenditures, 2013-2018



22. In Mexico, the discussion of tax expenditures and the annual budget takes place at different times. Tax expenditures can be a substitute for or complement direct spending programs. Therefore, ideally, they should be discussed alongside proposals for new spending to allow proper prioritization and allocation of public resources. Although in Mexico, the budget proposal is submitted later than the report on tax expenditures[32] and should include a chapter on tax expenditures, in practice the link between these two documents and the decision making on alternative options is weak. The annual revenue law contains only a summary of tax expenditures without a table describing the main tax expenditures and related revenue losses. Providing full information on all tax expenditures in the budget documents would show which groups and sectors currently benefit from exemptions, and the extent of overall revenue loss. As a result, it would improve the transparency of policy-making.

1.2. Frequency and Timeliness

1.2.1.	Frequency of In-Year Reports	Advanced

23. SHCP publishes fiscal reports on a monthly basis with a 30-day lag and the quarterly fiscal report is available within a month from the end of the quarter. The monthly fiscal bulletin and the monthly fiscal report containing the cash-based fiscal statistics (traditional balance, RFPS, financing and debt position) are disseminated on a monthly basis and within 30 days of the end of each month. The monthly report on grants to subnational governments is published with a 15-day lag. Finally, the quarterly fiscal report is sent to Congress and published in the SHCP's website 30 days after the end of the reference quarter. The above-mentioned monthly and quarterly frequencies for the disclosure of fiscal data, as well as the content the reports, are established in detail by the LFPRH (article 107) and the SHCP has regularly complied with these legal provisions.

1.2.2.	Timeliness of Annual Financial Statements	Advanced

24. The Constitution (article 74) mandates the publication of final accounts (*Cuenta Pública*) by end-April and audited statements by end-October. The SHCP has consistently met the dates and AFS has produced its auditing report to the chamber of deputies with the legal 8 months after the year end. The constitution allows for an extension in the dates on a maximum of 30 additional days on both deadlines. The statements submitted to congress by end-April are final. SHCP publishes the financial statements on its website upon submission to the legislative.

1.3. Quality

1.3.1.	Classification	Not met

[32] The report on tax expenditures budget needs to be presented to the Congress no later than June 30, and the budget proposal no later than September 8.

25. The fiscal reports in Mexico include information classified by administrative, economic, functional, and program categories. The administrative classification is based on the existing structure of the budgetary units. The economic classification is broadly aligned with *GFSM 1986* and is quite detailed. The functional classification used in the budget and SHCP's quarterly reports largely follows the United Nations' Classification of Functions of Government (COFOG), but has been adjusted to match the structure of sectors in Mexico[33]. As defined in the FRBL, a key element of the budget is its programmatic structure, which is submitted to the Chamber of Deputies by June 30 of each year. The classification and reporting structure is harmonized across budget and accounting systems, and is shared by the federal, state, and local levels of government.

26. The economic and functional classifications have yet to comply with international standards, and the government is preparing changes to the classification of fiscal statistics to achieve this. The SHCP publishes more detailed statistical tables by economic classification on its website. However, these tables do not contain all information necessary to produce *GFSM* 2014-compliant fiscal statistics. Importantly, the SHCP has developed bridging tables to produce reports by economic classification consistent with the GFSM standards. These tables were submitted to the IMF in the beginning of 2018, but at the time of the mission, had not been published by the government. Publication of this additional information would improve the rating of this indicator.[34]

1.3.2.	Internal Consistency	Good

27. Fiscal reports include two out of the three reconciliations prescribed by the FT code. The annex on public debt of the quarterly fiscal report present extensive information on debt issuance, redemption, and opening and closing position, by debt instruments, counterpart residency, currency, and maturity. The reconciliation between the financing and change in debt position is not explicitly presented, but can be easily derived from the additional tables on the change in net debt.

28. The financing data presented in the traditional balance table is not comparable with financing figures shown in the table of reconciliation between financing and the change in net debt, due to the valuation method applied to debt securities (face value). This happens because in all debt tables, gross debt, net debt, change in net debt, the stock of T-bonds are registered at face value, as well as the flows of issuance of such securities. The only exceptions are the *Certificados de Tesorería* – Cetes and the *Udibonos Segregados*, which represented only 13 percent of the debt stock in treasury securities by the end of 2016. Therefore, the consistency between the cash fiscal balance (traditional) and the stock of net debt is not guaranteed. This issue should be addressed by

[33] However, it has some line items in the quarterly reports, e.g. Stabilization Fund, that would be difficult to allocate to the sectors without a special knowledge of the transactions. Functional classification in the Public Account is more aggregate and slightly different than in the budget and quarterly reports and does not allow comparison by functions with the budget or quarterly reports.

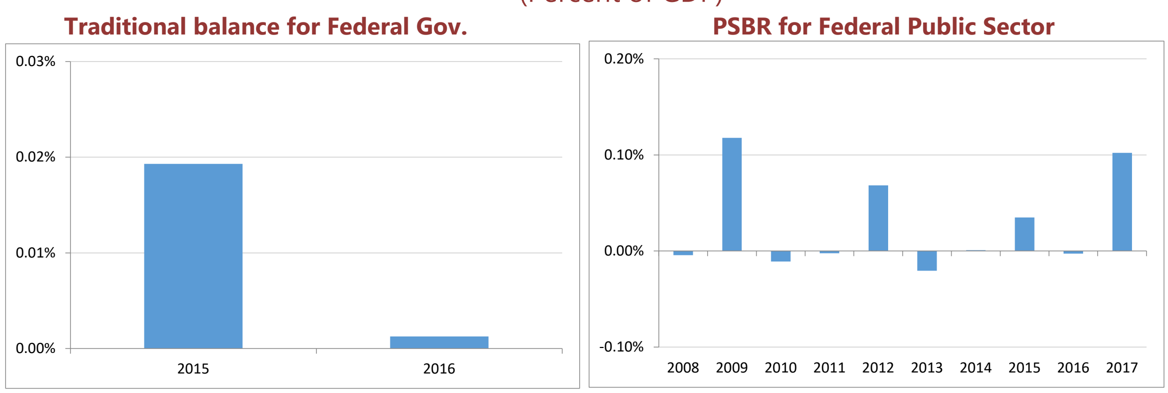
[34] If the SHCP would publish these tables on its website, the rating for this Principle would increase to Basic. Furthermore, if a bridging table to produce COFOG-compliant data were developed and published, the rating would move to Advanced.

changing the valuation method of T-bonds to nominal value in order to ensure that the fiscal balance performance indicator allows for a proper assessment of the debt dynamics.

29. The reconciliation between fiscal balance and financing is not provided and cannot be easily derived. Although this reconciliation is key to ensure consistency of fiscal data, fiscal reports do not assess the discrepancies between above and below-the-line calculations of fiscal balance. The monthly fiscal bulletin presents no discrepancy between the traditional balance and the financing for the social security funds (IMSS and ISSSTE) and the two "productive" public corporations (PEMEX and CFE), which is quite unusual. The financing (below-the-line) for the federal government is published in supplementary tables available online, but without any reconciliation with the above-the-line statistics presented in the reports. Comparing the two figures, one also finds an unusual zero discrepancy.[35]

30. However, discrepancies have been contained on both fiscal balance indicators, traditional and PSBR. Discrepancy between above-the-line and below-the-line deficit for the federal government (traditional balance) marked 0.02 percent of GDP in 2015 and was technically zero in 2016. Such figures were provided by the authorities since the information available online shows no difference between fiscal balance and financing (see paragraph below). Taking the wider PSBR indicator for the federal public sector, the average discrepancy was 0.27 percent of GDP over the period 2008-2017, surpassing the threshold of 0.1 percent of GDP in 2009 and 2017 (Figure 1.8). The discrepancy series for the PSBR is available on SHCP's website in the *Estadísticas Oportunas* database.

Figure 1.8. Mexico: Statistical Discrepancy between Fiscal Balance and Financing
(Percent of GDP)



Sources: Fiscal Reports and additional information provided by authorities.

1.3.3.	**Historical Revisions**	**Not Met**

[35] Any discrepancy is presented as an adjustment to the above-the-line balance in order to offset any potential difference between fiscal balance and financing.

31. Revisions to data on fiscal aggregates are not disclosed in fiscal reports, although ex-post revisions appear not to be significant. Fiscal statistics are initially released as provisional and become final upon the publication on the audited financial statements (18 months later). Over this period, revisions to provisional statistics can be performed based on updated source data, but the public is not informed of these changes. Final outcomes appear as new figures in future fiscal reports, without any comparison, explanation or bridging tables reconciling the different vintages. The online SHCP's database is updated retroactively whenever there is a change to sources and methods, in order to revise historical data. Over the last few years, annual revisions to the fiscal balance were less than 0.1 percent of GDP.

32. SHCP assesses the magnitude of historical revisions to fiscal statistics on a regular basis, but only for internal use. The General Directorate of Statistics produces analyses on the magnitude, characteristics and technical reasons of changes in source data that give rise to revisions on fiscal aggregates. Such investigations are used to improve compilation practices and quality of fiscal statistics, but are not made public. Making these studies public and introducing a short section on historical revisions in the quarterly fiscal reports would represent initial steps towards improved practice.

1.4. Integrity

1.4.1.	Statistical Integrity	Good

33. Fiscal statistics are produced and disseminated by the SHCP in line with the IMF's Special Data Dissemination Standard (SDDS) practices. Mexico subscribed to the SDDS in 1996 and, met all SDDS requirements in 2000, and has been complying with dissemination policies since the time of subscription. The fiscal data disseminated under SDDS framework is the same set of information compiled and published by SHCP on the regular fiscal reports, on monthly and quarterly basis.

34. SHCP has the legal mandate to produce and disseminate fiscal statistics. Such mandate was granted by articles 106 to 109 of the LFPRH, that define the scope of fiscal information to be submitted to Congress and disclosed to public. The SHCP's General Directorate of Statistics consolidates data provided by various data-producing units (debt, revenue, budget, etc.) and composes the fiscal statistics and reports. This is an important institutional arrangement to prevent multiplicity of agencies disseminating fiscal data.

35. SHCP submitted fiscal data to the IMF's GFS Yearbook using the GFSM 2014 reporting format for the first time in the beginning of 2018, but with no major methodological changes. Although using the same original cash-based data, SHCP conducted a valuable effort in classifying the institutional units into the GFSM defined sectors and subsectors. The exercise also included subnational finances in the compilation process in order to produce statistics for the consolidated general government. This initiative is a welcome preliminary step in migrating to more advanced statistics standards. Mexico should set up a migration plan to gradually adopt the GFSM 2014 and

IPSAS (including accrual accounting practices) to allow for more comprehensive fiscal analysis and evaluation of fiscal policies.

1.4.2.	External Audit	Basic

36. ***Auditoria Superior de la Federación* – ASF – is the supreme audit institution in charge of auditing the federal government's financial statements.** Its mandate is regulated by articles 74 and 79 of the constitution, which ensures its technical and managerial independence from the government. The Auditor General is appointed by the legislative branch. ASF undertakes financial audits of fiscal statements in accordance with the International Standards of Supreme Audit Institutions (ISSAI) and reports the audit results to a surveillance commission of the chamber of deputies.

37. **ASF has traditionally conducted operational and financial auditing at an individual basis in every public entity.** It has a mandate to conduct individual auditing process in almost all kinds of public entities, including central government units, parastatals, and funds. More recently ASF started auditing subnational governments and its corresponding public bodies. Financial auditing of the *Cuenta Pública*, as a whole, started in 2012. However, its enforcement power and prerogatives to apply sanctions on noncompliance could be strengthened, since several disclaimers and adverse opinions over the last years have not produced strong improvements in the accounts to date.

38. **ASF has been conducting financial audits on annual accounts since 2012, issuing 4 disclaimers and 1 adverse (2013) opinion in the period 2012-2016.** Their findings reveal a number of concerns such as : (i) there are limited accounting records for non-financial assets and corresponding depreciation, PPP arrangements, and contingent liabilities; (ii) the information presented in the financial statements is not fully harmonized among public entities, which reveal inconsistencies on debtor-creditor records, and non-compliance with reporting requirements by several entities providing financial information; (iii) other obligations such as PPP-related liabilities are not disclosed; and (iv) pension liabilities are not registered. There are limited findings related to financial auditing to subnational governments since the ASF was granted powers to audit them only in 2017. Nevertheless, ASF has raised concerns on the reliability of fiscal data reported by states and municipalities given that initial audits suggested that half of the 32 Mexican states were registering fiscal deficits while the publicly available information on INEGI's data set shows a few states on fiscal deficit in the 2016 fiscal year. Furthermore, the ASF has issued a number of recommendations to strengthen the measurement of the fiscal position, the fiscal revenues and expenditures, the public sector financing, the public spending and the public debt at subnational level.

1.4.3.	Comparability of Fiscal Data	Good

39. **Fiscal statistics and forecasts adopt the budget structure in terms of the coverage and economic classification.** The main data source used to prepare fiscal reports in Mexico is the budget execution data. Therefore, the fiscal tables are presented on the same basis as the budget,

with the same economic and administrative classifications. The economic classification of expenditure is based on a two-tier codification system, expenditure type (*clasificador por tipo de gasto*) and expenditure object (*clasificador por objeto de gasto*); the former distinguishes between current and capital expenditure, as well as programmable and non-programmable, while the latter classifies the expenditure by nine economic categories[36] (payroll, transfers, general services, etc.). Fiscal forecasts are also presented on the same basis as the budget.

40. Final accounts have a different classification framework, and there is no reconciliation of main aggregates. The financial statements are distinct in coverage, basis of recording, and classification of revenues and expenses. Therefore, accounting and budget execution figures differ, but there is inadequate information on how to reconcile those numbers on the notes to the statements or the budget outturn documents.

41. The publication of fiscal data in line with the GSFM 2014 presentation should be accompanied by bridging tables to allow for reconciliation with the budget and traditional fiscal statistics. SHCP have prepared bridging tables to map the traditional fiscal data to the GFSM 2014 economic categories and submitted the converted data to the IMF's statistics department in the beginning of 2018. In case this data is published, it should be accompanied by the corresponding bridging tables in order to ensure reconciliation of the new set of statistics with the previous one. This would require an eventual reassessment of this rating.[37]

1.5. Conclusions and Recommendations

42. Mexico's fiscal reporting practices meet good or advanced standards in several areas, providing plenty of fiscal and accounting data on a timely manner. Fiscal statistics are disseminated on a monthly basis and final financial statements are released four months after the end of the referenced fiscal year. Few countries in the Region have achieved such an advanced level in terms of frequency, regularity and timeliness of fiscal reporting. The SHCP's General Directorate of Statistics plays a key role in consolidating information from various data-producing units to compile final statistics for dissemination. Fiscal statistics are comparable with fiscal forecasts and budget plans since they are built on the budget execution data. Moreover, Mexico is a SDDS compliant since 2000. Finally, tax expenditures are fully disclosed on an annual basis, broadening the analytical scope of fiscal indicators.

43. In other areas, however, practices could be improved, in particular, on coverage of the institutions, stocks and flows. A major gap is the subnational sector, not covered by any fiscal report, even though states and municipalities represent 35 percent of the total public sector spending (net of transfers). Furthermore, relevant assets and liabilities and transactions (flows) are

[36] The 9 economic categories are: payroll, goods and services, general services, transfers and subsidies, fixed assets and intangibles, public investment, financial investment, grants, public debt.

[37] If the bridging tables are not published together with the statistics, the rating would move to Basic, since there would be a new set of statistics that are not reconciled with the budget outturn.

omitted or misreported in the financial statements and fiscal statistics. Finally, financial statements are not consolidated, which undermines the usefulness of the statements for a comprehensive analyses of the public sector financial position.

44. The lack of compliance with international standards on economic and functional classification of revenues and expenditures is another weakness that can be addressed soon. Publishing bridging tables developed by the SHCP to produce reports by economic classification consistent with the GFSM standards would improve the fiscal information to make more transparent the use of public resources and to facilitate international comparisons. Producing fiscal data on COFOG functional classification is also desirable to strengthen fiscal analysis.

45. Based on the above assessment, the FTE highlights the following priorities for improving the transparency of fiscal reporting:

- **Recommendation 1.1: Consolidate the general government and the public sector in the fiscal reports in accordance with international standards.** Expanding the coverage and improving consolidation practices will allow for a broader view of public finances, enhancing the usefulness of the reports for fiscal analysis and policy decision-making.
  - *Priority should be given to introduce fiscal data of subnational governments in the Quarterly Fiscal Report* (initially on annual basis in the end-year report) and consolidate these entities in the PSBR and HBPSBR fiscal indicators. States and municipalities are responsible for the final allocation of around 40 percent of the federal budget expenditures and having their budget execution disclosed in the reports will be a major improvement in fiscal reporting practices. In order to achieve this, SHCP should develop a web-based software system[38] for submission of fiscal data by states and municipalities. Once such a system becomes operational, fiscal statistics for the consolidated general government and public sector can be disseminated on a quarterly basis[39].
  - *Implement consolidations practices in Cuenta Pública.* As a first step, volumes (Tomos) II, VII and VIII should be consolidated in a new volume to present statements for the consolidated federal public sector. Further, SHCP should gradually include the accounts of states, municipalities and the Banxico in order to consolidate the entire public sector[40]. This would

[38] In the region, Colombia and Brazil have valuable experiences on setting up online platforms for transmission of fiscal data.

Colombia: information about the *Consolidador de Hacienda e Información Pública – CHIP* can be found at www.chip.gov.co

Brazil: information about the *Sistema de Informações Contábeis e Fiscais do Setor Público Brasileiro – SICONFI* can be found at www.siconfi.tesouro.gov.br

[39] G-20 Recommendation II.15 under the Data Gaps Initiative-Phase 2 (DGI-2) established the commitment to disseminate General Government data on a quarterly basis by the year 2021.

[40] In the region, Peru and Colombia have valuable experiences on producing comprehensive consolidated financial statements.

improve the usefulness of the statements for overseeing the evolution of the overall financial position,[41] including asset/liability management and mitigation of fiscal risks.

- **Recommendation 1.2: Improve the coverage of stocks and flows in fiscal reports, by including missing assets, liabilities and fiscal flows which will allow the reports to provide an accurate view of Mexico's financial position.**
  - *The Cuenta Pública should*: (i) include the main missing assets and liabilities highlighted in this report such as the FMP, oil reserves at present value, the employment-related pension liabilities (IMSS-patrón, ISSSTE, ISSFAM, PEMEX, CFE, courts and development banks), PPP liabilities, and assets and liabilities at the subnational level (including pension liabilities); (ii) improve the valuation of fixed assets, in particular highways infrastructure, and account the long term T-bonds (Bondes "D", Bonos de Desarrollo, Udibonos, Udibonos Segregados) at nominal value; and (iii) record flows of net accrual of employment–related pension liabilities, accrual of interest on discounted long term T-bonds and accrued expenses under PPP arrangements.
  - *The Quarterly Fiscal Report should*: (i) include the stock of T-bonds issued to Banxico in debt statistics (gross debt, net debt, HBPSBR and PFN); (ii) apply nominal value as valuation method of T-bonds; (iii) correct the asymmetric treatment of FEIP's oil hedging program transactions and adjust the PSBR calculation; (iv) include the accrual of interest on discounted T-bonds; (v) include expenditures and debt position of the subnational governments (at least on annual basis – end year report).[42]
- **Recommendation 1.3: Start publishing fiscal statistics by economic and functional classifications compliant with international standards.**
  - As a first step, the SHCP should include more detailed statistical tables for reporting on the PSBR aligned with the GFSM 2014 economic classification in the budget documents and quarterly fiscal report. While such tables are available on the SHCP's website, these are not published in any regular reports. The GFSM 2014 compliant reporting would allow a better fiscal analysis and monitoring of the PSBR, including timely revisions to budget activities during execution. Furthermore, publishing detailed fiscal statistics by economic classification fully aligned with the GFSM2014, that the SHCP has already prepared via bridging tables for the IMF, would enhance the understanding of underlying pressures on the budget, and strengthen the usefulness and credibility of fiscal reports.

Peru: *Cuenta General de la República*. https://www.mef.gob.pe/es/cuenta-general-de-la-republica

Colombia: *Situación financiera y de resultados Sector público.* http://www.contaduria.gov.co

[41] In case there are legal restrictions preventing the inclusion of subnational governments in *Cuenta Pública*, an alternative set of Annual Financial Statements, covering the entire public sector, should be published for fiscal analyses. For example, Brazil adopts this approach.

[42] Some of these actions may also require changes in the existing information systems.

- In the medium term, the SHCP could consider developing a bridging table to produce COFOG-compliant reports and publishing these reports. This would further improve the disclosure of the data and provide useful perspectives for more comprehensive analysis and decision-making.

- **Other recommendation:** Continue with the process of the gradual implementation[43] of IPSAS in Mexico to improve accounting practices.

Table 1.5 summarizes the assessment against the principles of the Code.

[43] The decision to implement IPSAS in the country needs to be approved by CONAC.

Table 1.5. Mexico: Summary Assessment of Fiscal Reporting Practices

	Principle	Assessment	Issue and Importance	Rec
1.1.1	**Coverage of Institutions**	**Basic:** Fiscal statistics consolidate central govt. entities and pub. corp., and the Financial Statements cover, but don´t consolidate them. Subnational govts are not covered by any fiscal report.	**High:** Sub-nationals are not included in statements and other fiscal reports. Total expenditure at subnational level amounted for around 11% of GDP in 2016 (35% of the total public sector).	1.1
1.1.2	**Coverage of Stocks**	**Basic:** Fiscal reports cover cash and debt positions; the information provided on other financial assets and liabilities is not comprehensive.	High: Missing items negatively impact the net worth by around 23% of GDP: • oil reserves: 11% of GDP; • pension liabilities: 38% of GDP; • assets of subnational govt: 7.8% • liabilities of subnational govt: 3.6% • PPP liabilities: 0.2% of GDP	1.2
1.1.3	**Coverage of Flows**	**Basic:** Fiscal reports are prepared on a cash basis. Traditional balance and PSBR, the two main fiscal indicators used for policy decisions, are compiled on a cash basis. Fin. statements have some accrual data, but significant accrued flows are omitted, and accounting practices are not aligned to IPSAS.	**High:** Non-reported cash and accrued expenditures deteriorates fiscal balance by 3.5% of GDP: • ROBM and FEIP oil hedging program transactions: 1.3% of GDP • net accrual of employment–related pension liabilities: 2.3% of GDP • accumulation of arrears: 0.02% • accrual of PPP liabilities: 0	1.2
1.1.4	**Coverage of Tax Expenditures**	**Good:** A report on tax expenditures is published annually and includes information by tax and function.	**Low:** The overall level of tax expenditures is at a low level of 3.5% of GDP in 2018.	
1.2.1	**Frequency of in-year Fiscal Reporting**	**Advanced:** In-year fiscal reports are published on a monthly basis, within a month.	**Low:** monthly fiscal reports cover central government entities and public corporations.	
1.2.2	**Timeliness of Annual Financial Statements**	**Advanced:** As mandated by the Constitution, the final accounts are published by end-April and audited statements by end-October.	**Low:** The final approval of the accounts is under the responsibility of the Chamber of Deputies with ASF's support.	
1.3.1	**Classification**	**Not met:** Economic classification in fiscal reports is not GFSM 2014 compliant.	**Medium:** Lack of GFSM 2014 compliant data limits the fiscal analysis and evaluation of fiscal policies.	1.3
1.3.2	**Internal Consistency**	**Good**: Fiscal reports include two out of three reconciliations prescribed by the FT code.	**Medium:** Reconciliation between fiscal balance and financing is not provided and cannot be easily derived.	
1.3.3	**Historical Revisions**	**Not met**: Revisions to fiscal aggregates are not reported.	**Low:** Ex-post revisions have been immaterial.	
1.4.1	**Statistical Integrity**	**Good:** Mexico is SDDS-compliant. Fiscal statistics are disseminated by SHCP.	**Medium:** Fiscal statistics should migrate to GFSM 2014 standards.	
1.4.2	**External Audit**	**Basic:** ASF has conducted financial audits on annual accounts since 2012, issuing 4 disclaimers and 1 adverse (2013) opinion in the period 2012-2016.	**High:** ASF audit findings have been significant. The General Auditor has not been appointed and a mandate to audit subnat. gov. was granted only in 2017.	1.2
1.4.3	**Comparability of Fiscal Data**	**Good:** budget outturns and fiscal statistics are prepared on the same basis as the fiscal forecast/budget. Reconciliation with final accounts is not provided.	**Medium:** Fiscal reports, where not prepared on a comparable basis, should present a reconciliation of key aggregates.	

II. FISCAL FORECASTING AND BUDGETING

Fiscal forecasts and budgets should provide a clear statement of the government's budgetary objectives and policy intentions, and comprehensive, timely, and credible prosecutions of the evolution of public finances.

46. **This chapter assesses the quality of Mexico's fiscal forecasting and budgeting practices against the standards set by the Fiscal Transparency Code.** It considers four key dimensions of fiscal forecasting and budgeting based on publicly available information:

- The comprehensiveness of the budget and associated documentation;
- The orderliness and timeliness of the budget process;
- Policy orientation; and
- The credibility of the fiscal forecasts and budget proposals.

47. **A summary of the main laws, fiscal and budget documents reviewed during the mission is presented in Table 2.0.**

Table 2.0. Mexico: Fiscal Forecasting and Budget Documents

Legislation		
The Constitution (*Constitucion Politica de los Estados Unidos Mexicanos*)		1917, revised 2017
Budget and Fiscal Responsibility Law (*Ley Federal de Presupuesto y Responsabilidad Hacendaria*)		2006, revised 2015
Law on Acquisitions, Leases, and Services of the Public Sector *(Ley de Adquisiciones, Arrendamientos y Servicios del sector Publico)*		2009
Law on Public Debt Management (*Ley Federal de Deuda Publica*)		1976, revised 2016
General Accounting Law (*Ley General de Contabilidad Gubernamental*)		2008, revised 2016
Federal Law of Transparency and Access to Information (*Ley Federal de Transparencia y Acceso a la Información*)		2016
General Law on Transparency and Access to Public Information (*Ley General de Transparencia y Acceso a Información Pública*)		2015
Budget Documentation		
Document	**Description**	**Timeframe**
National Development Plan (*Plan Nacional de Desarollo*)	Provides a comprehensive overview of the government's broad policy goals at federal, regional and sectoral level, and specific objectives and targets for the country's medium-term economic and social development.	2013-2018
Pre-Criteria report (*Pre-Criterios*)	Provides an overview of the main macroeconomic and fiscal parameters for the previous, current and next fiscal year.	April
General Economic Policy Criteria report (*Criterios Generales de Política Económica*)	Updates macroeconomic and fiscal forecasts; sets out broad fiscal objectives, and presents aggregate revenue and expenditures estimates for the next fiscal year, plus five outer years.	September
Budget Proposal (*Paquete Económico y Presupuesto*)	Detailed revenue and expenditure estimates by economic, administrative and functional classification, as	September

	well as a by programs, including performance targets, for the next fiscal year.	
Approved Budget (*Ley de Ingresos de la Federación; Presupuesto de Egresos de la Federación*)	Contains two laws: (i) estimates of revenue for the upcoming fiscal year; and (ii) expenditure appropriations for the same year.	November
Citizen's Guide (*Presupuesto de Egresos de la Federacion: Guia Rapida*)	Separate issues of the *Citizen's Guide* cover the Federal Budget Proposal, the Approved Budget, the Annual Financial Statements and, from 2018, the SHCP's quarterly reports.	At the time of submission or approval of budget documents
Quarterly Reports (*Informe Trimestrales*)	Provides an overview of economic developments, the achievement of fiscal targets, and information on budget execution, including revisions to the approved budget and performance data.	Quarterly
Annual Financial Statements *(Cuenta Publica*)	Report submitted to the Chamber of Deputies for review containing the annual accounts of the federal government, and other explanatory information.	Annual

2.1. Comprehensiveness

2.1.1.	**Budget Unity**	**Basic**

48. The coverage and structure of the federal budget is much broader and more complex than in many other countries, but not all extra-budgetary units are included in the budget documentation. In addition to ministries and other spending entities ("budgetary central government"), the budget includes two large state public corporations (PEMEX and CFE), and two social security funds. Except for PEMEX, whose transactions with the budget are shown on a net basis, flows within the federal budget are recorded on a gross basis. There are 119 extra-budgetary units[44] (EBUs) which are outside the perimeter of the budget, but information on the revenues, spending and financing of each unit is included in the budget documents. Some of these entities have a commercial orientation and should be properly classified as public corporations (see Section 3.3.2). The revenues and expenditure of these entities represent around 6 percent of the federal budget (Table 2.1). In addition, more than 246 federal trust funds[45] make transactions largely outside the budget. The net worth of these entities (including those belonging to sub-national governments) is estimated at about 2.7 percent of GDP (see Section 3.2.2). Information on transfers from the budget relating to trust funds, expenditure by them, and their balances of available funds is

[44] These EBUs include a diverse range of functions such as research institutes, colleges and training institutions, museums, cultural institutes, forestry and environmental protection agencies, laboratories, hospitals and health clinics, radio and TV stations, the telecommunications regulator, the national lottery, and postal services.

[45] Some of these trust funds have an "organic" structure, with a staff and administrative budget; others are "non-organic" funds which comprise essentially a set of accounts within a government ministry or entity which processes transactions but has no separate corporate identity.

published in the SHCP's quarterly reports. The main area of improvement would be to publish additional information on the execution of their budgets.[46]

Table 2.1. Spending and Own-Revenues of Extra-Budgetary Units (percent)

Number of EBUs = 119	2015	2016
Spending by EBUs as a ratio of total Federal Budget expenditure	5.8	6.2
Own-revenues of EBUs as a ratio of total Federal Budget revenues	1.8	1.7
Budget transfers to EBUs as a ratio of EBUs' total revenues	67.0	66.2

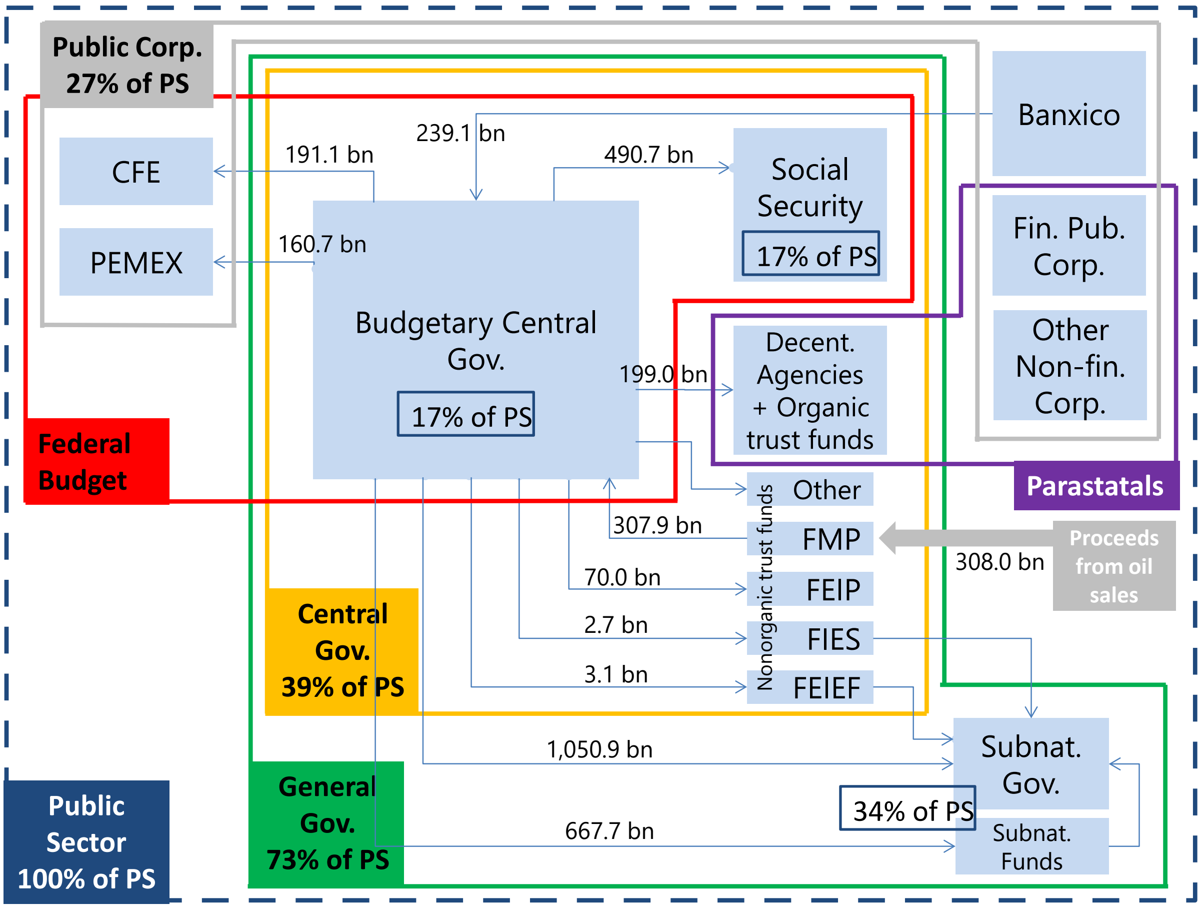
Source: SHCP, and FAD staff.

49. Figure 2.1 illustrates the more relevant flows between the federal budget and other public-sector entities in 2016. Transfers to subnational governments amounted to MXN 1,724 billion, mainly driven by revenue earmarking mechanisms. The two major social security institutions/funds, IMSS and ISSSTE, received MXN 491 billion to finance ordinary pension payments, while PEMEX and CFE received transfers of MXN 184 billion and MXN 161 billion respectively as a once-for-all compensation for the pension reform implemented in 2015. In addition, the CFE was paid MXN 30 billion in subsidies for electricity prices. Decentralized agencies (extra-budgetary entities, commissions, and hospitals, among others) received MNX 199 billion to finance their operations beyond the level of their own revenue. The more complex part of the system stands for the FMP stabilization mechanism (see Section 4.4). In 2016, FMP collected MNX 380 billion from the oil sector and transferred it to the budget, which allocated the resources accordingly. Another part was redirected to states and municipalities through the FEIP and FEIEF trust funds.

[46] Information on project-based expenditures (including some contracts) is already published on the fiscal transparency portal.

Figure 2.1. Relationship Between the Budget and the Wider Public Sector, 2016

(MXN billion)



Sources: SHCP, Quarterly Reports, *Cuenta Pública* 2016, and FAD staff estimates.

Note: Banxico: Banco de Mexico (Central Bank); FMP: Fondo Mexicano de Petroleo (Mexican Petroleum Fund); FEIP: Fondo de Estabilización de Ingresos Presupuestarios (Budget Revenue Stabilization Fund); FEIEF: Fondo de Estabilización de Ingresos de Entidades Federativas (Subnational Revenue Stabilization Fund); FIES: Fondo para el Fomento de la Investigación Económica y Social (Fund for Economic and Social Research).

2.1.2	Macroeconomic forecasts	Good

50. The SCHP prepares forecasts of the main macroeconomic variables and their underlying assumptions. It publishes two reports that cover macroeconomic forecasts—a "Pre-Criteria" report (in April) and a General Economic Policy Criteria (GEPC) report (in September).

- *The "Pre-Criteria" report covers the previous, current and next fiscal year, but includes no medium-term projections.* It provides an overview of the external environment and describes the broad assumptions made in preparing forecasts of the key macroeconomic variables such as GDP, inflation, the oil price, interest rates, and the current account. There is a discussion of the underlying drivers of each of the components of GDP, fiscal and monetary policy developments, and government financing needs. The report also includes projections of the key fiscal variables—revenues, expenditures, planned borrowing and debt. It is submitted to the Congress by April 1.

- *The General Economic Policy Criteria (GEPC) report provides a medium-term forecast of key macroeconomic variables, as well as a wider review of economic and fiscal developments.* The report is part of the package of budget documents presented to the Congress by September 8. It provides updated projections for the current and next fiscal year as well as forecasts for the following five years. The explanations accompanying the medium-term forecasts and their key drivers, are considerably less detailed than the forecasts for the next fiscal year. The medium-term macroeconomic forecasts would be improved by including, for example, a more complete analysis of the main components of GDP (agriculture, industry, services, etc.), and their contribution to GDP growth, and more detailed projections of expenditure and revenue components.

51. The accuracy of macroeconomic forecasts in Mexico could be improved. When actual and projected data are compared (Figure 2.2), nominal GDP forecast is relatively accurate, except for a few outlier years. However, projections of real GDP growth and inflation show significant deviations from the outturns (Table 2.2 and Figure 2.3).[47] Over the last 7 years the average absolute deviation in the real GDP forecast one year ahead has been 1.2 percentage points of GDP, ranging from underestimation of 2.1 percentage points in 2010 to an overestimation of the same magnitude in 2013. Since the economic downturn in 2013, successive forecasts have predicted a recovery in real GDP growth rates that did not materialize. As for inflation, during 2010-2017, except 2015, the forecast has always been lower than actual, with an average absolute deviation of 0.8 percentage points (Figure 2.4)[48]. The credibility of forecasts could be enhanced by taking more account of independent forecasts (see Section 2.4.1) and by analyzing forecast deviations and preparing reconciliation tables (see Section 2.4.3).

Table 2.2. Mexico: Macroeconomic Assumptions: Differences Between Budget Forecasts and Outturns, 2010–2016

	2010	2011	2012	2013	2014	2015	2016	Average	Average of absolute values
Real GDP growth (in percent of GDP)	-2.1	-0.2	-0.5	2.1	1.2	1.1	1.0	0.4	1.2
Inflation (in absolute terms)	-1.2	-0.8	-0.6	-1.0	-1.1	0.9	-0.4	-0.6	0.8

Source: SHCP.

[47] The SHCP noted that the variability of macroeconomic forecasts in recent years has been mainly due to external shocks, such as the deceleration of US industrial production in 2015-2016, or changes in world oil prices.

[48] The inflation forecasts used by the SHCP are prepared by the Bank of Mexico.

Forecast Accuracy

Figure 2.2. Forecasts and Observed Nominal GDP (Percent of GDP)

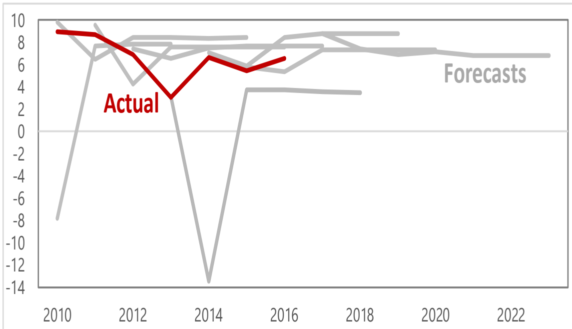


Figure 2.3. Forecast and Observed Real GDP Growth (Percent of GDP)

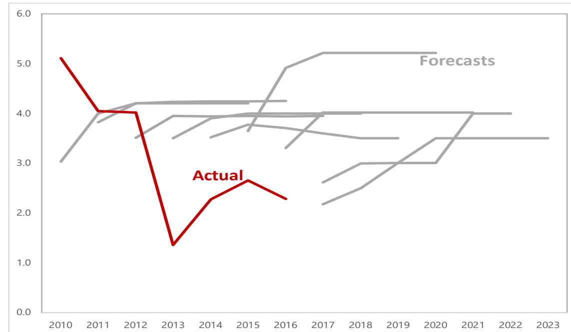
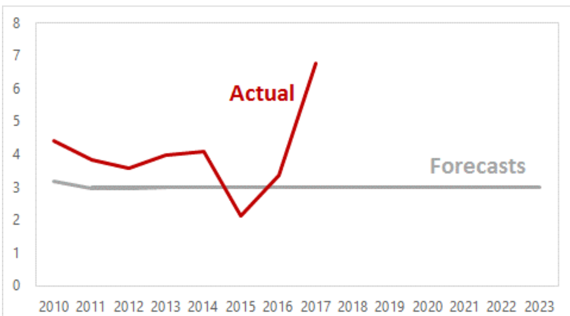


Figure 2.4. Forecast and Observed Inflation (Percent)



Source: SHCP

Note: These charts present an overview of different vintages of forecasts compared to actual outturns.

2.1.3.	Medium-Term Budget Framework (MTBF)	Basic

52. Mexico prepares and publishes a medium-term fiscal framework (MTFF) but the development of a medium-term budget framework (MTBF) is rudimentary. An MTBF provides a bridge between a country's fiscal strategy (MTFF) and the budget, a process for setting expenditure ceilings at the ministerial and program level for coming fiscal year and three or four additional years, and for making reliable forward projections of spending (see Box 2.1). One of the documents presented with the budget is the *General Economic Policy Criteria for the Annual Revenue Law and the Expenditure Budget Law (GEPC).*[49] This report includes projections of key macro-economic and fiscal variables for the upcoming budget year (2018 in the most recent case) and over the medium

[49] The recent version of the GEPC report was published in September 2017 coinciding with the submission of the executive's revenue and expenditure budgets to the Congress. The SHCP's *Pre-Criteria* report, published in April each year, includes macroeconomic and fiscal projections, but only for the past year and the coming budget year.

term (2019-2023).[50] Additionally, it includes a table showing medium-term projections of expenditure by economic category, but at a highly aggregated level. However, the report includes only limited data on the outturns of key macroeconomic and fiscal indicators for the two preceding fiscal years. A comparison of successive vintages of the projections published in the GEPC shows that in many years there have been substantial variations between the forecasts of aggregate revenue and expenditure and the outturns (Figures 2.5. and 2.6.).

Box 2.1. Definition of MTFFs and MTBFs

A **medium-term fiscal framework (MTFF)** encompasses the top-down specification of the aggregate resource envelope and the allocation of resources across spending agencies. It typically shows projections of the main fiscal aggregates—revenue, expenditure, the deficit, and public debt—over a period of 3-5 years.

A **medium-term budget framework (MTBF)** refers to a set of institutional arrangements for prioritizing, presenting, and managing revenue and expenditure over several years. It is usually presented in the same format, classification and level of detail as the annual budget. Binding or indicative ceiling on expenditure are included for all years of the MTBF. In most countries, however, spending appropriations are only made on an annual basis, through the budget law.

A third concept, used in some countries, is a **medium-term performance framework (MTPF)** which is an expanded form of MTBF in which performance information, indicators. and targets are also included.

Revenue and Expenditure Forecasts

Figure 2.5. Forecasts and Observed Revenues (% of GDP)

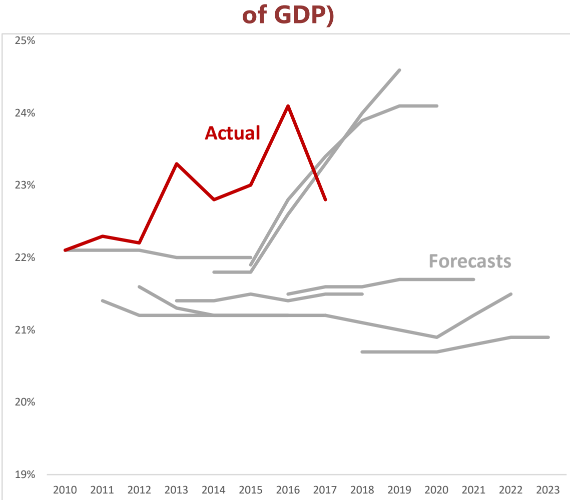
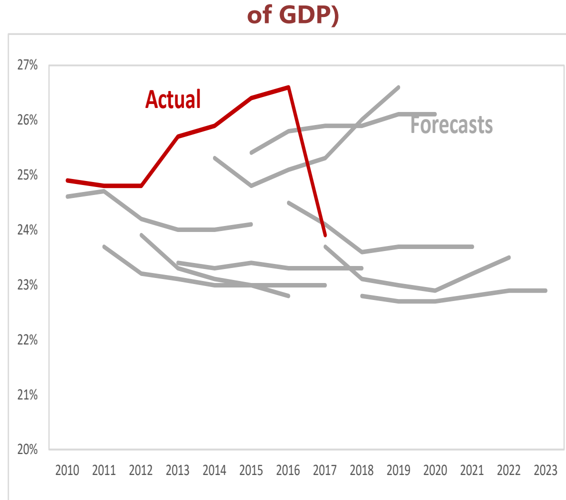


Figure 2.6. Forecasts and Observed Spending (% of GDP)



Source: the SHCP

[50] See Chapter 4 on "Economic and Fiscal Perspectives in the Medium-Term, 2019-2023". The medium-term macroeconomic projections include GDP, inflation, interest rates and the current account, as well as key economic assumptions (growth and inflation in the U.S., LIBOR interest rates, world oil prices, etc.). Fiscal projections include the fiscal balance and primary balance; budgetary revenues broken down by component; programmable and non-programmable expenditure (shown on a net basis); current and capital spending, and net debt.

53. Mexico's current procedures for preparing the budget include some features of an MTBF, but there are also substantial gaps compared to the models used in advanced countries and some emerging markets. Key features of an advanced MTBF that are currently lacking in Mexico include expenditure ceilings for the three out-years of the MTBF; an integrated process for preparing the annual budget and the MTBF; separations of the cost of existing policies (spending baselines) and new policy proposals; a process for making reliable forward estimates of spending over the medium term; the use of planning margins or planning reserves in allocating resources; and carrying forward defined categories of spending (e.g., capital investment) from one fiscal year to the next (see Table 2.3).

Table 2.3. MTBF: Differences Between Practices in Mexico and Advanced Model

MTBF Characteristics	Mexico	Advanced
3 to 5-year medium-term fiscal framework	Yes	Yes
Indicative expenditure ceilings for the out-years	No	Yes[1]
Alignment of budget projections with government's fiscal policy objectives and macroeconomic forecasts	Yes	Yes
Spending estimates for out-years rolled over from one MTBF to the next	No	Yes[2]
Fully integrated budget preparation process for capital and recurrent spending	Yes	Yes
Classification of expenditure and revenue aligned with international standards	No	Yes
A single process for preparing MTBF and annual budget, and fully integrated documentation	No	Yes
Separating out the cost of existing policy (spending baselines) and new policy proposals	No	Yes
Reliable forward estimates of spending in out-years	No	Yes
Planning margins or planning reserves used to allocate budget appropriations	No	Yes
Carry forward of spending from one year to the next, within well-defined limits	No	Yes

Source: FAD staff

[1] Some advanced countries have adopted a fixed framework for the MTBF, i.e., one that is only changed at the end of the 3-4-year period.

[2] Some advanced countries have binding ceilings for the out-years, e.g., Sweden, U.K. (partially).

2.1.4	Investment projects	Good

54. The annual budget proposal includes the total cost of all multi-annual investment projects. For each budget entity, a list of investment projects is shown with the following information: (i) an estimate of total project costs which is updated annually; (ii) cumulative actual spending on the project during the period of construction; (iii) the appropriation for the upcoming budget year; and (iv) estimated remaining project costs after the budget year. Operational and maintenance costs are not included in the estimate of a project's total investment cost. The budget documentation also includes information on multi-annual commitments for which the authorization by the Congress is sought.

55. The share of public investment to GDP in Mexico has been relatively low since 2000s compared to both emerging market economies and countries in Latin America and Caribbean (see Figure 2.7 and 2.8). At the end of 1990s, annual public investment dropped significantly and reached the low level of 3.4 percent of GDP in 2015. In the last few years public investment has been compressed further to achieve the deficit target set under the government's fiscal consolidation plan (see Section 2.3.1). The overall level of public investment is projected to fall to 2.6 percent of GDP in 2018[51].

Public Investment

Figure 2.7. Public Investment in Mexico Compared to Emerging Market Economies (2011 PPP$ Adjusted, % of GDP)

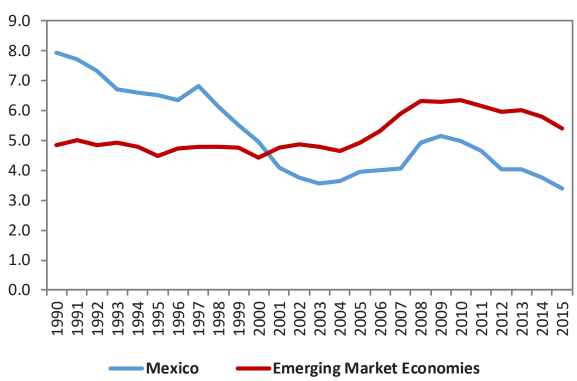
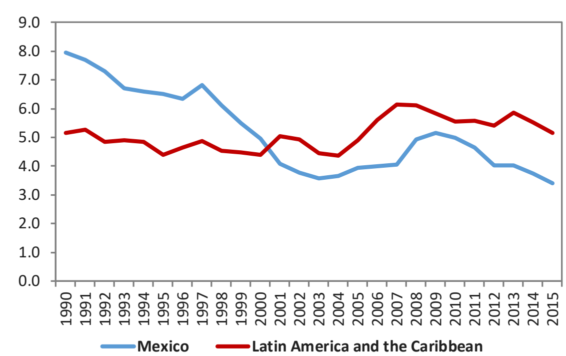


Figure 2.8. Public Investment in Mexico Compared to Latin America and Caribbean (2011 PPP$ Adjusted, % of GDP)



Source: IMF PIMA database

56. All public investment projects are subject to a cost-benefit analysis or cost-effectiveness analysis[52], which is made public before a project is approved. The Budget and Fiscal Responsibility Law (BFRL) includes provisions regarding public investment management (Articles 32 and 34).[53] The SHCP has also issued numerous guidelines on public investment management, including on the preparation and presentation of cost-benefit analysis, which may take

[51] Mexico: IMF Staff Report for the 2017 Article IV Consultation, November 2017.

[52] The authorities refer to these tests as "socio-economic evaluations".

[53] Article 32 includes the provision for the multi-annual commitments for investment projects and long-term productive infrastructure projects. Article 34 lays out the procedure for investment planning, including a requirement for cost-benefit analysis and project selection criteria.

different forms depending on the type of project and its size. The Investment Unit in the SHCP carries out a validation of the project documentation and the cost-benefit analysis, before registering the projects in the database. The cost-benefit analysis for all projects—approved and in the pipeline—is published on the SHCP's website[54] along with other project-related information.

57. Legislation requires major projects to be tendered competitively. Under the procurement law and public works law[55], the Ministry of Public Administration is responsible for the management and oversight of public procurement. The procurement and public works regulations provide for exceptions to public bidding for investment projects below a threshold,[56] as well as certain exceptions are also included in the law. All information regarding individual projects and procurements processes are available on two web portals – Transparency Portal and CompraNet.

58. The law and regulations define an open and competitive tender as a preferred method. However, the regulations also provide for many exemptions.[57] The agencies need to demonstrate that exceptions will ensure the best contracting conditions and administrative liability procedures are in place for deviating from the rules.[58] Overall, about 70 percent of the total amount contracted in 2016 and 2017 was through public tenders, while 30 percent were contracted by direct awards and/or restricted tenders (Table 2.4). Audits conducted by the Mexican Supreme Audit Institution (*Auditoría Superior de la Federación*) show that some major projects were contracted through exceptions to public tenders (which is allowed by Mexican Regulations regarding public procurement); that not all contracts are registered in the CompraNet web portal;[59] that there are cases where tenders are split in order to avoid the open procurement procedure; and that there are cases where exemptions are used inappropriately to allow restricted tenders or direct award instead of public tender.[60]

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[54] https://www.gob.mx/shcp/acciones-y-programas/cartera-publica-de-inversion-16287

[55] *Ley de Adquisiciones, Arrendamientos y Servicios del Sector Publico* and *Ley de Obras Publicas y Servicios Relacionados con las Mismas*.

[56] In 2017 the maximum threshold was 8,515,000 pesos, equivalent to US$ 450,000 approximately.

[57] The Constitution of the United Mexican States authorizes the legislators to establish exemptions to open tenders and use other methods like direct award and restricted tender. The regulations prescribe the procedures for granting the exemptions. For example, some exemptions could be due to unforeseeable circumstances, force majeure, national security or exclusive rights.

[58] In those cases when an agency does not justify the correct use of an exception to open public tender, it would give grounds to initiate administrative liability procedures for the public servants who have taken the decision.

[59] This depends on the origin of the resources, and whether the applicable or specific legislation requires such recording in the web portal.

[60] The ASF's report on *General Problems Regarding Public Works and Related Services 2011-2016* (http://www.asf.gob.mx/uploads/256_Informes_Especiales/Informe_Especial_Obra_publica.pdf) pointed to several issues where formal rules and procedures had not been followed, including: incomplete planning regarding the scope of projects and their profitability; inadequate or incomplete bidding rules; inadequate tenders or contract awards; and insufficient technical personnel trained to develop and evaluate project proposals.

Table 2.4. Total Number and Value of Contracts Above the Maximum Threshold

	2016				2017			
Procurement method	No of contracts	% of total	Value of contracts (mln pesos)	% of total	No of contracts	% of total	Value of contracts (mln pesos)	% of total
Direct award	1620	26%	79,607	25%	1666	30%	105,260	23%
Restricted tender	554	9%	18,926	6%	427	8%	25,682	6%
Public tender	3993	64%	222,062	68%	3378	62%	320,798	71%
Other	40	1%	2,976	1%	15	0%	469	0%
Total	**6207**	**100%**	**323,571**	**100%**	**5486**	**100%**	**452,209**	**100%**

Source: Compranet and Annual Budget Decrees.

2.2. Orderliness

2.2.1	Fiscal Legislation	Advanced

59. The legal framework for budgeting and fiscal management in Mexico is comprehensive and clear. The Constitution includes several articles on public finance and the budget process, and a definition of the role of the executive branch and the Chamber of Deputies in approving the annual budget (notably Articles 73 and 74). The Constitution is supplemented by several laws and regulations on public finance and budgeting, notably the Budget and Fiscal Responsibility Law (BFRL, 2006, revised 2015), the General Accounting Law (2008), as well as laws on public debt management and public procurement. This framework covers all aspects of budgeting, fiscal transparency, and fiscal reporting, as well as many aspects of fiscal risk management, including PPPs for example.

60. The legal framework sets out *inter alia* a clear timetable for budget preparation and approval, which has been regularly complied with in recent years (see Section 2.2.2). It also defines the key content requirements of the budget, the role of the SHCP and the President[61], and the powers of the Chamber of Deputies' to make amendments to the draft budget.[62] In law, the power of the Chamber to amend the budget are unlimited. But in practice, the Chamber is constrained by several factors: (i) it cannot deny funding for expenditures that the executive is legally or constitutionally compelled to make, such as federal transfers and entitlement spending; (ii) it can increase expenditures only if additional sources of financing are identified; and (iii) it must comply with the fiscal targets and rules set out in the BFRL (see Section 2.3.1). However, the Congress also approves a revenue law prior its deliberations on the expenditure budget, and generally increases the (typically conservative) revenue estimates submitted by the government to create space for

[61] The President is involved in the final stages before the draft budget is submitted to the Congress, and in the finalization of the approved budget. Individual ministers are involved in bilateral negotiations with the SHCP, but the cabinet as a collective body plays a very limited role on the budget preparation process.

[62] The budget is technically not a law but a decree, as it is only approved by the Chamber of Deputies, not the full Congress.

additional spending. Amendments made by the Chamber of Deputies to the draft budget in recent years have averaged around 4-5 percent of the approved budget, and have been focused mainly on investment projects, and environmental and social programs. As a quid pro quo, the executive has full authority to make in-year adjustments to the budget allocations, without the approval of Congress (see Section 2.4.2).

2.2.2	Timeliness of Budget Documents	Advanced

61. The legal framework includes specific deadlines on the preparation and approval of the budget that have been fully respected in recent years. As shown in Table 2.5, the draft budget must be submitted to the Chamber of Deputies in early September, nearly four months before the start of the fiscal year, and must be approved and published by November 15. These statutory deadlines have been complied with without exception in recent years. The budgets for 2016, 2017, and 2018 were approved by the Chamber between November 11 and November 13 in the previous year; and were published between November 27 and November 30. The revenue budgets were submitted on September 8, and approved between October 26-29 in each of these years.

62. The main forum for budget analysis and debate in the Chamber is the all-party Budget Committee. The budget is reviewed by the Chamber of Deputies' sectoral committees, which submit proposals for amendments to the Budget Committee, before the budget is debated and approved by the whole Chamber in plenary session. The Budget Committee invite targeted sub-groups to their hearings on the budget and take evidence from a variety of sources, such as academic institutions, business and civil society groups (see Section 2.3.3), representatives of line ministries and sub-national governments. Consultations with the SHCP take place throughout Chamber's deliberations. The draft budget is also reviewed by the Center for Public Finance Studies (CEFP), a technical advisory body attached to the Chamber of Deputies (see Section 2.4.1).

Table 2.5. Calendar for Submission and Approval of the Budget

Date	Event
April 1	The executive submits the Pre-criteria report for the next fiscal year to the Congress
June and July	Ministries start drafting their budget submissions
July	The SHCP sets the aggregate ceiling for the budget and circulates the annual guidelines to ministries
August 11-22	Ministries submit their budgets to the SHCP
August 25	The SHCP integrates the draft budget
September 8	The executive submits the draft budget to the Chamber of Deputies
October 31	The Budget Committee receives comments from the sectoral committees on proposed amendments, and submits the budget to the plenary
November 15	The Chamber of Deputies approves the budget
Second half of November	Publication of the budget
January 1	The fiscal year begins

Source. SHCP, FAD staff

2.3. Policy Orientation

2.3.1	Fiscal Policy Objectives	Advanced

63. The framework of fiscal policy objectives and fiscal rules in Mexico is precise and clear. It has evolved since the mid-2000s. The BFRL, enacted in 2006, aimed at locking in the low fiscal deficits that characterized fiscal performance prior to the Mexico's economic crisis in the mid-1990s. It did so by introducing a zero-balance target on the fiscal deficit.

64. Important modifications were made to the fiscal rule in 2014, to support the government's newly-established Fiscal Consolidation Plan, which set a target of reducing the budget balance to zero by 2017 (later amended to 2018). These amendments to the BFRL added two additional fiscal rules to the existing deficit rule, which was retained: (i) the public sector borrowing requirement (PSBR) was introduced as a target to limit the pro-cyclicality of the deficit rule, though a specific ceiling for the PSBR is not specified; and (ii) a cap on the real rate of growth of structural current spending,[63] equal to potential output growth which is currently estimated at 2.5 percent a year, was also introduced. Another change was to allow up to 2 percent of capital investment by PEMEX, CFE, and other "high impact" economic and social investment to be

[63] Structural current spending is broadly defined as programmable (or discretionary) expenditure.

discounted from the budget balance rule. In addition, the amendments changed the way oil revenues are managed. Starting in 2015, a new sovereign wealth fund, the Mexican Oil Fund, manages all hydrocarbon-related wealth, which should help better insulate public spending from transitory fluctuations in oil revenues (see Section 4.4).

65. Article 17 of the BFRL allows for ex ante deviations from the fiscal balance rule under exceptional circumstances. The regulations to this law (Article 11) include five specific triggers which are related to exceptional changes in economic circumstances, a revenue shock, or natural disasters.[64] These regulations also allow the deficit to be increased if the government introduces a new policy which incurs short-term fiscal costs but which yields net fiscal benefits over the long-term. The provisions have only been triggered once, in 2014, following a sharp decline in the economy.

66. Procedures for reporting on compliance with pre-defined fiscal targets and objectives are reasonably well developed. The SHCP's *General Economic Policy Criteria* (GEPC) report, published in September when the budget is submitted to the Chamber of Deputies, includes sections on prospects for public finances in the short term and medium term, and a discussion of the government's compliance with the Fiscal Consolidation Plan, and with the fiscal rules noted above. A similar assessment is provided in the *Pre- Criteria Report* published each April (though this document focuses only on the forthcoming fiscal year).[65] The quarterly reports on budget execution include a summarized assessment of fiscal policy and note any adjustments in budget allocations that have made to support the government's fiscal consolidation policies. In addition, the government publishes monthly and in the SHCP's quarterly reports information on 12 fiscal indicators[66] that provide a broad picture of developments in public finance. A simplified presentation of public finance trends and developments is also published in the Citizen's Guide to the Budget (see Section 2.3.3).

67. The authorities could consider developing its *Pre-Criteria Report* into a medium-term fiscal strategy report, issued early in the budget cycle. Such a report would include a full discussion of fiscal policy objectives and targets, in the medium-term context, together with an assessment of compliance with the fiscal rules, the need for further fiscal consolidation, and the sustainability of public finances. Many advanced countries and emerging markets publish similar reports. In some countries, the fiscal strategy document is discussed with the cabinet and the

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[64] These triggers include (i) an increase in interest rates which would raise the government's debt servicing costs by more than 25 percent; (ii) a natural disaster with a fiscal cost of more than 2 percent of programmable spending, after the resources of the natural resources disaster fund have been exhausted; (iii) fiscal liabilities carried over from the previous fiscal year of more than 2 percent of programmable spending; (iv) a fall in non-oil tax revenues of more than 2.5 percent; and (v) a fall in oil prices of more than 10 percent compared to the assumed price in the budget.

[65] The report published in April 2017, for example, noted the cuts in spending that were made in February and June 20916 to comply with the PSBR-GDP limit of 2.5 percent.

[66] These 12 indicators (four of which are new) include measures of tax and non-tax revenues, tax revenue excluding the fuel tax, programmable and non-programmable expenditure, current and capital spending, the primary balance and overall balance, the PSBR, and public debt.

legislature, thus helping to align expectations on the need for further fiscal consolidation. It can also be used to set preliminary ceilings for spending at the sectoral and ministerial level, thus providing a bridge to the detailed expenditure allocations proposed in the draft budget law.

2.3.2	Performance Information	Advanced

68. A comprehensive performance information system has been established at the federal level in Mexico. The system includes extensive data on the inputs, outputs, and outcomes of government spending programs, procedures for analyzing and monitoring this information, as well as a framework for evaluating programs and projects. The fully-automated system was designed and is managed by a dedicated unit in the SHCP, with support from the National Evaluation Council for Social Development Policy (CONEVAL) on social development programs[67]. Much of the information is published on the SHCP's Transparency Portal.[68]

69. The design of the performance information system follows closely the structure of sectors, ministries, and programs that is laid down in Mexico's National Development Plan and the associated sectoral plans. This design is based largely on the programmatic structure of the budget, which currently includes 658 programs at the federal level. About 100 of these programs relate to social development and are overseen by CONEVAL. Nearly 5,000 performance indicators have been defined, of which 2,000 are "strategic" and outcome-based, while the remainder are output-based. Targets are set for most of the indicators, some for a single year, others (including most of the strategic indicators) for several years. The number of performance indicators and targets is greatly in excess of those used in other OECD countries: for example, France, New Zealand, the United Kingdom, and the federal government of the U.S.A., which take a more strategic approach to performance budgeting, whereas Mexico takes both the strategic and operational approaches.

70. The budget documentation includes an annex with details of performance indicators and targets for all the 658 programs covered by the system. Summary information is also included in the SHCP's quarterly reports on budget execution. The SHCP has developed a "traffic lights" system which assesses and monitors both the quality and relevance of the indicators included in the system, and the progress made by spending entities in meeting their performance targets. Performance information, however, is used to only a limited extent in the policy-making process. A recent World Bank study concluded that there is little evidence that performance information is directly linked to the budget cycle, and that the use or performance information and performance evaluations varies considerably from one ministry to another.[69]

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[67] Until recently, another government agency, the Ministry of Public Administration (SFP), also played a role in performance evaluation, but the SFP's function were transferred to the SHCP in 2017.

[68] Transparencia Presupuestaria: http://www.transparenciapresupuestaria.gob.mx/

[69] World Bank, *Mexico Public Expenditure Review*, March 2016—Chapter 4 "The Performance Evaluation System",

2.3.3	Public participation	Good

71. Mexico has adopted several laws aimed at improving transparency and public participation the preparation of the budget.[70] These laws require more budgetary and fiscal information to be published by the government, and established two new vehicles for the public disseminating of such information—the *Citizen's Guide to the Budget*, and the Transparency Portal.

72. The *Citizen's Guide to the Budget* has been published every year since 2010. It provides an accessible description of (i) recent fiscal performance and economic prospects; (ii) the main budgetary revenues and expenditures; and (iii) the impact of the budget on the typical citizen. The focus of the guide is driven by the reforms undertaken by the government. For example, in 2014, the *Guide* focused heavily on the government's tax reform and its implications for citizens. The *Guide* does not usually provide an assessment of the implications of the budget for different demographic groups—for example, programs aimed at the poor and vulnerable, food insecurity, or regional imbalances—but such information is provided in the Transparency Portal. Separate issues of the *Citizen's Guide* cover the Federal Budget Proposal, the Annual Financial Statements and, from 2018, the SHCP's quarterly reports. Since 2018, the Guides are published only on SHCP's website. The SHCP has also developed jointly with civil society organizations a four-week online course on "How to Understand the Budget".

73. The Transparency Portal (*Transparencia Presupuestaria*) was launched in July 2011. The portal was the government's response to the increasing demands of citizens and civil society organizations to have a more transparent and effective system of public budgeting. In its first year of operation, the portal had 34,500 visits, but usage increased to nearly 900,000 visits in 2017. The Performance Evaluation Unit in the SHCP plays a key role in increasing the quantity and quality of budget information made widely available on the portal.

74. The authorities provide the public with relatively limited opportunities to engage in the budget preparation and execution process. Some ministries invite the public to send their opinions through the print media or websites on proposals for new policies or programs, and conduct surveys to assess citizens' satisfaction with the implementation of the policies.[71] Civil society

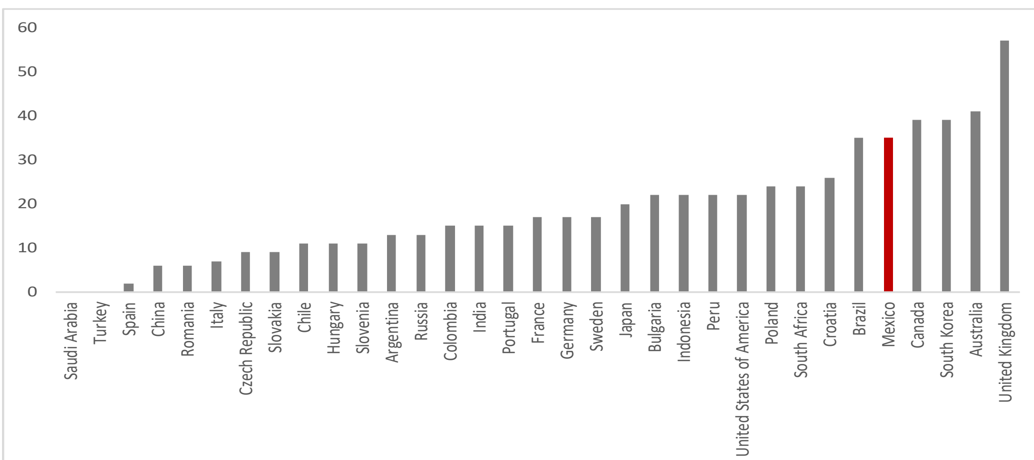
pages 118-154.

[70] Five laws have a direct impact on the budget information published by the government: the Federal Law of Transparency and Access to Information (*Ley Federal de Transparencia y Acceso a la Información, 2016*); the Budget and Fiscal Responsibility Law (*Ley Federal de Presupuesto y Responsabilidad Hacendaria, 2006*); the General Law on Government Accounting (*Ley General de Contabilidad Gubernamental, 2008*), the Federal Law on Audit and Accountability (*Ley de Fiscalización y Rendición de Cuentas de la Federación, 2009*); and the General Law on Transparency and Access to Public Information (*Ley General de Transparencia y Acceso a Información Pública*, 2015).

[71] For example, the SHCP organized an open data day for the third time in February-March 2018. This initiative encourages citizens to visit, monitor, interview project managers, assess the implementation of investment projects and report on their findings. This initiative is carried out by connecting people via Twitter and Facebook. Recent activities to engage people in the monitoring stage of the budget cycle include both hackathons and the Rally

organizations also participate in sector planning discussions led by sectors or line ministries, but the engagement varies by sector. The Congress also seeks views of the public on the annual budget proposals (see Section 2.2.2), but there is no formal requirement for such consultations, and public hearings are often targeted at certain lobby groups and are not open to the wider public. The plenary sessions of the Congress are broadcast live on the TV. The moderate level of public engagement in budgetary issues is reflected in Mexico's score of 44 out of 100 in the 2016 version of the World Bank's Voice and Accountability Index, and its score of 39 out of 100 in the 2017 OBI index of public participation (Figure 2.9).[72]

Figure 2.9. OBI Index on Public Participation, 2017



Source: OBI database

2.4. Credibility

2.4.1	Independent evaluation	Not Met

75. The SHCP's two main reports on economic and fiscal policy,[73] published in April and September each year, provide little information on the views of other forecasters on economic developments, or their economic and fiscal projections. In preparing its macro-fiscal forecasts, the SHCP, takes account of the forecasts prepared by organizations such as the Bank of Mexico, Blue Chip, the IMF, and the World Bank, and holds meetings with the chief economists of rating agencies, research institutes, and major domestic banks. The SHCP also attends quarterly meetings of the Financial Stability Committee at the Bank of Mexico which discusses fiscal risks and the economic outlook. However, reports published by the SHCP include virtually no information on these

#DatosEnLaCalle which have been in place since 2016, and are held annually in March on the international Open Data Day. In 2018, the Rally initiative was used as an example by the Global Initiative on Fiscal Transparency to implement similar practice in other countries as a way to encourage public participation in the budget cycle.

[72] The average global score is only 12 out of 100, with 111 countries having weak scores (lower than 41).

[73] The "Pre-Criteria" report and the General Economic Policy Criteria (GEPC) report.

alternative assessments and forecasts. Such comparisons could improve the accuracy of macroeconomic forecasts, and reduce the variability in the short- and medium-term projections of revenue and expenditure (see Section 2.1.2).

76. The SHCP's macroeconomic and fiscal forecasts are analyzed by the Center for Public Finance Studies (CEFP), which is a technical support unit attached to the Chamber of Deputies. A similar unit—the Belasario Dominguez Institute (BDI)—provides support to the Senate. The CEFP has a legal base in the FRBL, and is independent of the executive.[74] The Congress is responsible for the appointment of the Director of the CEFP and approving the Centre's annual work program. The Center analyzes the documents that are part of the executive's annual budget proposal, as well as the quarterly reports and annual reports presented by the executive. In addition, it prepares estimates of the budgetary impact of proposed legislation, and publishes studies on topics in public finance, a monthly news bulletin and its own Journal of Public Finance.

77. While the CEFP and BDI analyze the executive's economic and fiscal forecasts, they do not assess the credibility of these forecasts.[75] Nor do they review the government's performance in achieving its fiscal objectives and targets, or its compliance with the fiscal rules set out in the FRBL. Nevertheless, the CEFP and BDI play a useful role in synthesizing and simplifying the information on public finance that is presented to the Congress and Senate, as well informing the public, since the notes and studies prepared by these two entities are published on their websites. In addition, another independent oversight entity, the federal audit agency (ASF) provides in its annual report a formal assessment of the government's fiscal performance and its compliance with the fiscal targets/rules in their annual report.

2.4.2	**Supplementary budget**	**Basic**

78. Legal framework allows the executive to spend more than the approved budget and then report to the Chamber of Deputies. Both the quarterly reports and the annual financial statements provide information on the main changes, but no ex-ante or ex-post approval by the legislature is required. The FBRL sets out the following rules and procedures that govern in-year changes to the budget:

[74] The Centre has about 40 professional staff, and sufficient analytical capacity to carry out its tasks. It makes use of collaboration agreements with organizations such as the National Institute of Geography and Statistics (INEGI) and the National Council for the Evaluation of the Social Policy (CONEVAL) to obtain data and exchange reports. It also has links with international organizations such as the OECD, the IDB, and the Economic Commission for Latin America and Caribbean (ECLAC).

[75] Some of the CEFP's reports include benchmarks that compare the macroeconomic forecasts prepared by various organizations, but only looking one year ahead.

- Article 19 establishes that the SHCP can authorize additional expenditures if there is a surplus of revenues. The SHCP must inform the Chamber of Deputies in its quarterly reports and annual financial statements.
- Article 19 provides how the excess revenues should be allocated.[76] The provisions are fairly complex.
- Article 21 notes the rules of budgetary discipline that the executive must apply when the revenues foreseen in the Revenue Law decrease. Although these provisions reduce the discretion of the executive to adjust spending, they do not indicate that the approval of the legislature is required to implement any cuts in expenditure.
- Article 58 establishes that the executive may make budget adjustments provided they comply with the government's policy objectives and programs.

79. The executive has considerable discretion to modify the expenditure allocations initially approved by the Chamber of Deputies. Over the past decade, the executed budget has been on average 7 percent higher than the approved budget (Figure 2.10 and 2.11). In all the last ten years the budget outturn has been above the approved budget. In most years, this additional expenditure has been financed by higher than expected revenues (Figure 2.12).

Revisions to the Approved Budget, 2008-2017

Figure 2.10. Approved vs Actual Expenditures (%, 2008-2017)

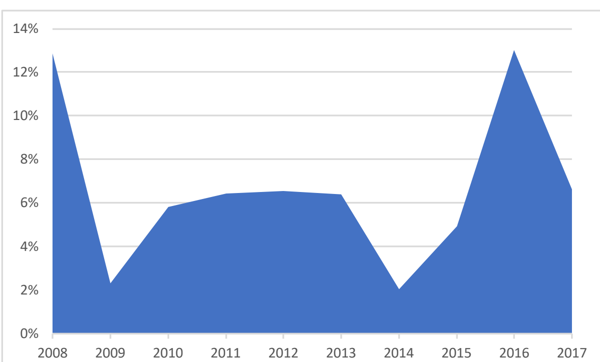
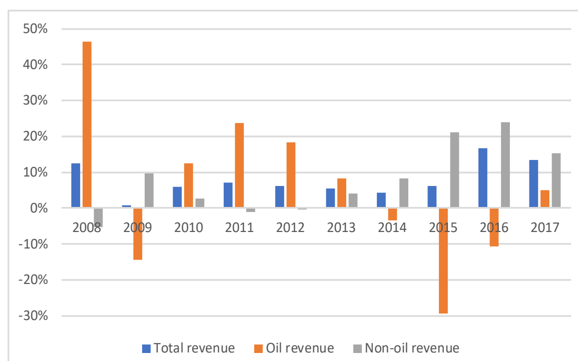


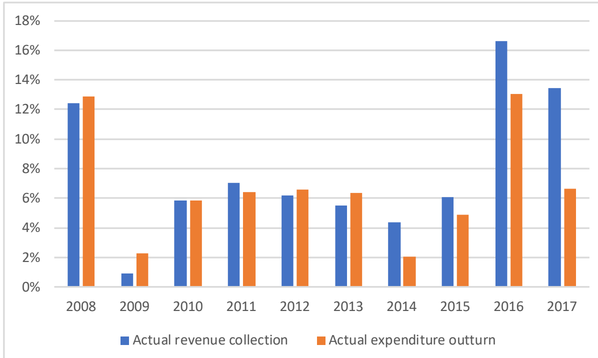
Figure 2.11. Approved vs Actual Revenues (%, 2008-2017)



Source: SHCP data

[76] For example, a certain amount of excess revenue will be allocated to the Revenue Stabilization Fund of the States; Stabilization Fund of the Budget Revenues; or investment programs in infrastructure.

Figure 2.12. Revenue and Expenditure Outturns (%, 2008-2017)



Source: SHCP data

2.4.3	Forecast reconciliation	Not met

80. The budget documentation does not provide any analysis of the differences between successive vintages of macroeconomic and fiscal forecasts.[77] The GEPC as well as the SHPC's quarterly reports provide some assessment of why the forecasts of revenue, expenditure and financing included in the previous budgets have deviated from the outturns. However, this analysis does not discuss whether the deviations are related to changes in fiscal policy, variations in macroeconomic conditions, policy changes, or other factors, even when in some cases the differences are considerable (see Sections 2.1.2 and 2.4.2). Including a reconciliation table in budget documents, together with an analysis and explanation of deviations would substantially increase the credibility of the forecasts that underpin the budget.

81. Observed changes can be broadly decomposed into macroeconomic factors, changes in volume and case-load, the impact of discretionary policies, and classification changes. The reconciliation table would:

- Begin with the previous year's medium-term macroeconomic forecast;
- Adjust for any accounting or classification changes;
- Identify the impact of changes in the baseline macroeconomic forecast, due to variations in economic and demographic parameters;
- Identify the fiscal impact of changes in law or policy decisions taken over the past year, and in the measures included in the budget; and

[77] Forecast reconciliation refers to the process through which a previous year's forecasts are compared to the new forecasts. Explanations of any material changes to the forecasts should be given. Deviations might result from from changes in the assumptions about world economic conditions, interest rates or exchange rates, or international oil proices, or from the fiscal impact of new policy measures.

- Present the latest macroeconomic and fiscal forecasts.

2.5. Conclusions and Recommendations

82. Mexico's fiscal forecasting and budgeting practices meet good or advanced practices under most of the principles, and compare favorably with the country's peers and some advanced countries. Only two principals were not met. The assessment highlights several strengths of fiscal forecasting and budgeting practices in Mexico:

- The legal framework is comprehensive though complex, and the budget documentation is also comprehensive and timely.
- The timetable for the submission and approval of budget documents to the Congress is closely observed.
- The fiscal policy framework is securely anchored in a fiscal consolidation plan and three fiscal rules that have been in place since 2014 are adhered to, though pressures for further fiscal consolidation in coming years may put the rules under strain.
- The performance information and evaluation system is well developed, though it comprises about 5,000 performance indicators, and could be better linked to the budget preparation process.
- The system for managing investment projects is generally transparent, but many contracts are not tendered openly and competitively.
- The government publishes a Citizen's Guide to the Budget and maintains an informative Transparency Portal, but the process of holding public hearings on budget issues is less developed.

83. There are also some areas where fiscal transparency in Mexico could be improved. The coverage of the budget includes many off-budget funds, social security funds, parastatal organizations, non-financial public corporations and development banks, and earmarked revenues. Few elements of a modern medium-term budget framework have been put in place. The Congress does not have to approve proposals by the government for in-year adjustments to the budget, though these changes are substantial (on average, around 7 percent of the approved budget). Macroeconomic and fiscal forecasts are prepared, but focus mainly on one year ahead, and are subject to substantial deviations compared to outturns. There is a tendency for published forecasts to overestimate GDP growth (since 2013) and inflation, and to underestimate the growth of revenues and expenditure. Mechanisms for the independent evaluation of macroeconomic and fiscal forecasts, or for validating that the government is complying with its fiscal targets and fiscal rules, have not been developed. No information is currently published on the reconciliation of current forecasts with previous vintages.

84. There are two main recommendations under this pillar of the Code:

- **Recommendation 2.1: The SHCP should strengthen the medium-term fiscal framework and the medium-term budget framework.** This reform would significantly strengthen the government's ability to plan public expenditure over the medium term. It includes several elements the implementation of which could be phased over a period of 2-3 years. These elements include:
  - Develop SHCP's "Pre-Criteria" report into an annual fiscal strategy statement, with a medium-term perspective, that would provide a robust framework for preparing the budget. The statement would provide a review of the government's fiscal performance over the past year, discuss challenges in meeting its fiscal consolidation targets, and include projections of fiscal developments on alternative scenarios.
  - Establish a process for separating the cost of new policy proposals from the underlying baselines of spending programs, and for making reliable forward estimates of spending, by administrative unit and program, over the medium term.
  - Set indicative ceilings for spending ministries and programs over the medium term. The ceilings would be rolled forward each year, with the new budget.
  - Adjust the presentation of the budget documents to show medium-term projections of spending on the same (or slightly reduced) level of detail as the annual budget.
  - Reconsider the use of performance indicators to strengthen their traction on the budget process, e.g., by focusing on a small sub-set of key indicators for each sector, ministry, or program.

- **Recommendation 2.2: Establish stronger mechanisms for the independent validation of the government's macroeconomic and fiscal forecasts, and compliance with fiscal targets and rules.** Several countries have attempted to deal with this issue by establishing an independent fiscal council, but this route depends on each country's specific political economy context. Other options might include:
  - Publishing information on the macroeconomic forecasts of other organizations (the Bank of Mexico, universities and research institutes, the OECD, the IMF and the World Bank, etc.) in the budget documents, and the Pre-Criteria report.
  - Establishing a committee of key stakeholders—the Bank of Mexico, the CEFP, the ASF, selected research institutes—that would meet twice a year, in March/April and August/September—to discuss the SHCP's forecasts of macroeconomic and fiscal developments. The minutes of these meetings and any decisions of the government arising from them would be published.
  - Mandating the ASF to provide each quarter a formal assessment of the government's fiscal performance in that quarter and its compliance with the fiscal targets/rules.

85. The report also notes two smaller recommendations for the SHCP to consider: (i) publishing comprehensive information in the budget documents on financial transactions conducted by the approximately 246 federal trust funds; and (ii) publishing information in the budget documents on the reconciliation of different vintages of macroeconomic and fiscal forecasts.

Table 2.6 summarizes the assessment against the principles of the Code.

Table 2.6 Summary Assessment of Fiscal Forecasting and Budgeting

Principle		Assessment	Importance	Recs
Comprehensiveness	**2.1.1 Budget Unity**	**Basic:** Budget covers ministries, parastatals, and public corporations, but excludes many trust funds. Most revenues, spending, and financing shown on a gross basis.	**Medium:** Budgets of approximately 250 federal trust funds are excluded from budget documentation.	
	2.1.2 Macro-economic Forecasts	**Good:** Budget documents provide macroeconomic forecasts, but with limited discussion of underlying assumptions.	**Medium:** Over last 7 years average absolute deviation in real GDP forecast was 1.2 percentage points of GDP.	
	2.1.3 MT Budget Framework	**Basic:** Mexico has an MTFF but a rudimentary MTBF. Budget documents include limited data on fiscal outturns in previous years.	**High:** Absence of an MTBF is a major weakness in fiscal planning and resource allocation.	**2.1**
	2.1.4 Investment Projects	**Good:** Budget documents include information on total cost and multi-annual commitments, and CBAs are published.	**Medium:** About 30% of large contracts are not awarded by open tenders which impacts on total cost and efficiency of investment projects.	
Orderliness	**2.2.1 Fiscal Legislation**	**Advanced:** Legal framework specifies the timing and content of budget proposal, and Congress' powers of amendment.	**Low:** No issues arise, but gaps could arise when significant fiscal/budgetary reforms are undertaken.	
	2.2.2 Timeliness of budget documents	**Advanced:** Critical timelines set in the FT Code fully met in past four years.	**Low:** No issues arise.	
Policy orientation	**2.3.1 Fiscal Policy Objectives**	**Advanced:** Numerical fiscal rules defined in law. Targets set in Fiscal Consolidation Plan. Reports on compliance with rules published quarterly.	**Medium:** Well designed and effective fiscal targets/rules will continue to be critical to Mexico's fiscal consolidation efforts.	
	2.3.2 Performance Information	**Advanced.** A comprehensive performance information and evaluation system has been developed, covering both outputs and outcomes.	**Medium:** Links between the performance targets/indicators and budget allocations are weak.	
	2.3.3 Public Participation	**Good:** A comprehensive citizen's guide to the budget exists, but formal consultations and hearings are limited.	**Low:** Improving Mexico's OBI scores on transparency is a goal of government's Modern and Proximate Government program.	
Credibility	**2.4.1 Independent Evaluation**	**Not met:** The budget documentation includes limited comparations between executive's economic/fiscal projections and independent forecasts.	**High:** Large forecast deviations and absence of mechanisms for independent oversight undermine credibility of fiscal/budget policies.	**2.2**
	2.4.2 Supplementary Budget	**Basic:** Changes to the budget are at a discretion of the executive. The Congress is informed ex post in quarterly reports.	**Medium:** The average increase of budget expenditures is 7 percent over the last ten years.	
	2.4.3 Forecast Reconciliation	**Not met:** The budget documents do not provide information on previous vintages of macroeconomic or fiscal forecasts.	**Medium:** Over last 7 years average absolute deviation in annual revenue and expenditure forecasts was around 5%.	

III. FISCAL RISKS ANALYSIS AND MANAGEMENT

Governments should disclose, analyze, and manage risks to the public finances and ensure effective coordination of fiscal decision-making across the public sector.

86. This chapter assesses the adequacy of Mexico's analysis, reporting, and management of fiscal risks against the practices of the FTC. The focus of this pillar is the exposure of the central government to the possibility of shocks to fiscal variables from the rest of the public sector, the domestic private sector, or the international environment. In addition, the chapter covers long-term fiscal sustainability. Fiscal risks include explicit fiscal risks—legal obligations or firm commitments to provide fiscal support under specific circumstances and conditions—as well as implicit risks, where there is no legal obligation on the government but an expectation that the government will provide fiscal support. Risks are assessed in three dimensions:

i. General arrangements for disclosure and analysis of macroeconomic and specific fiscal risks;
ii. Risks emanating from specific sources such as government assets, liabilities, guarantees, the financial sector, or public-private partnerships (PPPs); and
iii. Coordination of fiscal decision-making between the central government, subnational governments, and public corporations.

Table 3.1 lists key government reports in Mexico that provide information on fiscal risks.

Table 3.1. Mexico: Selected Reports Relating to Fiscal Risk

Fiscal Risks Addressed	Report or Publication and Links	Issuing Agency	Frequency
Macroeconomic Risks	General Criteria for Economic Policy 2018 *Criterios Generales de Política Económica 2018*	SHCP	Annual
	Annual Financing Plan 2018 *Plan Anual de Financiamiento 2018*		
Long Term Fiscal Sustainability	Actuarial and Financial Report 2015 *Informe Financiero Actuarial 2015*	ISSSTE	
Debt Management	Annual Financing Plan 2018 *Plan Anual de Financiamiento 2018*	SHCP	Annual
Financial Sector Risk	Financial Stability Report *Informe anual sobre el estado que guarda la estabilidad del Sistema financiero en México*	CESF	Annual
	Financial System Report, October 2017 Reporte sobre el Sistema Financiero, Octubre 2017	Bank of Mexico	Annual
Guarantees	General Criteria for Economic Policy 2018 *Criterios Generales de Política Económica 2018*	SHCP	Annual
	Quarterly and Annual Reports on Public Finances and Public Debt *Informes Trimestrales y Anuales sobre Finanzas Públicas y Deuda Pública*	SHCP	Quarterly, Annual

Provisions	Federal Revenue Law 2018 *Ley de Ingresos de la Federación para el Ejercicio Fiscal 2018*	SHCP	Annual
	Federal Expenditure Budget 2018 *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal 2018*	SHCP	Annual
Trust Funds	Quarterly and Annual Reports on Public Finances and Public Debt *Informes Trimestrales y Anuales sobre Finanzas Públicas y Deuda Pública*	SHCP	Quarterly, Annual
PPPs	General Criteria for Economic Policy 2018 *Criterios Generales de Política Económica 2018*	SHCP	Annual
	Quarterly and Annual Reports on Public Finances and Public Debt *Informes Trimestrales y Anuales sobre Finanzas Públicas y Deuda Pública*	SHCP	Quarterly, Annual
Petroleum Sector	PEMEX Annual Report Form 20-F filed with U.S. Securities and Exchange Commission http://www.pemex.com/en/investors/regulatory-filings/Paginas/sec-filings.aspx	PEMEX	Annual
	PEMEX Annual Report 2016 *Informe Anual PEMEX 2016* http://www.pemex.com/acerca/informes_publicaciones/Documents/Informe-Anual/Informe_anual_2016.pdf	PEMEX	Annual
	Evaluation of Hydrocarbons Reserves, January 1, 2017 *Evaluación de las Reservase de Hidrocarburos, 1 de Enero de 2017*	PEMEX	Annual
	Relationship between Reserves and Production, 2017 *Relación Reservas y Producción, 2017*	CNH	Annual
	Statistical Information *Información Estadística* https://www.gob.mx/cnh/articulos/informacion-estadistica-y-geografica	CNH	Ongoing
	Quarterly and Annual Reports on Public Finances and Public Debt *Informes Trimestrales y Anuales sobre Finanzas Públicas y Deuda Pública*	SHCP	Quarterly, Annual
	Projections of Crude Oil and Refined Products, 2017-2031 *Prospectiva De Petróleo Crudo y Petrolíferos, 2017-2031*	SENER	Annual

3.1 Risk Disclosure and Analysis

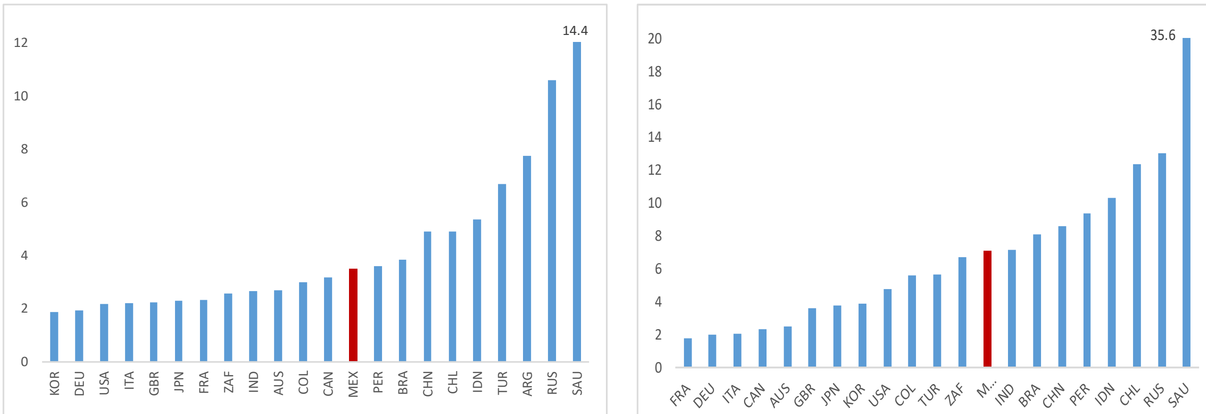
3.1.1	**Macroeconomic Risks**	**Basic**

87. Mexico has a moderately volatile economy. The volatility of nominal GDP in 2003-16 was close to average compared to other G-20 countries and selected Latin American countries. It was lower than in most G-20 emerging market economies, but higher than in the group's advanced economies (Figure 3.1). Over that period, there were two years when the rate of growth of nominal GDP was lower by more than one standard deviation than the average.

Figure 3.1. Indicators of Macro-Fiscal Risk, 2013-2016
G-20 and Selected Latin American Countries
(Percent)

Standard Deviation of Nominal GDP Growth

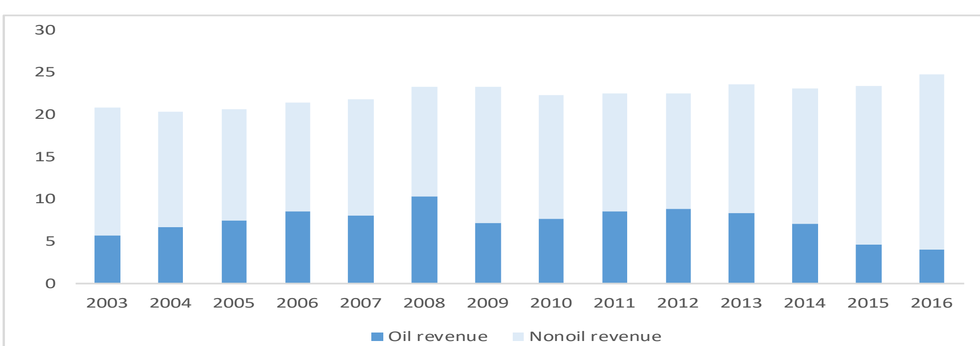
Standard Deviation of Fiscal Revenue Change in Real Terms



Source: IMF, World Economic Outlook database, October 2017; and IMF staff calculations.

88. **The substantial volatility of oil revenues in Mexico has been dampened by the negative correlation between oil and non-oil revenues.** Revenue volatility in Mexico is somewhat higher that in G-20 advanced economies and some emerging market economies. (Figure 3.1). The share of oil revenues in total revenues was about a third on average in 2003-16, and the volatility of oil revenue in real terms was close to three times the volatility of non-oil revenue. The volatility of total revenue, however, was dampened by a strong negative association between changes in oil revenue and in non-oil revenue (Figure 3.2). In particular, during periods of falling oil revenues, non-oil revenues mostly recorded well above average growth. In addition, the hedging of oil price risks reduced to some extent the volatility of total revenue.

Figure 3.2. Mexico: Oil and Non-Oil Revenue, 2003-2016 (Percent of GDP)



Source: SHCP; and IMF staff calculations.
Note: In Figure 3.3, consolidated federal public sector revenues, national definition

89. The SHCP identified the main risks surrounding its medium-term macrofiscal projections in the 2018 budget. Foremost among those risks were an unfavorable result in the renegotiation of NAFTA, lower U.S. economic growth than projected, a deterioration in international financial markets, and lower oil prices and production than expected.

90. The authorities publish a basic level of macroeconomic risk analysis, with small changes in variables to elicit sensitivities. In the *Criterios Generales de Política Económica* (General Criteria for Economic Policy) that accompany the annual budget, SHCP publishes, alongside its central six-year macroeconomic and fiscal forecasts, an analysis of the sensitivities of public sector revenue and expenditure to changes to five key variables—growth, oil prices and volumes, the exchange rate, and interest rates (Table 3.2). The sensitivities are assessed only for the budget year. The changes assumed in the variables to elicit the sensitivities are relatively small and are considered separately. For example, the assumed ½ percentage point difference in GDP growth compares to a standard deviation of real growth of close to 2½ percentage points in 2003-16. Over the period 1971-2016, the annual absolute percent change in the international oil price reported in the IMF's WEO was higher in 9 out of 10 years than the 2 percent change used in the sensitivity analysis. [78] The analysis looks at the impact of each change on revenue and/or expenditure in isolation, and does not present the fiscal implications of these changes at a more disaggregated level.

Table 3.2 Sensitivity Analysis of Public Sector Revenue and Expenditure in Budget Documentation

	Impact in 2018 (in percent of GDP)
Growth. One-half percentage point higher growth rate (tax revenue)	0.06
Oil price. Oil price higher by US$1/b (revenue)	0.07
Exchange rate. Ten-cent appreciation of the average exchange rate:	-0.01
Oil revenue (-)	-0.02
Financial costs (debt service) (+)	0.00
Oil production. Increase in oil output by 50 mbd (revenue)	0.06
Interest rate. Increase in the interest rate by 100 basis points (expenditure)	0.09

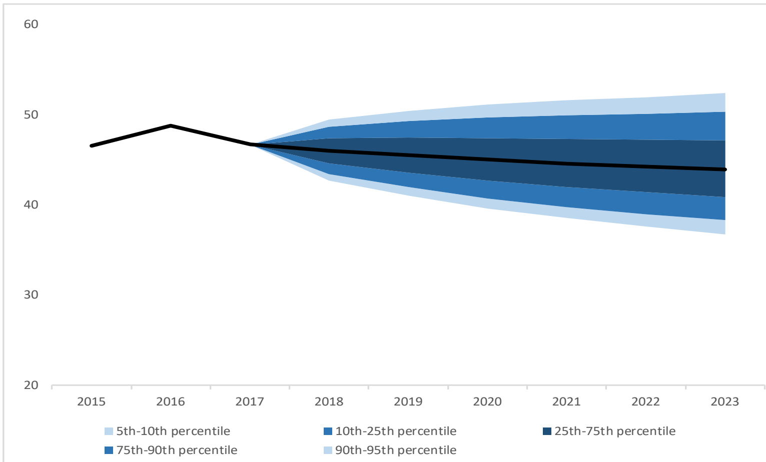
Source: SHCP, *Criterios Generales* for 2018.

91. SHCP also publishes a stochastic projection of the net public debt in the medium term. The *Plan Anual de Financiamiento* (Annual Financing Plan, PAF) includes simulated distributions of future debt outcomes for the next 6 years around the baseline scenario (Figure 3.3). Scenarios for the macroeconomic variables that have a bearing on the evolution of the debt are generated from

[78] In some cases, such as oil revenues, there may be nonlinearities when larger changes in the assumptions are assessed.

stochastic shocks, and a fan chart shows the evolution of the predictive densities of the public debt in percent of GDP.

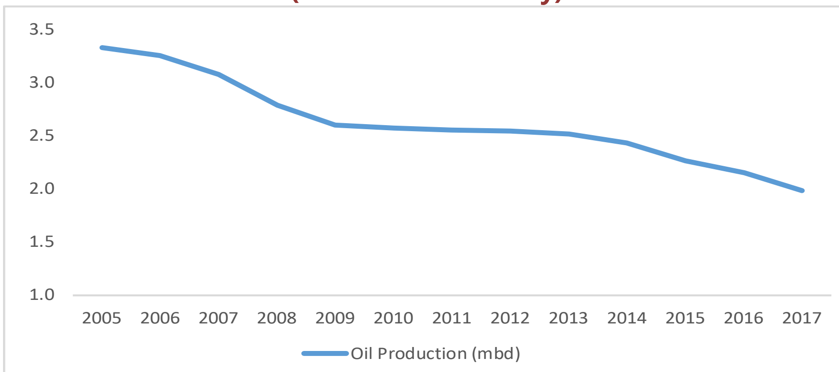
Figure 3.3. Mexico: Evolution of Predictive Densities of Net Public Debt (SHCP Estimates, Percent of GDP)



92. The sensitivity of the interest costs of the public debt to interest rates, exchange rates, and refinancing risks in the coming fiscal year is analyzed. The PAF presents separate Cost-at-Risk (CaR) analyses for the interest on the debt denominated in domestic currency, and on the debt denominated in foreign currency. Parametric and non-parametric methods are used; they yield broadly similar results. The CaR of the total public debt is estimated with a non-parametric method based on past observations of interest rates and exchange rates.

93. Uncertainties associated with revenues from oil and gas generate significant short- and medium-term fiscal risks. These risks are mainly associated with the impact of the volatility of oil prices and production on the government's cash flow. The volatility of the annual price of the Mexican basket of crudes in 1999-2016 (measured by the standard deviation of percentage change) was 31 percent. Oil production in 2017, at 2 mbd, was about a third lower than ten years earlier, with some volatility in the rate of decline (Figure 3.4). Reflecting these and other developments, fiscal oil revenue over the period fluctuated between 3½ percent of GDP and 10½ percent of GDP.

Figure 3.4. Mexico: Crude Oil Production, 2005-2017
(Million barrels a day)



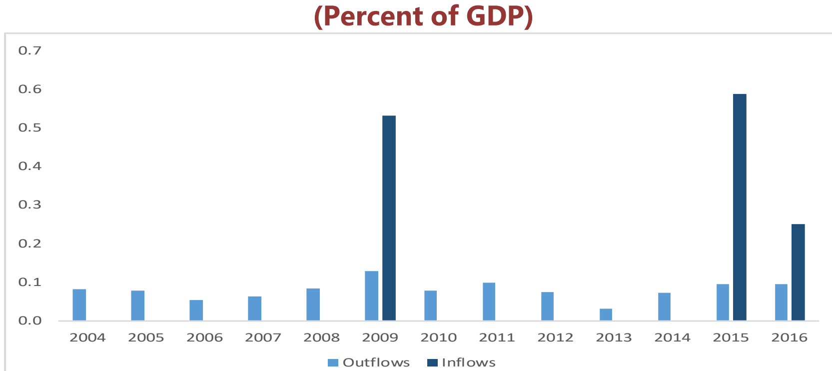
Source: CNH, SENER.

94. **The oil hedging program has been an important element of short-term macroeconomic risk mitigation.** The program aims at hedging the exposure of the central government to oil price volatility risks in the coming year (Box 3.1).

Box 3.1. Mexico's Oil Hedging Program

Under the oil hedging program, Asian put options are bought to insure the price of oil. The period covered is from December prior to the fiscal year, to November of the fiscal year.[1] The program helped cushion to some extent the fiscal impact of large declines in oil prices. It yielded revenues of 0.5 percent of GDP in 2009, 0.6 percent in 2015, and 0.3 percent in 2016 (Figure 3.5).

Figure 3.5. Mexico: Cash Flow from Oil Options, 2004-2016
(Percent of GDP)



Source: SHCP; *Auditoría Superior de la Federación*; and IMF staff calculations.

The hedging strategy is decided by a Technical Committee chaired by the SHCP. The strategy involves the determination of the volume of oil to be covered and the options strike price. A range of 210-250 million barrels of oil a year was hedged during 2010-17, reflecting approximately the volume difference between exports and imports. The strike price has been broadly consistent with the oil price assumed in the budget for each year (see Section 4.4.1). On occasion, given market conditions, the strike price has been a few dollars per barrel lower than the budget oil price—the difference being covered, if needed, by the *Fondo de Estabilización de los Ingresos Presupuestarios* (Budget Revenue Stabilization Fund, FEIP). Thus, the government has guaranteed a minimum average price of oil for the volume insured for a whole year.

The options strategy is implemented by the FEIP. This extrabudgetary fund replaced the earlier *Fondo de Estabilización de los Ingresos Petroleros* (Oil Revenue Stabilization Fund) in 2015. The cost of the options has been funded from resources available in the fund, and additional budget transfers if needed. If the options are exercised, FEIP transfers the proceeds to the Federal Government.

Public information on the oil hedging program is available. Press releases, including at the time of submission of the budget to Congress, inform the volume, strike price, type of hedging modalities, and the cost of the program. Information is also provided if the options are exercised. The quarterly reports on the public finances provide updated information on the actual oil price relative to the strike price. Historic information on the oil hedging program is available from the *Auditoría Superior de la Federación* (Supreme Audit of the Federation, ASF)**.** Audit reports on the FEIP provide information on the hedging operations, including the cost of the hedges, the oil volumes hedged by category of crude, the strike prices and the actual prices, and the receipts from the hedges, if any. Information can also be requested from the SHCP's Transparency Portal.

Source: SHCP and ASF.
[1] Asian put options are exercised if the average spot price for a pre-specified period is higher than the strike price.

3.1.2	**Specific Fiscal Risks**	**Basic**

95. Several specific fiscal risks are disclosed, though the disclosure is not comprehensive, and the relationship of these risks to the fiscal forecasts is unclear. In Mexico, there are several sources of specific risks (see Table 3.3 for quantification of some specific risks based on information provided by the authorities). The GCEP includes a section on fiscal risks, but this falls short of a comprehensive Fiscal Risk Statement.[79] The most recent edition of the report discusses, in addition to macroeconomic risks, specific fiscal risks stemming from pensions, the health sector, the banking sector and development banks, and actions taken to mitigate the risk of natural disasters. However, many sources of risk are not discussed, including those arising from subnational governments, public corporations, government guarantees, natural disasters costs, lawsuits brought by and against the government, the quality of financial and non-financial assets and associated risks, and contingent liabilities related to PPPs. When risks are discussed, it is sometimes unclear how they might affect the achievement of the fiscal target and the forecasts for the following years. In addition, the report does not address the fact that many specific risks are positively correlated—for example, during periods of low economic growth, the probability of failures of financial institutions and state-owned enterprises

[79] "The Statement should address several sources of fiscal risks including (a) macroeconomic risks and budget sensitivity; (b) public debt composition; (c) contingent central government expenditures; (d) pension liabilities; (e) public-private partnerships; (f) state-owned enterprises; and (g) subnational governments. For each source of risk, forward-looking expected cost estimates would be complemented by quantitative information on the costs incurred as a result of past shocks. See A. Cebotari, et.al., *Fiscal Risks: Sources, Disclosure, and Management.* 2009. (Washington DC: IMF)."

including development banks, increases. There is currently no unit in the SHCP that is responsible for consolidating information on specific fiscal risks and analyzing their fiscal implications.

Table 3.3. Mexico: Selected Specific Fiscal Risks of the Central Government

Fiscal Risk	Gross exposure MNX billion	Percent of GDP (2017)	cost billion MXN	Percent of GDP (2017)
Selected explicit fiscal risks				
Contingent liabilities:				
Legal claims against the state	n.a	n.a		
Debt guarantees				
FARAC/FONADIN	256	1.2		
Development Banks[1]	1215	5.6		
Subnationals	n.a	n.a		
PPP contracts	n.a	n.a		
Natural Disasters[2]	6.6	0.03		
			50	0.2
Total selected explicit fiscal risks	1,152	6.6[3]		
Memorandum item: risks to medium to long term fiscal sustainability				
Pensions			9,166	47

Source: Mexican authorities and FAD staff estimates.

1/ Includes two different types of granted guarantees to development banks: (1) 325 billion MXN, and (2) 890 MXN

2/ Source: Information submitted by USPSS. This contingent liability only relates to federal and sub-national infrastructure. Gross exposure is an estimate for 5 key sectors of the average annual loss, including earthquakes, wind, and flood damage. The cost of 50 billion MXN relates to claims for FONDEN, which protects more than 5 sectors and at least 18 risks (e.g., geological and hydro-meteorological risks).

3/ This figure includes: FARAC/FONADIN and development banks.

3.1.3	**Long Term Fiscal Sustainability Analysis**	**Not Met**

96. There is no information on the long-term sustainability of public finances and the projected evolution of overall net worth in budget documents. As discussed above, projections for the fiscal accounts are only presented for the next fiscal year and the following five years. Budget documentation provides some information on the prospective age structure of the population and on pension liabilities (in *Criterios Generales*), and there are long-term projections for the public sector social security systems. The lack of a long-term fiscal outlook hampers informed consideration of what is expected to happen to the overall public finances in the face of growing challenges discussed in Box 3.2.

Box 3.2. Long-Term Pressures on the Public Finances

Mexico faces growing demographic pressures that warrant adequate fiscal planning.[80] The median age reached 28 years in 2015 and is expected to rise to 42 years by 2050. The population that reaches retirement age is growing faster than the rest of the population. The share of the population aged 65 or older is projected to increase from 6 percent in 2010 to 17 percent in 2030. As a consequence of aging, the population is expected to start declining in 2065. These demographic changes have important implications for the pension and healthcare systems.

The public sector faces pressures arising from the pension systems of public sector workers. The social security institutions for public workers, as well as PEMEX and the CFE, regularly produce actuarial estimates of future pension liabilities. The government has estimated the actuarial value of public sector pension liabilities—considering the ISSSTE and the special regimes—at 46.9 percent of GDP in 2016. This amount does not include liabilities of subnational pension systems. Actuarial calculations for IMSS-PAYGO are not available.

Healthcare costs are also expected to come under growing stress. The government expects health spending to increase as a result of aging population, the transition to protracted and costly chronic diseases, and increases in medical costs regardless of the disease treated. Based on demographic developments and rising expectations about the quality of healthcare, public healthcare spending is projected to rise significantly in the coming decades from 3.3 percent of GDP in 2015 to 8.7 percent by 2065.

Reliance on a finite resource like petroleum generates long-term fiscal sustainability risks. The potential exhaustion of the oil and gas reserves in the coming decades poses long-term fiscal challenges. The oil reserve/production ratio (R/P) at end-2016 was estimated at only nine years for proven reserves, and 16 years for proven and probable reserves (see Section 3.2.6).[81] In addition, the long-term risk of obsolescence is rising. While considerable uncertainty surrounds the future path of reserve replacement and production, as petroleum reserves are depleted there will be a need to design sustainable long-term fiscal strategies that allow a smooth transition to the post-oil era.

Source: SHCP, CNH, and IMF staff.

97. Long-term policymaking should be concerned with strategies and potential responses to changing economic circumstances. It would be important to develop long-term fiscal projections because of the prospect of rising pension and health expenditures and the possible depletion of petroleum reserves in the next few decades. Such an analysis would give policymakers a better sense of the fiscal challenges that lie ahead. It would also promote the discussion of long-term strategies and policies to soften the future pressures on the public finances.

[80] The information on pension and healthcare spending pressures draws in part from IMF, *Mexico: Staff Report for the 2017 Article IV Consultation.*

[81] The level of reserves is dynamic and depends heavily on exploration activity and the extent of new discoveries, as well as on market conditions and technological developments that affect the cost and efficiency of extraction. See Section 3.2.6.

3.2 Risk Management

3.2.1	Budgetary contingencies	Advanced

98. The budget includes an adequate and transparent allocation for contingencies[82] that arise during the execution of the annual budget. The most significant provision is a line item in the budget for natural disaster relief, usually representing about 0.4 percent of the budget for programmable expenditure, with some variation from year to year. This contingency reserve complements Mexico's Natural Disaster Relief Fund and the government's access to the World Bank's Disaster Risk Financing and Insurance (DRFI) Program (see Section 3.2.6).

99. Access to the contingency reserve for natural disasters is based on transparent criteria and operating rules, using a decision-making process managed by the Ministry of the Interior. The SHCP's quarterly reports on budget execution include information on withdrawals from the reserve. A smaller reserve fund has been established to make transfers to subnational government related to natural disasters and other emergencies.[83] The SHCP confirmed that these reserves have been fully adequate in recent years. The substantial powers of the SHCP to make in-year adjustments to ministries' budgetary allocations, as required, without the need to table a supplementary budget with the Chamber of Deputies (see Section 2.4.2) obviate the need for additional contingency provisions.

3.2.2	Management of Assets and Liabilities	Basic

100. There is a legal cap on borrowing (see Section 2.3.1)**.**[84] All public-sector borrowing, including guarantees given for borrowing, must be authorized by the Congress. Specific debt rules are also set

[82] Contingencies may be defined as spending needs that are exceptional, urgent, and unforeseen when the budget was prepared, and thus cannot be financed through the existing budget allocations. Examples include natural disasters, health epidemics, terrorist activities, or major unforeseen outbreaks of civil unrest. Contingencies may take the form of an unallocated line item in the budget (a reserve), or a fund that is replenished each year. Strict criteria need to be established to ensure that applications by ministries for access to the contingencies reserve or fund are fully justified.

[83] The budget for the health sector also includes a provision for emergency spending on epidemics, but this is a contingency reserve held by the Ministry of Health, not the central budget, because the funds have already been allocated to the relevant health program.

[84] See Revenue Law, article 2 athttp://finanzaspublicas.hacienda.gob.mx/work/models/Finanzas_Publicas/docs/paquete_economico/lif/lif_2018.pdf. For PPPs, please see also article 24, the PPPs Law at http://www.diputados.gob.mx/LeyesBiblio/pdf/LAPP_210416.pdf and

http://www.ppef.hacienda.gob.mx/work/models/PPEF2017/paquete/egresos/Proyecto_Decreto.pdf for SNGs (see Section 3.3.1).[85] In addition, the law on PPPs sets a limit on the total annual payments related to PPPs (Section 3.2.4) which must be considered before the government initiates any new PPPs.

101. Information on debt sustainability analysis and stochastic analysis of debt-related liabilities is published. The SHCP provides information on the debt structure of the central government in its Annual Financing Plan (PAF). This information includes a breakdown of internal and external debt, the currency in which debt is denominated, amortization profiles, sources of lending, maturities, servicing costs, as well as interest rate and exchange rate risk exposure. In December 2016, the gross debt of the general government was estimated at 56.8 percent of GDP excluding the T-bonds used by the central bank for monetary operations.[86] The PAF presents on an annual basis the main elements of the Federal Government's public debt policy, which aims to cover the federal government's financing needs at the lowest possible cost, at an acceptable level of risk. Additionally, for the first time, the PAF 2018 summarizes the main elements of debt policy of other public sector entities that frequently access the debt markets. The portfolio risk analysis shows that the greater part of the federal government's debt is denominated in pesos. Most government securities issued in the local market, and all external market debt, are fixed-rate assets. The federal government has reduced its refinancing risk by maintaining a portfolio where long-term instruments predominate.

102. The analysis of risks surrounding non-debt liabilities and financial and non-financial assets is not publicly available. In 2016, public sector financial and nonfinancial assets were valued at around 62.5 percent of GDP (see Section 1.1.2). At the same time, the financial assets of general government were worth 37.4 percent of GDP, the largest of these assets being currency and deposits at the central bank (27.3 percent of GDP). The value of the government's assets and non-debt liabilities, and the associated cash flows can vary with inflation, interest rates, the exchange rate, and the performance of the companies the government owns or has lent to. The government does not have a policy to calculate the effects of these changes on public sector non-debt liabilities, which amounted to 70.9 percent of the GDP in 2016.

103. Substantial risks also arise on the management of the assets and liabilities relating to non-organic trust funds,[87] but only limited information is published on their use. The net worth of these funds represented about 2.7 percent of GDP in 2016. Table 3.4 presents the list of non-

[85] For SNGs, please see art 46 of the Financial Discipline law at http://disciplinafinanciera.hacienda.gob.mx/work/models/DISCIPLINA_FINANCIERA/Documentos/Normatividad/LDF.pdf

[86] The T-bonds used by the central bank for monetary operations are not included in the authorities' gross debt definition.

[87] Organic trust funds are defined as institutional units within ministries or other public entities that have a dedicated staff and resources, while non-organic trust funds do not have such a structure but may be used to transfer funds or as a payment mechanism.

organic trust funds classified by sector and their net worth as of December 2016, and some information is included in the SHCP's quarterly fiscal reports, including the use of budgetary resources. Further analysis is needed to evaluate the risks associated with these funds.[88]

Table 3.4. Non-Organic Trust Funds by Sector (In Million MXN)

Net Worth (December 2016)			
by Federal and State Level, and Private Sector			
Administration of Funds		**Number of Funds**	**Net Worth**
1. Register of the Policy and Budget Control Unit		339	549,808
2. Mexican Petroleum Fund (FMP)		1	53
TOTAL (1+2)		**340**	**549,861**
By Beneficiary			
A Federal Public Sector		***245***	**536,352**
1. Federal Government (Includes FMP)		*85*	*319,252*
	Financial Support	46	107,301
	Budget Stabilization	2	110,194
	Infrastructure	11	72,250
	Pensions and Employment Benefits	9	19,532
	Subsidies and Support	17	9,976
2. Social Security		*9*	*701*
3. Parastatal Companies with Governmental Activity		*82*	*37,293*
	Financial Support	20	1,575
	Infrastructure	1	142
	Pensions and Employment Benefits	12	14,418
	Subsidies and Support	49	21,157
4 Parastatal Companies with non-Financial Commercial Activity		*30*	*66,302*
	Financial Support	7	4,743
	Infrastructure	8	53,657

[88] For example, some of these funds making risky investments such as PPPs.

Table 3.4. Non-Organic Trust Funds by Sector (In Million MXN) [Concluded]

	Pensions and Employment Benefits	14	7,899
	Subsidies and Support	1	4
5 Parastatal Companies with Financial Commercial Activity		39	112,803
	Financial Support	14	13,064
	Infrastructure	1	120
	Pensions and Employment Benefits	20	69,147
	FID. 2065.- BANOBRAS' Pension Plan for Retired Staff	1	19,538
	Subsidies and Support	4	30,472
B. State Level		*65*	*8,806*
Trust Fund 1928		1	5,033
Others		*64*	3,772
C Private Sector		*30*	*4,704*

Source: Authorities

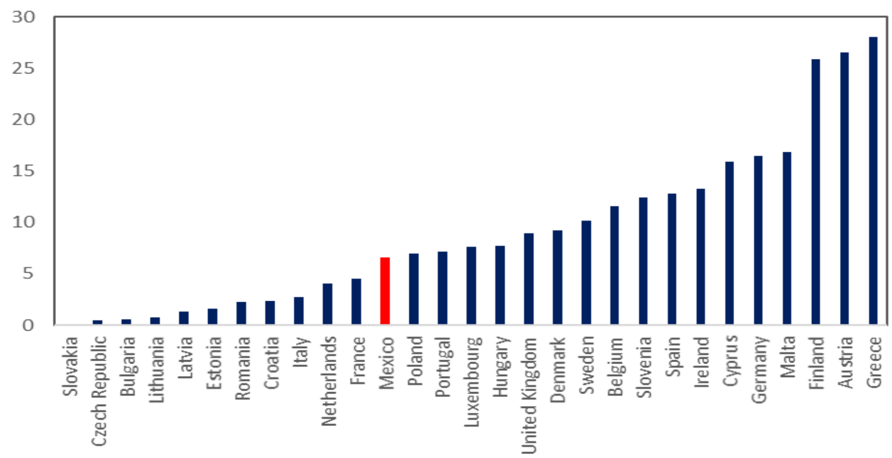
Note: This table does not include an important Fund for stabilization of the revenues at the state level (FEIEF), which has a net worth of 30,277 million MXN at the end of 2016; and another Trust Fund responsible for infrastructure in states (FIES), which had a net worth of 2,311 million MXN at the end of 2016.

104. There is some published data on nonfinancial assets but no comprehensive and updated register of such assets. The SHCP should prepare a register of these assets and develop a strategy for managing them.

3.2.3	Guarantees	Not Met

105. Guarantees provided by the federal government are substantial, but not fully disclosed except for those related to deposit insurance, development banks and FARAC/FONADIN. At the end of 2017, the total stock of explicit recorded federal government guarantees is estimated at about 6.6 percent of GDP (see comparison of Mexico's stock of guarantees with other selected countries in Figure 3.6). This amount includes guarantees of 256 billion MXN granted to FARAC/FONADIN; government-guaranteed debt securities issued by development banks amounting 890 billion MXN; and guarantees of mortgage securitizations and risk capital of about 325 billion MXN. The Institute for the Protection of Banking Savings (IPAB), which manages the government's deposit insurance scheme, in principle, has substantial resources to meet its potential obligations. Any liability of the government will only arise if these resources are exhausted, but could be as high as 2,225 billion MXN, equivalent to 10.25 percent of GDP.[89] The issuance of guarantees is regulated by law, but there is no statutory limit on the flow or stock of such guarantees. Moreover, there is no published information on what form these guarantees take, or a detailed list of the beneficiaries of the guarantees. The Federal government may issue guarantees to SNGs subject to certain requirements, but in practice has not done so.

Figure 3.6. Government Guarantees in Europe and Mexico [1]



Source: Eurostat, Authorities
1/ Mexico's estimate refers to 2017. For other countries, estimates refer to 2014.

3.2.4	Public-Private Partnerships	Advanced

106. The regulatory framework for Public-Private Partnerships (PPPs) has been strengthened over time.[90] The 2012 Public-Private Partnership Law and related regulations were amended in 2016 and 2017. These changes strengthened the processes for the preparation and authorization of PPP projects, their budgetary management, and the required authorizations. A manual was recently issued to help investors analyze PPP-related risks and undertake financial analyses; and guidance has been issued to the ministries that sponsor PPPs on the economic

[89] As of June 2017, the total amount of sight and installment deposits was 4,400 billion pesos (10.7 percent) of GDP. (It covers a maximum amount of 400 thousand UDIs, 2.3 million pesos, per natural or legal person).

[90] See the PPP Law at www.diputados.gob.mx/LeyesBiblio/pdf/LAPP_210416.pdf, regulations under the PPP law at http://www.diputados.gob.mx/LeyesBiblio/regley/Reg_LAPP_200217.pdf, manual https://www.gob.mx/shcp/documentos/manual-con-las-disposiciones-para-determinar-la-rentabilidad-social-y-la-conveniencia-de-llevar-a-cabo-un-proyecto-app, guidelines at http://www.dof.gob.mx/nota_detalle.php?codigo=5382830&fecha=20/02/2015 and

appraisals and value-for-money tests that projects must undergo before they are accepted for financing.

107. Substantial information is published on PPP projects. Mexico has a PPP program which has been growing recently. To date, 22 PPP projects with a total value of 41.5 billion MXN have been authorized by the government, that will strengthen infrastructure in the transportation, health, safety and water sectors. The SHCP indicated that, in principle, all risks associated with PPPs are shared with the private sector, that there are no explicit guarantees, and that all PPP contracts are published and summarize the government's right and obligations. See list of recent PPPs in Table 3.5. While the current regulations put much emphasis on the need for robust economic analysis of potential PPP projects, and their associated risks, it is not clear that the federal government has sufficient capacity to comply with these requirements. For example, in the case of the transport sector, many estimates made by the federal government in the last ten years of the volume of traffic were inaccurate, which had implications for the economic, financial and technical viability of some proposed PPP projects.[91]

108. There is a quantitative limit on the flow of new PPP obligations, and hence on the stock of accumulated obligations.[92] The SHCP includes in the budget an estimate of the maximum annual amount of payments for PPP projects from budgetary resources that are required to meet commitments for new PPP projects that sponsoring ministries intend to initiate during the next fiscal year, or those already authorized. The current ceiling on such payments is one percent of total programmable expenditure in the budget, but may vary from year to year. The SHCP makes some projections of the budgetary impact of PPPs obligations over the medium term.

109. The transparency and accountability of PPPs have improved with the revised regulations. Information about PPPs is published by the respective sponsoring ministry, and on the SHCP's transparency portal. Information on all approved PPP projects, as well as those under review, is also included in the SHCP's quarterly reports submitted to the Congress. This information includes the name of the private sector counterpart, the contract term, the total investment amount, other financial data, and the schedule of payments by the government. Unsolicited PPP proposals may be accepted by the government but the regulations require that they must be linked to national policy objectives, are subject to risk analysis, and be disclosed. In addition, the annual payment commitments for PPP projects have also been disclosed for the period between 2017 and 2023 in the Criterios Generales.[93] For 2018, the payment commitments for PPPs under execution and operation are estimated at 7.7 thousands of million MXN.

110. PIDIREGAS' annual payment commitments are also disclosed in Criterios Generales for the period between 2017 and 2023. Until 2007, PEMEX and CFE could invest with off balance sheet

[91] Sandoval (2016), Corruption and Organizational Challenges in a World of Public-Private Partnerships, Gestion Politica Publica, Volume 25, http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-10792016000200365
[92] See Article 32 of the PPP Law http://www.diputados.gob.mx/LeyesBiblio/pdf/LAPP_210416.pdf http://www.ppef.hacienda.gob.mx/work/models/PPEF2017/paquete/egresos/Proyecto_Decreto.pdf
[93] See Criterios Generales (2018), page 97.

debt under the umbrella of a project financing mechanism known as PIDIREGAS.[94] This financing mechanism came to an end in December 2006, when a cap was put on PIDIREGAS debt. Following this first measure, and amid concerns over the growing debt obligations of PEMEX, the Mexican Congress, in October 2008, unanimously approved amendments to the federal budget and Fiscal Responsibility Law that limited PEMEX's participation in the Deferred Impact Status Projects or PIDIREGAS.[95] There are two types of PIDIREGAS and the government discloses estimates of annual payment obligations for both PIDIREGAS: (i) direct; (ii) and conditional.[96] The government discloses estimates for direct and conditional PIDIREGAS of which the annual payments for 2018 are estimated at 71 and 92 billion of MXN respectively.

Table 3.5. Total investment in PPPs

Sector	Subsector	Responsible Unit	Number of Projects	Total Amount Investment (million pesos)	Average Contract Term	Stage of Projects
Communications and Transports	Highway Development	SCT	1	954.3	30	Construction
	Highway Conservation		10	21,911.1	10	Construction/ Recruiment
Health	Health	IMSS	4	7,188.3	25	Construction/ Recruiment
		ISSSTE	5	6,621.8	25	Construction/ Recruitment
Environmental	Water	CONAGUA	1	1,350.7	20	Bidding Process
Security	Security	SEGOB	1	3,521.8	20	Bidding Process
Total			**22**	**41,548.1**		

Source: Authorities

[94] On December 21, 1995, the Article 18 of the Public Debt Law (Public Debt Law) and the Article 30 of the Abrogated Federal Public Budgetary, Accounting, and Expenditures Law (FPBAEL) were amended to create a new category of long-term contingent public debt to support priority infrastructure projects that would generate revenue for their own funding, creating the Deferred Impact Status Projects of PIDIREGAS – Proyectos de Infraestructura Productiva de Largo Plazo (PIDIREGAS).

[95] Because of these amendments, PEMEX's existing PIDIREGAS commitments are now considered direct public debt rather than contingent debt obligations. Also, PEMEX is not permitted to undertake further PIDIREGAS authorizations and projects.

[96] Under the direct investment PIDIREGAS, the private company finances and builds the plant, with no payment due from the public sector until completion. When the project is completed, it is delivered to the public sector, which then pays the contracted obligations, using the revenue flows generated from the project. While recording of the financial transaction takes place when payments actually start, the PSBR records the resources involved (i.e., an estimation of the financial requirement during the year). Under the conditional investment, mainly in the power sector, the government acquires the plant only if some previously identified eventuality occurs. Under these projects, the government guarantees the purchase of electric power during the plant's life; it assumes the risk of the investment and should record the investment as a contingent liability.

3.2.5	Financial Sector Exposure	Good

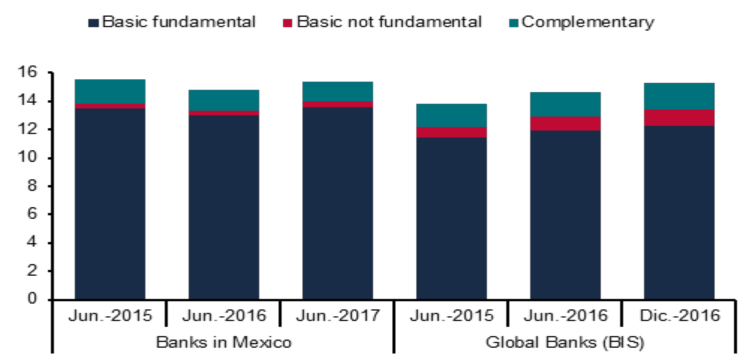
111. The Mexican financial System remains well-capitalized and has adequate levels of liquidity, and government support to the financial sector is quantified and disclosed. The fiscal risks created by banks are, as in many countries, among the most important. In December 2016, the aggregate liabilities of government controlled financial institutions exceed 10 percent of GDP (see Table 0.2). As noted in Section 3.2.3 (paragraph 105), information on the two main sources of government support to the financial sector (deposit insurance and development banks) is quantified and disclosed. The strength of the Mexican financial system results from improvements in its regulation and supervision since the banking crisis of 1995. These changes allowed credit institutions to face the global crisis of 2008-2009 and the most recent episodes of volatility with high levels of capital. The Financial System Stability Council recently reported that the country has implemented the Basel III reforms, which contribute to a greater resilience of Mexican financial institutions. The Bank of Mexico's comprehensive, twice-yearly reports on financial stability present numerous indicators of the soundness of the financial sector, including the results of stress tests that estimate the effect of various shocks on banks' finances.[97] The central bank's and the National Commission of Banking and Securities Commission (CNBV) websites include comprehensive, timely, and easily-accessed data on banks' finances. Management of the fiscal risks created by banks, including mechanisms for the resolution of any crisis, warrants closer coordinated attention by the Bank of Mexico and the SHCP—recognizing that the central bank has the expertise to monitor the risks, but the SHCP must manage the fiscal consequences of possible problems, notably for the development banks.

112. The Bank of Mexico thoroughly analyzes and monitors the banking sector. Bank supervision is performed by the CNBV, and private and development banks' capital exceeds regulatory minimums (See Figure 3.7 for comparison of Mexico's with Global banks integration of Regulatory Capital). The 2016 FSAP noted that the financial system was resilient, and the central bank recently concluded that "the solvency of the banking system remained at a high level in the second half of 2017." Banks' capital ratios exceed regulatory requirements for both private-sector banks and the publicly-owned development banks as noted in various reports. Nevertheless, although there is an overall robust regulatory regime for the banking sector, fiscal risks remain with the development banks.[98]

[97] See Bank of Mexico's Report on the Financial System, October 2017.

[98] There are six development banks, namely: (i) Nacional Financiera, S.N.C (NAFIN); (ii) Banco Nacional de Obras y Servicios Publicos, S,N.C.(Banobras); (iii) Banco Nacional del Comercio Exterior, S.N.C.(Bancomext); (iv) Sociedad Hipotecaria Federal, S.N.C (SHF); (v) Banco del Ahorro Nacional y Servicios Financieros, S.N.C (Bansefi): and (vi) Banco Nacional del Ejercito, Fuerza Aérea y Armada, S.N.C. (Banjercito).

Figure 3.7. Global and Mexican Banks: Integration of Regulatory Capital



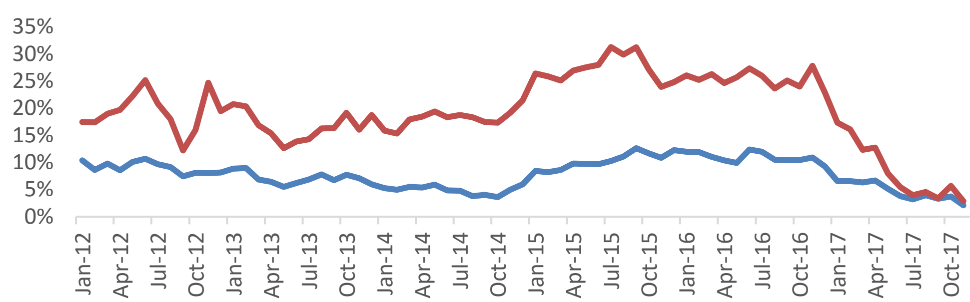
Source: Banco de Mexico (2017), Report on the Financial System 2017, page 30.

113. Fiscal risks from public development banks need to be closely monitored given their large size, and the exposure of the central government. The IMF Financial Stability Assessment Program (FSAP) carried out in 2016 noted the critical risks posed by these banks. They have aggregate liabilities of 860 billion MXN (4 percent of GDP in 2016), together with estimated contingent liabilities associated with induced credit of 177 billion MXN (0.8 percent of GDP). SHF and NAFIN are the development banks with the largest contingent liabilities (see Figure 3.10). It is necessary to ensure that the banks are leveraged on a sustainable basis while avoiding market distortions and crowding out of the private sector. (See Figure 3.8 on development banks' real credit growth). In addition, capitalization index regulatory minimums do not eliminate fiscal risks, and any large macroeconomic shock (e.g., from major changes to the Free Trade Agreement with the U.S, and Canada) could create increasingly severe problems for many entities that borrow from the development banks (e.g., Bancomext). CNBV reported that stress tests are done frequently to assess the resilience of the development banks, but such tests are not conducted by the central bank. It would also be useful for the Central Bank and the CNBV to test the impact of macroeconomic shocks on the development banks' profit.

114. Using the development banks to carry out government policies currently does not generate fiscal risks. On one hand, development banks carry out public policy obligations determined by Mexico's national development plan. The goal set in the 2013-2018 plan is to reach 7.9 per cent of GDP for the total of direct and impulsed credit that encompass induced credit (guarantees and loans granted by private financial intermediaries guaranteed by development banks) and the holding of securitizations and the venture capital granted to the private sector by the development banks. On the other hand, financial reforms undertaken by the authorities, as published in the Federal Official Gazette on January 10, 2014, enhanced the public service mandate of the development banks in order to provide access to credit to those who have financing needs. These two measures explain the development banks' credit expansion without depending on budgetary support. Figure 3.9.a shows aggregated assets of development banks with risk exposure and their capitalization index that exceeds 16 percent, more than double of the regulatory minimums. Figure 3.9.b shows individual development banks' assets with credit risks. This figure reflects important increases in individual development banks' assets with credit risks during the period between June 2014 and June 2017 (e.g., 92 percent in Bancomext, 71 percent in Banjercito, 84 percent in Nafin, and 138 percent in Bansefi).

115. The main fiscal risks associated with development banks are derived from potential direct loans default and realization of guarantees. In June 2017, the balance of direct loans amounted 1,012 billion MXN, which accounted for 4.9 per cent of GDP. The guaranteed portfolio, the securitized mortgage (without considering the exposed balance of the intermediary) and capital risk were 294 billion MXN, equivalent to 1.4 per cent of GDP. Box 3.3 (Figure 3.11) shows aggregated and individual development banks' direct credit by sector (i.e., government, private sector, and the intermediary agent). Figure 3.12 shows that the direct credit to governments has increased substantially in several development banks during the period between June 2014 and June 2017 (e.g., 226 percent in Bancomext; and 155 percent in NAFIN). Also, this Figure reflects an important increase of direct credit to the private sector in Bansefi (415 percent). While current risks associated with development banks appear to be very limited, the fiscal risks associated with direct loans defaults and realization of guarantees could materialize in case of any potential macroeconomic shocks to the economy.

Figure 3.8. Multiple and Development Banks: Real Credit Growth (2012-2017)



Sources: CNBV and FAD staff estimates

Figure 3.9. a. Development Banks: Aggregated Assets with Credit Risks (in MXN)

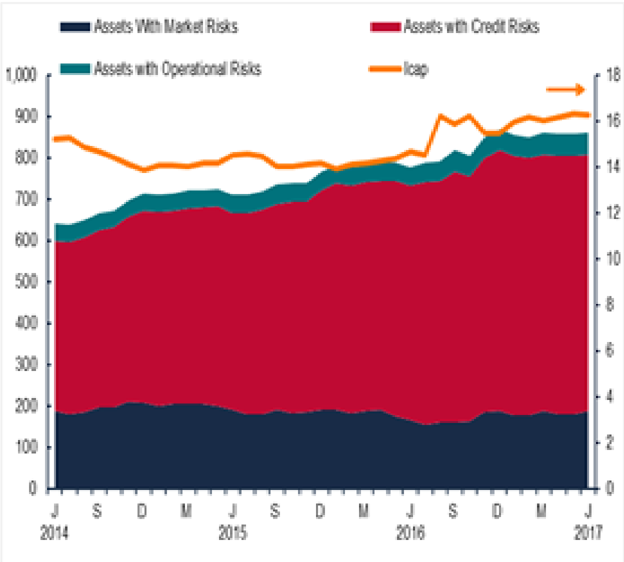
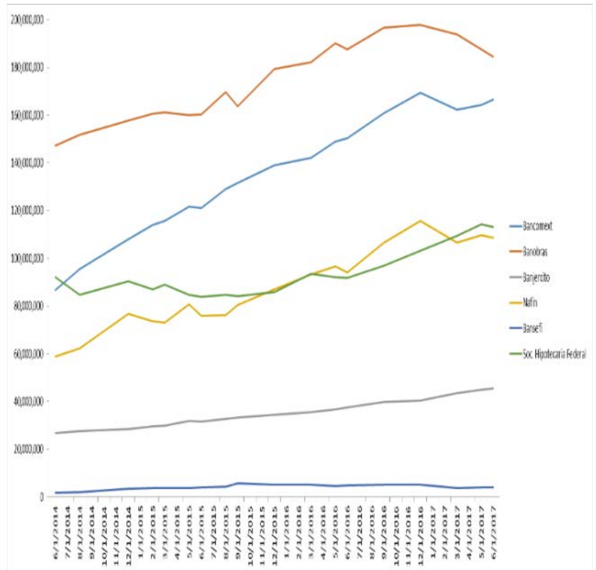
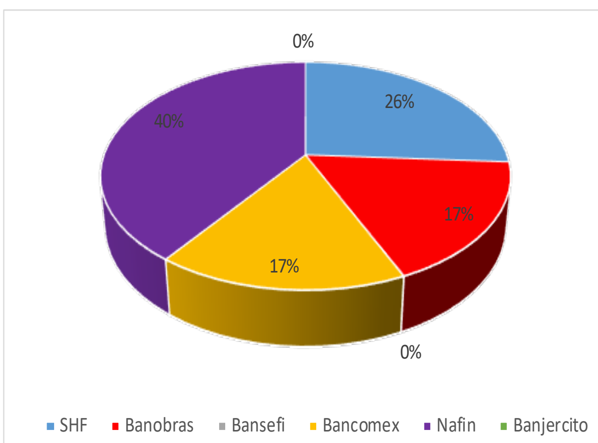


Figure 3.9. b. Individual Development Banks Assets with Credit Risks (in MXN)



Source: Banco de Mexico (2017)

Figure 3.10. Development Banks: Capitalization Index Contingent Liabilities (2017)



*S*ource: CNBV and FAD staff estimates.

Box 3.3. Development Banks: Direct Credit by Sector, 2014-2017, (Million MXN)

Figure 3.11. Development Banks: Aggregated Direct Credit by Sector, 2014-2017, (Million MXN)

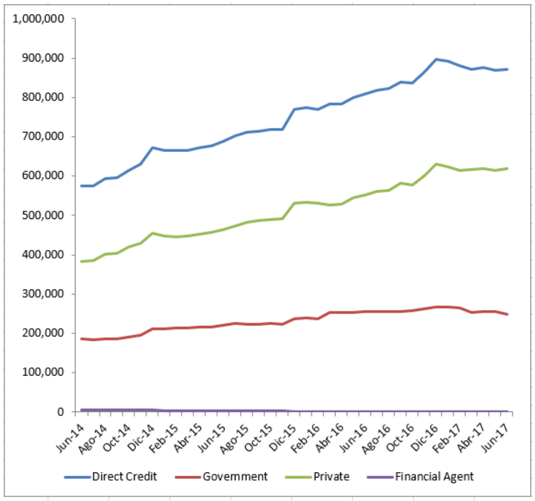
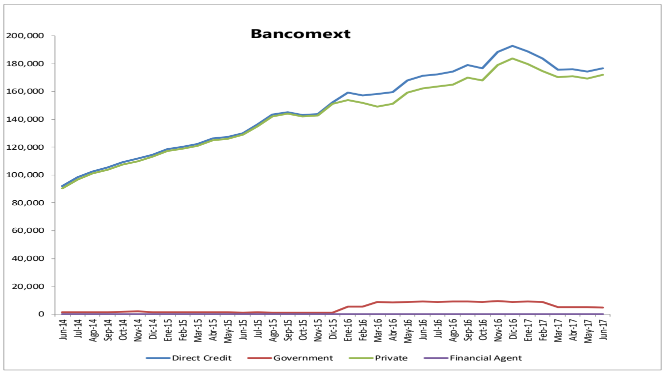
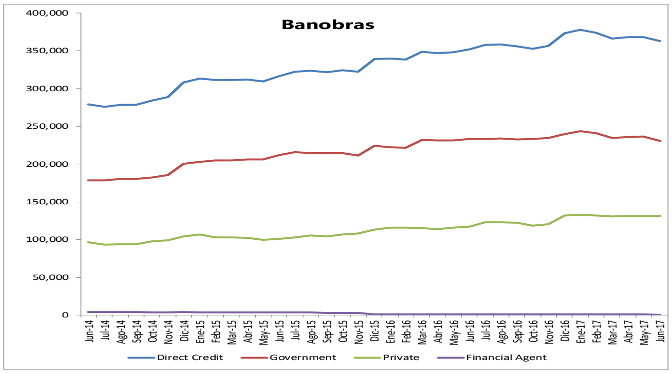
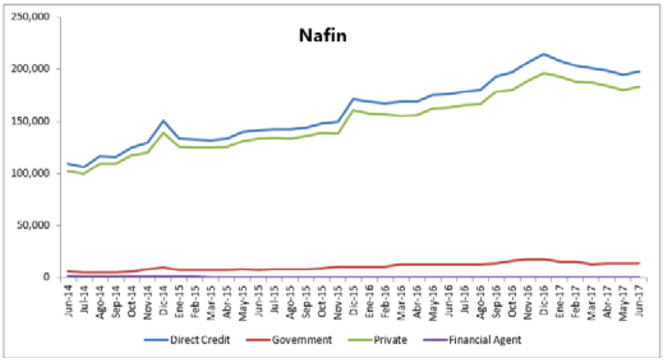
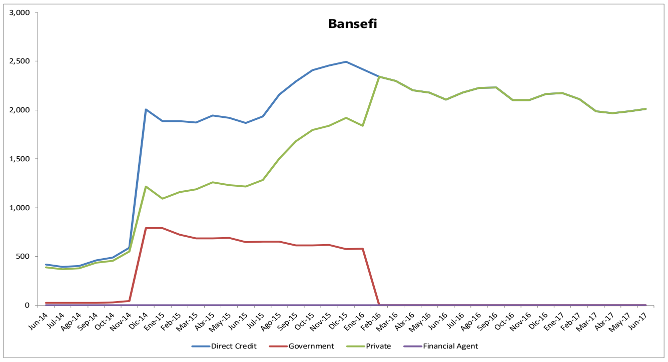


Figure 3.12. Individual Development Banks: Direct Credit by Sector, 2014-2017, (Million MXN)

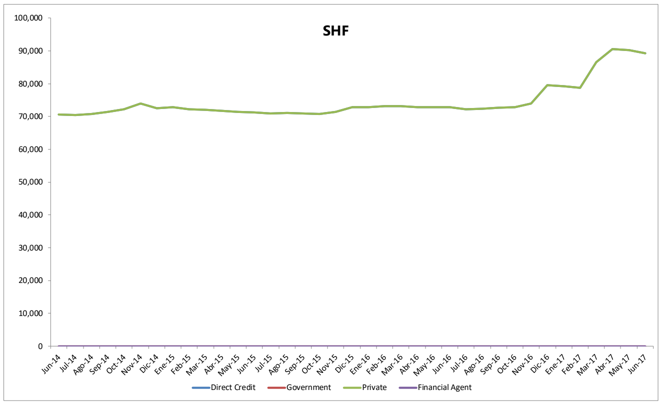


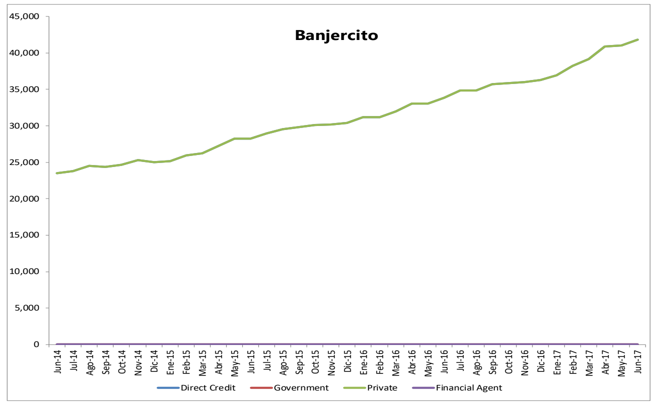






Box 3.3. Development Banks: Direct Credit by Sector, 2014-2017, (Million MXN) [Concluded]





Source: Banco de Mexico 2017, IMF staff estimates

3.2.6	Natural Resources	Basic

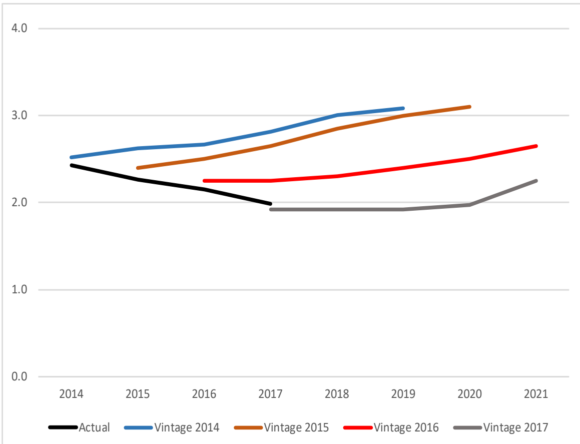
116. Oil and gas production is an important source of revenue for the government. Even though the economy has diversified away from reliance on the petroleum sector, petroleum revenue has accounted on average for one-third of federal public sector revenues since the mid-1990s. In recent years, however, the share of petroleum revenues declined significantly, as oil production and prices dropped markedly, and non-oil revenues increased. In 2015-16, the contribution of oil revenues to total revenues fell on average to 18 percent.

117. Medium-term projections of petroleum production can be quite uncertain, especially in situations of major structural change as in Mexico since 2014, and can sometimes reflect optimism. In 2014-17, the decline in production continued. This outcome contrasts with successive projections that saw production rising (Figure 3.13). But every year the base for the projections was revised down, reflecting a persistently lower production path for PEMEX and a slower pace of private investment in exploration and production. More recently the projections have been more conservative.

118. Developments in the petroleum sector in recent years vividly illustrate the effects of the materialization of oil-related risks on the public finances. PEMEX revenues tumbled from 10-11 percent of GDP in 2011-14 to 6 percent of GDP in 2015 as oil prices fell precipitously, and stayed at that level in the following years in the context of a gradual longer-term decline in production (Figure 3.14). This led to a fall in revenue to the Federal Government, as direct taxes paid by PEMEX fell by four percentage points of GDP. Reflecting the challenging conditions, PEMEX reduced its investment, as the company put in place measures to contain spending.

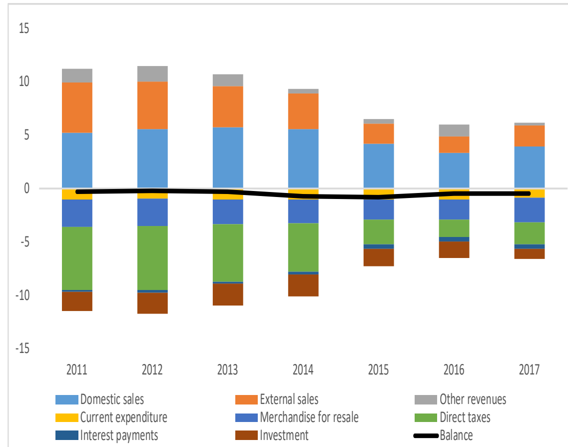
Mexico: Oil Production Forecast Vintages and PEMEX Operations

Figure 3.13. Oil Production Forecast Vintages (Millions of barrels a day)



Source: CNH; SHCP

Figure 3.14. PEMEX Operations, 2011-17 (Percent of GDP)



Source: PEMEX; and IMF staff calculations

119. Substantial information on developments in the oil and gas sector is provided. The *Comisión Nacional de Hidrocarburos* (National Hydrocarbons Commission, CNH), the *Secretaría de Energía* (Ministry of Energy, SENER), PEMEX, and the *Instituto Nacional de Estadística y Geografía* (National Statistics and Geography Institute, INEGI), publish regular statistics and analyses of various aspects of oil and gas production, prices, exports, imports, and domestic sales, including the volume and value of the previous year's sales. Information on fiscal petroleum revenues is provided in a number of annual, quarterly, and monthly reports produced by SHCP, PEMEX, and the *Fondo Mexicano del Petróleo* (FMP).

120. Statistics on the volume of oil and gas reserves are published on an annual basis and in the last few years have reflected the evolving nature of the sector following the energy reform. CNH and PEMEX publish a wide range of statistics on the volume of the reserves, classified according to their probabilities of recovery (see Box 3.4). Under the Constitution, all oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation. Until 2014, the national reserves estimates published by CNH corresponded to the reserves estimates produced by PEMEX, as the latter had monopoly rights on the exploration and production of all oil and gas assets. Following the Energy Reform, in December 2014 PEMEX was assigned rights through "Round Zero" corresponding to areas that together contained about 93 percent of Mexico's total proven reserves. Therefore, since 2015 the CNH estimates of Mexico's reserves have diverged from PEMEX data, as they also include reserves allocated to private contractors. All the estimates of reserves are externally audited by specialized petroleum companies.

Box 3.4. Mexico: Petroleum Reserves

PEMEX publishes annual externally-audited estimates of the volume of oil and gas reserves assigned to it using internationally accepted petroleum engineering and evaluation methods and procedures. The methods applied to estimate the proven (1P) reserves are based primarily on applicable U.S. Securities and Exchange Commission's (SEC's) regulations, the Society of Petroleum Engineers' (SPE) *Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information*, the *Petroleum Reserves Management System* (PRMS) issued by four international specialized associations, and other SPE publications. [99] The estimates prepared by PEMEX are certified through an internal review process, audited by three external independent engineering firms, and reviewed and approved by the CNH. PEMEX also publishes externally-audited audited estimates of 2P and 3P reserves based on internationally accepted SPE and World Petroleum Council methods and procedures.

CNH has issued detailed guidelines for the estimation and valuation of the reserves allocated to private operators, their certification by independent third parties, and their reporting to CNH. The operators must quantify on an annual basis the volume of reserves (broken down into 1P, 2P, and 3P) in the areas assigned to them, using PRMS methods. The reserves must be certified by an independent third party registered with the CNH. They must be valued according to standardized NPV methods.

PEMEX publishes information on the estimated NPV of the proven oil and gas reserves it has been assigned for exploitation. The notes to PEMEX's consolidated financial statements in its annual reports to the SEC and in its Annual Reports set out an estimate of the discounted future net cash flow from the exploitation of proven oil and gas reserves (1P) until a given year (in 2016, the horizon extended to 2042). Future cash inflows from sales and outflows from production and development costs are estimated, yielding estimated future net cash flows before tax. Net cash flows after tax are then arrived at by deducting future taxes assuming an unchanged fiscal regime. The estimated future cash inflows from production are computed by applying the actual average prices of oil and gas on the first day of each month of the year; the reserves are estimated at end-year. Unchanged future economic conditions are assumed. The cash flows are brought to NPV using a discount rate of 10 percent.

Source: CNH, PEMEX

121. Mexico's estimated oil and gas reserves had been on a declining trend before falling steeply in 2015-16. PEMEX experienced difficulties fully replacing the reserves depleted each year, with the proven reserve-replacement ratio (RRR) only occasionally reaching 100 percent over a number of years.[100] The yield from new fields on the whole disappointed expectations, and old fields, notably the large Cantarell field, are in their depletion phase. Natural gas production has also fallen, and Mexico has been a natural gas importer since 2002. Oil and gas reserves fell markedly in 2015-16, mainly due to sharply lower oil and gas prices, production not replaced by additions to reserves,

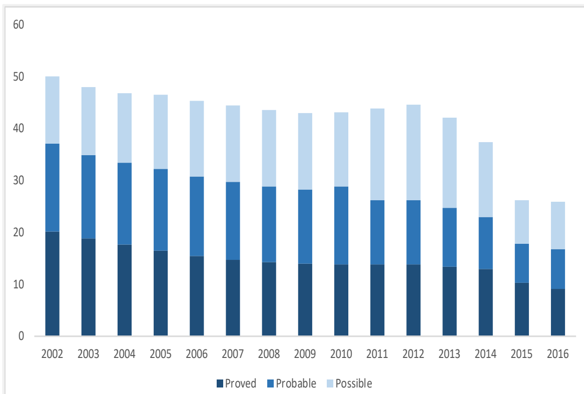
[99] Proven (1P) oil and natural gas reserves are those estimated quantities of crude oil, natural gas and natural gas liquids that geological and engineering data demonstrate with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods, and government regulations. Probable reserves are non-proven reserves where the analysis of geological and engineering data suggests that they are more likely to be commercially recoverable than not. 2P reserves comprise proven and probable reserves. Possible reserves are the hydrocarbon volume where the analysis of geological and engineering data suggests they are less likely to be commercially recoverable than probable reserves. 3P reserves comprise 2P reserves plus possible reserves. The probabilities of commercial recovery are at least 90 percent for proven reserves, between 50 percent and 90 percent for probable reserves, and between 10 percent and 50 percent for possible reserves.

[100] The proven RRR is a key statistic that indicates how much of the production in a given year is replaced by additions to proven reserves. A RRR of 100 percent keeps the level of proven reserves constant.

a reduction in field development activities, and field behavior (Figure 3.15).[101] Proven oil reserves have thus declined to around 7 billion barrels, which at current production rates translates into a production horizon, or reserve/production (R/P) ratio of 9 years. Proven and probable reserves, at 13 billion barrels, have a R/P ratio of 16 years.

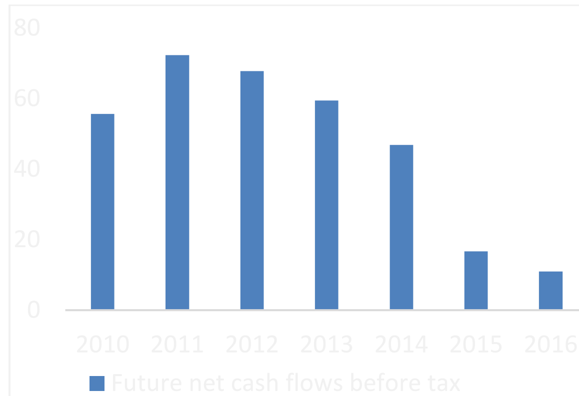
Mexico: Petroleum Reserves

Figure 3.15. Oil and Gas Reserves, 2002-2016 (Billion barrels of Oil Equivalent)



Source: PEMEX, CNH.
Note: Oil equivalent: Total of crude oil, condensate, plant liquids and dry gas equivalent to liquid.

Figure 3.16. Value of Proven Reserves Assigned to PEMEX (Percent of GDP of Year of Estimate)



Source: PEMEX; and IMF staff calculations.
Note: NPV of PEMEX projected future cash inflows net of future production and development costs, before tax.

122. The annual estimates of the monetary value of the remaining reserves assigned to PEMEX for exploitation are very volatile and show a steep decline in recent years. The NPV of cash flows before tax in percent of the GDP of the year the estimate was made fluctuated between 60 and 70 percent of GDP in 2011-13 before falling steeply to 11-17 percent of GDP in 2015-16 (Figure 3.16). In monetary terms, the estimated net value of the reserves fell from US$750 billion in 2013 to US$115 billion in 2016. This development largely reflected the fall in international oil prices, and to some extent the assignment of some reserves, on the order of less than 10 percent of the total, to private contractors**.**

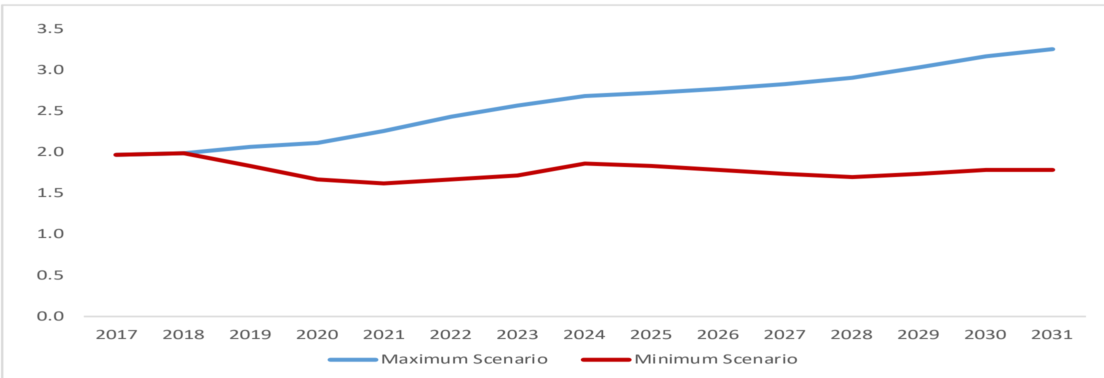
123. Intensified exploration activity following the energy reform should result in improved oil reserve prospects. Joint ventures with international exploration firms will allow PEMEX to reach areas that require large investments and advanced technologies. Some significant discoveries have recently been made.

124. Long-term volume projections for oil and gas are published every year. The latest projections, published by the *Secretaría de Energía* (Ministry of Energy, SENER) in 2017, cover the

[101] Proven oil reserves are a function of oil prices and available technology. A fall in oil prices affects the volume of proven reserves. Oil resources previously classified as proven reserves at higher oil prices are declassified if lower oil prices render them uneconomical to produce with available technology.

period 2017-31. The projections for crude oil include two scenarios with annual projections for oil production: a "minimum" scenario comprising exploration and extraction of 2P reserves, and a "maximum" scenario where 3P reserves are explored and extracted (Figure 3.17).

Figure 3.17. Mexico: Crude Oil Production Scenarios, 2017-2031
(Million barrels a day)



Source: SENER.

Note: Maximum scenario: extraction and exploration of reserves 3P. Minimum scenario: extraction and exploration of reserves 2P.

125. **It would be important to complete the valuation of petroleum reserves and include them in public sector assets and liabilities.** The bulk of Mexico's reserves is already valued by PEMEX, and the estimate could be reproduced in other official documents and included in public sector assets and liabilities with appropriate qualifications (see Section 1.1.2). Moreover, the calculation of total oil and gas asset worth is feasible with current information. As a first step, CNH could aggregate the monetary reserve estimates provided by the contractors and add them to the PEMEX estimates to derive an estimate of the monetary value of the nation's proven reserves. At a later stage, or alternatively, the reserves valuation methodology in the UN's System of Environmental-Economic Accounts for Energy could be implemented. The estimates should be published in budget documents. The high level of uncertainty associated with such estimates, including measurement difficulties and volatility and uncertainty over physical volumes and prices, should be noted.

3.2.7	**Environmental Risks**	**Basic**

126. **Mexico has become increasingly vulnerable to natural hazards.** Population growth and the concentration of physical assets in environmentally risky areas are leading to increased exposure to adverse natural events. Unplanned and unregulated land use, lack of environmental controls, and poor building standards contribute significantly to asset losses. These trends are likely to continue and, together with a changing climate and increased climatic variability, are expected to result in a rising number of disasters. Mexico is considered one of the world's most exposed countries to three

or more types of natural hazard. Around 41 percent of Mexico's territory and 31 percent of its population are exposed to hurricanes, storms, floods, earthquakes, and volcanic eruptions. The 2017 edition of the *World Risk Report* ranked Mexico the 94th out of 171 countries most at risk from natural disasters and, according to the International Disaster Database, EM-DATA, Mexico also ranks high in terms of the annual cost of damages from natural disasters (Figure 3.18).[102]

127. The government publishes qualitative information on the risk of natural disasters, but only limited quantitative information. Since 2007, the Natural Disaster Relief Fund (FONDEN) designed and implemented a catastrophe risk model for financial decision-making called R-FONDEN. This model offers scenario-based as well as probabilistic analysis at national, state, and sub-state levels for the four major categories of natural disaster noted above. It focuses on economic and social infrastructure in five key sectors: education, health, roads, the hydraulic sector, and low-income housing. R-FONDEN takes as input a detailed exposure database (including extensive data on buildings, roads, and other public assets) and generates estimates of the annual expected loss from natural disasters, as well as the probable maximum loss (PML). The model is currently used by the SHCP, in combination with an actuarial analysis of historic loss data, to monitor the disaster risk exposure on FONDEN's portfolio and to design risk transfer strategies. Most of this information is not publicly available.

128. Extensive Information is available on the national disaster risks financing strategy. The GCEP provides information on the government's policies for mitigating natural disasters. For 2017, the cost of natural disasters (equivalent to about 0.25 percent of GDP)[103] was more than double the estimated losses based on probabilistic calculations made by the authorities (0.1 percent of GDP)[104] (See Table 3.6 for the authorities' estimates for Natural Disaster Exposure and Expected Annual Loss). FONDEN has evolved into one of the cornerstones of Mexico's integrated disaster risk management strategy. Other sources of financial support include the contingency reserve in the budget (see Section 3.2.1); the FOPREDEN Program for Natural Disaster Prevention; and the Emergency Relief Fund, which covers activities immediately before or after a disaster occurs. To manage volatility, the government has enabled the FONDEN Trust to pay premiums and receive loss payments from risk transfer instruments. Mexico's first catastrophe bond was issued in 2006, followed by renewals in 2009, 2012, 2017 and 2018, and an indemnity-based insurance for FONDEN losses since 2011 and renewed annually. In 2017, the government renewed this insurance (coverage up to 5,000 million MXN) and renewed the Catastrophic Bond issued by the World Bank (coverage up to 360 million USD).

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[102] https://reliefweb.int/report/world/world-risk-report-2017.

[103] This cost estimate relates to claims made by states and sectors, and could change upon further review.

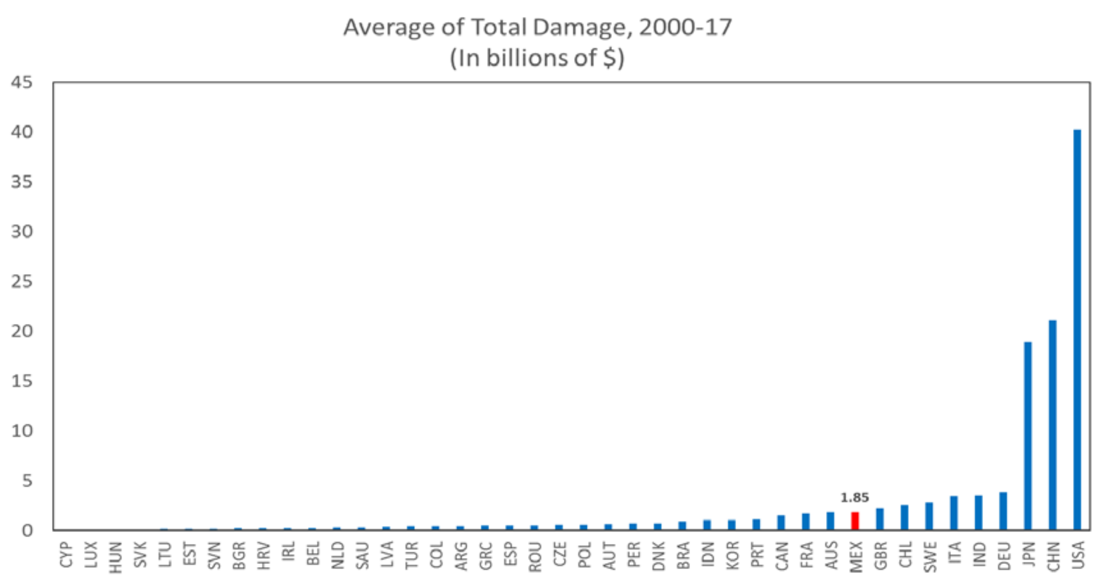
[104] This estimate accounts for the losses of the Federal Government related to federal and sub-national infrastructure (See note 2 to Table 3.3).

Table 3.6. Mexico: Natural Disaster Exposure and Expected Annual Loss (in Million MXN)

Sector	Exposure	Average Annual Loss	Probable Maximum Loss 95%	PML99%
Health	77,010	278	435	1,303
Education	419,846	1,103	1,902	6,164
Social Development	604,485	1,866	3,105	7,966
Hydraulic Sector	286,785	2,223	520	1,197
Roads	1,399,957	1,137	1,706	6,295
Total	**2,788,083**	**6,606**	**7,667**	**22,926**

Source: Authorities
Note: Exposure refers to the estimated amount of the infrastructure value. Average Annual Loss refers to the average loss during a year. Probable Maximum Loss (PML) is defined as the estimate of the size of the loss that will exceed a certain rate of occurrence in a portfolio subject to certain catastrophic events. In this table, it is associated with events whose return periods are 20 and 100 years, respectively.

Figure 3.18. Countries' Average of Total Damage, 2000-2017



Source: The International Disaster Database, EM-DAT

3.3 Fiscal Coordination

3.3.1	Sub-national Governments	Basic

129. Sub-national governments (SNGs) constitute a substantial part of the public sector, and their total expenditure represents about 11 percent of GDP.[105] Financial information on the states is published annually and quarterly, but similar data for municipalities (a much smaller sector) are not disclosed. Subnational debt as a ratio of GDP was about 3 percent of GDP at the end of 2016 (see Figure 3.20 for comparison of Mexico's sub-national governments debt with selected countries' sub-national liabilities), of which the states' share was about two-thirds, and municipalities about one-fifth. According to information from the Single Public Registry of SHCP, which is published, the balance of the financial obligations of the states increased from 116 billion MXN at the end of 2002 to 560 billion MXN in the third quarter of 2017. Data on government transfers to SNGs are published in the SHCP's quarterly reports.

130. Sub-national borrowing and debt is controlled by law.[106] The Financial Discipline law along with the General Law of Government Accounting require SNGs to publish quarterly information on their finances.[107] Data on the debt position and financial performance indicators of the states is published quarterly in their websites. The SHCP has made a lot of progress in aggregating states' debt data. Following the approval of the Financial Discipline Law, the SHCP has put in place an early-warning system, which monitors states' debt and financial obligations. The amount of subnational debt, which amounts to 560 billion pesos as of the third quarter of 2017, is distributed by type of creditor in the following manner: multiple banking (60.1 percent); the development banks (22.1 percent); bonds (15.8 percent); and trusts (2.0 percent). The total debt balance amounts are distributed among the states in a heterogeneous way, being the most indebted in absolute terms, Ciudad de México, Nuevo León, Chihuahua, el Estado de México, and Veracruz. In the case of debt balances, the type of borrowers are governments of the Federal Entities (84.8 percent); Municipalities, with financial obligations (8.1 percent); State Public Entities (6.0 percent); and

[105] Mexico comprises 32 states, 2,457 municipalities, and other local authorities.

[106] See Article 46 of the Financial Discipline Law for SNGs: http://disciplinafinanciera.hacienda.gob.mx/

[107] See the Financial Discipline law at http://disciplinafinanciera.hacienda.gob.mx/work/models/DISCIPLINA_FINANCIERA/Documentos/Normatividad/LDF.pdf; http://www.dof.gob.mx/nota_detalle.php?codigo=5511684&fecha=30/01/2018;General Law of Accounts http://www.diputados.gob.mx/LeyesBiblio/pdf/LGCG_300118.pdf; criteria for disclosing information at CONAC: http://www.conac.gob.mx/work/models/CONAC/normatividad/CLDF_01_01_001.pdf; Regulations for the public register of SNGs Financing and Liabilities. http://disciplinafinanciera.hacienda.gob.mx/work/models/DISCIPLINA_FINANCIERA/Documentos/Normatividad/RRPU.pdf; Public Register: http://172.22.75.89/es/DISCIPLINA_FINANCIERA/2017; Regulations for the Early Warning System: http://disciplinafinanciera.hacienda.gob.mx/work/models/DISCIPLINA_FINANCIERA/Documentos/Normatividad/Reglamento%20del%20Sistema%20de%20Alertas.pdf; For Information data on the Warning System; http://172.22.75.89/es/DISCIPLINA_FINANCIERA/2017SA

Municipal Public Entities (1.1 percent). Figure 3.19 shows consolidated financial indicators and debt in percent of GDP for Mexican States. The ratios show constant for the last 4 years which raises questions about the quality of data.

131. The SHCP has recently established an "Early Warning System" for monitoring the debt and financial obligations of states, and eventually the municipalities.[108] The system requires each state to provide quarterly information on various financial indicators to a public registry. These indicators are: (i) the ratio of public debt and other obligations to non-earmarked revenues; (ii) the ratio of debt service and other obligations to non-earmarked revenues; and (iii) and the ratio of short-term obligations to suppliers/ contractors to total revenues. The system also incorporates other sources of financial information published by the states and the federal government. The Early Warning System classifies states into three broad categories: (i) those for which the level of debt is regarded as sustainable (Green); (ii) those which are under observation (Yellow); and (iii) those which have a high level of indebtedness, and may require remedial action (Red).[109] At present, the SHCP noted that only one state was in the "Red" category. However, it is not clear what powers the federal government has to require states to take remedial measures when they are highly indebted, or what such measures would comprise.

132. At the municipal level, indicators of financial performance and debt are not yet available, but borrowing is also controlled by law.[110] The SHCP will finalize the implementation of the early-warning system for municipalities in 2018. It is important to mention that the SHCP attempted to publish a first informative evaluation for the municipalities, however, this exercise was invalidated because of the Fiscal Discipline Law reform establishes that the first evaluation of municipalities' debt according to the "Warning System" will be published during 2018.

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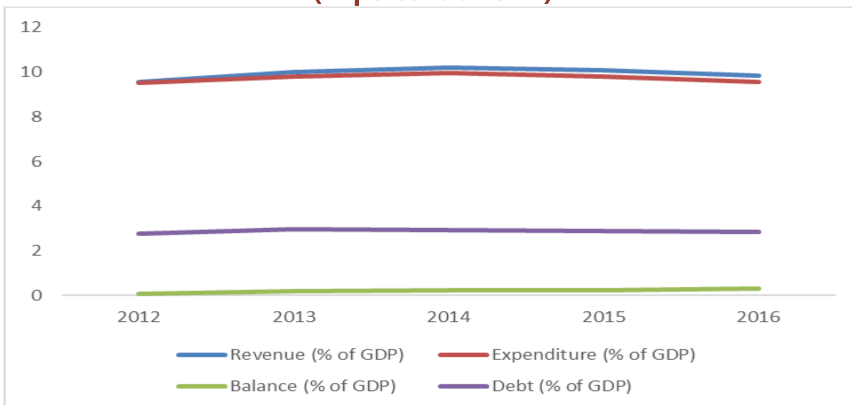
[108] It is important to note that a part of the expenditures on federal transfers to SNGs and SNGs' performance indicators are available both in the quarterly reports and the Transparency Portal (http://www.transparenciapresupuestaria.gob.mx/es/PTP/EntidadesFederativas and http://www.transparenciapresupuestaria.gob.mx/es/PTP/Datos_Abiertos). In addition, art. 80 of LGCG also mandates the SHCP to conduct an evaluation of the implementation of Performance Based Budgeting, both at the state and municipal levels, and to provide this information to the federal legislature. The evaluations have been conducted since 2010. Comparable data is available for 2016, 2017 and 2018 (as a different methodology was followed before 2016). The information on these evaluations is publicly available at http://www.transparenciapresupuestaria.gob.mx/es/PTP/EntidadesFederativas#DiagnosticoPbR-SED.

[109] For the three indicators, the following values apply respectively: Green equals <=100%, <=7.5%, <=7.5%; Yellow equals <=200%, <=15%, <=12.5%; and Red equals >200%, >15%, >12.5%.

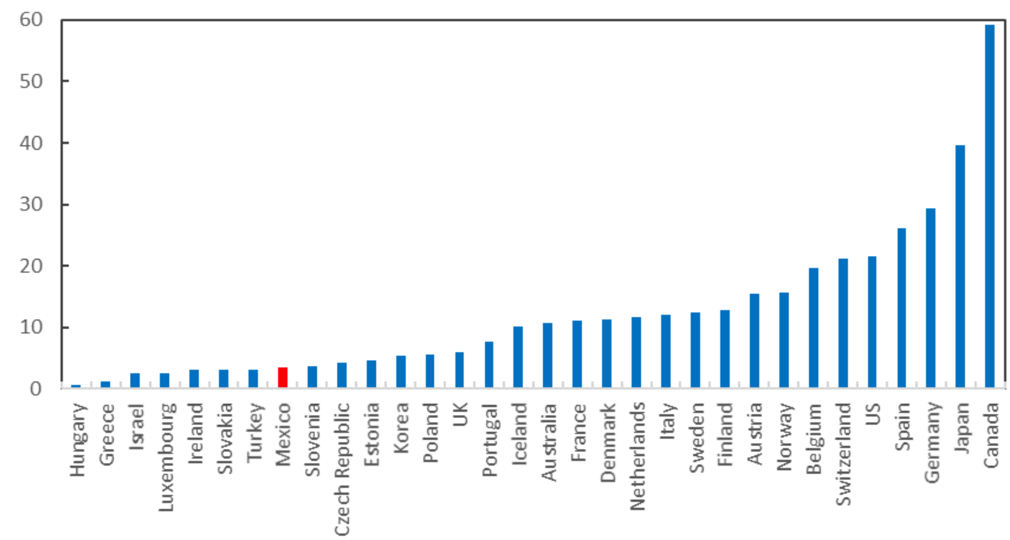
[110] See Secretaría de Hacienda y Crédito Público, Disciplina Financiera de Entidades Federativas y Municipios. Disponible en: http://disciplinafinanciera.hacienda.gob.mx/

Figure 3.19. Consolidated Financial Indicators and Debt for Mexican States (2012-2016) (in percent of GDP)



Source: INEGI, FAD staff estimates

Figure 3.20: Liabilities of Subnational Governments[1] (Percent of GDP)



Source: OECD Fiscal Decentralization Database
1/Mexico's sub-national governments' debt estimates are for 2016. For other countries, estimates refer to 2013-2014

3.3.2	**Public corporations**	**Basic**

133. Public corporations in Mexico are treated as part of the organizational structure of the government, not as a separate class of corporate entities, as defined by the IMF's *Government Finance Statistics Manual (GFSM)* 2014.[111] According to the *GFSM,* public corporations (PCs) are

[111] While the parastatal entities in Mexico constitute a separate class of entities with corporate identity, there is no differentiated treatment for public corporations compared to other parastatal entities (which act as governmental

defined as "entities that are capable of generating a profit or other financial gain for the owners, are recognized by law as separate legal entities from their owners, and are set up for the purposes of engaging in market production."[112] A public corporation must also be controlled by the government, several different definitions of "control" being set out in *GFSM 2014*.

134. A clear definition of PCs in line with international standard is not currently used in Mexico, but estimates presented earlier in this report suggests that the overall size of this sector is substantial. These estimates show that there are approximately 49 nonfinancial public corporations and 19 financial public corporations, with revenues equivalent to, respectively, 9.9 percent and 1.5 percent of GDP, and total liabilities of 23.3 percent and 10.6 percent of GDP (Tables 0.2 and 1.2).

135. PCs are grouped together with some 200 parastatal organizations that include four different categories of entities[113]: (i) state-owned decentralized agencies, most of which are supervised by ministries, and carry out a range of functions such as the national lottery, social security institutions, postal service and hospitals; (ii) companies that are majority-owned by the government, many with a commercial orientation, such as ports operated at state-level; a salt distributing company; a federal printing company and a publishing company; film and TV studios; biological laboratories; and science and technology centers; (iii) public trust funds[114] discussed in Sections covering principles 1.1.1, 1.1.2, and 2.1.1; and (iv) state-owned productive companies, of which there are two main entities—the largest public enterprises in Mexico—the *Comisión Federal de Electricidad* (CFE), and PEMEX, and their subsidiaries.[115]

136. The list of parastatal organizations also includes six development banks and a decentralized agency (FND) which has similar functions. The development banks would qualify as public corporations under the GFSM definition. These banks—which account for about one-fifth of the credit operations of the banking sector[116]—have responsibility for specific sectors, such as agriculture and the rural economy, industry and SMEs, housing, and infrastructure development in states and municipalities.

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agencies) as they have not been established under a regulatory framework that reflects their commercial considerations and financial sustainability.

[112] GFSM 2014, paragraphs 2.31 and 2.107.

[113] SHCP, *Relación de Entitades Parastatales de la Administraceión Pública Federal*, August 2017.

[114] There are two categories of trust funds: (i) those with a defined administrative structure and staff ("organic" funds); and (ii) those which are essentially accounts held by ministries or other government entities ("non-organic" funds) and which essentially act as a conduit for processing transactions. Only "organic funds" are considered to be parastatal entities and hence PCs.

[115] There is also one parastatal which is in the process of disincorporation, the National Railway Company of Mexico.

[116] This share increased from about 17 percent in 2012 to 20 percent in 2017, excluding off-balance sheet operations.

137. The budgets of PEMEX and CFE, as well as the development banks are consolidated by the SHCP, and transfers from the budget to these entities are shown on a gross basis, except for PEMEX (see Section 2.1.1).[117] The public policy functions of these corporations are defined in their laws, and, in the case of the development banks, in the *National Development Financing Program 2013-2018*, which was published as part of Mexico's National Development Plan. Shares in the development banks are held by the SHCP. In the case of PEMEX and CFE, there are no shares but their ownership is vested with the Ministry of Energy, Ministry of Public Function and the SHCP, The SHCP also consolidates the annual budgets of both types of companies. The companies have quite well-defined corporate governance arrangements which include a board of management[118]—with representatives of the SHCP and other ministries on the main board as well as on the audit, credit and risk committees[119]—international accounting (IFRS) and auditing standards, and an internal audit regime that, in the case of the development banks, was substantially strengthened in 2014 with the creation of new audit committees. Because of its strong trading links with the U.S.A, and its issuance of bonds on the U.S. market, governance and reporting arrangements in PEMEX meets high international standards. The development banks are supervised by the Bank of Mexico and Mexico's National Banking Commission, and operate within a similar framework of macro-prudential requirements as the commercial banks. Both PEMEX and CFE are adapting elements of the government's performance information and evaluation system with the support of the SHCP (see Section 2.3.2).

138. No comprehensive framework for the corporate governance and financial management of public corporations has yet been developed. Within the list of parastatal organizations discussed above, the SHCP has identified a preliminary list of approximately 80-90 entities that meet the characteristics of a public corporation on the *GFSM* definition. The SHCP has begun the process of developing a classification of these entities according to their objectives and activities (commercial or institutional),[120] and drafting a common financial management framework under which they might be operate and be overseen by a unit in the SHCP. In line with international good practice,[121] such a framework could possibly include an ownership policy; corporate governance arrangement;

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[117] In the case of other public corporations, transfers are also recorded in the budget, and in quarterly reports.

[118] For example, according to PEMEX's annual report for 2016, the board of PEMEX includes the Secretary of SHCP and four other representatives of the government, four members with expertise in the oil business, and five representatives of PEMEX's workers' union.

[119] The Bank of Mexico is also represented on the main board, and the credit, risk and audit committees, of the development banks.

[120] SHCP have begun work to design the criteria for classification of parastatals, since Article 50, second paragraph, of the Organic Law of the Federal Public Administration, amended on June 18, 2016, establishes the mandate of the SHCP and the SFP to issue criteria for the classification of parastatal entities into those that fulfill an institutional function and those that perform commercial purposes and, once the classification has been carried out, initiate the process to establish mechanisms that make efficient their organization, operation, control and evaluation according to their objectives and activities.

[121] See R. Allen and M. Alves, "How to Improve the Financial Oversight of Public Corporations", IMF Fiscal Affairs Department, How to Notes, No. 5, November 2016. See https://www.imf.org/external/pubs/ft/.../howtonote1605.pdf

accounting and reporting requirements; performance management system; and rules for managing and reporting quasi-fiscal activities (QFAs)[122]. A report on the overall financial performance of the public corporation sector, including information on QFAs, should also be published.

3.4 Conclusions and Recommendations

139. Mexico faces diverse and significant fiscal risks. GDP and government revenue are relatively volatile. Petroleum revenues impart volatility to public finances and generate significant short-, medium-, and long-term risks. The public sector faces growing long-term pressures from the public pension system, and rising healthcare costs. In several instances, specific fiscal risks appear substantial and interconnected, and the country is exposed to large risks from natural disasters.

140. While Mexico has several strengths in managing fiscal risks, their analysis, disclosure, and mitigation strategies need to be enhanced further. In particular:

- Macroeconomic risk analysis is basic, and there is limited information on the long-term sustainability of public finances in budget documents.
- The analysis and management of specific fiscal risks remains diffuse across different institutions. The disclosure of specific risks is not comprehensive, and the relationship of these risks to fiscal forecasts is unclear.
- The budget includes an adequate and transparent allocation for contingencies that arise during the execution of the annual budget, notably for natural disasters.
- The analysis of risks surrounding non-debt liabilities and financial and non-financial assets is not publicly available.
- Substantial risks arise in the management of assets and liabilities relating to non-organic trust funds, and are largely undisclosed. The net worth of these funds represents about 3 percent of GDP.
- Guarantees provided by the federal government are substantial, but not fully disclosed.
- The transparency and accountability of PPPs have improved with the revised law and regulations, but there are concerns that the capacity of the federal government to implement the new regulations may be insufficient.
- The Mexican financial system is well-capitalized and has adequate levels of liquidity, but there are significant fiscal risks associated with the state-owned development banks—which comprise one-fifth of the banking sector—that are not fully analyzed and disclosed.

[122] Information on quasi-fiscal operations of public enterprises and development bank in Mexico is fragmented and limited. The mission was informed for example, that the development banks may be allocated funds from the state budget which are used to guarantee lending by counterpart commercial banks for the support of SMEs and other activities. A recent IMF study shows that electricity tariffs have been set at below cost-recovery levels and that these subsidies are not transparent—see B. Clements, et. al., *Energy Subsidy Reform: Lessons and Implications.* 2013 (Washington DC: IMF).

- The government quantifies the risks of natural disasters, which are well covered by budgetary contingencies and other financial support mechanisms, but little information on these risks is published.
- The sub-national government sector is substantial (11 percent of the GDP), and an early warning system has been put in place to monitor states' debt sustainability, but there are concerns about the reliability of data. The system needs to be rolled out to municipalities.

141. To strengthen its fiscal risk management practices, the government could consider taking the following actions.

- **Recommendation 3.1: The SHCP should strengthen its analysis of macroeconomic risks and incorporate other risks, which will serve to better determine the fiscal policy.**
    - The sensitivity analysis of the baseline medium-term macroeconomic framework in the GCEP should include larger shocks, and combined shocks such as a simultaneous reduction in economic growth and the oil price.
    - Alternative macroeconomic and fiscal scenarios should be presented. The analysis could discuss the channels through which the macroeconomic scenarios and specific risks are expected to impact the main revenue and expenditure items in the budget.
    - The analysis should be extended to include the impact of exogeneous shocks on fiscal outcomes, and the impact of combined macroeconomic and specific fiscal risk shocks.
- **Recommendation 3.2: The SHCP should prepare a summary report quantifying and disclosing the main specific fiscal risks.** The report should also include a strategy to manage the identified risks in coordination with key stakeholders. This can be done through the following steps:
    - Develop a clear methodology to identify and quantify the main specific risks (e.g., risks related to guarantees, lawsuits against the state, assets and liabilities, development banks, states and municipalities, PPPs, and public corporations).
    - Develop a clear strategy and policy to mitigate these risks in consultation with relevant stakeholders.
    - Establish a risk management unit within the SHCP, with the responsibility to prepare and publish summary reports on specific risks, and monitor the implementation of the strategy.
- **Recommendation 3.3: The SHCP should establish a comprehensive framework for the financial governance and oversight of non-financial public corporations, apart from PEMEX and CFE which already have their own corporate governance and financial supervision regimes.**[123] This reform could include the following main elements and be implemented over a period of 2-3 years:

[123] These regimes for PEMEX and CFE are derived from the 2013 Energy Reform.

- Establish a list of non-financial public corporations (from the SHCP's set of about 200 parastatal organizations) that complies with the *GFSM* definition, namely commercial entities selling goods and services in the market, and controlled by the government.
- Develop a framework for the financial oversight of these companies which would include *inter alia* an ownership policy, a corporate governance framework, procedures for financial reporting based on key performance targets, publication of quarterly and annual performance reports, and the analysis and reporting of QFAs.
- Publish a consolidated report of non-financial and financial public corporations in the budget documents, and SHCP's quarterly reports.
- Set up a unit in the SHCP responsible for implementing and enforcing the financial oversight regime, and for developing a monitoring system that provides early warning if any corporation is under-performing or in financial difficulties.
- Enact modifications to the LFPRH and operational regulations, as required, to implement the new arrangements.

Other recommendation:

- Budget document and other policy statements should include long term projections for the public finances, which could be updated every few years.

Table 3.7 summarizes the assessment of the fiscal risk analysis and management practices.

Table 3.7. Pillar III: Summary Assessment of Fiscal Risk Analysis and Management Practices

	Principle	Assessment	Importance	Rec
Risk Disclosure and Analysis	**3.1.1 Macro-economic risks**	**Basic:** Limited use of sensitivity analysis or stochastic analysis. No alternative macroeconomic scenarios are presented.	**High:** Volatile petroleum revenue and other macroeconomic risks increase uncertainty of public finance outcomes.	x
	3.1.2 Specific Fiscal Risks	**Basic:** Not all specific risks are disclosed, and the link between risks and forecasts is unclear.	**High:** Some specific risks are important, including guarantees to PCs and development banks (of which guarantees are 3.9 % of GDP).	x
	3.1.3 Long-Term Fiscal Sustainability Analysis	**Not met:** Except for pensions, no long-term analysis of fiscal trends and debt sustainability is published.	**Medium:** Mexico faces pressures from rising health and pension spending, and exhaustion of oil reserves.	
Risk Management	**3.2.1 Budgetary contingencies**	**Advanced:** There is contingency allocation and a reserve fund for natural disasters, with clear access criteria and transparent reporting.	**Low:** Contingencies represent about 0.4% of programmable spending.	
	3.2.2 Asset and Liability Management	**Basic:** There is a legal cap for borrowing, and DSA and stochastic analysis of debt stock are published. But there is no analysis of risks surrounding non- debt liabilities and assets.	**High:** Public sector liabilities represent 124 percent of GDP.	
	3.2.3 Guarantees	**Not met:** While gross exposure of guarantees is published, the complete list of all beneficiaries of guarantees is not disclosed.	**Medium:** Stock of existing guarantees represents about 5.5 percent of GDP.	
	3.2.4 Public-Private Partnerships	**Advanced:** Much data published on PPP projects including on the government's rights and annual obligations. There is an annual cap on total PPP obligations.	**Medium:** The 22 PPPs represent about 0.2 percent of total GDP.	
Risk Management	**3.2.5 Financial Sector Exposure**	**Good:** The authorities regularly assess financial sector stability. Low level of government support, and risks are limited. However, not all plausible scenarios are analyzed (e.g., related to development banks).	**Medium**: Banks have aggregate liabilities of 10 percent of GDP. Public banks are large, and highly leveraged.	x
	3.2.6 Natural Resources	**Basic.** Plentiful published data on petroleum reserves (audited), production volume, sales, and fiscal revenues.	**Medium:** Petroleum reserves are a significant and volatile component of public assets.	
	3.2.7 Environmenta l Risks	**Basic:** Extensive Information is available on the national disaster risks financing strategy. However, quantification of risks is only done internally but not published.	**Low:** Natural disaster relief cost represents a 0.2 percent of the GDP.	
Fiscal Coordination	**3.3.1 Sub-National Governments**	**Basic:** States publish quarterly financial performance indicators and debt data, but information on local governments is limited.	**High:** SNGs are a substantial part of the public sector and their total expenditure represent about 11 percent of GDP.	
	3.3.2 Public Corporations	**Basic:** Transfers are disclosed quarterly, but no consolidated performance assessment report, or recording of QFAs.	**Medium:** Total expenditure of two major PCs (PEMEX and CFE) and development banks account for 13 percent of GDP, but the two major PCs are in the budget.	x

IV. RESOURCE REVENUE MANAGEMENT

Natural resource revenues should be collected, managed, and disbursed in an open, transparent, and sustainable manner.

142. This chapter assesses fiscal transparency practices associated with the government's management of petroleum revenues, based on a draft of the Natural Resource Revenue Pillar of the FTC released for public consultation in April 2016.[124] It focuses on four sector-specific dimensions:

- Legal and fiscal regime;
- Allocation of resource rights and collection of revenue;
- Company reporting; and
- Resource revenue management.

143. Petroleum has a long history in Mexico. Development of the petroleum sector took place in the late nineteenth century, and commercial crude oil production began in the early twentieth century. In 1938, the oil industry was nationalized and the national oil company *Petróleos Mexicanos* (PEMEX) was founded, with exclusive rights over exploration, extraction, refining, and commercialization of oil in Mexico. This set up lasted until 2013-14, when a far-reaching energy reform opened up the sector to private participation.

144. In 2016, Mexico was the 11th largest oil producer in the world.[125] In 2017, oil production was close to 2 million barrels per day (mpbd), of which about half was exported. Domestic consumption of refined petroleum products is about 1.4 mpbd, with imports of refined products complementing domestic production. The value of PEMEX's domestic sales is higher than the value of its exports.

145. Mexico's natural gas resources are limited. The country has been a net gas importer since 2002, and imports have grown significantly while production has fallen by about 10 percent since 2013. Natural gas plays an important role in Mexico's energy consumption: in 2014, it represented 40 percent of the total. There is potential for shale gas production.

146. Petroleum revenues are an important contributor to public sector revenues, but their relative importance has declined in recent years. The share of petroleum revenues has dropped from the long-standing average of about one third of revenues to less than 20 percent. This reflects the fall in oil prices since 2015, lower production volumes, and the results of efforts to strengthen non-oil revenue.

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[124] https://www.imf.org/external/np/exr/consult/2016/ftc/index.htm

[125] BP Statistical Review of World Energy, 2017.

147. In the years prior to the energy reform, the petroleum sector was facing growing difficulties. Mexico experienced falling crude oil and natural gas production, with crude oil production declining on a sustained basis from its peak in 2004 of 3.4 mbpd. PEMEX had a difficult time fully replacing petroleum reserves. Natural gas production also fell. At the time, the fall in crude oil production was seen by the government as the main challenge facing Mexico's public finances.

148. The energy reform that was enacted through constitutional amendments in 2013 and legislation in 2014 opened the petroleum sector to private companies. The reform, while reaffirming that the nation owns the hydrocarbons in the ground, ended the 75-year old state monopoly in the petroleum sector. The reform promoted open and competitive markets between PEMEX and private firms across the petroleum value chain and allowed the state to enter into a wide range of risk-sharing contracts with the private sector. The reform introduced important changes for PEMEX, including giving it greater operational autonomy, and strengthened the regulatory sector for the petroleum sector.

149. The reform has succeeded in attracting private companies to the sector. About 70 companies now conduct exploration and production in Mexico. Over 70 contracts have been signed as of January 2018-. Petroleum exploration activity is progressing, with a few significant recent discoveries, and increased production is anticipated over the medium term.

Table 4.1. List of Publications

Publication	Name and Links	Issuing Agency	Frequency
Laws and Regulations	*Constitución Política de los Estados Unidos Mexicanos* Political Constitution of the United Mexican States	--	--
	Ley de Hidrocarburos Hydrocarbons Law		
	Reglamento de la Ley de Hidrocarburos Regulations of the Hydrocarbons Law		
	Ley Federal de Presupuesto y Responsabilidad Hacendaria Law on the Federal Budget and Fiscal Responsibility		
	Reglamento de la Ley Federal de Presupuesto y Responsabilidad Hacendaria Regulations of the Law on the Federal Budget and Fiscal Responsibility		
	Ley de Ingresos sobre Hidrocarburos Hydrocarbons Revenue Law		
	Reglamento de la Ley de Ingresos sobre Hidrocarburos Regulations of the Hydrocarbon Revenue Law		
	Ley de Petróleos Mexicanos Law on PEMEX		
	Reglamento de la Ley de Petróleos Mexicanos Regulations of the Law on PEMEX		
	Ley del Impuesto Sobre la Renta Income Tax Law		
	Ley del Fondo Mexicano del Petróleo Para la Estabilización y el Desarrollo Law on the Mexican Petroleum Fund for Stabilization and Development		
Project Documents	*Contratos para la Exploración y Extracción de hidrocarburos* Exploration and Production Contracts https://www.gob.mx/cnh/ http://www.fmped.org.mx/administracion-contratos.html#contratos_registrados	CNH, FMP	--
	Asignaciones/Entitlements	SENER	

	http://asignaciones.energia.gob.mx/		
	Work Programs, Environmental and Social Impact Assessments https://www.gob.mx/cnh/	CNH	
Bid Documents	Model PSCs and Licenses, Bidding Guidelines and Bid Results https://rondasmexico.gob.mx	CNH	Per bid round
Revenue Administration Guidance Notes	Cost Classification Guidelines https://www.gob.mx/shcp/ Production Measurement Guidelines http://cnh.gob.mx/regulacion/regulacion.aspx	SHCP, CNH	--
Audit reports	Audit Reports of the Supreme Auditor http://www.asf.gob.mx/Default/Index		
PEMEX Reports	Annual Report Form 20-F filed with U.S. Securities and Exchange Commission http://www.pemex.com/en/investors/regulatory-filings/Paginas/sec-filings.aspx	PEMEX	Annual
	Annual Report 2016 *Informe Anual 2016* http://www.pemex.com/acerca/informes_publicaciones/Documents/Informe-Anual/Informe_anual_2016.pdf	PEMEX	Annual
Budget Documents and Fiscal Reports	General Criteria for Economic Policy 2018 *Criterios Generales de Política Económica 2018*	SHCP	
	Federal Revenue Law 2018 *Ley de Ingresos de la Federación para el Ejercicio Fiscal 2018*		
	Federal Expenditure Budget 2018 *Presupuesto de Egresos de la Federación para el Ejercicio Fiscal 2018*		
	Monthly, Quarterly and Annual Reports on Public Finances and Public Debt *Informes Mensuales, Trimestrales y Anuales sobre Finanzas Públicas y Deuda Pública*		
FMP Documents	Laws, Regulations, Agreements, Guidelines, and Contracts Pertaining to the FMP http://www.fmped.org.mx/que-es-fmp.html#marco_juridico		--
	General Guidelines for the Investment Policy and Risk Management for the Reserve of the Fund *Política de Inversión y de Administración de Riesgos para la Reserva del Fondo* http://www.fmped.org.mx/transparencia/%7B3B2A381F-B1D8-9716-E986-3E656F383F9F%7D.pdf http://www.fmped.org.mx/transparencia/%7B318E5C7F-15DA-7F70-1558-545DFA125DD2%7D.pdf		--
	Quarterly and Annual Reports Monthly and Annual Financial Statements Operational Expenditure and Workplans Technical Committee Minutes Calendar of Publications http://www.fmped.org.mx/transparencia.html#informes		Quarterly and Annual
	Revenue from Entitlements Revenue from Contracts Transfers to the Treasury http://www.fmped.org.mx/administracion-ingresos.html#recursos_recibidos_asignaciones		Monthly Updates
	Alternative Scenarios for Revenue in 2018 http://www.fmped.org.mx/administracion-reserva.html#programacion_financiera		Annual

4.1. Legal and Fiscal Regime

4.1.1	Legal Framework for Resource Rights	Advanced

150. Mexico has a clear, accessible, and comprehensive legal framework for the petroleum sector covering each stage of the upstream[126] resource exploration and extraction process. The Mexican constitution vests ownership of the country's subsoil petroleum resources in the nation. The 2013 energy reform modified the constitution to allow private participation in the sector, and introduced a framework of laws, regulations, and contracts that determine the conditions for granting rights to either a productive state enterprise or private company for the exploration and extraction of petroleum resources. The legal framework allows for the exploration, appraisal, development, production for a specified time period in a given area, with transition between phases being conditional on approval of work programs by the sector regulator, *Comisión Nacional de Hidrocarburos* (National Hydrocarbons Commission, CNH). The framework also sets out the obligations for decommissioning of facilities at the end of production.

151. The legal framework specifies a clear allocation of institutional responsibilities among government agencies. Responsibilities for governance of the petroleum sector are shared primarily between *Secretaría de Energía* (Secretariat of Energy, SENER) and SHCP, which determine the operational and fiscal policy for the sector, the newly created CNH , which acts as an independent regulator, conducts licensing rounds and monitors activity in the sector, and the *Fondo Mexicano del Petróleo* (Mexican Petroleum Fund, FMP) and the *Servicio de Administración Tributaria* (Tax Administration Service, SAT) which are responsible for the collection and administration of revenue from the sector. Following the energy reform, PEMEX has the status of a "state productive company", exclusively owned by the government, with its own legal identity, assets, and technical, operational and managerial autonomy to carry out hydrocarbon exploration and extraction activity.

152. Exploration and extraction activities can be carried out either through 'entitlements' or 'contracts'. These contract types differ primarily in their fiscal terms, which are discussed in section 4.1.2.

- **Entitlements:** An entitlement is a contract through which SENER can grant PEMEX (or another state productive enterprise) the right to explore and produce hydrocarbons. The entitlement holder can then conclude service contracts with private companies for exploration and extraction activities. Under the 'Round Zero' process of the energy reform, SENER granted PEMEX rights over 83 percent of proven and probable reserves and 21 percent of Mexico's prospective

[126] The framework also covers the governance of the midstream and downstream petroleum sectors, which are not covered in detail in this assessment. The transparency assessment focuses on the revenue management associated with upstream (exploration and extraction) activities in the petroleum sector.

resources, to be governed by the terms of the entitlement regime. There are currently 428 entitlement agreements in place between SENER and PEMEX.

- **Contracts[127]:** The legal framework also allows for a range of new exploration and production (E&P) contract types covering: (i) license contracts, (ii) production-sharing contracts, (iii) profit-sharing contracts, and (iv) service contracts. Contracts are concluded between the State, through CNH, and the contractor (either an individual private sector company or state productive enterprise, or a consortium). To date, 71 such contracts have been concluded.

153. The legal framework governing PEMEX's activities is currently in transition. At the time of the energy reform, PEMEX had concluded 22 service contracts with private sector companies, also known as CIEPS or COPFs[128]. PEMEX may request for these to be 'migrated' to the new contract regime, to form E&P contracts between the state and the contractor group made up of PEMEX and its private sector partners. To date, PEMEX has migrated 2 of these service contracts under this process. Under the Hydrocarbons Law, PEMEX can also request SENER to migrate any of its existing entitlements to the new contract regime, and is required to demonstrate that this will be of benefit to the nation. SENER, with technical assistance from CNH, is responsible for approval of such a request. The contract type and the technical terms are determined by SENER and the fiscal terms are established by the SHCP. Incentives to move to the new regime include more progressive fiscal terms which are more directly linked to profitability, and the possibility to 'farm out' or partner with private sector partners. In the case of a farm out, PEMEX's joint venture partners are determined through a public tender process (discussed further in 4.2.1). As of January 2018, PEMEX had migrated 2 entitlements to contracts under this migration process. It is understood that the intent of the reform is for all PEMEX entitlements to ultimately migrate to the new contract regime.

154. All relevant laws, regulations, and contracts are public and easily accessible, and the new legal framework mandates a large degree of transparency in the sector. The core legal framework for the upstream sector has been streamlined into a handful of laws and regulations, which are all publicly available on the government-wide website (see Table 4.1). There are no legal impediments to the disclosure of non-commercially sensitive information. Under the legal framework, all geological and technical data is deemed to be the property of the state. The law requires contracts to contain provisions to ensure transparency of information and documents derived from the contract (with the exception of technical data and intellectual property), including the terms and conditions of the contract itself. All signed entitlements and contracts are publicly accessible, and model production sharing and license contracts as well as joint operating agreements (for PEMEX farm-outs) are also available for all licensing rounds held to date. In addition, the law sets out the reporting requirements of SENER and CNH with respect to exploration and extraction

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[127] License contracts license the right to extract petroleum and grant ownership over any resources extracted to the license-contract holder. Under production/profit sharing and service contracts, the state retains ownership and the contractor extracts the resource on behalf of the government.

[128] CIEPs refer to Integrated Contracts of Exploration and Production and COPF reports to Financed Public Works Contracts

activities, mandating all contractors to provide information necessary to fulfil these requirements. Information is required to be published in formats which facilitate their use and understanding, taking advantage of electronic media and information technology. The Federal Law of Transparency and Access to Public Government Information also provides for a public right to access information held by public authorities, subject to certain exemptions.

4.1.2	**Fiscal Regime for Natural Resources**	**Advanced**

155. The upstream petroleum sector fiscal regime sets out in legislation and contracts the rates and base of fiscal instruments, and the scope for variation in fiscal terms between contracts. The entitlements granted to PEMEX are subject to a specific fiscal regime, summarized in Figure 4.1a. For contracts, the system is more complex. The legal framework provides for a number of different contract types (license contracts, production-sharing contracts, profit-sharing contracts and service contracts), each implying different fiscal regime. For each contract type, some of the terms are determined under the Hydrocarbons Revenue Law and specified in further detail in model contracts issued for each licensing round, and others are specified as biddable variables to be determined during the tendering process. Figure 4.1b. sets out the contract types, fiscal terms and method of determination. Members of the contracting party are also individually liable to pay statutory income taxes, and can consolidate revenues and costs across contracts. The Hydrocarbon Revenue Law sets out the income tax rate applicable to contract and entitlement holders, with some special rules for accelerated depreciation and the allowable period for carrying forward losses in the case of deep water projects. Contractors are also subject to other statutory indirect taxes and fees according to applicable law, including the hydrocarbons exploration and extraction tax specified in the Hydrocarbons Revenue Law. As an owner of PEMEX, the government can also require it to pay an annual state dividend, to be determined on a discretionary basis. While the fiscal regime is well specified under the legal framework, the range of regime types and the number of instruments adds complexity to the system—a more streamlined approach could achieve the same fiscal objectives.

Figure 4.1.a. Key Fiscal Terms (Entitlements)

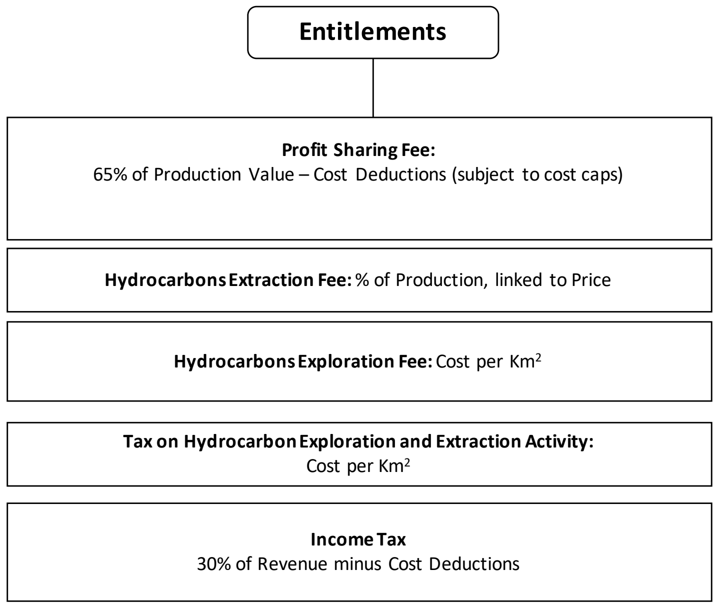
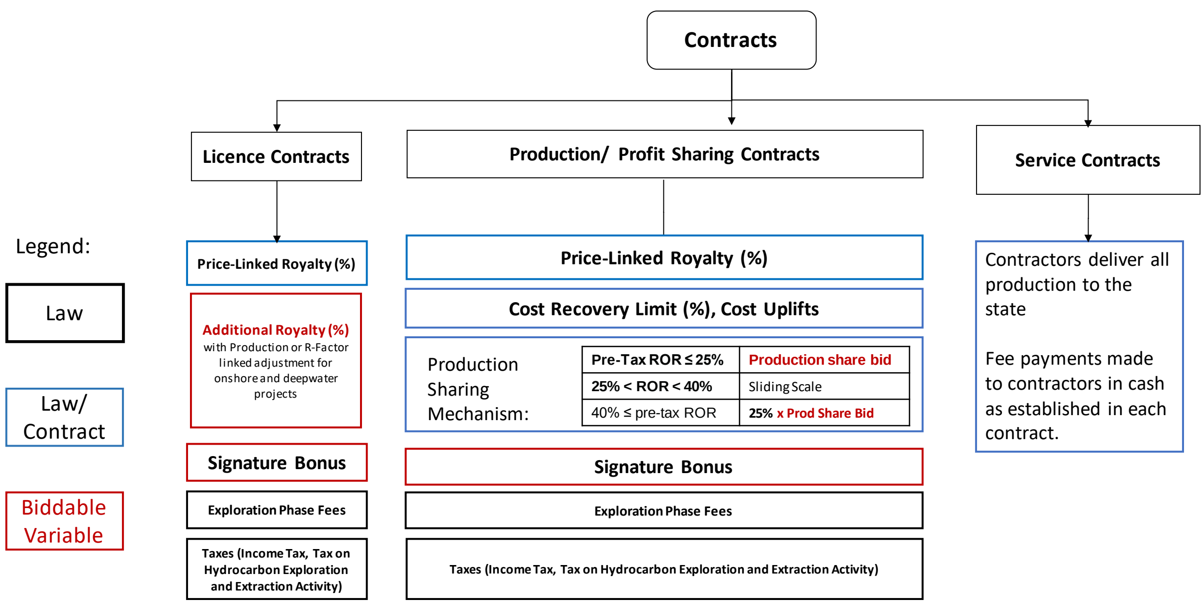


Figure 4.1.b. Key Fiscal Terms (Contracts)



156. The principal sources of variation in terms across contract areas are the choice of contract and the bid variable. The government has the flexibility to choose the fiscal system for each area tendered and the associated fiscal biddable variables. To date, license contracts have been awarded for onshore and deep-water areas, and production sharing contracts have been concluded for shallow water areas. A natural consequence of this design is that each contract awarded is subject to a slightly different fiscal regime. However, all bids, evaluation criteria and contracts have been made public, and CNH also publishes a contract summary which states the level of the bid variables applicable under each signed contract.

157. Fiscal payments made by PEMEX under the entitlement regime are ringfenced by 'region'. Under the Hydrocarbons Revenue Law, payments under the entitlement regime as well as for income tax are ringfenced accordingly to five 'regional' classifications: onshore, shallow water and deep-water areas, extraction of non-associated natural gas, as well as extraction in the Chicontepec Paleochannel, where exploration for unconventional hydrocarbons is taking place. This 'regional ringfence' also applies for income tax and no consolidation between entitlements and contracts is permitted. However, in its financial statements, PEMEX reports a single consolidated number for income tax, so it is not clear whether these ringfencing rules are being applied in practice.

158. When migrating from PEMEX's entitlements to contractual regimes, the new fiscal regime is determined by SHCP. According to the Hydrocarbons Law, when migrating from entitlements to contract schemes (without a private sector partner), the SHCP will determine the economic terms of the contract, ensuring that income over time for the State is no less than what it would have been under the entitlement. This process would also apply to the migration of PEMEX's existing CIEP and COPF service contracts, for which a public tender is not required. However, such a determination of fiscal terms would be driven by SHCP's assumptions regarding future prices, costs and production levels, as well as the discount rate applied to future cash flows. While the final contract is made public, for added transparency, SHCP might consider making public a brief analysis to demonstrate the economic equivalence of the fiscal terms applicable under the entitlement regime and the new contract. So far, this approach appears to have been applied only to two new PSC contracts.

159. Production received in kind under production sharing contracts is marketed by a competitively selected state marketer. The selected marketer (currently Trafigura for oil, and CFEnergia for gas) markets the petroleum products on behalf of the state and delivers income derived from the sale, after deducting the payment for its services (currently US$0.18 per barrel of oil, and US$0.020 per MMBtu of gas sold). The state marketer was selected in December 2017 through a public tender process. The contracts with the state marketer and associated commissions are publicly available.

4.2. Allocation of Rights and Collection of Revenue

4.2.1	**Allocation of Resource Rights**	**Advanced**

160. Mexico has open and competitive processes for granting resource rights. The Hydrocarbons Law specifies that any new areas must be allocated by competitive tender processes to be conducted, according to best practice in transparency, by SENER, SHCP and CNH. SENER selects the areas to be tendered and establishes the technical and financial qualification requirements for bidders, SHCP establishes the fiscal terms of the contract and the bid variables, and CNH conducts the bidding process. Where PEMEX wishes to migrate to the contract regime in partnership with a private company, apart from in the case of pre-existing service contracts (as noted above), its partner must also be selected by public tender carried out by CNH, in consultation with PEMEX.

161. CNH awards license contracts through open tender processes with clear pre-qualification and evaluation criteria and independent verification of final award. The process is conducted in three stages, beginning with an open invitation to bid published in the Official Journal of the Federation. The bidding guidelines, calendar and pre-qualification criteria for interested companies are published on CNH's webpage. Geological data is also made available at this stage, for a small fee. After at least 90 days, at the pre-qualification stage, a list of prequalified companies is published and the next phase of bidding guidelines including the model contract and the bid evaluation criteria are published. The last phase of the process is the bid submission, opening and award. The law provides for a number of award mechanisms including an ascending auction, descending auction, or first-price sealed bid auction. In the latter case, submissions should be received and opened in the same session, in the presence of a public notary and transmitted live on the Internet, with all final bids and associated scores made public. Bid awards are published in the Official Gazette of the Federation.

162. The bidding parameters are simple and objective. In accordance with the Hydrocarbons Revenues Law, the bid variables must be economic in nature. The SHCP establishes the economic variables to be evaluated, with minimum and maximum permitted values, and rules to determine the outcome when bids are tied. In bid rounds conducted to date, the formula has been a weighted average of an additional royalty (for licenses); or the government's profit share (for production sharing contracts), and any increase over mandatory work program commitments. Bidders also submit a cash consideration or signature bonus, the level of which is used to determine the outcome in the case of tied bids.

163. With the exception of Round Zero, all rights have been allocated by competitive tender since 2014. Under Round Zero, the allocation of resources under the entitlement regime was determined by SENER, with clear criteria and public justification for the allocated areas. Since the start of the energy reform, three competitive bidding rounds to license new areas or to select PEMEX joint venture partners have been conducted, each with a number of phases for onshore, shallow water and deep-water allocations, and 71 contracts have been awarded to date under this process. While early bid processes saw limited interest with few bid submissions, the number of bidders has increased in subsequent rounds. Winners have been selected through a first-price sealed-bid auction, with public opening of all bids received and disclosure of bid scores, as well as the final award.

164. PEMEX competes on an equal basis with other operators in obtaining additional contract areas, with a few exceptions. The Hydrocarbons Law allows for PEMEX to participate in tender processes either by itself or in a consortium with one or more private companies. Once

PEMEX is granted a contract in a tender process, it is able to transfer rights and obligations to other parties, just like any other private party. The law sets out certain special conditions under which PEMEX may be required by SENER to participate in contracts, e.g., where cross border deposits are anticipated, where contract area coexists with an entitlement, where SENER deems there to be technology or knowledge transfer opportunities to develop PEMEX's capabilities, or where projects are to be financed by specialized financial vehicles of the state.

4.2.2	**Disclosure of Resource Rights Holdings**	**Good**

165. The government maintains and publishes a database and map of petroleum rights holdings. The interactive map allows a user to easily see all areas allocated or offered, along with key details such as the start date of the contract, its status, coordinates and the name of the operator. SENER, CNH as well as FMP also publish the contracts and entitlement documents themselves, and for contracts CNH provides an accessible interactive summary of the terms of the project, its history, and investment and production to date.

166. However, there are no formal requirements to disclose beneficial ownership of petroleum contracts. As a starting point, CNH publishes details of the members of the joint venture and the parent company. The beneficial owners of many companies operating in Mexico are publicly listed parent companies, for which no further information would be required. The parent company guarantee contained in the contract provides contact information of parent company offices, although individual names are not disclosed for reasons of personal data protection.

167. As part of the EITI process, the authorities plan to publish a beneficial owner registry by 2020. A roadmap has been developed to determine the process and timeline for development for the registry. It sets out issues that will need to be resolved in the process of establishing such a registry, such as the definition of a beneficial owner, the level of detail to be published, and how to navigate personal data protection laws which might prevent public disclosure of beneficial owners. Once this registry has been established, for additional transparency and accountability, the government could also consider public disclosure of the chain of any intermediaries between the license-holder and the ultimate beneficiary.

4.2.3	**Assessment and Collection of Revenues**	**Advanced**

168. There are clear procedures and guidelines in place for the determination of payments under the fiscal regime. In addition to the rules contained in contracts, CNH issues guidelines for the measurement of production, and SHCP publishes guidelines for the classification of costs for the determination of income tax and fiscal payments under contracts and entitlements. It also issues guidance notes on the calculation of contractual payments, as well as procurement rules for purchases of goods and services, applicable to both contract and entitlement holders. The SAT provides guidance on its website regarding the filing of tax payments by contractors in the petroleum sector.

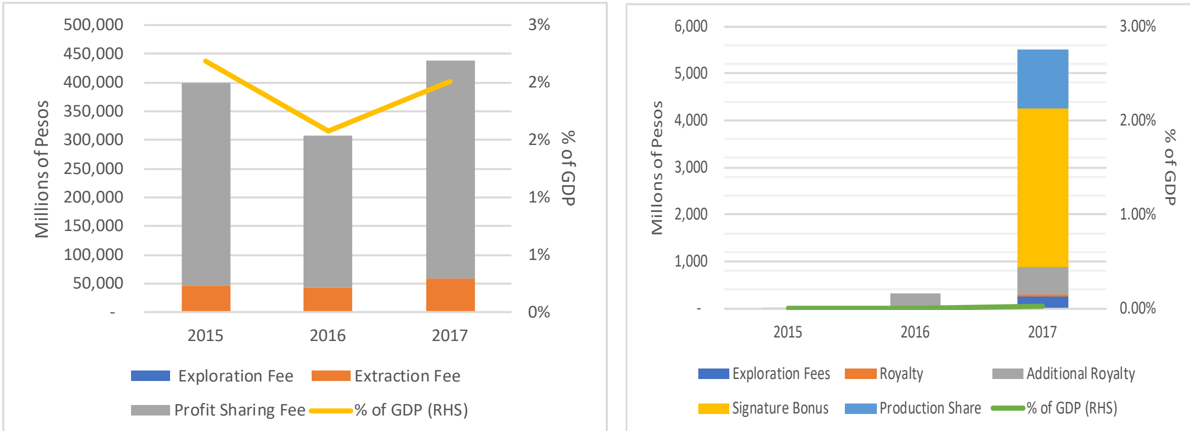
169. For contracts, there are clear procedures for the calculation and collection of revenue. Revenue and costs are reported by the contractor to the government for verification via the electronic Information System for Payments by Hydrocarbon Assignees and Contractors (SIPAC) of the FMP. The SIPAC system is accessible by the contractor and all government entities, with instant and up-to-date access to the production, prices and cost data forming the basis of contractual payments to the FMP. Contractors make payments for contractual (non-tax payments) to the FMP based on provisional calculations. At the end of each month, the FMP is responsible for reconciling this calculation, making any necessary adjustments, and determining the final amount to be paid, with a credit/debit due in the following month in the case of over- or under-payments. Tax payments are made directly to the SAT.

170. CNH, SHCP and SAT coordinate in their audit and compliance of petroleum contracts. In line with its legal mandate, CNH conducts technical administration and supervision of production and costs. It verifies the production and price figures reported by contractors, and conducts random audits for production volume and quality verification. Contractors are required to submit an annual budget plan to CNH for approval. CNH publishes an analysis of the budget submitted, in which it compares budgeted costs against international benchmarks for major cost categories. This information is then used for an ex-post verification of costs incurred.[129] SHCP has a dedicated hydrocarbons unit with specialist sector knowledge, which monitors and verifies the calculation of fiscal payments and can instruct the SAT to conduct audits on contractors when necessary. The results of such audits are required to be published by law, although none have been completed and published to date.

171. Published information on the audit and verification of PEMEX's fiscal payments is limited. The FMP receives payments from PEMEX under its entitlements, but does not verify the calculations. On a technical level, CNH has the authority to audit the production and costs reported by PEMEX, but does not currently do so. The authority to audit PEMEX's entitlement payments (both tax and non-tax) lies with the SHCP and SAT, although no published audit results are currently available. However, the country's *Auditoría Superior de la Federación* (the supreme audit institution, ASF) regularly conducts performance audits on specific investments and purchases to verify compliance with procurement rules, and on production volume and value measurements, all of which are all made public. Still, there appears to be room for more systematic verification of PEMEX's reported production and costs and of the calculation of fiscal payments. With 98 percent of revenue currently derived from entitlements (Figure 4.2), the administration of PEMEX entitlement payments should be subject to the same scrutiny and transparency as is given to payments made under contracts. Clear production and cost verification and audit processes at the entitlement level are of further importance considering the envisaged migration from entitlements to contracts under the new legal framework.

[129] To date, this exercise has been done primarily for production sharing contracts where the cost recovery limit is a key determinant of fiscal payments.

Figure 4.2. Revenues from Entitlements and Contracts



Source: FMP

172. There is a clear process for dispute resolution with regular reporting on disputes resolved. Contracts contain mechanisms for resolving disputes related to contract terms, first through a conciliator and then through arbitration proceedings if disputes remain unresolved. For income tax, as for all sectors, there is both a taxpayer's ombudsman and an administrative appeals procedure to which tax disputes can be referred. The authorities reported that there have been no disputes on petroleum sector contractual or tax payments since the energy reform.

4.2.4	Resource Revenue Audit and Verification	Not Met

173. The authorities do not currently produce a report reconciling payments reported by companies and payments received by government. With significant fiscal payments by a number of private sector participants anticipated in future under E&P contracts, regular reconciliation of company payments and government receipts will provide an important and transparent verification mechanism.

174. Aggregated entitlement payments and receipts currently reported by PEMEX and the FMP do not reconcile due to differing calculation bases. PEMEX reports payments made for its entitlements in its 20-F SEC filings, which is reported on an IFRS accruals basis. The FMP reports payments received from entitlements on a cash basis, which are then reported in budget documents. Table 4.2 shows the difference in the 2016 numbers reported by FMP and PEMEX for the three main revenue types under the entitlement regime.

Table 4.2. Entitlement Revenues Reported by FMP and PEMEX

	2016	
Millions of Pesos	**FMP**	**PEMEX**
Exploration Fee	951	963
Extraction Fee	41,660	43,500
Profit Sharing Fee	264,994	304,299
Total	**307,604**	**348,762**

Source: FMP Annual Report, PEMEX SEC 20-F Report

175. There is no systematic project-level[130] reporting on company payments or government receipts. Although the Hydrocarbons Revenue Law requires monthly reporting by SHCP and FMP of fiscal payments on a contract basis for E&P contracts and on a regional basis with respect to entitlements, in practice payments made under entitlement and contractual regimes are only reported by the FMP on an aggregate basis by payment type. For new E&P contracts, some project level fiscal data is published by CNH. For income tax and for the tax on hydrocarbon exploration and extraction activity which are both paid to SAT, the SHCP reports a total figure for tax paid by all entitlements and contracts. Project-level reporting is preferable for enhanced transparency, and would be required by both government and companies (see 4.3.1) in order to conduct a project-level reconciliation exercise.

176. Mexico is currently a candidate country under the Extractive Industries Transparency Initiative (EITI)[131]. The 2013 standard requires a reconciliation of company payments and government receipts, on a cash basis, at a project level. The reconciliation is certified in the host country by an independent administrator, and then validated by EITI's international secretariat. Any reconciliation error must be explained. Mexico's first EITI report is scheduled to be published in 2019.

4.3. Company Reporting

4.3.1	Reporting on Domestic Payments	Basic

177. There are no systematic reporting requirements on payments to government by resource companies. While companies may individually be reporting on payments to government and some may be reporting under the US, Canadian or EU mandatory disclosure rules on worldwide

[130] 'Project' is defined to mean the operational activities governed by a single contract, license, lease, concession, or similar legal agreements that form the basis for payment liabilities with a government. For E&P contracts, this would be at the contract level, and in the case of entitlements, this would be the 'regional' basis on which they are ringfenced, as discussed in 4.1.2.

[131] The EITI is a global standard to promote open and accountable management of a country's oil, gas and mineral resources. Countries implementing the EITI disclose information on tax payments, licenses, contracts, production and other key elements around resource extraction following the EITI reporting standard. The standard is implemented by governments, in collaboration with companies and civil society and all information is regularly published and certified for compliance in country's EITI Reports.

payments, there are no clear and standardized reporting requirements for resource companies operating in Mexico to report payments made to the government.

178. PEMEX is currently the dominant producer and reports total payments to government, broken down by fiscal instrument. As noted above, in its SEC filing, PEMEX reports on its payments to government by fiscal instrument for all of its extraction activity in Mexico under entitlements and contracts.

179. It is expected that companies will begin to report project level payments under the EITI standard. The 2013 EITI standard requires reporting by payment type and by 'project'. When determining project level disaggregation, payments should be reported on the basis that they are ringfenced. Hence, PEMEX's payments under the entitlement regime should be reported by 'region', and payments under contracts reported by contract area. Income tax liabilities should also be reported according to the applicable ringfence. The authorities may also consider including the state marketer within the scope of the EITI report, to adequately capture revenue received from the sales of Mexican petroleum.

4.3.2	**Reporting on Worldwide Payments**	**Not Assessed**

180. An assessment of reporting by domestically domiciled or listed resource companies with international extraction activities is not undertaken for Mexico. While there is no legislation in Mexico mandating project-level reporting on worldwide extraction activity for these companies, the extent of worldwide operations undertaken by Mexican petroleum companies is limited. Hence, this aspect of reporting by resource companies is not covered in this report.

4.3.3	**Operational, Social and Environmental Reporting**	**Advanced**

181. There is clear disclosure of social impacts of petroleum sector activity. Before the commencement of petroleum activities, under the terms of their contract, both contractors and entitlement holders must undertake social impact assessments detailing the possible social impacts of their activities, as well as mitigation measures and social management plans. For current contracts, social impact assessments are published by CNH, along with the required authorization by SENER. Since this requirement applies to new projects, no social impact assessments appear to have yet been published for entitlements, most of which relate to existing operations.

182. For contracts, there is clear disclosure of environmental impacts of petroleum sector activity. Contracts and entitlement holders require the submission of an environmental impact assessment before any activity can commence. For contract holders, these assessments are published by CNH, along with the required authorization by the National Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (ASEA). ASEA also publishes a bi-monthly list of assessments received from all economic sectors. For PEMEX entitlements, assessments submitted before production began do not appear to be publicly available.

183. There is regular disclosure of information related to project operations. For contracts, CNH reports regularly on the progress of exploration and production activity, key data about investments made, and production levels, as well as annual work programs. For entitlements, the same level of detail does not appear to be available, although production data is reported by CNH by production well. PEMEX reports on its production activities in its Statistical Yearbook, for selected fields and assets, although not on an entitlement basis.

4.4. Resource Revenue Management

4.4.1	Budgeting of resource revenue	Advanced

184. All petroleum revenues that finance spending are allocated through the annual budget law in accordance with predefined fiscal objectives and clear conditions for deviation from those objectives. The framework for the management of petroleum revenues is transparent though complex. Petroleum revenues are channeled in various ways to be included in the pool of budgetary federal government resources, or to accumulate in the FMP as public sector financial assets. There is no extrabudgetary spending financed directly by petroleum revenues, or dual budgeting practices associated with petroleum revenue.[132] The objectives of fiscal policy and the conditions for deviation from those objectives are discussed in Section 2.3.1.

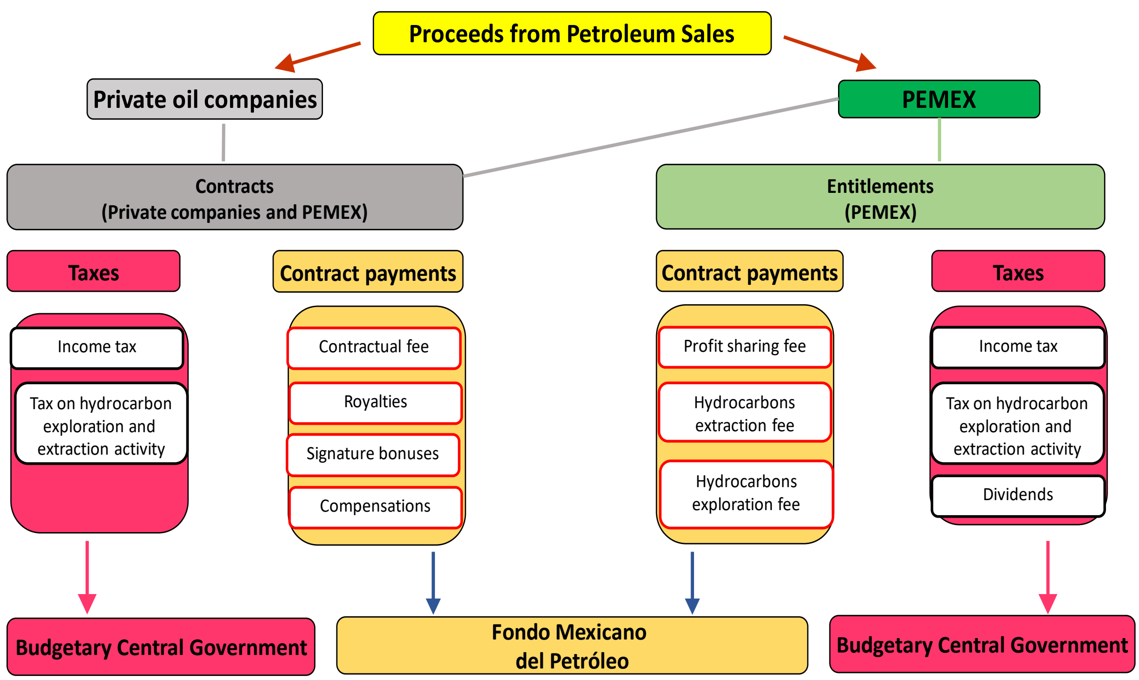
185. Petroleum revenues accrue to the public sector in two ways. First, PEMEX obtains the proceeds from its petroleum sales. Second, private contractors make the payments specified in the fiscal regime to the budgetary central government (BCG) and the FMP. Mexico is unusual among resource-exporting countries in that its national oil company is part of the budget. PEMEX's expenditure and operational balance are approved by the legislature as part of the annual budget.

186. The petroleum fiscal regime applies to PEMEX and contractors, and the legislation specifies the flow of petroleum revenue to the FMP or to the BCG. The functions of the FMP are to collect specified petroleum revenues, make transfers to the BCG, and accumulate financial resources (see Section 4.4.2).[133] The FMP collects all contractual payments due to the state, which include royalties, signature bonuses, exploration fees, profit sharing payments, and the net proceeds from the sale of hydrocarbons received in kind by the state. The BCG collects corporate income taxes, taxes on petroleum exploration and extraction activity, and dividends from PEMEX (Figure 4.3) (see also Section 4.2.3).

[132] The only exception are the costs of the FMP, which include operational costs and fees paid to the Banco de Mexico. In 2016, these costs were MEX 184 million.

[133] For practical reasons, the fund receives the total proceeds from the production sharing agreements, retains the part due to the government under the fiscal regime, and pays petroleum contractors their share.

Figure 4.3. Mexico: Assignment of Petroleum Revenue Items



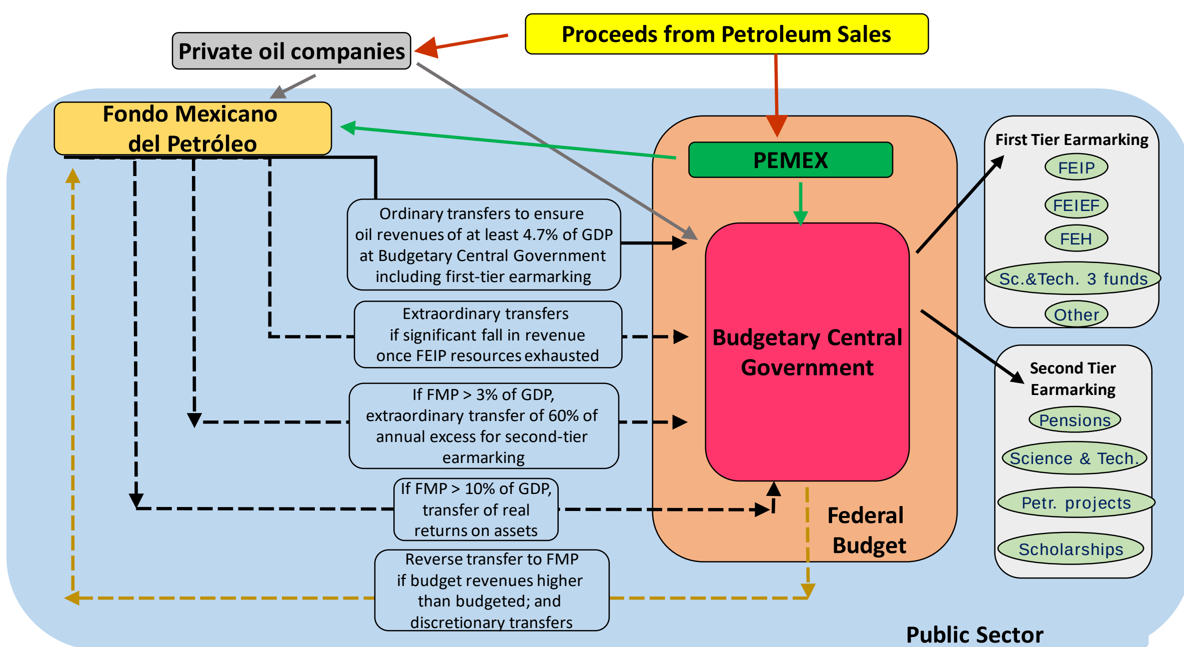
Source: SHCP; and legislation.

187. The FMP makes transfers to the budget and may accumulate financial resources. The revenue allocation system that governs the transfer of FMP resources to the BCG consists of "ordinary" and "extraordinary" transfers (Figure 4.4).

- **Under the system of "ordinary" transfers, the FMP transfers resources to the Treasury to ensure that BCG petroleum revenue in a given year is at least 4.7 percent of GDP** (its level in 2013). The amounts transferred are included in budgetary revenue. A part of the resources transferred is earmarked to six extrabudgetary funds—including the FEIP and FEIEF—and to some other uses, according to specified formulas. The expenditures financed by the earmarked resources are included in the budget. In 2017, 3.8 percent of the revenue transferred by the FMP under ordinary transfers was earmarked. If in a given year, the FMP's resources are insufficient to make the transfers to the BCG specified in the law, the fund must transfer the annual inflow of hydrocarbon payments in its entirety. So far, this has been the case.
- **"Extraordinary" transfers from the FMP may be mandated in certain circumstances regardless of the size of the fund, or if the resources in the fund are above 3 percent of GDP.** First, if there is a significant decrease in revenue arising from a fall in GDP, a marked reduction in the price of oil, or a drop in petroleum production, and if the resources of the FEIP have been exhausted, the government may propose to the lower chamber of Congress an additional transfer from the fund's reserve to increase budget revenue. Second, once the resources in the fund have reached 3 percent of GDP, the FMP may recommend to the lower house the allocation of part of the increase in the resources in the previous year to four types of

expenditures according to specific earmarking percentages, up to 60 percent of the increase.[134] These transfers require legislative approval, they must go through the Treasury, and the expenditures are included in the budget. The remaining 40 percent of the increase must stay in the FMP.

Figure 4.4. Mexico: System of Petroleum Revenue Management



Source: SHCP; and legislation.

188. FMP resources not transferred to the BCG remain in the fund's reserve, which may be supplemented by reverse transfers from the BCG. The fund has a mandate to manage any surplus resources after all ordinary and extraordinary transfers are made (see Section 4.4.3). Returns on the fund's assets remain in the FMP until the size of the fund reaches 10 percent of GDP. Once the size of the fund exceeds that threshold, the fund must transfer the annual financial returns in real terms to the BCG. The fund's reserve may receive reverse transfers from excess budget revenues relative to the approved budget (these transfers are allocated according to pre-specified criteria), and discretionary transfers from the BCG.

189. The oil price used in the budget is specified through a transparent mechanism set in legislation. The maximum level of the budget oil price is specified in a formula in the LPFRH. The formula is an average of three components: (i) the average price of the Mexican export basket of

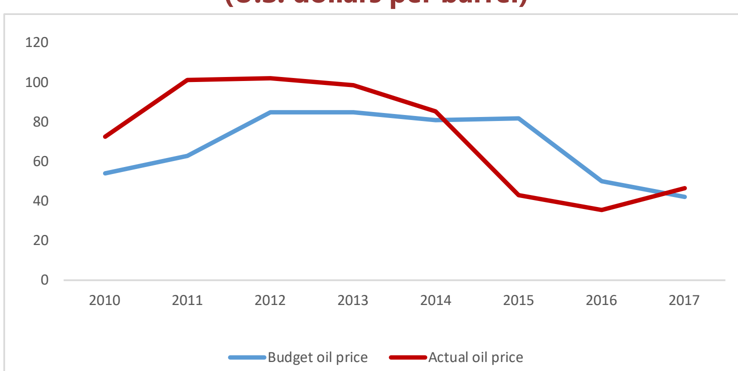
[134] The 60 percent share of annual excess revenues over 3 percent of GDP must be earmarked as follows: 10 percent for the universal pension system, 10 percent for science and technology and renewable energy projects, 30 percent for petroleum projects, and 10 percent for scholarships and regional development.

crudes in the previous 10 years (25 percent weight); (ii) the average of future prices for West Texas Intermediate (WTI) crude for delivery at least three years forward from the time the estimates are made, adjusted for the expected price differential with the Mexican export basket (25 percent weight); and (iii) the average of future prices for WTI crude for the next budget year, adjusted as under (ii), and with a discount of 16 percent (50 percent weight). The government may propose a lower budget oil price than the formula oil price. The calculations of the budget oil price according to the formula are presented in budget documentation. Congress may adjust the oil price if significant developments have taken place after the budget proposal; such changes must be justified.

190. The application of a discount factor to the average future price for the budget year reflects a precautionary motive. The government has considered that in a context of very large oil price volatility, it is desirable to use a lower price for budget purposes than market expectations. It considers that the errors that result from overestimation of the oil price generate costlier adjustments than those resulting from underestimating it.

191. The budget oil price lagged behind actual oil prices during the latter stages of the oil price boom, and lagged again following the slump in oil prices before broadly converging in 2017 (Figure 4.5). To the extent that oil price shocks are persistent, the inclusion of a long moving average of past oil prices in the formula will delay convergence to spot prices on an expectational basis. The inclusion of a discount factor in the component of futures prices for the next budget year will result in a downward bias insofar as futures prices are an unbiased (though very poor) predictor of spot prices.

Figure 4.5. Mexico: Budget Oil Price and Actual Oil Price, 2010-17
(U.S. dollars per barrel)



Source: SHCP.
Note: Price of the Mexican oil export basket.

192. To enhance transparency, budget documentation should include a clear description of the system of petroleum revenue management. It should explain the steps that petroleum revenue takes, starting from the petroleum sales revenue accruing to PEMEX and the taxes and other dues paid by private companies, until it reaches the BCG and becomes part of the pool of revenue to finance budget spending (including the petroleum revenue earmarks mandated by legislation), or stays at the FMP for future stabilization purposes or for long-term savings purposes.

4.4.2	Resource fund operations and oversight	Advanced

193. The FMP is an extrabudgetary trust fund enshrined in law and set up by the SHCP through a contract with the Bank of Mexico as fiduciary manager. The fund was created through a constitutional reform in the context of the energy reform in 2013. The Law on the FMP, which established the norms for the fund's structure and operations, and changes in other relevant laws, were enacted in 2014. That year, the SHCP and the Bank of Mexico signed a contract specifying the Bank's functions and responsibilities as fiduciary manager of the FMP. The fund started activities in 2015.

194. The FMP's governance arrangements and operational rules are clearly specified in official documents. The legal framework for the fund is set out in several laws, including the Law on the FMP, the LPFRH, the Hydrocarbons Law, the Hydrocarbons Revenue Law, and the PEMEX Law, as well as regulations, agreements, contracts and other relevant regulatory and operational documents that are publicly available. The legal base governing the FMP establishes the fund's legal status; its purposes and policy objectives; its institutional set up, structure, and mandate; the operating mechanisms for inflows and outflows; responsibilities over fund operations; and disclosure, audit and reporting requirements. The roles of the SHCP as owner of the fund, the FMP's Technical Committee (TC) as fund manager, and the Bank of Mexico as fiduciary manager have been specified.

195. The purpose and objectives of the FMP are set out in legislation. The FMP's purpose is to receive, manage, invest, and distribute nontax petroleum revenue from petroleum entitlements and contracts. The fund has stabilization and long-term savings objectives, and aims to increase transparency.

196. The composition of the FMP's TC is specified in the Law. The TC has seven members: the Minister of Finance (who presides the TC), the Minister of Energy, the Governor of the Bank of Mexico, and four independent members who must comply with the required qualifications. Independent members are proposed by the President to the Senate, and must be approved with a two-thirds majority.

197. The functions of the TC and the rules governing its meetings are clearly spelt out in the Law on the FMP and other public documents. The TC has a number of powers and responsibilities. The main ones are set out in Box 4.1.

Box 4.1. Selected Functions and Responsibilities of the FMP's Technical Committee

The TC has, among others, the following functions and responsibilities:

- Manage the financial aspects of exploration and extraction contracts.
- Appoint an Executive Coordinator on the recommendation of the Bank of Mexico.
- Approve the financial statements audited by the external auditor.
- Approve the fund's quarterly reports, including the financial statements.
- Approve the workplan and the operational expenditure for the following fiscal year.
- Request from the Executive Coordinator the provision of projected flows from entitlements and contracts every six months.
- Instruct the Bank of Mexico to make the transfers to the Treasury as specified in the legislation.
- Define the investment policy and the risk management strategy that the fund's asset manager (the Bank of Mexico) must implement as regards the fund's reserve portfolio (the long-term investment portfolio of the fund).
- Recommend to the lower house the use of fund resources once the fund's reserves exceed 3 percent of GDP.
- Instruct the Bank of Mexico to make the specified transfers to the Treasury once the fund's reserves exceed 10 percent of GDP.
- Issue an opinion on the proposed PEMEX dividend to the government.
- Approve agreements of cooperation and technical assistance (with SHCP, SAT, CNH, and SENER).

Source: FMP.

198. The TC has issued guidelines to avoid conflict of interest in the Bank of Mexico as fiduciary manager of the fund. Conflict of interest could arise between the operations that the Bank carries out for the FMP with itself, its role as fiduciary manager of the FMP for other operations, and its role as central bank. The guidelines establish a number of principles and practices that need to be followed. In particular, the Bank's administrative units that carry out the Bank's operations, and the units that carry out operations for the FMP, cannot depend directly from each other, and that there must be a physical and structural separation between them, as well as separate management of information.

199. The FMP has a detailed registry of the payments it receives from each contract and each entitlement. Currently, the registry comprises 71 contracts and 428 entitlements. The FMP's administration of the revenues from contracts and entitlements is discussed in Sections 4.2.3 and 4.2.4.

200. The FMP carries out financial programming exercises twice a year. In the fourth quarter of a given year, projections for the cash flow for that quarter and the next year are produced. The projections for the current year are updated in the second quarter.

201. The FMP's annual financial statements are externally audited, and the fund has also been subject to external and internal performance audits. The fund's annual financial statements are audited by the Bank of Mexico's external auditor. The *Auditoría Superior de la Federación* (ASF) has performed several financial, performance, and compliance audits, including on the fund's financial management. It also performed in 2015 a combined audit of the role of the FMP and FEIP in the public finances concerning the institutional mechanisms for the stabilization of the public finances; it found that the outlook for the accumulation of resources in the FMP was unfavorable, given the statutory requirement to transfer the equivalent of up to 4.7 percent of GDP to the government each year, and prospects in the international oil market. The Bank of Mexico's audit office carried out a performance and compliance audit that included the evaluation of risk control, financial management, managerial procedures, contract payments, and accounting practices. The fund's Internal Controller reports to the TC on internal audit results.

202. The fund's transparency requirements are set out in legislation. The Law on the FMP mandates the publication of quarterly reports one month after the end of the quarter, and sets out the minimum information to be provided. The minutes of Technical Committee meetings are published, subject to the deletion of sensitive information, the nature of which is specified. The Law on Hydrocarbons Revenue stipulates the information and data that the FMP, in coordination with the SHCP, must publish for each contract (or for each specified producing region under entitlements) and in aggregated form, as well as information on revenues and expenditures.

203. The FMP's transparency standards for the publication and disclosure of relevant information on its activities are very high. The fund regularly publishes or otherwise makes available on the internet, legal, financial, operational, and sector-specific information, as well as data (Box 4.2).

Box 4.2. Selected Publications and Information Made Available by the FMP

The FMP's website includes, inter alia, the following publications and other information:

- Legal framework for the FMP, legal transparency requirements, relevant regulations and agreements with other institutions, guidelines issued by the fund, additional information on the nature of the fund, and the functions and current composition of the fund's TC.
- Quarterly and annual reports that set out the fund's operations, detailed inflows by types of petroleum revenue collected and outflows (including transfers by recipient), information on contracts, operational costs, yield on the fund's assets, and management fees paid to the Bank of Mexico.
- Monthly financial statements and annual externally-audited financial statements.
- Annual workplans and information on the fund's operational costs (previous year and projections for the current year).
- Individual contracts registered with the FMP (currently: 71 contracts), migrations, and associations.
- Separate monthly data for entitlements and for contracts: in both cases, volumes produced, proceeds from sales, operational costs, and investment. For entitlements, fiscal take accruing to the FMP is reported; for contracts, the payments to the FMP and to the contract holder are reported. This information is available for each region and in aggregate form in the case of entitlements, and for each contract and in aggregate form in the case of contracts.
- Monthly data on transfers to the Treasury.
- Disclosures of personal interest of TC members.
- Minutes of TC meetings, subject to the deletion of sensitive information.

Source: FMP.

204. So far, because of the conditions prevailing in the petroleum sector since the FMP started operations, the fund's transfers to the BCG have been insufficient to ensure oil revenues equivalent to at least 4.7 percent of GDP in the budget. The revenues collected by the fund have been of the order of 1½-2 percent of GDP, and they were all transferred to the budget. In late 2017, there was a reverse transfer to the FMP equivalent to 0.1 percent of GDP from excess budgetary revenues, for the fund's reserve portfolio (Table 4.3) (see Section 4.4.3).

Table 4.3. Mexico: FMP Operations, 2015-17 (Percent of GDP)

	2015	2016	Prel. 2017
Revenue	2.18	1.58	2.16
Revenue from entitlements	2.18	1.57	2.01
Revenue from contracts	0.00	0.00	0.03
Transfer from the budget for FMP reserve	0.00	0.00	0.12
Other	0.00	0.00	0.00
Expenditure	2.18	1.58	2.03
Transfers to the budget	2.18	1.58	2.03
Other	0.00	0.00	0.00
Balance	0.00	0.00	0.13

Source: FMP; SHCP; and IMF staff calculations.

4.4.3	Resource fund investment strategy	Basic

205. As indicated in the previous section, so far only a small level of assets has accumulated in the fund, all of it in late 2017. The fund has allocated its assets in accounts at the Bank of Mexico and in some accounts in domestic and foreign currency with private banks.

206. The FMP has as one of its objectives the management of a long-term savings portfolio (the reserve portfolio). This portfolio will be funded with the resources that are left in the FMP once the required transfers to ensure that petroleum revenue in the budget is 4.7 percent of GDP have been made (net of any extraordinary transfers), and with excess resources that the BCG may transfer to the fund when actual budget revenues exceed budgeted revenues.

207. The FMP published the Guidelines for the Investment Policy and Risk Management of the Fund's Reserve on February 14, 2018. The guidelines establish the general strategy that will guide the financial investments of the reserve portfolio, as well as the risk management strategy for those investments.

208. The investment strategy incorporates broad investment principles. It indicates that the investment policy and risk management of the reserve portfolio should seek the maximum return subject to an adequate level of risk. The fund should seek risk diversification aligned with the country's macroeconomic policy, through the purchase of financial assets—such as sovereign bonds, inflation-indexed sovereign bonds, corporate bonds, and stocks—that meet the investment objectives to be determined by the TC. The strategy must set exposure limits by class of asset, country, region, and economic sector. It should take advantage of the long-term nature of the reserve portfolio to avoid the risks associated with short-term market volatility and reap a premium on long-term returns. The strategy also requires consideration of a benchmark portfolio against which the performance of the reserve portfolio will be measure. It indicates that consideration may be given to the use of derivatives with the sole aim of facilitating the implementation of the investment and risk management policies.

209. The strategy specifies the investment policy for the FMP's reserve portfolio in general terms. It stipulates the range of qualifying financial assets, the permitted currency denominations of the assets, minimum credit ratings for fixed-income assets, and minimum credit qualifications for counterparty financial institutions. The strategy indicates that the returns on the assets in the fund's reserve portfolio will be compared with the returns on a benchmark portfolio to be defined by the TC. A maximum tracking error will be specified by the TC. External asset managers will need to abide by the risk limits set out, and will be evaluated on their performance.

210. The FMP's investment strategy needs to be operationalized in clear investment guidelines to instruct the asset management function. Such guidelines must direct the asset manager in terms of key portfolio dimensions such as the targeted shares of the various types of eligible assets in the total portfolio, regional or country distribution, currency composition, risk profile, maximum exposure of the portfolio to any one asset, specific investment limits to control risk, and the duration of the fixed-income portfolio.

211. The benchmark portfolio for the strategic allocation of assets must be specified using well-defined market indices. The maximum tracking error should be specified to provide limits to risk-taking.

212. Transparency requires the publication of the operational investment guidelines and the benchmark portfolio, and the provision of comprehensive and regular financial reporting on investment performance. Dissemination is necessary for public scrutiny and informed evaluation, and to give assurances to the legislature and the public that public assets are properly managed. Consistent with best international practice, the fund's reports should provide detailed information on its assets, returns, financial performance, comparisons with benchmarks, financial position, risk profile, and compliance with the operational investment guidelines. [135]

213. The legislation for the FMP also provides guidelines for the management of the fund's short-term liquidity. It indicates that the satisfactory operation of the FMP in terms of its timely compliance with its responsibilities requires it to maintain current accounts at the Bank of Mexico to

[135] For example, Chile's *Fondo de Estabilización Económica y Social* (Economic and Social Stabilization Fund), which has stabilization and savings objectives, publishes its investment strategy, investment guidelines to implement the strategy, benchmark portfolio, current composition of the fund's portfolio, market value, returns, investment performance relative to the benchmark portfolio, and risk profile. See http://www.hacienda.cl/fondos-soberanos.html.

receive, manage, and distribute the petroleum revenues that are assigned to it. These accounts must not be allowed to go into overdraft.

4.5. Conclusions and Recommendations

214. Mexico meets advanced fiscal transparency practices for seven principles of the draft fourth pillar of the Code. It has a clear and comprehensive legal and fiscal framework, and follows open and competitive rights allocation and disclosure practices. All petroleum revenues accrue to the federal budget and FMP, and although allocation rules are complex, petroleum revenues that finance spending are allocated through the annual budget. The FMP also has clear governance arrangements and operational rules, and publishes quarterly and annual reports and financial statements. As private activity in the sector increases and as petroleum revenues increase, it will be important to maintain these high levels of transparency with respect to rights allocation and revenue management.

215. At the same time, the assessment highlights several areas that need attention.

- **Mexico should continue its implementation of the EITI standards.** The first EITI report is expected in 2019 and will provide project-level reporting by all resource companies, and a reconciliation with government receipts. This will be particularly important with a growing number of companies operating in Mexico, under a range of fiscal regimes. Over time, the authorities should also make progress in their plans to require petroleum companies operating in Mexico to report details of their ultimate beneficiaries.
- **There is scope for more detailed reporting and oversight of PEMEX's activities under the entitlement regime.** With PEMEX still contributing the bulk of government revenue from upstream petroleum activity, the same advanced transparency practices as for contracts should be in place for PEMEX's activities under the entitlement regime. This includes publication of social and environmental impact assessments as well as regular reporting on operations carried out under entitlements. There is room for more rigorous audit and verification of PEMEX reported production and costs, which form the basis of fiscal payments due under the entitlement regime. Payments made by PEMEX to the government should be reported on a disaggregated 'regional' basis.
- **The possibility of larger future petroleum revenues underscores the importance of a clear and published operational investment guidelines for the FMP.** FMP assets could become much larger than at present. The specification of clear operational guidelines for the asset manager that implement the investment strategy just published, and benchmarks for the evaluation of performance, are a priority.

Recommendation 4.1: Oversight and reporting on activity under PEMEX entitlements should be strengthened.

- More rigorous audit and verification of PEMEX's reported production and costs should be introduced.

- As a step towards EITI compliance, PEMEX should report on payments made to the government under entitlements on the 'regional' basis by which they are ringfenced and calculated
- There should be regular environmental, social and operational reporting on activity in entitlement areas.

Recommendation 4.2: The FMP should publish the benchmark portfolio that operationalizes the investment guidelines after it is issued by the TC, as well as the risk management policy to limit deviations from the benchmarks.

Other recommendations:

- For PEMEX entitlements migrating to contracts without a tender, SHCP could publish a brief analysis to demonstrate the economic rationale behind the new contractual fiscal terms.
- To enhance transparency, budget documentation should include a one-stop description of the system of petroleum revenue management. The revenue flows should be explained, starting from PEMEX sales and taxes and dues paid by contractors, through the FMP, finalizing in the BCG and the earmarks mandated by legislation, or staying at the FMP for asset accumulation. The system of mutual transfers between the FMP and the BCG should be clearly explained.

Table 4.3 summarizes the assessment against the principles of the Code.

Table 4.3. Summary Evaluation: Resource Revenue Management

Principle			Assessment	Importance	Recs
Legal and Fiscal Regime	**4.1.1**	**Legal Framework for Resource Rights**	**Advanced**: Legal framework is clearly established in published laws and model licenses, and facilitates legal access to all non-commercially sensitive information.	**Medium:** Consistent application of policy framework will facilitate liberalization efforts.	
	4.1.2	**Fiscal Regime**	**Advanced:** Tax rates and bases are clearly specified in laws, regulations, and contracts.	**Medium:** Consistent application of policy framework will facilitate liberalization efforts.	
Allocation of Rights and Collection of Revenue	**4.2.1**	**Allocation of Resource Rights**	**Advanced:** Licensing rounds are conducted in an open manner, involving public calls for tender, pre-specified bid evaluation criteria, and publication of bids and scores.	**Medium:** Continuing efforts to maintain high transparency standards will help attract further investment.	
	4.2.2	**Disclosure of Resource Rights Holdings**	**Good:** All contracts are published. No systematic disclosure of beneficial owners.	**Low:** Sector dominated by PEMEX and publicly-listed resource companies. Beneficial ownership registry expected by 2020 under EITI requirements.	
	4.2.3	**Assessment and Collection of Revenues**	**Advanced:** SHCP and CNH produce guidance notes, with clear administrative and audit procedures, and dispute resolution processes.	**Medium**: Complexity of fiscal regime necessitates strong administrative capacity and processes.	4.1
	4.2.4	**Resource Revenue Audit and Verification**	**Not Met:** No reconciliation of company payments and government receipts.	**Low:** Majority of revenue is currently derived from PEMEX operations. EITI reconciliation report expected by 2019.	
Company Reporting	**4.3.1**	**Reporting on Domestic Payments**	**Basic:** No systematic project-level reporting by private companies. Country-level reporting on taxes and payments by PEMEX.	**Medium**: Increasing private sector activity, and need for increased transparency by PEMEX. EITI report expected by 2019.	4.1
	4.3.2	**Reporting on Worldwide Payments**	**N/A**	**N/A**	
	4.3.3	**Operational, Social and Environmental Reporting**	**Advanced:** Environmental and social impact assessments are published, and CNH reports regularly on petroleum operations.	**Medium:** Large degree of onshore activity, with potential social and environmental impact.	4.1
Resource Revenue Management	**4.4.1**	**Budgeting of Resource Revenue**	**Advanced:** All petroleum revenues accrue to the federal budget and FMP, and all petroleum revenues that finance spending are allocated through annual budget law, although the allocation rules are complex.	**Low:** Aside from the complexity of allocation, which should be clearly explained in budget documents, no issues arise.	
	4.4.2	**Resource Fund Operations and Oversight**	**Advanced:** The FMP's governance arrangements and operational rules are specified in legislation, with quarterly and annual reports and financial statements. The annual statements are externally audited.	**Low:** No issues.	
	4.4.3	**Resource Fund Investment Strategy**	**Basic:** The FMP has published a broad investment strategy. So far, only a small level of assets has accumulated in the fund.	**High:** The FMP may accumulate significantly more financial assets in the near future.	4.2

Appendix I. Mexico FTE Recommendations: Action Plan 2018-2021[1]

Action	2018	2019	2020	2021	Responsible agency
Pillar I – Fiscal Reporting					
Objective 1. **Improve coverage (institutions, stocks and flows) of fiscal reports to provide an accurate view of Mexico's financial position and fiscal performance**					
Consolidate the general government and the public sector in the fiscal reports in accordance with international standards.	- Present available fiscal data of subnational governments in the Quarterly Fiscal Report (initially on annual basis). - Develop a web-based system for submission of detailed fiscal data by states and municipalities. - Include FMP in *Cuenta Pública*. -CONAC approves a time frame for consolidation process at national level.	- Consolidate subnational finances in the PSBR and SHRFSP fiscal indicators. - Consolidate volumes (*Tomos*) II, VII and VIII of *Cuenta Pública* in a new volume to present statements for the consolidated federal public sector.	- Disseminate fiscal statistics for the consolidated general government and public sector on a quarterly basis in accordance with international standards as recommended by the G-20 Data Gaps Initiative.	- Include the accounts of states, municipalities and the Banxico in *Cuenta Pública* in order to consolidate the entire public sector.	SHCP
Improve the coverage of stocks and flows in fiscal reports, by including missing assets, liabilities and fiscal flows.	- Include stock of T-bonds issued to Banxico in debt statistics (gross debt, net debt, SHRFSP and PFN); - Apply nominal value as valuation method of T-bonds; - Correct the asymmetric treatment of FEIP's oil hedging program transactions and adjust the PSBR calculation; (iv) Include the accrual of interest on discounted T-bonds in fiscal statistics.	- Include in *Cuenta Pública*: (i) oil reserves at present value; (ii) employment-related pension liabilities; (iii) PPP liabilities in line with IPSAS 32 standard; (iv) flows of net accrual of employment–related pension liabilities and accrued expenses under PPP arrangements.	- Improve the valuation of fixed assets in *Cuenta Pública*, especially highways infrastructure.		SHCP
Objective 2. **Ensure publication of fiscal data conforming to international standards to enhance fiscal policy analysis and strengthen the credibility of fiscal reports.**					

[1] The recommended action plan includes sequential steps to achieve the reform objectives. Its timeline is indicative and should be adjusted by the authorities taking account of legal, institutional and other constraints.

Action	2018	2019	2020	2021	Responsible agency
Start publishing fiscal statistics by economic and functional classifications compliant with international standards.	Include more detailed statistical tables for reporting on the RFSP aligned with the GFSM 2014 economic classification in the 2019 budget documents and 2018 quarterly fiscal reports.	Publish detailed fiscal statistics by economic classification fully aligned with the GFSM2014 by using the bridging tables	Develop a bridging table to produce COFOG-compliant reports and publish these reports.		SHCP
Pillar II – Fiscal Forecasting and Budgeting					
***Objective 3*. Strengthen the government's ability to plan public expenditure over the medium term**					
Improve the medium-term fiscal framework and the medium-term budget framework.		Develop the Pre-Criteria report for 2020 budget into an annual Fiscal Strategy Statement, with a medium-term perspective. Establish a process for separating the cost of new policy proposals from spending baselines, and for making forward estimates of spending over a 3-year period.	Set indicative ceilings for spending ministries and programs over the medium term, starting from 2021 budget. Develop a system for using systematically key performance indicators in budget negotiations with spending entities	Publish in the budget documents medium-term projections of spending on the same (or slightly reduced) level of detail as the annual budget.	SHCP
***Objective 4*. Improve the credibility of macro-fiscal forecasts, and compliance with fiscal targets and fiscal rules**					
Establish stronger mechanisms for the independent validation of the government's macroeconomic and fiscal forecasts, and compliance with fiscal targets and rules	Take a decision on the most suitable options for independent validation.	Implement the chosen independent validation process for the 2020 budget.			SHCP
Pillar III – Fiscal Risk Analysis and Management					
***Objective 5*. Improve the analysis of macroeconomic and other risks**					
Deepen and extend the SHCP's macroeconomic risk analysis.	Subject the baseline scenario in GCEP to larger and combined shocks.	Present alternative macroeconomic and fiscal scenarios.	Extend analysis to include impact of exogenous shocks on fiscal outcomes and the impact of		SHCP

Action	2018	2019	2020	2021	Responsible agency
			combined macro a specific fiscal risk shocks.		
***Objective 6*. Quantify and disclose information on the main specific fiscal risks**					
Prepare an annual report that quantifies specific fiscal risks, and an associated mitigation strategy.		Develop a clear methodology to identify and quantify the main specific risks, and a strategy to mitigate these risks, in consultation with relevant stakeholders	Establish a risk management unit within the SHCP to prepare and publish summary reports on specific risks, and develop/implement a strategy for managing risks		SHCP
***Objective 7*. Establish a comprehensive framework for the financial oversight of non-financial public corporations**					
Develop a framework covering the ownership policy of PCs, financial targets and reporting, and the disclosure of QFAs.	Establish a comprehensive list of non-financial PCs which meet the GFSM criteria, and prepare a framework for their financial oversight	Set up a unit in the SHCP responsible for implementing and enforcing the financial oversight regime, and for developing a monitoring / early warning system	Publish a consolidated report on PCs' financial performance and QFAs in the budget documents, and SHCP's quarterly reports		SHCP
***Objective 8*. Publish long-term projections of public finances**					
Prepare long term projections for the public finances.	Budget documents should include long-term projections of public finances, for at least the next 10 years, which could be updated every few years	Publish first long-term projections in GCEP			
Pillar IV – Resource Revenue Management					
***Objective 9*. Ensure greater transparency over PEMEX activities**					
Strengthen oversight and reporting on activity under PEMEX entitlements.	PEMEX to report on payments made to the government under entitlements on a 'regional' basis.	- SAT, SHCP and CNH to publish clear procedures for audit and verification of PEMEX reported production and costs. - Publish social and environmental impact assessments relating to new activity under PEMEX entitlements.	Publish annual work programs relating to PEMEX entitlement operations.	SAT, SHCP and CNH to publish an annual report on results of audits of entitlement payments.	CNH, SAT, SCHP

Action	2018	2019	2020	2021	Responsible agency
***Objective 10*. Introduce a clear operational investment strategy for the FMP**					
Publish the FMP's benchmark portfolio that operationalizes the investment. guidelines	- FMP to publish the benchmark portfolio after it is issued by the TC. - FMP to publish the risk management policy. -				FMP

Appendix II. Relationship Between the SHCP and Banxico

In recent years, the relationship between the SHCP and the Banxico have significantly impacted the Mexican fiscal indicators: the traditional balance, PSBR, as well as the debt level and the overall balance sheets of the two institutions. These include: (i) relevant capital transfers from the bank to the federal budget in 2016 and 2017, of around 1.2 and 1.5 percent of GDP, respectively; (ii) a stock of T-bonds sold to the market by Banxico that accounted for 4.9 percent of GDP at the end of 2016, as per usually done, since 2010, for monetary policy implementation purposes; and (iii) a stock of around 20 percent of GDP in non-marketed T-bonds held by the Banxico, by end-2016, also to be used for monetary policy purposes. This appendix describes in more detail these operations and how they are recorded. The accounting and statistical treatments of such transactions could be, in some cases, strengthened to improve transparency.

Banxico uses T-bonds to manage liquidity[1]

Amongst the main instruments used by the Banxico to perform its monetary policy interventions in financial markets for liquidity management are treasury bonds (T-bonds), even though the bank has legal provision to issue its own securities[2]. The decision to use T-bonds was taken as a strategy to develop the government securities markets[3] and to avoid a bifurcation on the market and liquidity conditions between fixed income instruments issued by the bank and the federal government. In these open market operations, the Banxico may use various types of T-bonds, including *Cetes, Bondes, Bonos M* and *Udibonos*, although only *Cetes* and *Bondes* have been used up to date. The transactions between the bank and the SHCP work as follows:

- The SHCP issues T-bonds to the Banxico upon request from the bank. In return, the bank matches the T-bonds purchases with deposits in favor of the SHCP in a restricted account at the Banxico. These deposits should have the same size (taken at face value), terms and yield of the securities. The restricted account is separate from the fiscal Treasury Single Account (TSA), also held at the Banxico, but with full availability of resources. The government can only withdraw funds from the restricted account when the T-bonds issued directly to the bank mature.
- The Banxico sells the T-bonds to the market whenever there is a need to reduce liquidity. It runs auctions on a weekly basis following a pre-established schedule[4]. Once these bonds are

[1] Extensive information on this monetary policy framework can be found in: (i) Sidaoui, J., Santaella, J. and Pérez, J., "Banco de México and recent developments in domestic public debt markets", section 2.6: https://www.bis.org/publ/bppdf/bispap67q.pdf; (ii) see footnote 3 below.

[2] Between 2000 and 2006, Banxico issued its own monetary regulation bonds (known as BREMs). These bonds were replaced by *Bondes-D* issued by the federal government in August 2006.

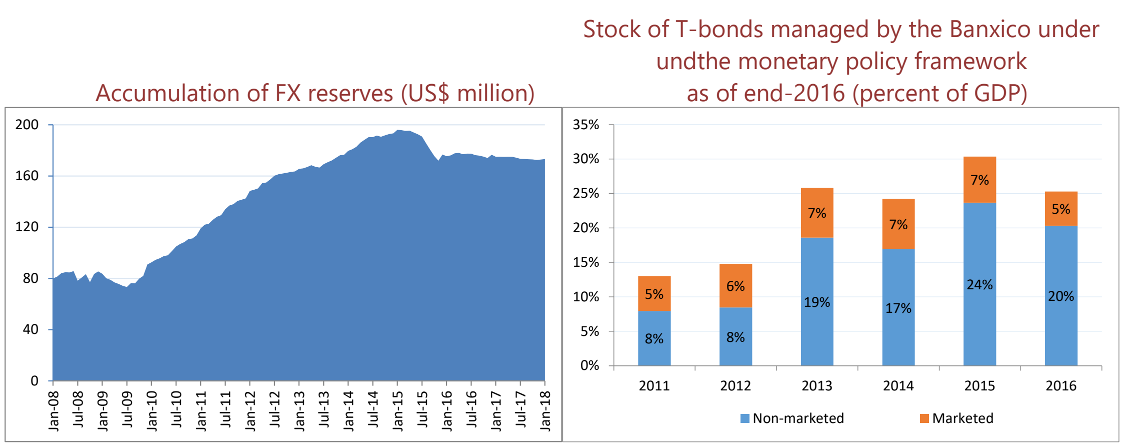
[3] See more on "The Mexican Government Securities Market", Banco de México, 2014, ebook: http://www.banxico.org.mx/elib/mercado-valores-gub-en/OEBPS/Text/default.html

[4] *Bondes* auctions follows a pre-established weekly schedule that is announced every quarter-end for the following period, whereas *Cetes* auctions are not scheduled and are announced when the Banxico deems it

in the market, the SHCP is responsible for redeeming them at maturity, but the bank bears the interest bill. Bond holders are not able to distinguish among T-bonds sold by the bank and the ones sold by the SHCP (the bonds are completely fungible from the market's perspective). By end-2016, the stock of T-bonds sold by the bank amounted for about 4.9 percent of the GDP, and Banxico's non-marketed T-bonds holdings reached around 20 percent of GDP (Figure 1).

- The Banxico also acts as a financial agent or broker to the federal government, selling and redeeming T-bonds on behalf of the SHCP. Since T-bonds issued for monetary policy purposes and for government financing are fungible for the market, the bank manages the total marketed T-bonds portfolio (fiscal and monetary) on an aggregated level. As the portfolio matures, the bank makes the resources of the restricted account gradually available to the SHCP, in order to match the proportion of the overall due bonds that was originally sold by the bank in liquidity management operations. The SHCP then uses the disbursed resources to redeem those securities.
- The Banxico[5] had been very active in performing open market operations (with T-bonds) to sterilize the surpluses of liquidity in the financial system coming from the accumulation of international (FX) reserves over the period 2011-2016. As a consequence, the stock of T-bonds managed by the Banxico under the monetary policy framework, market and non-marketed, increased from 13 percent of the GDP in 2011 to 25 percent in 2016 (Table 1).

Figure 4.6. Mexico, International (FX) Reserves and T-Bonds Sold by the Banxico



Sources: Banxico and *Cuenta Pública* 2011 to 2016.

necessary. Nonetheless, the total rollover amount or issuance of *Cetes* are made known alongside the aforementioned quarterly announcement so that markets know what to expect.

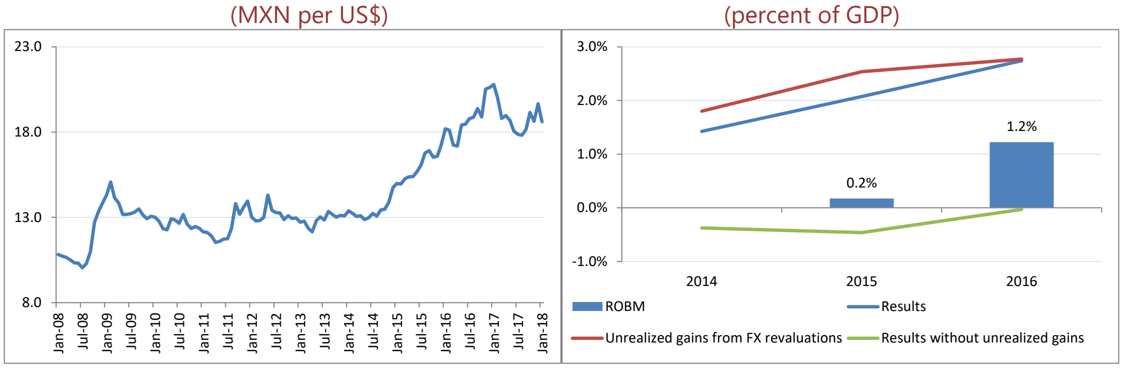
[5] The legal provision for the Banxico to purchase T-bonds for monetary regulation purposes is established in Articles 7 and 9 of Banco de México's Law and in the Financial Broker Agreement between Banxico and SHCP.

Banxico makes capital transfers (ROBM) to the SHCP

Part of the gains of the Banxico is transferred to the SHCP in the form of capital transfers, locally known as "*Remanentes de Operación del Banco de Mexico – ROBM*". However, the bank's earnings are not separated into those originated from revaluation of assets and liabilities (due to exchange rate variations) and those resulting from current operations. Therefore, the bank can transfer to the SHCP, in the form of ROBM, unrealized gains from the revaluation of assets denominated in foreign currencies, such as the international FX reserves. Since 2014, Banxico's profits averaged about 2.1 percent of GDP a year, entirely driven by volatile unrealized gains from the revaluation of FX reserves (table 2).

Figure 4.7. Banxico's Profits and Unrealized Gains from Exchange Rate Variation

Exchange rate (MXN per US$) | Banxico's results and capital transfer do SHCP (percent of GDP)



Sources: Banxico and Banxico's Financial Statements.

The ROBM received by the SHCP are legally earmarked since 2015, when Congress approved a legal amendment that changed article 19 bis of the LFPRH regarding the destination of ROBM resources. Since then, 70 percent (at least) of the ROBM is used to redeem government debt and 30 percent (at most) to improve the federal government's financial position. This treatment of unrealized profits positively affects the debt dynamics; however, it could also come at the expense of negatively affecting the capital of the bank.[6]

Transparency in the Fiscal Statistics and Financial Statements

- The official debt statistics (gross debt, net debt, HBPSBR, PFN) do not include the stock of T-bonds sold by the Banxico[7], nor the treasury securities held by the bank (non-marketed). This contrasts with the treatment in the GFSM, where T-bonds are considered as central

[6] See "Profit Distribution and Loss Coverage Rules for Central Banks" by Brunea, Karakitsos, Merriman, and Studener, 2016, Occasional Paper, European Central Bank, and "Do Central Banks Need Capital?" by Peter Stella, 1997, IMF Working Paper.

[7] The Banxico publishes online the stock of T-bonds sold by the bank to the market in liquidity management operations but the information is not included in the official debt statistics: http://www.banxico.org.mx/valores/PresentaResumenPosicionGub.faces?BMXC_resumen=GOBFED&BMXC_lang=es_MX

government (or general government, GG) debt regardless of the way they were sold to the market. Moreover, the Central Bank is considered a public financial institution, and, as such, its entire Treasury securities holdings are considered a liability of the GG.

Furthermore, the accounting practices adopted by the federal government and the Banxico differ:

- In *Cuenta Pública* the T-bonds issued by the SHCP to the Banxico under the monetary policy framework are recorded as a liability (not debt) at face value and the corresponding deposit at the restricted account as an asset by the same amount.

- In Banxico's financial statements, the operation is recorded in accordance with the Banxico's accounting standards[8]: when the bank purchases the T-bonds, an asset corresponding to the face value of the securities is added to the balance sheet. On the liability side, the same amount is incorporated to the restricted account of the SHCP. Once the T-bonds are on the books of the Banxico, both the asset component and the liability component, in the form of the restricted account of the SHCP, are revaluated at market value on a daily basis. When the bank sells the securities to the market, they are eliminated from the assets and the monetary base is reduced by the same amount. Finally, the stock of (non-marketed) treasury securities held by the bank is then removed from the asset side and the balance of the restricted account (liability side) is reduced by the same amount, in a kind of a "consolidation" procedure. Such netting-out type of recording[9] undermines the transparency of the accounts, making it difficult to assess the financial position of the bank[10] as well as the dynamics of the government's net debt.

Regarding the capital transfers from the Banxico, these are treated in fiscal statistics as fiscal revenues, positively affecting the traditional balance and the PSBR indicator, which conflicts with the international statistics standards. Under the GFSM 2014, the profits due to current operations of central banks transferred to government units should be recorded as dividends, and the compensation of losses due to current operations of central banks should be recorded as subsidies to public corporations. However, a different treatment applies to the transfer of unrealized gains/losses due to valuation effects on the FX reserves. The GFSM 2014 prescribes that one-off payments based on holding gains should be recorded as withdrawals of equity (an

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[8] *Normas de Información Financiera del Banco de Mexico – NIFBdM.*

[9] In the notes to the statements the Banxico provides additional disclosure of the stock of T-bonds under the monetary policy framework and the gross balance of the restricted account.

[10] At maturity, the accounting practice differentiates marketed and non-marketed portfolio on an aggregated. When the marketed portfolio matures, the corresponding amount is released from the restricted account to SHCP to be used the redeem the bonds; the restricted account is reduced and the monetary base increases. When the non-marketed portfolio matures, the restricted account is also reduced, but the corresponding amount is transferred back to the Banxico (there is no change in the monetary base).

analogy can be made for compensations for holding losses, which should be recorded as equity injections).

The current accounting and statistical treatments of the transactions between the SHCP and the Banxico complicates international comparisons on key fiscal aggregates, like public debt and the primary/overall fiscal balances. Aligning those practices with international standards would be a major improvement in transparency to better inform policymakers and the public in general.