INTERNATIONAL MONETARY FUND

IMF Country Report No. 17/360

DEMOCRATIC REPUBLIC OF TIMOR-LESTE

2017 ARTICLE IV CONSULTATION—PRESS RELEASE AND STAFF REPORT

December 2017

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2017 Article IV consultation with the Democratic Republic of Timor-Leste, the following documents have been released and are included in this package:

- A **Press Release**.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on a lapse of time basis, following discussions that ended on October 6, 2017, with the officials of the Democratic Republic of Timor-Leste on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on November 15, 2017.
- An **Informational Annex** prepared by the IMF staff.
- A **Debt Sustainability Analysis** prepared by the staffs of the IMF and the World Bank.

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

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IMF Executive Board Concludes 2017 Article IV Consultation with the Democratic Republic of Timor-Leste

On December 6, 2017, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Democratic Republic of Timor-Leste, and considered and endorsed the staff appraisal without a meeting on a lapse-of-time basis.[2]

Non-oil real GDP growth in 2016 is estimated at 5.5 percent, supported by a near doubling of government capital spending, albeit with large import leakages. However, real total GDP declined by 7.9 percent in 2016, owing to a sharp fall in oil production. The CPI declined by 1.3 percent (y/y) in 2016, largely due to lower global food and oil prices.

The overall fiscal deficit widened to 30.8 percent of GDP in 2016 from 17.0 percent in 2015. Revenue sourced from estimated sustainable income (ESI) of the Petroleum Fund (PF) was marginally lower at 19.7 percent of GDP while domestic revenue outperformed due to one-off increases in customs duties and corporate tax collection as well as improved compliance through streamlined procedures. Recorded capital spending doubled, reflecting substantial additional allocations in the supplementary budget to projects that advanced ahead of schedule.

The external current account turned to a deficit of 18.9 percent of GDP in 2016 from a surplus of 7.7 percent of GDP in 2015. This was driven by higher imports related to public investment and a decline in oil/gas receipts as output fell with the near depletion of current oil field amid lower global oil prices. The real effective exchange rate (REER) depreciated by 2.8 percent in 2016, reflecting lower inflation and U.S. dollar nominal depreciation against the currencies of Timor-Leste's trading partners.

Non-oil real GDP growth is projected to moderate to 3 percent in 2017, due to lower government expenditure and the slowdown of activity due to the delayed formation of the new government

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

[2] The Executive Board takes decisions under its lapse-of-time procedure when the Board agrees that a proposal can be considered without convening formal discussions.

after the parliamentary elections in July. Inflationary pressures remain low, albeit with a return to positive territory with rising global food and fuel prices.

Medium-term risks depend critically on the success of fiscal and structural reforms. The key challenge facing Timor-Leste will be achieving economic diversification. The depletion of its current oil field by around 2022 adds more urgency to the need to generate growth and fiscal revenue. Significant frontloading of public investment poses large downside risks to fiscal sustainability due to the envisaged large PF withdrawals required for financing. Risks also lie in whether large infrastructure projects would generate sufficient social and economic returns to achieve inclusive growth that would translate into higher tax returns and restore fiscal sustainability. There is also risk of higher inflation due to domestic price pressures from larger government spending.

Executive Board Assessment

In concluding the 2017 Article IV consultation with Timor-Leste, Executive Directors endorsed the staff's appraisal, as follows:

Timor-Leste faces a pressing need for economic diversification to create employment opportunities for its young labor force. Adjustment from high dependency on oil revenue and large infrastructure and social development needs pose a significant challenge to a fragile state with weak institutional capacity. While the near-term growth outlook is favorable and inflationary pressures low, the medium-term outlook and risks depend critically on the success of fiscal and structural reforms. Significant frontloading of public investment poses considerable downside risks to fiscal sustainability, due to the envisaged large PF withdrawals required for deficit financing. Public infrastructure projects need to generate sufficient social and economic returns to achieve inclusive growth that would then translate into higher tax returns that would help restore fiscal sustainability.

Bold fiscal reforms are needed to ensure long-term fiscal sustainability. Fiscal policy should be guided by the objective of maintaining a fiscal position compatible with debt sustainability and preserving the assets of the PF. Maintaining the PF's assets as a sustainable revenue source should remain the fiscal anchor, achieved by adhering to the ESI. Frontloading of capital spending to close Timor-Leste's large infrastructure gap should be moderated and prioritized, in line with its scarce resources and capacity constraints. It should also be in line with the reforms of public investment management system. Public investment should be prioritized with a focus on high-return projects determined through rigorous investment appraisal, cost-benefit analysis, and risk assessments. Recurrent spending should also be rationalized, while health and education spending need to be protected and the efficiency of public spending improved.

Domestic revenue mobilization and effective use of concessional borrowing are critical for safeguarding fiscal sustainability. The introduction of a value-added tax by 2020 and an early start in upgrading the tax administration capacity are key to mobilization of sufficient domestic non-oil revenues. Clear criteria should be developed to identify infrastructure projects to be financed by concessional loans, especially projects that would benefit from knowledge transfer in project appraisal and implementation.

Expanding financial inclusion would support inclusive growth, while continued vigilance is needed to safeguard financial stability. A steady implementation of the recently adopted national financial inclusion strategy 2017-22 would help to achieve greater financial deepening and inclusive growth. Creating a well-designed and operated credit guarantee scheme for small and medium-sized enterprises (SMEs) should be accompanied by capacity building to SMEs in formulating business plans and financial management. At the same time, safeguarding financial stability requires further strengthening of BCTL supervisory and regulatory framework and capacity, and bolstering the anti-money laundering/combating the financing of terrorism (AML/CFT) framework.

Macro-critical structural reforms are needed to support economic diversification and job creation. These reforms should aim to improve basic infrastructure, financial access, labor competitiveness and the ease of doing business. Staff's assessment of the external position to be substantially weaker than suggested by medium-term fundamentals and desirable polices in a fully dollarized economy also points to the importance of improving external competitiveness by keeping wages competitive, raising productivity, and closing labor skill gaps by more targeted vocational training.

Further efforts are required to improve statistical capacity, as data limitations continue to hamper surveillance. Improvements are needed in timeliness and periodicity of national accounts data, which are crucial to policy formulation.

The authorities are encouraged to further leverage technical assistance and capacity building. Well-coordinated support from the Fund and other development partners would help strengthen institutional and human capacity.

Table 1. Timor-Leste: Selected Economic Indicators, 2014-2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
			Est.	Proj.					
				(Annual percent change)					
Real sector									
Real total GDP	-26.0	20.9	-7.9	-8.0	-0.7	-4.7	-3.7	-2.6	-2.6
Real non-oil GDP	4.3	4.0	5.5	3.0	5.0	5.7	5.5	5.5	5.2
CPI (annual average)	0.7	0.6	-1.3	1.0	2.7	3.6	3.8	3.9	4.0
CPI (end-period)	0.3	-0.6	0.0	2.0	3.5	3.7	3.8	4.0	4.0
				(In percent of GDP, unless otherwise indicated)					
Central government operations									
Revenue	26.5	33.2	33.7	29.9	30.0	28.9	27.5	26.1	24.9
Domestic revenue	4.2	5.5	7.8	6.8	7.6	7.9	8.0	8.0	8.4
Estimated Sustainable Income (ESI)	15.6	20.6	19.7	17.4	16.8	15.5	13.9	12.4	10.8
Grants	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Expenditure	39.8	50.2	64.5	49.9	70.6	73.8	63.9	57.8	50.9
Recurrent	22.6	33.2	36.3	33.4	35.7	35.8	36.0	36.2	35.2
Net acquisition of nonfinancial assets	10.5	9.9	22.1	10.9	29.3	32.4	22.3	16.0	10.1
Donor project	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Net lending/borrowing	-13.3	-17.0	-30.8	-20.1	-40.7	-44.8	-36.3	-31.7	-26.0
				(Annual percent change, unless otherwise indicated)					
Money and credit									
Deposits	19.6	76.7	11.9	36.1	41.5	29.8	35.8	35.7	33.8
Credit to the private sector	5.5	10.5	-1.8	4.8	10.2	9.7	9.7	9.9	11.4
Lending interest rate (percent, end-period)	12.9	13.5	14.2	…	…	…	…	…	…
				(In millions of U.S. dollars, unless otherwise indicated)					
Balance of payments									
Current account balance 1/	1,093	239	-523	-95	-523	-574	-585	-585	-630
(In percent of GDP)	27.0	7.7	-18.9	-3.4	-18.2	-19.4	-18.9	-17.9	-17.8
Trade balance	-603	-635	-539	-548	-797	-834	-815	-823	-835
Exports 2/	16	18	20	12	23	27	32	37	45
Imports	618	653	559	559	820	861	847	861	879
Services (net)	-594	-580	-527	-516	-543	-547	-504	-484	-567
Petroleum revenue	2,117	1,281	540	965	696	672	583	554	585
Overall balance	-376	220	-157	-3	-4	-5	-7	-6	-9
Public foreign assets (end-period) 3/	16,850	16,655	16,125	16,062	15,318	14,422	13,667	12,922	12,292
(In months of imports)	157	153	167	166	126	114	111	104	91
Exchange rates									
NEER (2010=100, period average)	106.8	120.2	120.0	…	…	…	…	…	…
REER (2010=100, period average)	134.9	150.1	145.9	…	…	…	…	…	…
Memorandum items (in millions of U.S. dollars):									
GDP at current prices:	4,042	3,102	2,762	2,764	2,877	2,960	3,090	3,273	3,541
Non-oil GDP	1,451	1,607	1,672	1,843	2,085	2,371	2,695	3,069	3,541
Oil GDP	2,591	1,496	1,090	921	792	590	395	204	0
GDP per capita	3,492	2,619	2,278	2,228	2,267	2,280	2,325	2,409	2,549
(Annual percent change)	-30.1	-25.0	-13.0	-2.2	1.7	0.6	2.0	3.6	5.8
Crude oil prices (U.S. dollars per barrel, WEO) 4/	96	51	43	49	49	50	52	53	55
Petroleum Fund balance (in millions of U.S. dollars) 5/	16,539	16,217	15,844	15,784	15,043	14,153	13,405	12,666	12,045
(In percent of GDP)	409	523	574	571	523	478	434	387	340
Public debt (in millions of U.S. dollars)	22	46	77	87	304	527	749	902	1,002
(In percent of GDP)	0.5	1.5	2.8	3.1	10.6	17.8	24.3	27.6	28.3
Population growth (annual percent change)	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2

Sources: Timor-Leste authorities; and IMF staff estimates and projections.

1/ Excludes trade in goods and services of entities located in the Joint Petroleum Development Area, which are considered non-resident.

2/ Excludes petroleum exports, the income of which is recorded under the income account.

3/ Includes Petroleum Fund balance and the central bank's official reserves.

4/ Simple average of UK Brent, Dubai, and WTI crude oil prices based on July 2017 WEO assumptions.

5/ Closing balance.

INTERNATIONAL MONETARY FUND

DEMOCRATIC REPUBLIC OF TIMOR-LESTE

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION

November 15, 2017

KEY ISSUES

Context. The near-term growth and inflation outlook remains generally favorable, but the fiscal balance and external position have deteriorated substantially. Adjustment from high dependency on oil revenue and large infrastructure and social development needs pose a significant challenge to a fragile state with weak institutional capacity. Rapid frontloading of public investment risks substantial waste of resources through investment inefficiency. This underscores the need to shift away from frontloading of capital spending, improve public investment management system and ensure sufficient social and economic returns from such investment to safeguard fiscal sustainability.

Outlook. The medium-term outlook depends critically on greater economic diversification and supportive public investment. At the same time, significant frontloading of public investment poses considerable downside risks to fiscal sustainability, due to the envisaged large withdrawals from the country's sovereign wealth fund (Petroleum Fund (PF)) required for financing this investment spending. Risks also lie in whether these large public investment projects will generate sufficient social and economic returns to achieve more inclusive growth that would translate into greater fiscal revenues and thereby enhance fiscal sustainability

Policy recommendations. Policies should ensure fiscal sustainability and support economic diversification to boost inclusive growth and create employment.

- **Fiscal policy.** The long-term fiscal goal should be to maintain a fiscal position that is compatible with debt sustainability and preserving the wealth of the PF. This is necessary so that the PF can be an ongoing revenue source, act as a fiscal buffer to enhance confidence, and ensure intergenerational equity. This requires implementation of revenue and expenditure reforms, reducing frontloading of public investment and making a clear commitment to end excess withdrawals from the PF. Maintaining the PF's assets as a sustainable revenue source should remain the fiscal anchor. Mobilizing domestic revenues and concessional financing will help generate fiscal space.
- **Infrastructure investment.** Focus public investment on high-return projects selected through rigorous investment appraisals, and put in place institutional mechanisms to increase investment efficiency. Strengthening project appraisal and

selection processes are near-term priorities. More public investment projects need to be selected through a thorough appraisal process, cost-benefit analysis, and risk assessments. Some of the resources intended for scaling up public investment should be spent in improving the public investment management systems and capacity.

- **Financial sector.** Promote financial inclusion while continuing efforts to strengthen financial sector resilience.
- **Structural reforms**. Diversify the economy, through steady progress in improving ease of doing business, competitiveness and human capacity.

Approved By
Paul Cashin (APD) and Ali Mansoor (SPR)

Discussions were held in Dili during September 25–October 6, 2017. The staff team comprised Yu Ching Wong (Head), Tadaaki Ikoma and Racha Moussa (all APD). Fazurin Jamaludin, Ananya Shukla and Nadine Dubost (all APD) assisted in this report's preparation. David Knight (World Bank Group) participated in the meetings. Pedro Fachada (OED) participated in the discussions.

CONTENTS

ANNEXES

CONTEXT

1. **Timor-Leste has achieved significant progress in securing peace, nation building, and economic development over the past fifteen years**. Adjustment from high dependency on oil revenue and large infrastructure and social development needs poses a significant challenge to a fragile state with weak institutional and human capacity. The country also faces a pressing need for greater economic diversification and for creating jobs given the large cohort of youths in the population. This underscores the need for the new minority government, formed following parliamentary elections in July, and amid difficult political circumstances to invest in building capacity, improve public investment management system and ensure sufficient social and economic returns from such investment to safeguard fiscal sustainability and secure inclusive growth.

2. **Progress has been made on past IMF recommendations in several areas, but challenges remain.** The authorities have made good progress in implementing recommendations from previous Fund surveillance and intensive technical assistance (TA) in the first decade of nation building (2002-12), including the setting up of the Petroleum Fund (PF), and development of the financial sector and statistics. Nonetheless, policies in moderating the scale-up of public investments and addressing weaknesses in public investment management to restore long-term fiscal sustainability are not adequate (Annex I).

RECENT ECONOMIC DEVELOPMENTS AND OUTLOOK

3. **Growth picked up in 2016 accompanied by low inflation.** Non-oil real GDP growth in 2016 is estimated at 5.5 percent, supported by a near doubling of government capital spending, albeit with large import leakages. However, real total GDP declined by 7.9 percent in 2016, owing to a sharp fall in oil production. The CPI declined by 1.3 percent (y/y) in 2016, largely due to lower global food and oil prices (Figure 1).

4. **The fiscal deficit has widened.** The overall fiscal deficit widened to 30.8 percent of GDP in 2016 from 17.0 percent in 2015.[1] Revenue sourced from estimated sustainable income (ESI)[2] of the PF was marginally lower at 19.7 percent of GDP while domestic revenue outperformed due to one-off increases in customs duties and corporate tax collection as well as improved compliance through streamlined procedures. Recorded capital spending doubled, reflecting additional allocations in the

[1] The fiscal table has been migrated to the GFS format, with some modifications to facilitate fiscal analysis (see Box 1 and Table 2b).

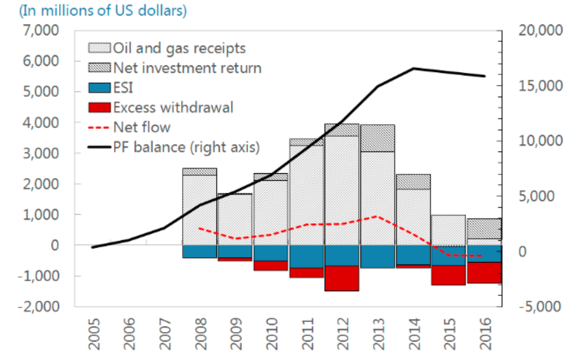
[2] The ESI—a form of fiscal rule—is set at 3 percent of petroleum wealth, which consists of the PF balance and the projected net present value of future petroleum revenues. The PF—a sovereign wealth fund—was established in 2005 under the Petroleum Fund Law to fulfil the constitutional requirement for the management of Timor-Leste's petroleum-based revenue.

supplementary budget to projects under Timor-Leste's Infrastructure Fund that advanced ahead of schedule (Figure 2).[3]

5. The external current account position has deteriorated. The current account turned to a deficit of 18.9 percent of GDP in 2016 from a surplus of 7.7 percent of GDP in 2015. The deterioration was driven by higher imports for public investment and a decline in oil/gas receipts as output fell with the near depletion of current oil fields amid lower global oil prices. The real effective exchange rate (REER) depreciated by 2.8 percent in 2016, reflecting negative inflation and U.S. dollar nominal depreciation against the currencies of Timor-Leste's trading partners (Figure 3).[4]

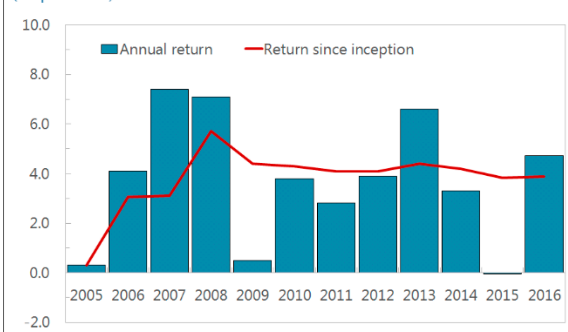
6. Dissaving from the PF financed the fiscal deficit. The PF provided a transfer of US$1.24 billion to finance the 2016 budget, of which US$0.7 billion was in excess of the ESI. The PF closing balance for 2016 declined to US$15.8 billion, a second year of net reduction. By end-2016, cumulative excess withdrawals from the PF totaled $3 billion, which in the absence of offsetting inflows would lower future ESI. As of end-September 2017, the PF balance stood at US$16.7 billion.

Petroleum Fund Dynamics
(In millions of US dollars)



Sources: Banco Central de Timor-Leste; and IMF staff calculations.

Petroleum Fund: Nominal Investment Returns
(In percent)



Sources: Banco Central de Timor-Leste; and IMF staff compilation.

7. Slowing credit growth. Private sector credit growth declined sharply to -1.8 percent (y/y) in 2016 from 10.5 percent in 2015. This slowing is largely due to the resolution of legacy non-performing loans (NPL), together with underlying weaker growth, as the NPL ratio declined to 15 percent of outstanding loans at end-2016, down from 23 percent at end-2015. The loan-to-deposit ratio declined to around 29 percent in 2016 and excess liquidity in the banking system pushed banks' overseas placements of deposits up to 74 percent (Figure 4).

8. The near-term outlook is generally favorable. Non-oil real GDP growth is projected to moderate to 3 percent in 2017, due to lower government expenditure and the slowdown of activity following the delayed formation of the new government after parliamentary elections in July 2017. Inflationary pressures remain low, albeit with a return to positive territory given rising global food and fuel prices.

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[3] This included the transfer of the government's contribution to the Tibar Bay PPP-project in the amount of US$131.3 million (4.8 percent of GDP) to an escrow account, which will be paid-out as the project advances.

[4] The U.S. dollar is sole legal tender in Timor-Leste.

9. Medium-term risks relate mainly to the success of fiscal and structural reforms. The key challenge facing Timor-Leste is achieving greater economic diversification. The depletion of its current oil field by around 2022 adds urgency to the need to generate growth and fiscal revenue. Significant frontloading of public investment poses large downside risks to fiscal sustainability due to the large PF withdrawals required for financing. Risks also lie in whether large infrastructure projects will generate sufficient social and economic returns to achieve inclusive growth that would translate into higher tax returns and support fiscal sustainability. There is also risk of higher inflation due to domestic price pressures from larger government spending. The recent finalization of the Greater Sunrise petroleum field agreement with Australia does not materially alter the need for employment creation and economic diversification but will help alleviate fiscal resource constraints in the long term *(*Box 2 and Annex II*)*.

Authorities' Views

10. The authorities broadly shared the staff's assessment of the outlook and risks. They agreed with the staff on the importance of ensuring the sustainability of public finances by setting well-defined policy targets and ensuring a prudent allocation of scarce resources. They expressed a commitment to expediting structural reforms to promote economic diversification and inclusive growth.

POLICY DISCUSSIONS

A. Ensuring Fiscal Sustainability Through Revenue and Expenditure Reforms

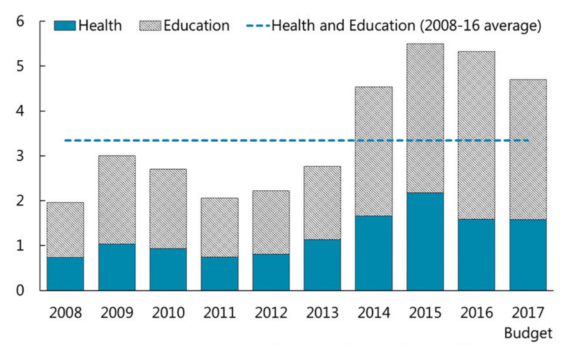
11. Government expenditure is driven by the frontloading of public investment. Capital spending has increased rapidly in the past three years. Public investment in priority projects such as roads, ports, airports, and the oil sector, under the 2011–30 Strategic Development Plan (SDP), are being scaled up to attract private investment and facilitate economic diversification but the impact on crowding-in investment is unclear. The 2017 Budget envisaged that planned capital spending will average around US$1 billion annually during 2018-21, or about US$4.3 billion (156 percent of 2016 GDP) in total. This high level of capital spending is expected to be financed by transfers from the PF (exceeding the ESI) in the amount of US$4.8 billion (30 percent of the PF balance), and external borrowing (US$1.3 billion). Staff's baseline scenario assumes that 70 percent (past average execution rate) of the multi-year (2018-21) capital expenditures allocation plan under the 2017 Budget will be implemented due to capacity constraints. With current policies under this scenario, the economy will face a fiscal cliff as continued reliance on excess PF withdrawals would lead to rapid reduction in the PF balance over the long term.

12. A bold fiscal reform strategy to ensure long-term fiscal and debt sustainability is needed. Fiscal policy should be guided by the overall objective of maintaining a fiscal position compatible with debt sustainability and the preservation of PF wealth as an ongoing revenue source. Preserving the PF's assets as a sustainable revenue source should remain the fiscal anchor. This implies a need to make a clear commitment to end excess withdrawals from the PF. Recurrent spending should be rationalized by reducing current transfers to ZEESM[5] over the medium term as the economic zone's living standards catch up. Nonetheless, health and education spending should be protected and more should be done to improve spending efficiency. While recognizing the need to close infrastructure gaps, any frontloading of capital spending should be moderated and prioritized in line with the country's resources and capacity constraints. Building capacity to manage public investment projects should be accelerated before scaling up. The authorities could consider the merits of adopting a ceiling on primary expenditure as an expenditure rule in addition to the ESI (Annex 3). Staff provided an illustrative reform scenario (text table and Annex IV) and urged the government to incorporate the following reform measures in the upcoming 2018 Budget:

- **More moderate levels of recurrent and capital spending**, while preserving pro-poor social spending and investing in people and system to improve public investment management.
- **Mobilize domestic revenue through the introduction of a value-added tax by 2020**, accompanied by an increase in excise duties and other taxes.
- **Put an end to PF excess withdrawals** from 2028 onwards to rebuild the PF asset base.

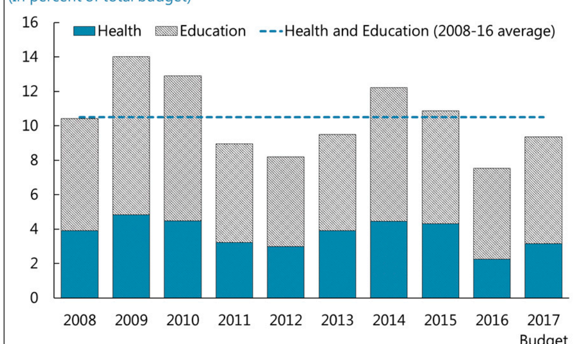
If these measures are implemented, a smaller overal deficit is expected in the medium term and higher total revenue will allow for a larger expenditure envelope while maintaining the PF balance.

Timor-Leste: Health and Education Spending
(In percent of GDP)



Sources: Timor-Leste Transparency Portal, 2017 Budget; and IMF staff estimates.

Timor-Leste: Health and Education Spending
(In percent of total budget)



Sources: Timor-Leste Transparency Portal, 2017 Budget; and IMF staff estimates.

[5] Government grant transfers of US$171.9 million to ZEESM (the Special Zone of Social Market Economy of Oecusse and Atauro) accounted for 40 percent of public transfers or 6.2 percent of GDP under the 2017 Budget.

Timor-Leste: Illustrative Revenue and Expenditure Reform Strategy vs. Baseline Forecast

	Baseline Scenario					Reform Scenario		
	2016	2017	2018	2022	2037	2018	2022	2037
	Est.		Proj.				Proj.	
Total revenue	33.7	29.9	30.0	24.9	21.6	29.7	33.0	32.6
Domestic revenue	7.8	6.8	7.6	8.4	16.7	8.2	14.3	25.2
Tax revenue	5.9	5.1	5.5	6.1	11.8	6.0	12.0	19.8
Direct tax	2.7	2.2	2.4	2.7	7.4	2.9	3.6	9.0
VAT	-	-	-	-	-	-	3.8	5.0
Other indirect tax	2.9	2.7	3.0	3.3	4.3	3.0	4.5	5.8
Estimated Sustainable Income	19.7	17.4	16.8	10.8	0.2	17.0	14.2	2.8
Total expenditure	64.5	49.9	70.6	50.9	26.7	51.8	38.7	34.0
Recurrent spending	36.3	33.4	35.7	35.2	17.9	32.2	21.6	19.4
Wages and salaries	6.5	6.6	7.3	7.3	7.3	6.6	6.3	6.0
Goods and services	12.7	12.2	13.7	13.3	5.1	13.2	7.6	5.4
Public transfers	17.0	14.5	14.6	14.1	5.0	12.3	7.1	7.2
Capital spending	22.1	10.9	29.3	10.1	5.4	15.0	12.5	10.0
Gross operating balance	-8.7	-9.2	-11.4	-15.9	0.3	-7.0	6.8	8.6
Net borrowing and lending	-30.8	-20.1	-40.7	-26.0	-5.1	-22.0	-5.7	-1.4
Financing:								
PF excess withdrawal	25.3	19.7	33.1	23.2	3.4	14.4	4.2	0.0
Borrowing	1.1	0.4	7.6	2.8	1.7	7.7	1.5	1.4
Outstanding public debt	0.1	0.1	0.4	0.8	0.1	0.5	1.1	0.1
Petroleum Fund balance (in millions of US dollars)	15,844	15,784	15,044	12,046	639	15,589	15,602	17,729

Sources: Timor-Leste authorities; and IMF staff calculations.

13. Public investment should focus on high-return projects determined by rigorous investment appraisal. Areas of weaknesses identified by the recent Public Investment Management Assessment (PIMA) TA should be addressed (Box 3) with a clear action plan and timeline before scaling up infrastructure investment. Strengthening the project appraisal and selection processes are near-term priorities. More public investment projects need to be selected through a rigorous appraisal process, cost-benefit analysis, and risk assessments. More competitive public procurement processes should also help. Some of the resources intended for scaling up public investment should be spent in improving the public investment management systems and capacity, which will thereby provide benefit in terms of public resource saving. These savings from increasing investment efficiency will reduce the need for excess withdrawal from the PF and thereby increase compliance with the ESI.

14. Investment efficiency and absorptive capacity are important for growth and debt sustainability. Staff's analyses using the Debt-Investment-Growth (DIG) model (Annex V) highlighted that:

- Scaling up investment rapidly (as envisaged in the authorities' medium-term budget) may not achieve the desired goals due to absorptive capacity constraints and inefficiencies.

- New investment requires significant resources for operation and maintenance once projects are completed. The extent of any frontloading should take these resource requirements into consideration to effectively utilize the newly-built up public capital.

- A sustained improvement in investment efficiency cuts the resource requirements significantly and reduces the debt burden.

15. Domestic revenue mobilization remains critical. Staff welcomes the establishment of the customs authority and tax authority, and the formulation of an action plan to increase tax compliance. Passing the VAT legislation and the introduction of a VAT by 2020 that sufficiently mobilizes domestic revenue would be crucial for achieving the government's goal of raising domestic revenue to 15 percent of non-oil GDP. An early start in upgrading Timor-Leste's tax administration capacity is critical for an efficient implementation of the VAT in a two- to three-year timeframe (Annex VI).

16. Concessional borrowing should be effectively utilized to reduce the size of PF withdrawals. A set of clear criteria should be developed to identify projects to be financed by concessional loans, especially projects that would benefit from knowledge transfer in project appraisal and implementation.

17. The debt sustainability analysis (DSA) suggests a moderate risk of debt distress driven by projected higher external borrowing. The assessment, based on the baseline scenario,[6] reflects the government's plan to increase concessional borrowing to help finance frontloaded public investments. External debt is projected to increase from 2.8 percent of GDP in 2016 to about 28 percent in the medium term. Debt recording and monitoring capacity need to be strengthened with the greater utilization of external financing.

18. Public financial management needs further strengthening. The objectives set out in the "Roadmap of Budgetary Governance Reform" paper approved in March 2017 will need to prioritize and sequence reforms that complement public financial management (PFM) practices beyond just the budget process. The first phase (2011-16) review of the SDP should be published and lesson learned be applied. Costings of the SDP, should be prioritized to the key service delivery areas of health and education, in line with the long-term objectives set out in the Sustainable Development Goals (SDG).

Authorities' views

19. The authorities concurred with the staff on the need to preserve the Petroleum Fund. The government's policy program for the next five years, supported by the consolidation of public finances, are broadly in line with staff's recommendations. The program emphasizes the need to have quality public investment based on cost-benefit analysis and to link basic infrastructure

[6] However, the risk of debt distress will be higher if the higher level of external borrowing over the medium term as envisaged in the 2017 Budget is implemented.

projects to rural development. The authorities also intend to reduce current expenditures over the coming years. Social spending will focus on eliminating malnourishment and raising human capital. At current market conditions, the authorities recognized that the cost of borrowing at concessional rates is lower compared to the rate of investment return foregone when drawing down PF assets.

20. The authorities agreed that public investments should be better prioritized. This includes increasing the efficiency of capital investment in public infrastructure projects and implementing basic infrastructure projects that would increase productivity in priority sectors. In particular, priorities will be on improving road connectivity centered on increasing productivity in the coffee and tourism industries, investing in value-added agri-business, and decreasing rural isolation.

21. The authorities plan to implement reforms that strengthen public financial management. Reintegrating the planning function in the Prime Minister's Office back to the new Ministry of Planning and Finance should increase the effectiveness of planning and prioritizing. They also plan to strengthen the budgeting process through program budgeting and improving the multi-year budgeting framework.

B. Fostering Financial Inclusion and Macro-Financial Stability

22. Financial intermediation remains weak. For foreign bank branches, growth in retail deposits has largely funded liquid investment abroad through loans to banks' headquarters.[7] These dollar-based deposits provide low-cost funding to international banks given low dollar interest rates. The continued decline in the loan-to-deposit ratio suggests banks are falling short of their role in providing financial intermediation to the domestic economy. Despite progress in resolving legacy NPLs, major challenges lie in expanding bank credit while ensuring the soundness of banks' lending.

Selected Financial Soundness Indicators (FSIs), 2014-17
(In percent)

	Dec-14	Dec-15	Dec-16	Jun-17
Asset Quality				
Capital adequacy ratio 1/	...	42.4	32.9	32.4
Non-performing loans to total gross loans	26.8	23.0	15.3	15.2
Provision for loan losses to total gross loans	31.6	29.8	21.9	19.8
Earnings and Profitability				
Return on assets	1.1	0.7	1.0	1.0
Return on equity 1/	...	3.5	6.6	7.7
Liquidity				
Liquid assets to total assets	82.8	83.6	84.5	81.9
Memorandum items (In millions of U.S. dollars):				
Total assets	805	928	1149	1074
Total loans	177	191	183	197

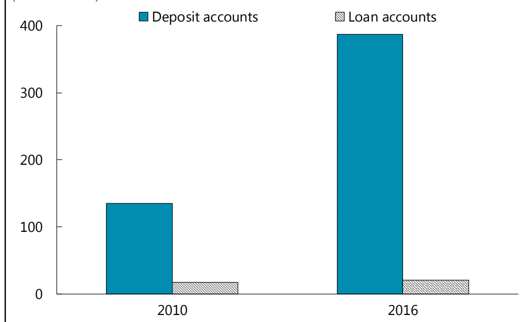
Source: Central Bank of Timor-Leste.
1/ Covers BNCTL only.

23. Expanding financial inclusion is a priority. Staff welcomes the national financial inclusion strategy 2017-22, which includes plans to promote digital financial products and agent banking arrangements; review the regulatory framework for consumer protection; publish a financial literacy strategic plan; and introduce a pilot credit guarantee scheme.

[7] The banking system consists of five banks, a wholly government-owned bank, BNCTL, and four branches of foreign banks incorporated in Australia (ANZ), Indonesia (Bank Mandiri, Bank Rakyat), and Portugal (CGD/BNU). Bank Rakyat Indonesia started operations in Timor-Leste in March 2017.

24. Increasing access to credit can help support private sector growth. Efforts to enhance the collateral system, bankruptcy regime, and improving the credit registry information system are important to achieve greater financial deepening and inclusion. Creating a credit guarantee scheme for small and medium-sized enterprises (SMEs) could help to close the SME financing gap and support economic diversification.[8] However, the scheme should be designed and operated to limit moral hazard through a proper risk-sharing mechanism and to minimize contingent liabilities through features such as clear eligibility criteria, partial guarantee, loss-sharing, and adequate regulation and supervision (Annex VI). The Central Bank of Timor-Leste (BCTL) is currently preparing regulations for the implementation of the scheme. Staff encouraged best practices on design and operation such as eligibility only to new loans, and clarification of the claim and recovery processes, and regulatory requirement to be adopted. Staff highlighted that the success of this initiative would be enhanced by providing accompanying capacity building to SMEs in formulating better business plans and improved financial management.

Timor-Leste: Number of Deposit and Loan Accounts
(In thousands)



Source: Central Bank of Timor-Leste.

25. Developing the national payment system is important. There is ongoing progress in modernizing the national payments system to bring affordable financial payment services to the population. The implementation of the automated transfer system (R-TiMOR)—a hybrid system that combines a Real Time Gross Settlement and a Clearing House System—was introduced in early 2016. BCTL is currently developing the national card and mobile payment switch to connecting the core banking system and payment networks.

26. Safeguarding financial stability needs continued vigilance. The continued efforts by BCTL to strengthen its supervisory oversight of banks—including through close collaboration with home country regulatory authorities and strict oversight of the government-owned local bank, and implementation of a plan to review prudential requirements—is commendable. BCTL has signed a memorandum of understanding with the Australian Prudential Regulation Authority and Financial Services Authority of Indonesia last year and various joint programs have been implemented including joint examination of financial institutions. Further, developing capacity to adequately regulate the non-bank financial institutions—credit unions and micro-finance institutions—would help mitigate financial sector vulnerability. The BCTL is preparing a draft credit union law with support from MCM/PFTAC.

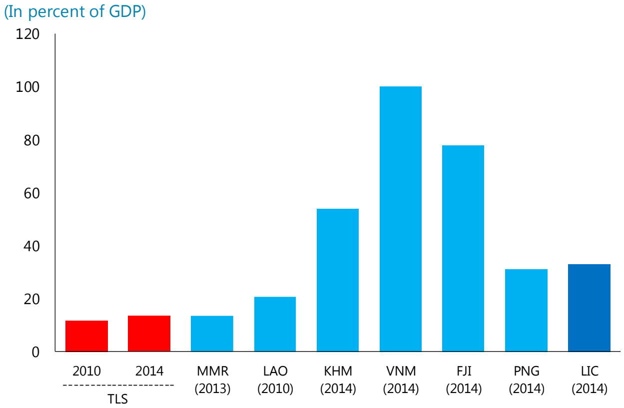
27. More needs to be done to operationalize the AML/CFT framework. The first National Risk Assessment of Money Laundering and Terrorist Financing was released in October 2016, and the government has adopted a national strategic plan (2016-2020) to mitigate its ML/TF risks. The

[8] The Decree-Law on Credit Guarantee Scheme for SMEs was approved in May 2017.

Timor-Leste: Financial Sector Developments

Credit to private sector is relatively low compared to peers...

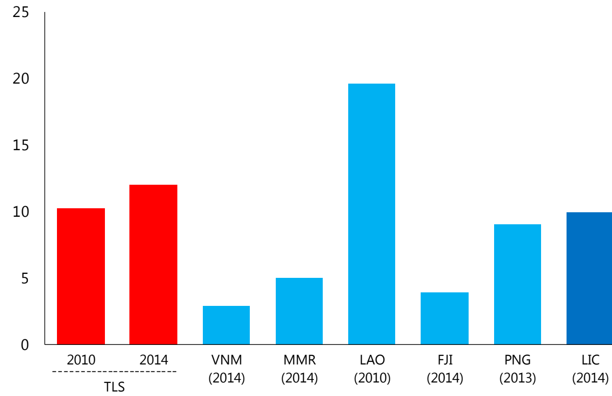
Domestic Credit to Private Sector
(In percent of GDP)



Sources: World Bank Global Financial Development Database; and IMF staff calculation.

...while the large interest rate spread suggests low efficiency in financial intermediation.

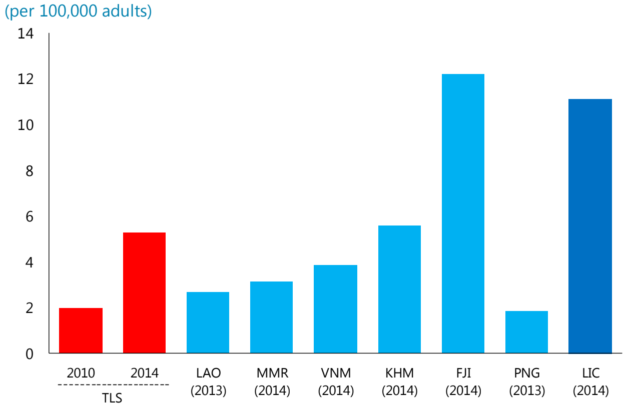
Bank Lending-Deposit Spread
(In percent)



Sources: World Bank Global Financial Development Database.

Financial inclusion has improved given the increase in the number of bank branches per capita....

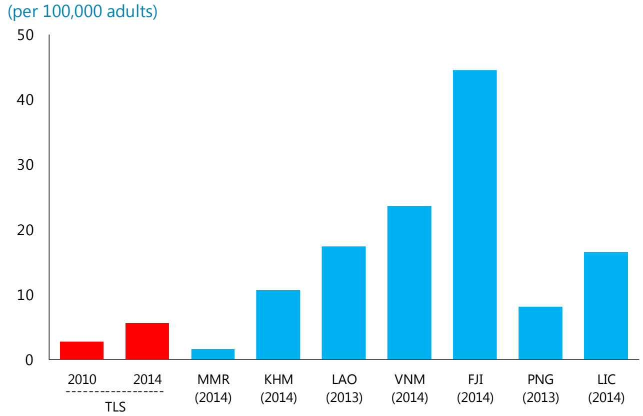
Bank Branches
(per 100,000 adults)



Sources: World Bank Global Financial Development Database; and IMF staff calculation.

...but has lagged given poor coverage by ATMs.

ATMs
(per 100,000 adults)



Sources: World Bank Global Financial Development Database; and IMF staff calculation.

introduction of the risk based approach to AML/CFT by BCTL this year is commendable. There is no sign of the withdrawal of correspondent banking materializing in Timor-Leste as foreign banks have access to correspondents through their head offices. Transfers are largely for trade payments and workers' remittances are low.

28. The use of the U.S. dollar as sole legal tender remains appropriate given institutional capacity constraints and limited financial development. The fully dollarized regime has worked well for Timor-Leste, given the high dependence on oil revenue and limited other non-oil exports. Sound macroeconomic policies, including improved fiscal policies, together with further progress in financial sector and institutional developments, would be needed over the long run to pave the way for any change in exchange rate regime.

Authorities' Views

29. The authorities appreciated the importance of promoting safe financial inclusion. They emphasized that initiatives to modernize the national payment system would enhance the safety of the payment system and foster financial system stability. They added that upgrading the payment system is also important for the successful implementation of fiscal reforms as it will make domestic revenue collection more efficient. They expect the credit guarantee scheme would promote financial intermediation, which is currently weak in a banking system dominated by foreign banks. They agreed with the staff's recommendations on institutional design principles to contain moral hazards and public contingent liabilities, while noting that the scheme's specific design should reflect the country's circumstances and policy objectives (such as promoting growth in specific sectors). They also noted that the banking system is sound and the resolution of legacy NPLs would help to promote private sector credit growth. They emphasized their efforts to effectively implement AML/CFT framework in line with the global best practice, including the adoption of risk-based approach and the provision of training to commercial banks.

C. Facilitating Economic Diversification and Inclusive Growth

30. Staff assesses the external sector position to be substantially weaker than suggested by medium-term fundamentals and desirable polices. The current account deficit is expected to remain above the sustainable level financed by the ESI, due largely to falling oil exports and high imports driven by the scaling up of public investment. Improving external competitiveness is key to economic diversification and job creation, warranting further fiscal adjustment and steady implementation of structural reforms (Box 4). For Timor-Leste with a dollarized regime, the burden of the adjustment necessarily falls on domestic price reduction.

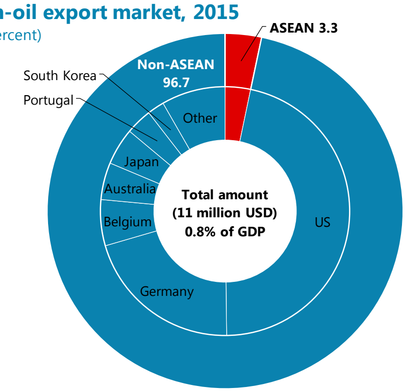
31. Potential ASEAN accession poses economic opportunities and challenges. Timor-Leste applied for ASEAN membership in 2011 and a decision approving its accession is expected in one to two years. Integration into the ASEAN Economic Community[9] is unlikely to have significant short-term economic implications, but can create economic transformation opportunities. Timor-Leste's commitment to harmonize trade, services and investment policies and regulatory frameworks with ASEAN standards, and acquired observer status in the WTO in December 2016, will help raise its attractiveness as an investment destination.

[9] The Association of Southeast Asian Nations (ASEAN) Economic Community (AEC) allows the free flow of goods, services, investments, and skilled labor, and the freer movement of capital across the region. Under the AEC, individuals in eight professions (physicians, dentists, nurses, architects, engineers, accountants, surveyors, and tourism professionals), who are licensed in both their home and host countries, are free to work in any ASEAN country.

Economic Linkages Between Timor-Leste and ASEAN

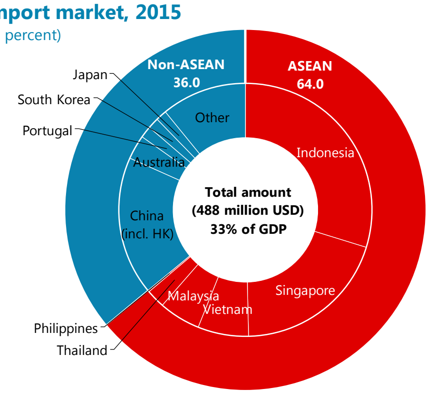
Timor-Leste's non-oil exports—mainly coffee—are largely directed to non-ASEAN markets but two-thirds of imports are from ASEAN countries.

Non-oil export market, 2015
(In percent)



Sources: Timor-Leste authorities; and IMF staff calculation.

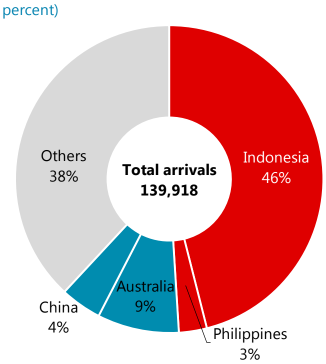
Import market, 2015
(In percent)



Sources: Timor-Leste authorities; and IMF staff calculation.

Most tourists are from neighboring countries – Australia and Indonesia…

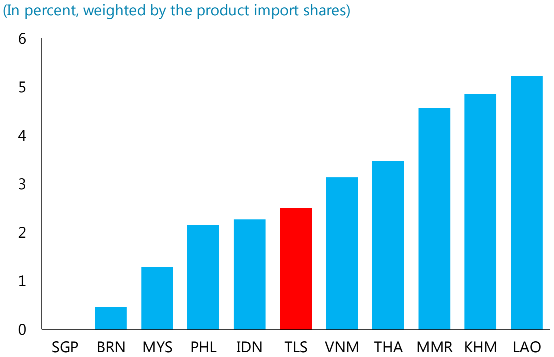
Tourists Arrivals, 2016
(In percent)



Sources: Timor-Leste authorities; and IMF staff calculation.

…and Timor-Leste imposes a relatively low level of tariff.

Tariff Rate: All Products
(In percent, weighted by the product import shares)



Sources: World Bank WDI (Timor-Leste as of 2015; others latest available)

32. Macro-critical structural reforms are needed to support economic diversification. These include improving infrastructure, enhancing financial access without raising risks, and action to improve labor competitiveness. Relatively high wages—underpinned by high public sector minimum wage levels—could offset Timor-Leste's advantage of having a young labor force. It is critical to keep wages competitive, which can be addressed by setting wages in line with labor market fundamentals, raising productivity and closing labor skill gaps with better targeted vocational training. In addition, it is important to move forward in the following priority areas:

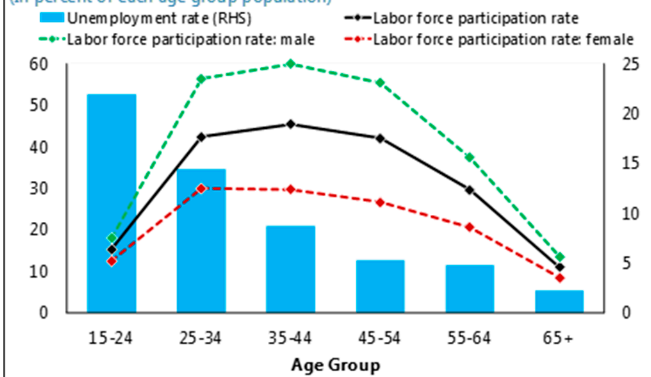
- **Employment.** Significant challenges remain in creating jobs for youth entering the labor force (unemployment at 11 percent and youth unemployment at 22 percent). The adoption of the

National Employment Strategy 2017-30 is a good start and should be accompanied by action plans to improve the quality of vocational training and labor market institutions.

- **Investment**. The operationalization of the Land Law passed recently should help clarify land/property rights, and facilitate land use for investment and as loan collaterals. The amendment of the private investment law which clarifies investment regulation and incentives, as well as the adoption of the National Tourism Policy, should help stimulate investment.

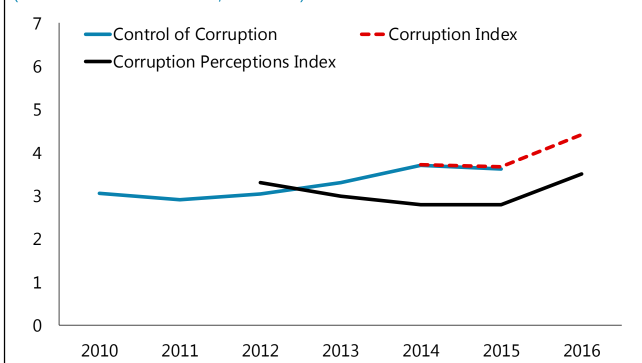
- **Governance.** Perceptions of corruption appear to have declined marginally, but remain a key impediment to doing business. Finalizing the national anti-corruption strategy and its effective implementation could enhance governance.

Timor-Leste: Labor Force Participation and Unemployment Rates
(In percent of each age group population)



Sources: Timor-Leste Labor Force Survey 2013.

Timor-Leste: Governance Indices
(Indices rescaled: 0 = worst, 10 = best)



Sources: World Bank Governance Indicators (Control of Corruption); Maplecroft (Corruption Index); Transparency International (Corruption Perceptions Index)

Authorities' Views

33. The authorities stressed their commitment to accelerate the implementation of structural reforms to facilitate economic diversification. They emphasized their focus lay on the development of basic and high quality infrastructure that would generate higher economic returns (based on rigorous cost-benefit analysis), improving connectivity and help develop agri-business and tourism. The government is currently preparing an industrial policy (which focuses on FDI to promote knowledge and technology transfer) and is working on improving the business environment, including through the operationalization of Land Law to promote the commercial use of land and as collateral in borrowing/lending. They also stressed their policy priorities to reduce the unemployment rate to single digits over the medium term, and improve food security by promoting domestic production.

D. Building Capacity and Strengthening Statistics

34. Persistent efforts in institutional strengthening and capacity building are key to reducing fragility. For Timor-Leste, investment in human capital, through education and health aligned to long-term objectives set out in the SDGs, will help build the foundation for economic diversification. More specifically, government analytical and policy-making capacity need rapid strengthening.

35. Data quality and timeliness continue to hamper surveillance. Efforts to strengthen statistics should be continued. In particular, the near 18-month lag in the release of annual GDP data should be shortened. Making quarterly GDP available would help economic monitoring and policy making. The authorities are encouraged to implement the enhanced General Data Dissemination System (e-GDDS), which recommends dissemination of a key set of macroeconomic statistics in a National Summary Data Page based on an advance release calendar. Improving the reporting of annual and quarterly government finance statistics in line with the GFSM 2014, as recommended by the recent Pacific Financial Technical Assistance Centre (PFTAC) TA mission, would strengthen fiscal analysis. Enhancing the current cash-based accounting system will pave the way for moving to an accrued accounting system over the medium to long term, in the context of a sustainable PFM reforms. The establishment of a quarterly statistical working group comprising representatives from MOF, BCTL and General Directorate of Statistics to resolve data compilation issues and facilitate data exchange and monitoring is commendable.

36. The Fund stands ready to provide TA and capacity building to assist the government's reform efforts. Timor-Leste is a pilot country under the Fund's infrastructure support initiative. Staff encourage the authorities to request TA to strengthen Timor-Leste's public investment management. The Fund also stands ready to provide support on progressing tax and PFM reforms.

Authorities' Views

37. The authorities are appreciative of the TA and training provided by the Fund and PFTAC. However, they reiterated their view that having on-the-ground technical experts could enhance TA traction. They concurred with the recommendations on the need to further improve the quality and timeliness of statistics.

STAFF APPRAISAL

38. Timor-Leste faces a pressing need for economic diversification to create employment opportunities for its young labor force. Adjustment from high dependency on oil revenue and large infrastructure and social development needs pose a significant challenge to a fragile state with weak institutional capacity. While the near-term growth outlook is favorable and inflationary pressures low, the medium-term outlook and risks depend critically on the success of fiscal and structural reforms. Significant frontloading of public investment poses considerable downside risks to fiscal sustainability, due to the envisaged large PF withdrawals required for deficit financing. Public infrastructure projects need to generate sufficient social and economic returns to achieve inclusive growth that would then translate into higher tax returns that would help restore fiscal sustainability.

39. Bold fiscal reforms are needed to ensure long-term fiscal sustainability. Fiscal policy should be guided by the objective of maintaining a fiscal position compatible with debt sustainability and preserving the assets of the PF. Maintaining the PF's assets as a sustainable revenue source should remain the fiscal anchor, achieved by adhering to the ESI. Frontloading of capital spending to close Timor-Leste's large infrastructure gap should be moderated and prioritized, in line with its scarce resources and capacity constraints. It should also be in line with the reforms of public investment management system. Public investment should be prioritized with a focus on high-return projects determined through rigorous investment appraisal, cost-benefit analysis, and risk assessments. Recurrent spending should also be rationalized, while health and education spending need to be protected and the efficiency of public spending improved.

40. Domestic revenue mobilization and effective use of concessional borrowing are critical for safeguarding fiscal sustainability. The introduction of a VAT by 2020 and an early start in upgrading the tax administration capacity are key to mobilization of sufficient domestic non-oil revenues. Clear criteria should be developed to identify infrastructure projects to be financed by concessional loans, especially projects that would benefit from knowledge transfer in project appraisal and implementation.

41. Expanding financial inclusion would support inclusive growth, while continued vigilance is needed to safeguard financial stability. A steady implementation of the recently adopted national financial inclusion strategy 2017-22 would help to achieve greater financial deepening and inclusive growth. Creating a well-designed and operated credit guarantee scheme for SMEs should be accompanied by capacity building to SMEs in formulating business plans and financial management. At the same time, safeguarding financial stability requires further strengthening of BCTL supervisory and regulatory framework and capacity, and bolstering the AML/CFT framework.

42. Macro-critical structural reforms are needed to support economic diversification and job creation. These reforms should aim to improve basic infrastructure, financial access, labor competitiveness and the ease of doing business. Staff's assessment of the external position to be substantially weaker than suggested by medium-term fundamentals and desirable polices in a fully dollarized economy also points to the importance of improving external competitiveness by keeping wages competitive, raising productivity, and closing labor skill gaps by more targeted vocational training.

43. Further efforts are required to improve statistical capacity, as data limitations continue to hamper surveillance. Improvements are needed in timeliness and periodicity of national accounts data, which are crucial to policy formulation.

44. The authorities are encouraged to further leverage technical assistance and capacity building. Well-coordinated support from the Fund and other development partners would help strengthen institutional and human capacity.

45. It is recommended that the next Article IV consultation takes place on the standard 12-month cycle.

Box 1. A More Pragmatic Fiscal Presentation[1]

The new Summary Operation of the Central Government (Table 2b), in addition to adopting the format mostly in compliance with the GFSM2014, improves the presentation of the central government's fiscal position to help analysis of fiscal sustainability.

The Petroleum Fund (PF) Law requires that all petroleum revenues are transferred to the PF and invested in financial assets. The PF is only transferred to the state budget through the Estimated Sustainable Income (ESI) and excess withdrawals after parliamentary approval. Petroleum revenues—oil and gas receipts and the PF investment returns—are not included in central government revenue.

The ESI is included as a revenue item. In contrast, excess withdrawals from the PF is presented as a financing item. These treatments reflect that ESI represents budget financing consistent with long-term PF viability, whereas the excess withdrawals lead to a reduction in PF assets. In this context, a zero balance in net lending/borrowing which included the ESI as a revenue item will imply zero requirement on net financial transactions.

In preparation for the migration to GFSM2014, a PFTAC/GFS TA mission in February 2017 assisted the authorities in reviewing the compilation, and clarified statistical and presentation issues that may impact the data reporting for Fund surveillance.

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[1]Prepared by Fazurin Jamaludin.

Box 2. The Greater Sunrise Gas Field Agreement[1]

On October 15, 2017, the Permanent Court of Arbitration announced that Timor-Leste and Australia had agreed on a draft treaty relating to the Greater Sunrise gas field. The bilateral agreement addresses issues related to the maritime boundary, and the gas field's legal status, development strategy, and revenue sharing.

Details of the agreement remain confidential. The parties will be discussing the development of the resources through the Greater Sunrise Joint Venture with an aim to sign the agreement by end 2017 or early 2018.

The 2006 Treaty on Certain Maritime Arrangements in the Timor Sea divides revenue from the Greater Sunrise 50:50 between Timor-Leste and Australia. Both governments announced the termination of this treaty on January 9, 2017 in the context of the conciliation proceedings which resulted in the current agreement.

Estimates from Woodside, the largest shareholder in the Greater Sunrise Joint Venture, suggest that the field holds 5.13 trillion cubic feet of gas and 225.8 million barrels of condensate. The value of the resources was reportedly worth between US$40 billion to US$50 billion.

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[1]Prepared by Racha Moussa.

Box 3. Public Investment Management Assessment (PIMA)[1]

The July 2016 PIMA mission recommended a prioritized action plan to strengthen public investment management institutions and processes.

Near-term measures

- Budget unity: Consolidate capital and current budget preparation, including project selection, in the Ministry of Finance, while retaining project appraisal in the Ministry of Planning and Strategic Investment (MPSI).[2]
- Medium-term capital budget ceilings: Based on a binding resource envelope, ministerial ceilings for capital budget need to be determined at the start of the budget process.
- Project appraisal: MPSI should strengthen the project appraisal process by developing a standard methodology for project appraisal, publishing this methodology and verifying that it is consistently applied by the line ministries.
- Project selection: Strengthen the capital project selection process for the annual budget (and, in future years, for the multi-year investment plan and budget) by developing better targeted selection and prioritization criteria and by improving the information provided to decision makers.

Medium-term measures

- Full cost disclosure: Ensure that budget documents provide comprehensive information on full capital project costs and eventually lifecycle costs of projects.
- National and sectoral planning: Prepare Strategic Development update and sectoral strategies with indicative costing.
- Protection of investment: Create a mechanism to enable parliament to review and authorize commitments beyond the budget year in the annual budget law; and establish the legal authority to enable automatic carry-over of unspent appropriations within strict limits.
- Project management: Task an appropriate agency to develop government project management standards and promote a comprehensive approach to project management across ministries that have ownership of capital projects.

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[1]Prepared by Eliko Pedastsaar (FAD).

[2]Under the Seventh Constitutional Government, MPSI ceased to exist and almost all functions of the MPSI are transferred to the new Ministry of Development and Institutional Reform.

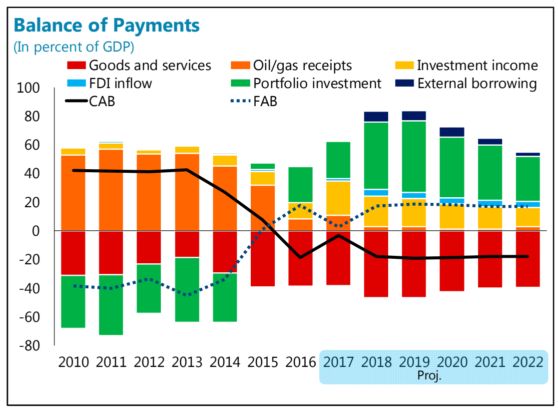
Box 4. External Sector Assessment[1]

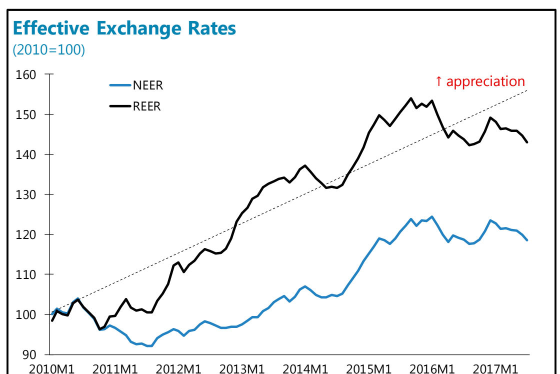
The external position is substantially weaker than that consistent with medium-term fundamentals and desirable policy settings. The oil-dependent economy is facing a large structural change due to expected depletion of the current oil/gas field by 2022. The deterioration is due to falling oil exports and is compounded by higher imports driven by the scaling up of public investment. Improving external competitiveness is key to advancing economic diversification and promoting non-oil private sector development, warranting fiscal adjustment and steady implementation of structural reforms.

The external current account (CA) deficit is projected to remain. The CA turned to a deficit in 2016, driven by a decline in oil/gas receipts amid declining output and lower oil prices. The current account deficit is projected to remain at 18 percent of GDP in the medium term (2018-2022 average), driven by a higher imports related to capital spending, coupled with falling oil/gas receipts.

The Petroleum Fund (PF) will provide a source of funding over the medium term. The CA deficit will be financed largely by divestment from the PF, together with external borrowing and FDI inflows. However, this is unsustainable over the long term as the PF balance dwindles.

The real effective exchange rate (REER) has appreciated strongly since 2010 resulting in an erosion of external competitiveness. The REER has appreciated by about 7 percent annually during 2010-2015, due to high inflation differential with trading partners in 2010-13 and an appreciation of the nominal effective exchange rate (NEER) since 2013 as the U.S. dollar strengthened against trading partners' currencies. The REER depreciation in 2016 and early 2017 helped to moderate the loss of external competitiveness. Nevertheless, this has not been conducive to enhancing export performance as Timor-Leste's main exports–petroleum and coffee–are denominated in U.S. dollars. The economy is also highly dependent on imports, reflecting its very limited domestic production base.





Sources: Country authorities; and IMF staff calculation.

Staff's assessment—based on the EBA-lite framework—suggests substantial exchange rate overvaluation compared to the level implied by fundamentals and desirable policies.[2] This assessment is based on the IMF standard methodology using the CA model, the REER Index model, and External Sustainability approach (ES). The CA gap, the difference between CA-actual and the CA norm, suggests an external position that is substantially weaker than current fundamentals and desirable policy settings. The REER gap from the REER model also points to substantially weaker external position. Nonetheless, these results are sensitive to sample periods and underlying assumptions. Further, the estimates of the CA norm may not fully capture Timor-Leste specific factors such as data

Box 4. External Sector Assessment (concluded)

limitations (e.g., no output gap), the availability of financing from the PF, and rapid structural change the country is undergoing.

2016 External Balance Assessment Results

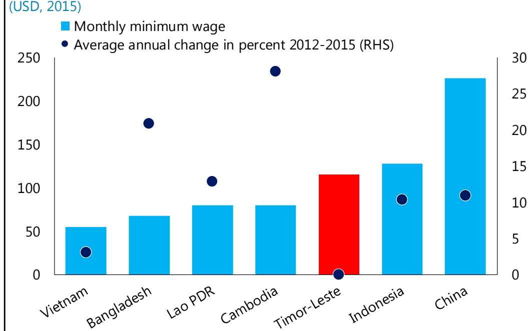
	CA model	CA model* 1/	REER model	ES model 2/
Actual CA	-19.3	-19.3		-15.3
CA norm	-8.2	-6.6		-0.3
CA gap	-11.1	-12.7		-14.9
REER gap 3/	**32.7**	**37.4**	**26.6**	**44.1**

1/ With staff's recommended desirable fiscal balance equivalent to narrowing the underlying fiscal deficit by 6 percent of GDP via reducing capital expenditure by one-third.
2/ For External Sustainability (ES) model, actual CA is the medium-term CA projection and CA norm is the CA that stabilizes NFA at the 2016 level.
3/ Implied over(+)/under(-) valuation.
Source: IMF staff estimates

International reserves adequency is met due to the significant buffer from the PF. NIR was US$0.3 billion at end 2016 or an import coverage of 2.9 months. Reserve adequacy metrics for credit-constrained LICs suggest that the optimal level of reserves for Timor-Leste is around 9.5 months of imports, much higher than the traditional metric of 3 months. The estimated adequacy threshold largely reflects the inflexibility of a dollarized economy in adjusting the exchange rate to absorb shocks.[3] While a fully dollarized economy does not face exchange rate fluctuation risk, liquidity is needed to protect the financial system from liquidity shocks and as a fiscal buffer for the financing gap. In this context, the PF provides significant buffers, with foreign assets at US$15.8 billion (574 percent of GDP with allocation of 40 percent in equities and the remaining in bonds) equivalent to 164 months of goods and services imports. In contrast, foreign liabilities remain relatively small, at 18.8 percent of GDP at end-2016, mostly consisting of FDI liabilities and concessional external debt (12.8 percent and 2.4 percent of GDP, respectively).

Structural reforms remain crucial to improve external competitiveness. Structural reforms such as raising productivity, improving the business climate, and promoting non-oil private sector development are warranted to enhance external competitiveness. The minimum wage remains relatively high compared to regional peers, which could discourage FDI in labor-intensive sectors. Keeping the wage level in line with productivity will help improve export competitiveness and attract foreign direct investment. Addressing infrastructure bottlenecks, increasing financial access and closing labor skill gaps by more targeted vocational training would also help improve competitiveness.

Monthly Minimum Wage
(USD, 2015)



Sources: Timor-Leste authorities; ILOSTAT; and IMF staff calculations.

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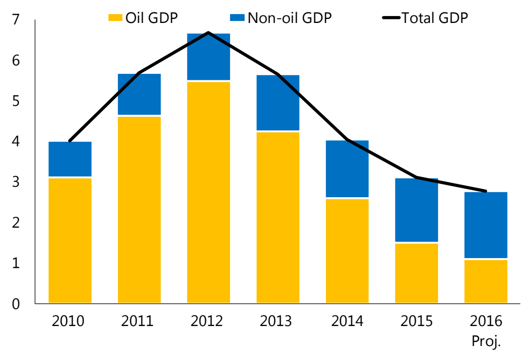
[1]Prepared by Tadaaki Ikoma.
[2]See IMF (2016), Methodological Note on EBA-Lite.
[3]See IMF (2015), Assessing Reserve Adequacy – Specific Proposals.

Figure 1. Timor-Leste: Real Sector Developments

The dominance of the oil sector in the economy peaked in 2012 with oil output declining rapidly thereafter…

Nominal GDP: Total, Oil, and Non-Oil

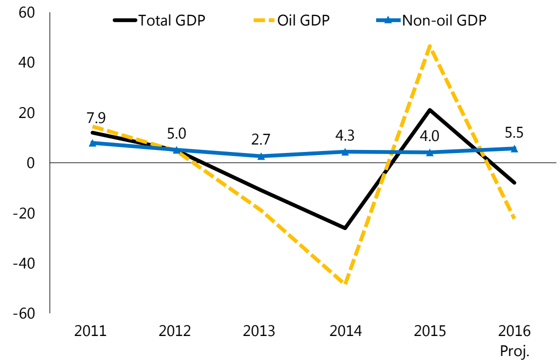
(In billions of US dollars)



…while, growth in non-oil GDP remains favorable.

Real GDP: Total, Oil and Non-Oil

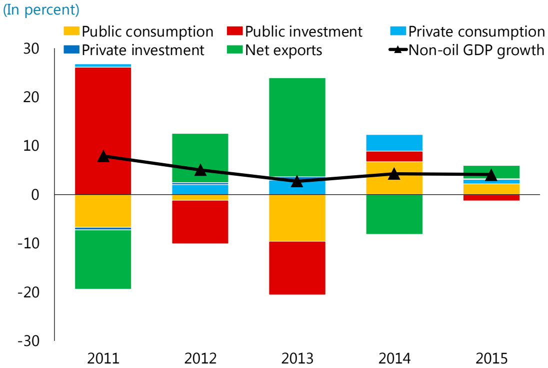
(Annual percentage change)



Non-oil GDP has been largely driven by government spending…

Real Non-Oil GDP Expenditure: Contributions to Growth

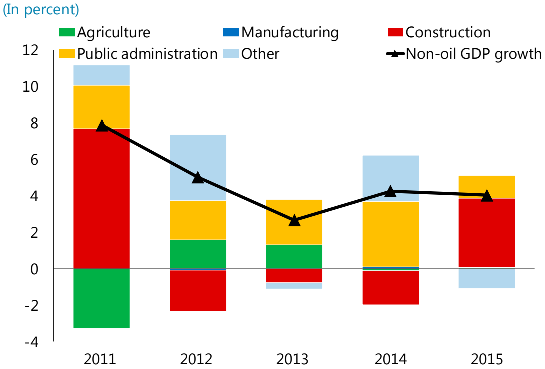
(In percent)



… and is for the most part underpinned by economic activities in construction and public administration.

Real Non-Oil GDP Production: Contributions to Growth

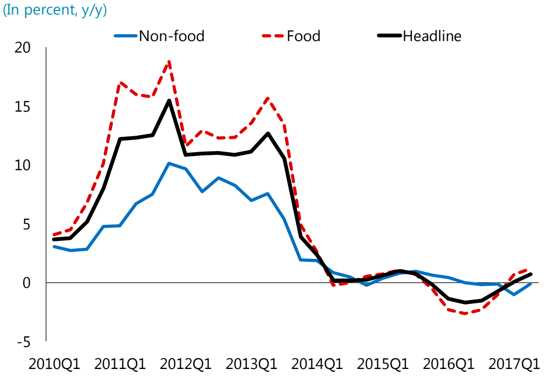
(In percent)



Inflation has remained weak, with headline CPI declining since the last quarter of 2015…

Food and Non-food Prices

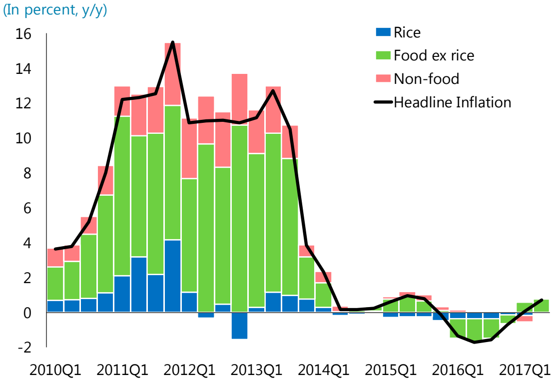
(In percent, y/y)



…reflecting the impact of lower domestic and global food prices.

Contribution to Headline Inflation

(In percent, y/y)

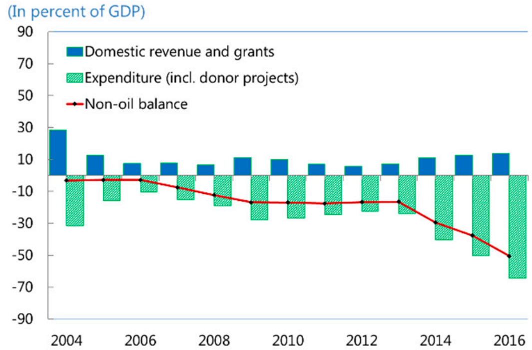


Sources: General Directorate of Statistics; and IMF staff estimates and projections.

Figure 2. Timor-Leste: Fiscal Developments

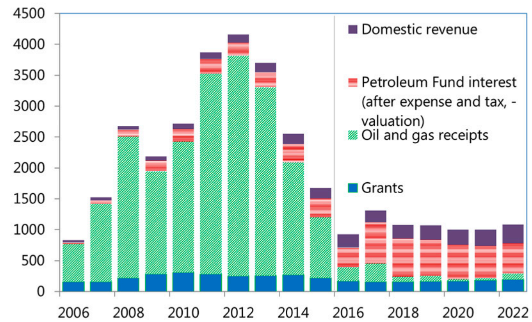
Faster growth in government spending vis-a-vis domestic revenue has led to substantially greater financing needs…

Non-Oil Balance
(In percent of GDP)



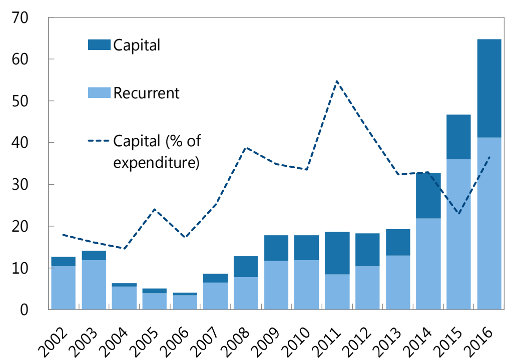
…even as total revenue levels in the medium term are expected to decline amid shrinking oil and gas reserves.

Revenue Sources
(In millions of USD)



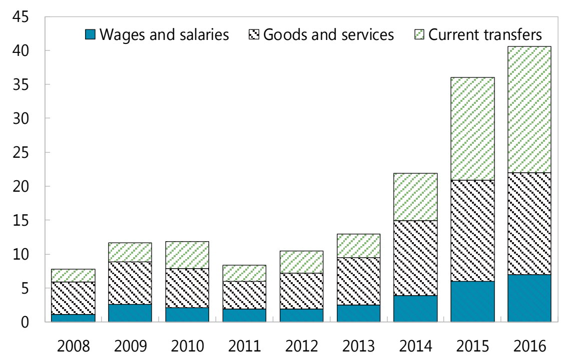
Recurrent spending continues to account for the bulk of the budget outlay…

Expenditure Shares
(In percent of GDP, excl. donor projects)



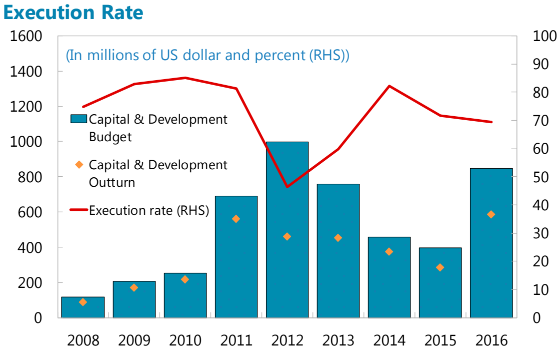
…driven by higher current transfers, and to a lesser degree, rising spending on wages and salaries.

Recurrent Spending
(In percentage of GDP)



While the capital budget continues to be under executed due to capacity constraints, spending levels have increased…

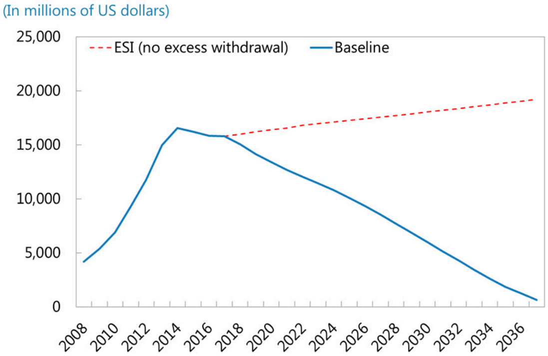
Capital and Development Expenditure: Budget and Execution Rate



Source: Timor-Leste Budget Transparency Portal.

…and higher use of excess withdrawals to meet growing financing needs is reducing the PF balance rapidly.

Petroleum Fund Balance: Baseline vs. ESI Scenarios
(In millions of US dollars)



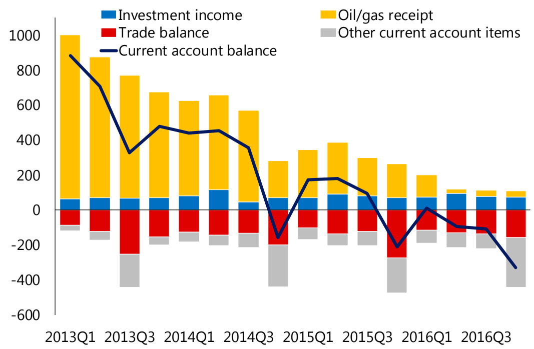
Sources: Ministry of Finance of Timor-Leste; IMF staff calculations and estimates.
Notes: ESI= Estimated Sustainable Income; PF= Petroleum Fund.

Figure 3. Timor-Leste: External Developments

Current account balance continued to deteriorate due to strong imports and declining oil and gas receipts.

Current Account Balance

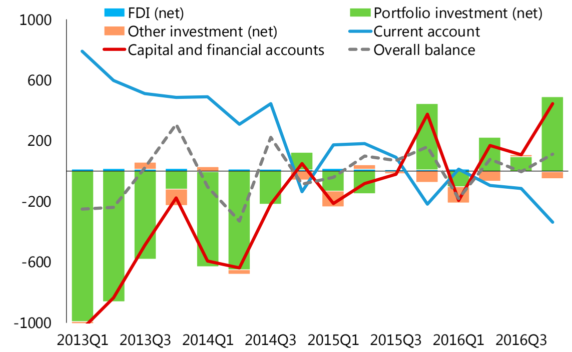
(In millions of USD)



Current account deficit was financed mainly by divestment of the PF portfolio investment.

Financial Account Balance

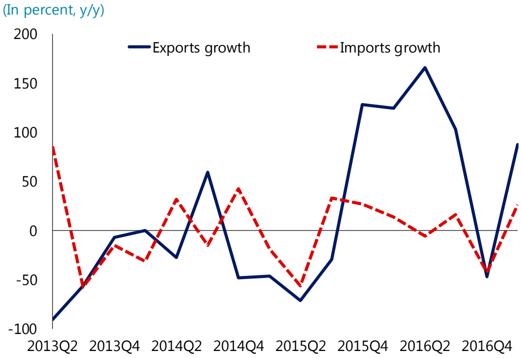
(In millions of USD)



Non-oil exports have picked up, albeit from a small base, but are volatile…

Goods Exports and Imports Growth

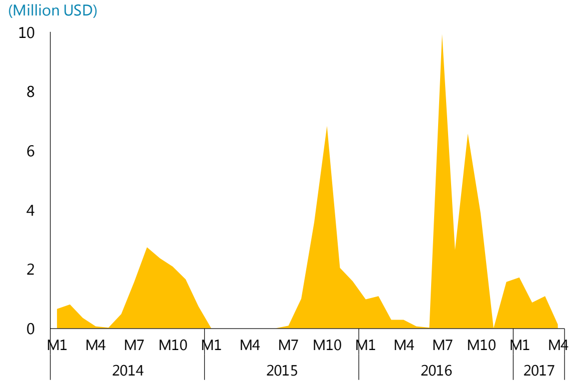
(In percent, y/y)



… reflecting fluctuations in coffee exports, the single-largest export item after oil/gas.

Coffee Exports Value

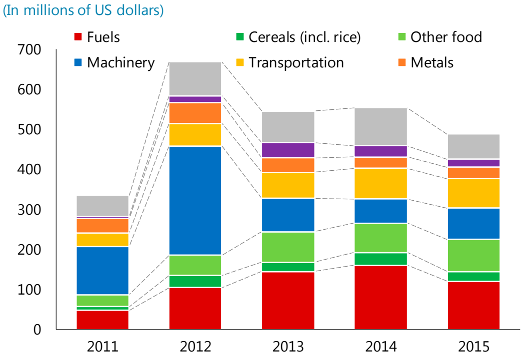
(Million USD)



Fuel and food account for about one-half of total imports.

Goods Import

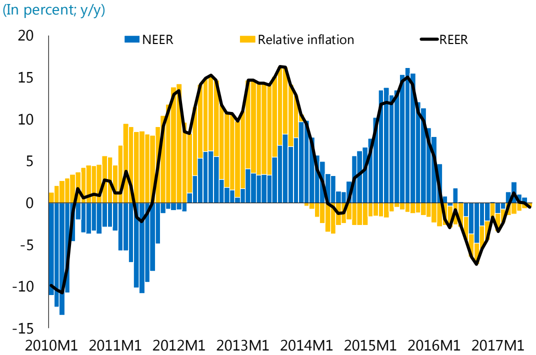
(In millions of US dollars)



The depreciation of REER in 2016 reflected negative inflation and nominal depreciation of the U.S. dollar against the currencies of trading partners.

Real Effective Exchange Rate: Contribution to Change

(In percent; y/y)



Sources: Timor-Leste authorities; and IMF staff calculation.

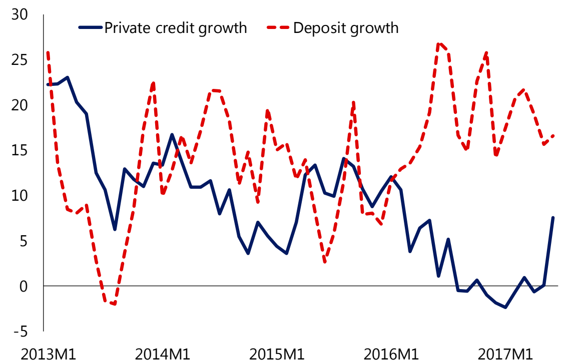
Sources: Central Bank of Timor-Leste; and IMF, Integrated Monetary Database.

Figure 4. Timor-Leste: Monetary and Financial Developments

Private sector credit growth has been declining recently, while deposit growth remains strong …

Credit and Deposit Growth

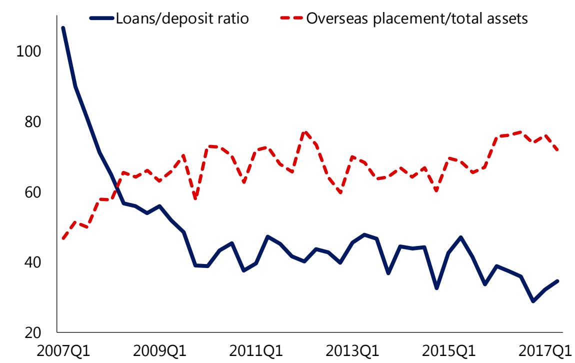
(In percent, year-on-year)



… resulting in high liquidity in the banking sector and increased overseas placement of bank assets.

Liquidity Ratios

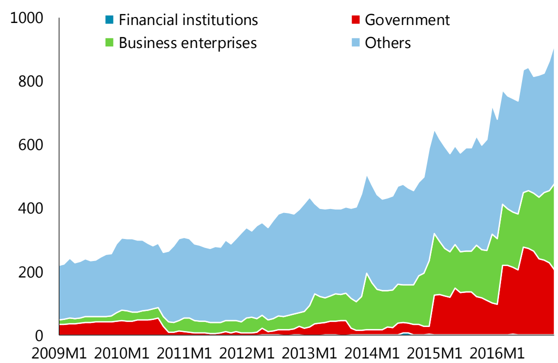
(In percent)



Government deposits in the banking system have increased in recent years.

Deposits by Type of Depositors

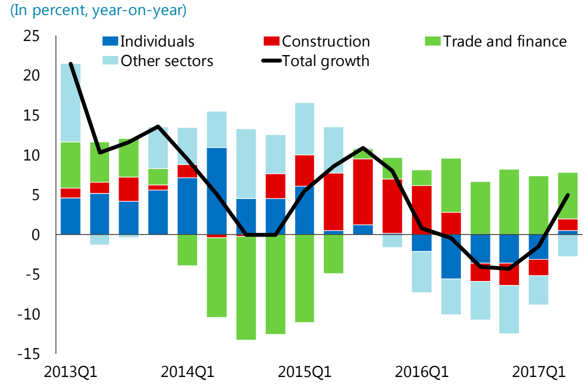
(In million USD)



Recent private sector credit has been driven by loans to trade and finance.

Loans to Private Sector: Contribution to Growth

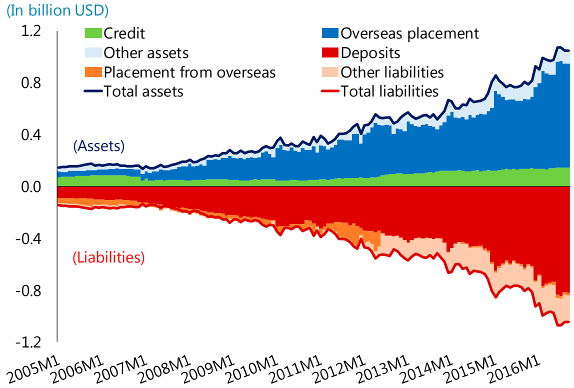
(In percent, year-on-year)



Overseas placement of assets constitutes a significant share of the assets of the banking sector.

Banking Sector Balance Sheet

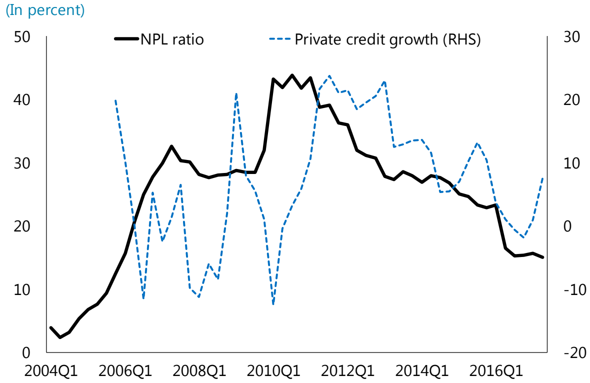
(In billion USD)



Weak private sector credit growth in 2016 was partly due to the resolution of legacy NPLs.

NPL Ratio and Private Sector Credit Growth

(In percent)



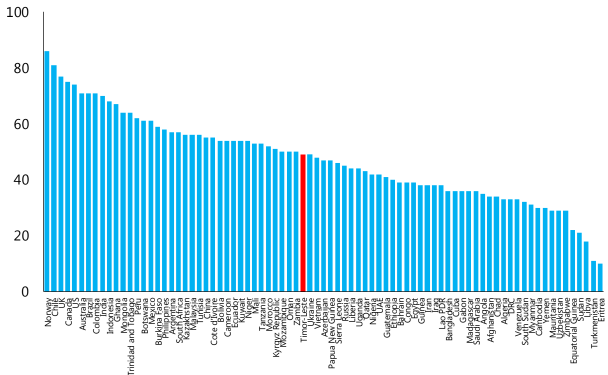
Sources: Central Bank of Timor-Leste; and IMF, Integrated Monetary Database.

Figure 5. Timor-Leste: Business Environment and Governance

The governance of the Timor-Leste's Petroleum Fund is strong by international standards...

Resource Governance Index

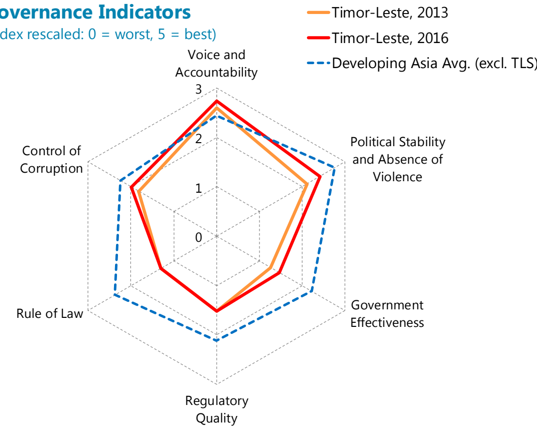
(Index ranges from 0-100, higher is better; 2017)



...the governance of the public sector is improving but lagging somewhat behind peers.

Governance Indicators

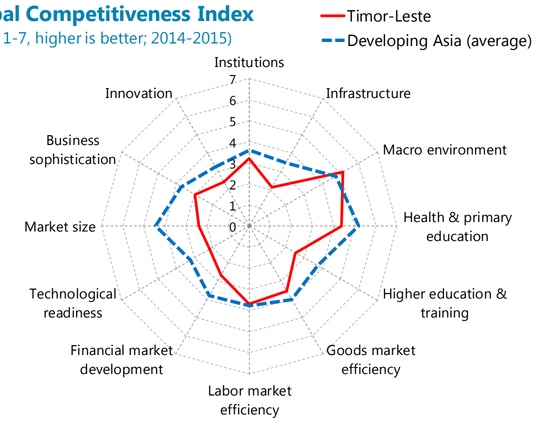
(Index rescaled: 0 = worst, 5 = best)



Competitiveness in most areas needs improvement...

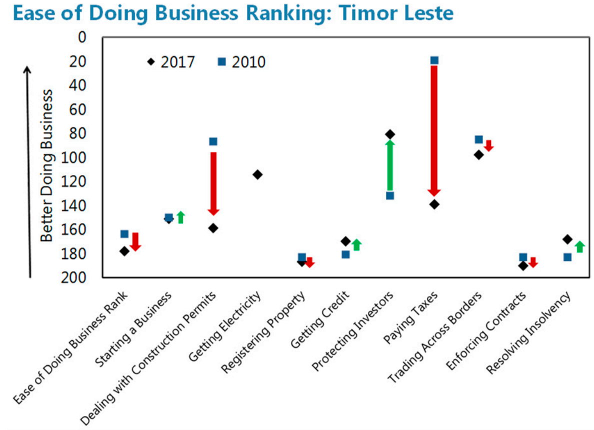
Global Competitiveness Index

(Score 1-7, higher is better; 2014-2015)



... together with further improvements in the ease of doing business.

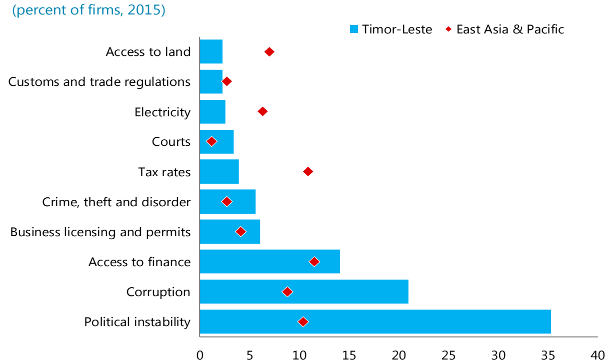
Ease of Doing Business Ranking: Timor Leste



Political instability, governance and limited financial access are among the major business constraints perceived by firms.

Top ten business environment constraints

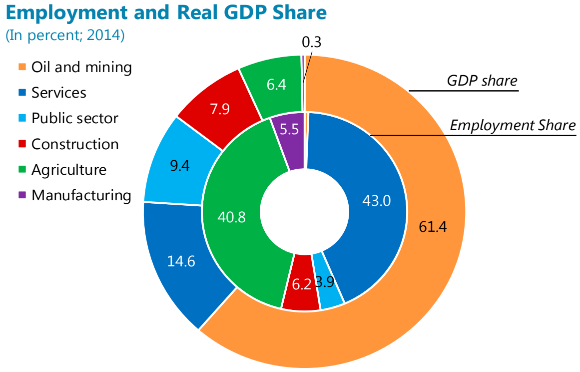
(percent of firms, 2015)



Agriculture and services absorb most of the employment, despite their small share in GDP.

Employment and Real GDP Share

(In percent; 2014)

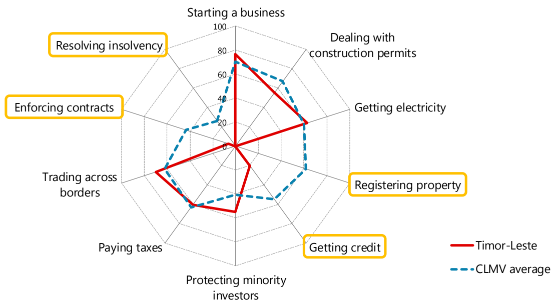


Sources: World Bank Doing Business 2018; Labor Market Survey, 2013; Worldwide Governance Index, 2016; Natural Resource Governance Institute, Resource Governance Index 2017; the World Economic Forum Global Competitiveness Index 2014-2015; World Bank Enterprise Survey, 2015 and World Bank Development Indicators, latest available data.

Figure 6. Timor-Leste: Challenges to Growth – Comparison with Regional Peers

Improvements in key constraints to doing business are needed …

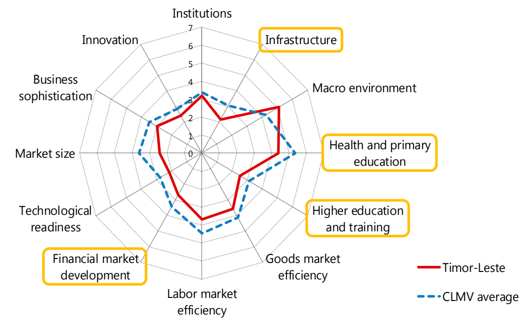
Doing Business Indicators 1/
(Distance to frontier score 2/)



1/ These indicators should be interpreted with caution due to a limited number of respondents, a limited geographical coverage, and standardized assumptions on business constraints and information availability.
2/ On a scale of 0 to 100; 100 is the frontier and 0 is the furthest from the frontier.

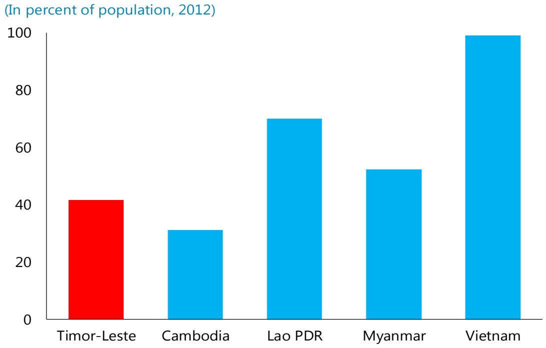
…as well as in infrastructure and human capital to improve competitiveness.

Global Comptitiveness Index
(Score 1-7, higher is better; 2014-15)



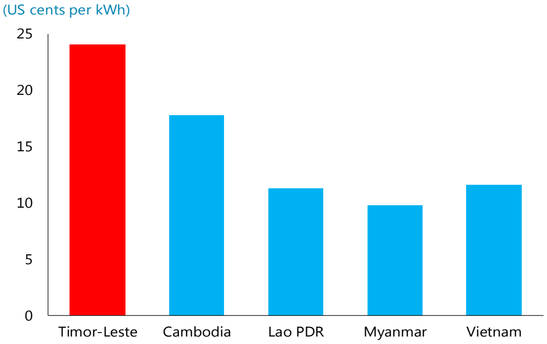
Infrastructure such as access to electricity is relatively low…

Access to Electricity
(In percent of population, 2012)



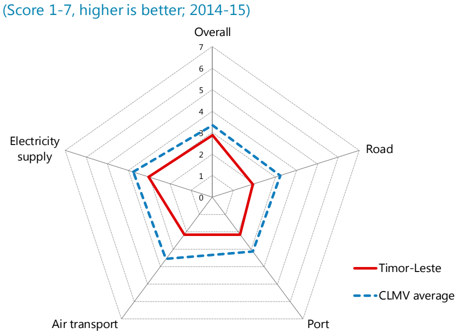
… and with relatively high prices.

Price of Electricity
(US cents per kWh)



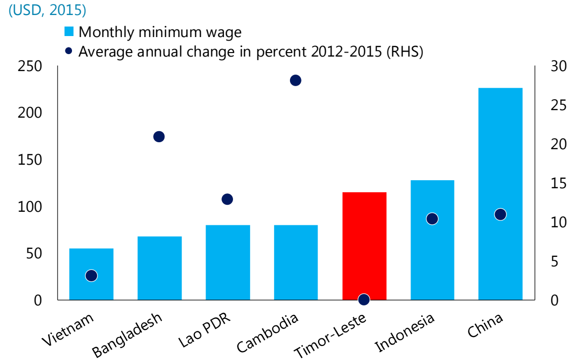
The perceived quality of infrastructure is lower than peers.

Quality of Infrastructure
(Score 1-7, higher is better; 2014-15)



Improving wage competitiveness is another challenge given relatively high minimum wage level.

Monthly Minimum Wage
(USD, 2015)



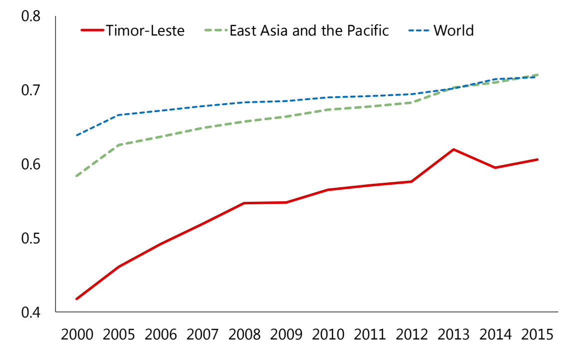
Sources: Timor-Leste authorities; ILOSTAT; and IMF staff calculations.

Sources: World Bank Development Indicators; World Bank Doing Business 2018; World Economic Forum Global Competitiveness Index 2014-2015; ILO STAT latest data available; and IMF staff calculations.
Note: CLMV denotes Cambodia, Lao PDR, Myanmar, and Vietnam.

Figure 7. Timor-Leste: Social Economic Development

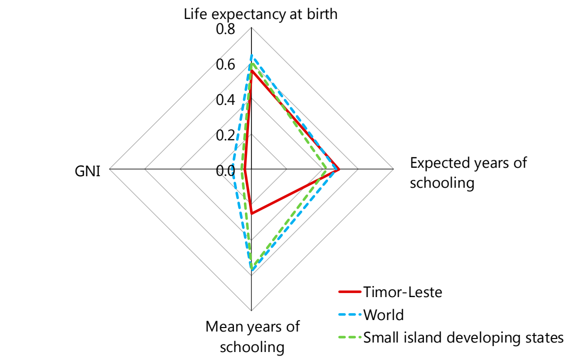
Timor-Leste's relative ranking of human development has improved steadily over the last decade…

Human Development Index (HDI)
(Higher is better)



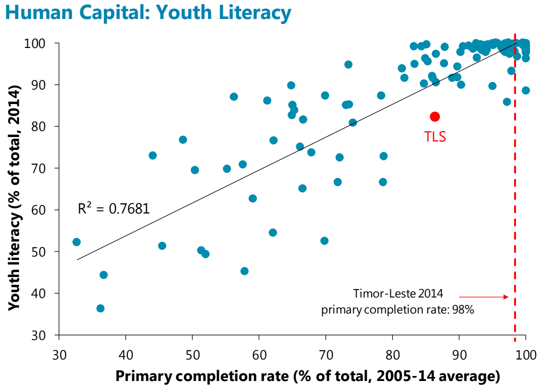
… yet lags peers in average years of schooling.

HDI Components
(Index rescaled; 0=worst, 1=best; 2015)



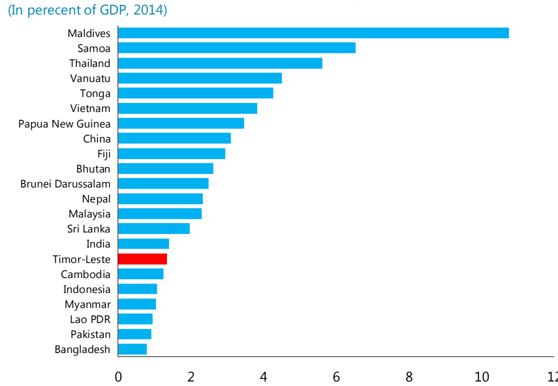
Improved completion rate of basic education achieved in recent years will help to raise literacy rate…

Human Capital: Youth Literacy



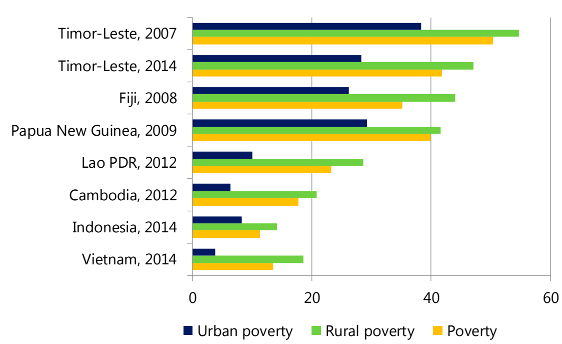
… and increasing the level and quality of public spending on health would help strengthen human capital.

Health Expenditure: Selected Developing Asian Economies
(In perecent of GDP, 2014)



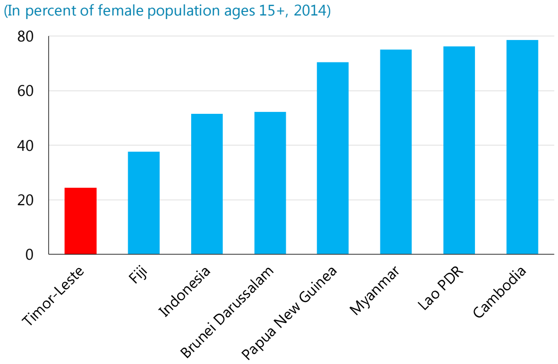
Poverty has declined in recent years…

Poverty Headcount Ratio: Selected Asian Countries
(National poverty line, in percent of population)



…while raising female participation in the labor market remains a challenge.

Female Labor Force Participation Rate 1/
(In percent of female population ages 15+, 2014)



1/ ILO Estimates.

Sources: Human Development Report, 2017; World Bank Development Indicators, latest available data; and IMF staff calculations.

Table 1. Timor-Leste: Selected Economic Indicators, 2014-2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
			Est.			Proj.			
				(Annual percent change)					
Real sector									
Real total GDP	-26.0	20.9	-7.9	-8.0	-0.7	-4.7	-3.7	-2.6	-2.6
Real non-oil GDP	4.3	4.0	5.5	3.0	5.0	5.7	5.5	5.5	5.2
CPI (annual average)	0.7	0.6	-1.3	1.0	2.7	3.6	3.8	3.9	4.0
CPI (end-period)	0.3	-0.6	0.0	2.0	3.5	3.7	3.8	4.0	4.0
				(In percent of GDP, unless otherwise indicated)					
Central government operations									
Revenue	26.5	33.2	33.7	29.9	30.0	28.9	27.5	26.1	24.9
Domestic revenue	4.2	5.5	7.8	6.8	7.6	7.9	8.0	8.0	8.4
Estimated Sustainable Income (ESI)	15.6	20.6	19.7	17.4	16.8	15.5	13.9	12.4	10.8
Grants	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Expenditure	39.8	50.2	64.5	49.9	70.6	73.8	63.9	57.8	50.9
Recurrent	22.6	33.2	36.3	33.4	35.7	35.8	36.0	36.2	35.2
Net acquisition of nonfinancial assets	10.5	9.9	22.1	10.9	29.3	32.4	22.3	16.0	10.1
Donor project	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Net lending/borrowing	-13.3	-17.0	-30.8	-20.1	-40.7	-44.8	-36.3	-31.7	-26.0
				(Annual percent change, unless otherwise indicated)					
Money and credit									
Deposits	19.6	76.7	11.9	36.1	41.5	29.8	35.8	35.7	33.8
Credit to the private sector	5.5	10.5	-1.8	4.8	10.2	9.7	9.7	9.9	11.4
Lending interest rate (percent, end-period)	12.9	13.5	14.2	…	…	…	…	…	…
				(In millions of U.S. dollars, unless otherwise indicated)					
Balance of payments									
Current account balance 1/	1,093	239	-523	-95	-523	-574	-585	-585	-630
(In percent of GDP)	27.0	7.7	-18.9	-3.4	-18.2	-19.4	-18.9	-17.9	-17.8
Trade balance	-603	-635	-539	-548	-797	-834	-815	-823	-835
Exports 2/	16	18	20	12	23	27	32	37	45
Imports	618	653	559	559	820	861	847	861	879
Services (net)	-594	-580	-527	-516	-543	-547	-504	-484	-567
Petroleum revenue	2,117	1,281	540	965	696	672	583	554	585
Overall balance	-376	220	-157	-3	-4	-5	-7	-6	-9
Public foreign assets (end-period) 3/	16,850	16,655	16,125	16,062	15,318	14,422	13,667	12,922	12,292
(In months of imports)	157	153	167	166	126	114	111	104	91
Exchange rates									
NEER (2010=100, period average)	106.8	120.2	120.0	…	…	…	…	…	…
REER (2010=100, period average)	134.9	150.1	145.9	…	…	…	…	…	…
Memorandum items (in millions of U.S. dollars):									
GDP at current prices:	4,042	3,102	2,762	2,764	2,877	2,960	3,090	3,273	3,541
Non-oil GDP	1,451	1,607	1,672	1,843	2,085	2,371	2,695	3,069	3,541
Oil GDP	2,591	1,496	1,090	921	792	590	395	204	0
GDP per capita	3,492	2,619	2,278	2,228	2,267	2,280	2,325	2,409	2,549
(Annual percent change)	-30.1	-25.0	-13.0	-2.2	1.7	0.6	2.0	3.6	5.8
Crude oil prices (U.S. dollars per barrel, WEO) 4/	96	51	43	49	49	50	52	53	55
Petroleum Fund balance (in millions of U.S. dollars) 5/	16,539	16,217	15,844	15,784	15,043	14,153	13,405	12,666	12,045
(In percent of GDP)	409	523	574	571	523	478	434	387	340
Public debt (in millions of U.S. dollars)	22	46	77	87	304	527	749	902	1,002
(In percent of GDP)	0.5	1.5	2.8	3.1	10.6	17.8	24.3	27.6	28.3
Population growth (annual percent change)	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2

Sources: Timor-Leste authorities; and IMF staff estimates and projections.
1/ Excludes trade in goods and services of entities located in the Joint Petroleum Development Area, which are considered non-resident.
2/ Excludes petroleum exports, the income of which is recorded under the income account.
3/ Includes Petroleum Fund balance and the central bank's official reserves.
4/ Simple average of UK Brent, Dubai, and WTI crude oil prices based on July 2017 WEO assumptions.
5/ Closing balance.

Table 2a. Timor-Leste: Summary of Central Government Operations, 2014–2017 1/

	2014	2015	2016		2017	
			Rectification Budget	IMF estimate	Budget	Projection
			(In millions of U.S. Dollars)			
Revenue	**2,555.0**	**1,673.7**	**1,908.3**	**925.0**	**1,469.1**	**1,309.3**
Petroleum revenue	2,116.7	1,280.8	1,593.5	540.4	1,106.3	965.5
Oil/gas receipts	1,817.0	978.9	718.7	223.9	263.4	300.0
Interest	299.8	301.7	874.8	316.2	842.9	665.5
Domestic revenue	168.0	170.2	176.0	215.4	206.2	187.2
Taxes	123.8	119.7	116.4	157.7	145.7	138.4
Taxes on income, profits, and capital gains	53.0	53.3	52.3	74.7	64.9	61.9
Taxes on goods & services	57.3	54.1	52.1	65.9	65.5	61.2
Taxes on international trade & transactions	13.4	12.1	11.8	14.2	14.8	14.8
Non-taxes	44.2	50.5	55.0	53.1	56.9	45.2
Grants	270.3	222.7	143.4	169.2	156.6	156.6
Expenditure	**1,607.7**	**1,558.7**	**2,096.3**	**1,780.2**	**1,543.4**	**1,379.8**
Expenditure excluding donor projects	1,337.4	1,336.0	1,952.9	1,611.0	1,386.8	1,223.2
Current expenditure	912.7	1029.0	1106.9	1001.5	1025.9	922.5
Wages and salaries	162.5	173.4	181.9	179.0	208.8	183.7
Current transfers	291.5	432.4	476.0	470.6	421.3	400.2
o/w ZEESM	n.a.	133.4	217.9	217.9	171.9	171.9
Goods and services	458.7	423.1	449.0	352.0	395.8	338.4
Capital expenditure	424.6	306.9	846.0	609.5	360.9	300.7
Donor project	270.3	222.7	143.4	169.2	156.6	156.6
Overall balance	**947.4**	**115.0**	**-188.0**	**-855.2**	**-74.3**	**-70.6**
Non-oil overall balance	**-1169.4**	**-1165.7**	**-1781.5**	**-1395.6**	**-1180.6**	**-1036.0**
Financing:	1191.2	1148.1	1781.5	1428.3	1180.5	1036.0
Petroleum Fund withdrawals	732.0	1278.5	1674.5	1244.8	1078.7	1026.0
ESI	632.3	638.5	544.8	544.8	481.6	481.6
Withdrawals above ESI	99.7	640.0	1129.7	700.0	597.1	544.4
Change in cash balance (increase="-")	443.3	-154.4	0.0	152.8	0.0	0.0
Borrowing	15.9	24.0	107.0	30.6	101.8	10.0
			(In percent of GDP)			
Revenue	**63.2**	**53.9**	**69.1**	**33.5**	**53.2**	**47.4**
Petroleum revenue	52.4	41.3	57.7	19.6	40.0	34.9
Oil/gas receipts	45.0	31.6	26.0	8.1	9.5	10.9
Interest	7.4	9.7	31.7	11.4	30.5	24.1
Domestic revenue	4.2	5.5	6.4	7.8	7.5	6.8
Taxes	3.1	3.9	4.2	5.7	5.3	5.0
Taxes on income, profits, and capital gains	1.3	1.7	1.9	2.7	2.3	2.2
Taxes on goods & services	1.4	1.7	1.9	2.4	2.4	2.2
Taxes on international trade & transactions	0.3	0.4	0.4	0.5	0.5	0.5
Non-taxes	1.1	1.6	2.0	1.9	2.1	1.6
Grants	6.7	7.2	5.2	6.1	5.7	5.7
Expenditure	**39.8**	**50.2**	**75.9**	**64.5**	**55.8**	**49.9**
Expenditure excluding donor projects	33.1	43.1	70.7	58.3	50.2	44.3
Current expenditure	22.6	33.2	40.1	36.3	37.1	33.4
Wages and salaries	4.0	5.6	6.6	6.5	7.6	6.6
Current transfers	7.2	13.9	17.2	17.0	15.2	14.5
Goods and services	11.3	13.6	16.3	12.7	14.3	12.2
Capital expenditure	10.5	9.9	30.6	22.1	13.1	10.9
Donor Project	6.7	7.2	5.2	6.1	5.7	5.7
Overall balance	**23.4**	**3.7**	**-6.8**	**-31.0**	**-2.7**	**-2.6**
Non-oil overall balance	**-28.9**	**-37.6**	**-64.5**	**-50.5**	**-42.7**	**-37.5**
Financing	29.5	37.0	64.5	51.7	42.7	37.5
Borrowing	0.4	0.8	3.9	1.1	3.7	0.4
			(In percent of non-oil GDP)			
Non-oil revenue	**30.2**	**24.5**	**18.8**	**23.0**	**19.7**	**18.7**
Expenditure	**110.8**	**97.0**	**125.4**	**106.5**	**83.7**	**74.9**
Expenditure excluding donor projects	92.2	83.2	116.8	96.3	75.2	66.4
Current expenditures	62.9	-39.6	-47.4	-36.9	-36.0	-31.4
Capital expenditures	29.3	19.1	50.6	36.4	19.6	16.3
Donor funded expenditures	18.6	13.9	8.6	10.1	8.5	8.5
Non-oil overall balance	**-80.6**	**-72.6**	**-106.5**	**-83.5**	**-64.1**	**-56.2**
Memorandum items:						
Funding gap 2/	-537.1	-527.2	-1236.7	-850.8	-699.0	-554.4
Petroleum Fund balance	16,539	16,217	17,967	15,844	15,784	15,043
Non-oil GDP at current prices	1,451	1,607	1,672	1,672	1,843	1,843
GDP at current prices	4,042	3,102	2,762	2,762	2,764	2,764

Sources: Timor-Leste authorities; and IMF staff estimates.

1/ This presentation of government operations as well as the related comments in the main text of the report do not follow the GFSM 2001 format.

2/ Funding gap is the deficit as per the fiscal rule, and equals ESI plus domestic revenue less expenditure.

Table 2b. Timor-Leste: Summary of Central Government Operations, 2014–2022 1/

	2014	2015	2016	2017	2018	2019	2020	2021	2022
			Est.	Projection					
				(In millions of U.S. dollars)					
Revenue	**1,070.6**	**1,031.4**	**929.4**	**825.4**	**861.9**	**856.6**	**850.2**	**852.6**	**880.1**
Domestic revenue	168.0	170.2	215.4	187.2	219.2	233.3	248.0	263.4	299.1
Taxes	123.8	119.7	157.7	138.4	155.4	165.9	177.0	188.8	213.4
Of which: Taxes on income, profits, and capital gains	53.0	53.3	74.7	61.9	69.1	73.5	78.1	83.0	96.8
Taxes on goods and services	57.3	54.1	65.9	61.2	70.0	75.0	80.2	85.9	94.6
Taxes on international trade and transactions	13.4	12.1	14.2	14.8	15.8	16.9	18.1	19.3	21.3
Non-tax revenue	44.2	50.5	53.1	45.2	60.0	63.5	66.9	70.4	81.5
Estimated Sustainable Income	632.3	638.5	544.8	481.6	482.7	458.7	430.4	407.2	384.1
Donor Projects	270.3	222.7	169.2	156.6	160.0	164.6	171.8	182.0	196.9
Expenditure	**1,607.7**	**1,558.7**	**1,780.2**	**1,379.8**	**2,032.6**	**2,183.3**	**1,973.1**	**1,890.6**	**1,801.5**
Expenditure excluding donor projects	1,337.4	1,336.0	1,611.0	1,223.2	1,872.6	2,018.7	1,801.3	1,708.6	1,604.6
Expense	1,183.0	1,251.7	1,170.7	1,079.1	1,188.5	1,223.9	1,282.6	1,366.9	1,444.5
Recurrent	912.7	1,029.0	1,001.5	922.5	1,028.5	1,059.3	1,110.8	1,184.9	1,247.6
Compensation of employees	162.5	173.4	179.0	183.7	210.1	215.2	225.3	237.4	256.8
Goods and services	458.7	423.1	352.0	338.4	394.2	404.4	422.4	450.0	471.1
Current transfers	291.5	432.4	470.6	400.2	421.4	432.0	450.5	480.7	500.0
o/w ZEESM	n.a.	133.4	217.9	171.9	168.6	172.8	180.2	192.3	200.0
Interest payment	0.0	0.0	0.0	0.1	2.7	7.7	12.7	16.9	19.7
Donor projects	270.3	222.7	169.2	156.6	160.0	164.6	171.8	182.0	196.9
Net acquisition of NFA	424.6	306.9	609.5	300.7	844.1	959.4	690.5	523.7	356.9
Gross operating balance	**-112.4**	**-220.3**	**-241.3**	**-253.7**	**-326.6**	**-367.3**	**-432.4**	**-514.3**	**-564.5**
Net lending/borrowing	**-537.1**	**-527.2**	**-850.8**	**-554.4**	**-1,170.7**	**-1,326.7**	**-1,122.9**	**-1,038.0**	**-921.4**
Statistical discrepancy	21.8	-17.7	32.7	0.0	0.0	0.0	0.0	0.0	0.0
Net financial transactions	-558.9	-509.6	-883.5	-554.4	-1,170.7	-1,326.7	-1,122.9	-1,038.0	-921.4
Net acquisition of FA	-543.0	-485.6	-852.8	-544.4	-953.2	-1,104.1	-900.5	-885.3	-821.4
Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic (net)	-543.0	-485.6	-852.8	-544.4	-953.2	-1,104.1	-900.5	-885.3	-821.4
Equity	-99.7	-640.0	-700.0	-544.4	-953.2	-1,104.1	-900.5	-885.3	-821.4
of which, Excess withdrawal from PF	-99.7	-640.0	-700.0	-544.4	-953.2	-1,104.1	-900.5	-885.3	-821.4
Change in cash/deposit	-443.3	154.4	-152.8	0.0	0.0	0.0	0.0	0.0	0.0
Net incurrence of liabilities	15.9	24.0	30.6	10.0	217.5	222.6	222.5	152.7	100.0
Foreign	15.9	24.0	30.6	10.0	217.5	222.6	222.5	152.7	100.0
Domestic	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				(In percent of GDP)					
Revenue	**26.5**	**33.2**	**33.7**	**29.9**	**30.0**	**28.9**	**27.5**	**26.1**	**24.9**
Domestic revenue	4.2	5.5	7.8	6.8	7.6	7.9	8.0	8.0	8.4
Taxes	3.1	3.9	5.7	5.0	5.4	5.6	5.7	5.8	6.0
Of which: Taxes on income, profits, and capital gains	1.3	1.7	2.7	2.2	2.4	2.5	2.5	2.5	2.7
Taxes on goods and services	1.4	1.7	2.4	2.2	2.4	2.5	2.6	2.6	2.7
Taxes on international trade and transactions	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Non-tax revenue	1.1	1.6	1.9	1.6	2.1	2.1	2.2	2.2	2.3
Estimated Sustainable Income	15.6	20.6	19.7	17.4	16.8	15.5	13.9	12.4	10.8
Expenditure	**39.8**	**50.2**	**64.5**	**49.9**	**70.6**	**73.8**	**63.9**	**57.8**	**50.9**
Expenditure excluding donor projects	33.1	43.1	58.3	44.3	65.1	68.2	58.3	52.2	45.3
Expense	29.3	40.3	42.4	39.0	41.3	41.3	41.5	41.8	40.8
Recurrent	22.6	33.2	36.3	33.4	35.7	35.8	36.0	36.2	35.2
Compensation of employees	4.0	5.6	6.5	6.6	7.3	7.3	7.3	7.3	7.3
Goods and services	11.3	13.6	12.7	12.2	13.7	13.7	13.7	13.7	13.3
Current transfers	7.2	13.9	17.0	14.5	14.6	14.6	14.6	14.7	14.1
o/w ZEESM	n.a.	4.3	7.9	6.2	5.9	5.8	5.8	5.9	5.6
Donor projects	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Net acquisition of NFA	10.5	9.9	22.1	10.9	29.3	32.4	22.3	16.0	10.1
Gross operating balance	**-2.8**	**-7.1**	**-8.7**	**-9.2**	**-11.4**	**-12.4**	**-14.0**	**-15.7**	**-15.9**
Net lending/borrowing	**-13.3**	**-17.0**	**-30.8**	**-20.1**	**-40.7**	**-44.8**	**-36.3**	**-31.7**	**-26.0**
Statistical discrepancy	0.5	-0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Net financial transactions	-13.8	-16.4	-32.0	-20.1	-40.7	-44.8	-36.3	-31.7	-26.0
Net acquisition of FA	-13.4	-15.7	-30.9	-19.7	-33.1	-37.3	-29.1	-27.0	-23.2
Domestic (net)	-13.4	-15.7	-30.9	-19.7	-33.1	-37.3	-29.1	-27.0	-23.2
Equity	-2.5	-20.6	-25.3	-19.7	-33.1	-37.3	-29.1	-27.0	-23.2
of which, Excess withdrawal from PF	-2.5	-20.6	-25.3	-19.7	-33.1	-37.3	-29.1	-27.0	-23.2
Change in cash/deposit	-11.0	5.0	-5.5	0.0	0.0	0.0	0.0	0.0	0.0
Net incurrence of liabilities	0.4	0.8	1.1	0.4	7.6	7.5	7.2	4.7	2.8
Memorandum item									
Nominal GDP	4,042.0	3,102.3	2,761.9	2,763.7	2,877.3	2,960.2	3,089.8	3,272.9	3,540.6
Petroleum Fund									
Opening balance	14,952.1	16,538.6	16,217.4	15,844.1	15,783.5	15,043.3	14,152.5	13,404.5	12,665.7
Comprehensive investment income	2,318.5	957.3	871.6	965.5	695.7	672.0	582.8	553.7	585.1
Oil and gas receipts	1,817.0	978.9	223.9	300.0	80.2	85.3	30.9	30.9	91.1
Investment returns	325.6	326.7	340.9	665.5	615.6	586.7	552.0	522.8	494.0
Valuation gains/losses	201.8	-323.3	331.4	0.0	0.0	0.0	0.0	0.0	0.0
(*Minus*) Expenses and withholding tax	25.8	25.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0
Withdrawal	732.0	1,278.5	1,244.8	1,026.0	1,435.9	1,562.8	1,330.8	1,292.5	1,205.5
ESI	632.3	638.5	544.8	481.6	482.7	458.7	430.4	407.2	384.1
Excess withdrawal	99.7	640.0	700.0	544.4	953.2	1,104.1	900.5	885.3	821.4
Closing balance	16,538.6	16,217.4	15,844.1	15,783.5	15,043.3	14,152.5	13,404.5	12,665.7	12,045.3
(In percent of GDP)	409.2	522.8	573.7	571.1	522.8	478.1	433.8	387.0	340.2

Sources: Timor-Leste authorities; IMF staff calculations.

1/This table is in accordance with the GFS format, with some modifications, to facilitate policy discussion and analysis.

Table 3. Timor-Leste: Balance of Payments, 2014–2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
			Est.	Projections					
				(In millions of U.S. dollars)					
Current account balance 1/	1,093	239	-523	-95	-523	-574	-585	-585	-630
Trade balance	-603	-635	-539	-548	-797	-834	-815	-823	-835
Exports 2/	16	18	20	12	23	27	32	37	45
of which: Coffee	15	17	19	10	20	22	25	28	32
Imports	-618	-653	-559	-559	-820	-861	-847	-861	-879
Services (net)	-594	-580	-527	-516	-543	-547	-504	-484	-567
Receipts	74	74	77	84	92	104	120	148	171
of which: Travel	35	51	58	65	71	80	91	104	118
Payments	-668	-653	-603	-600	-635	-652	-624	-632	-738
Income (net)	2,134	1,290	543	961	689	665	576	548	580
of which: Investment income	316	311	320	661	609	580	546	518	490
Other primary income (oil/gas)	1,817	979	224	300	80	85	31	31	91
Current transfers (net)	156	164	-1	8	128	142	158	174	191
Capital and financial accounts	-1,364	58	515	92	519	569	578	578	620
Official capital transfers	14	29	30	22	22	22	22	22	22
Financial account	-1,378	29	485	70	497	547	556	556	598
of which: Oil/gas savings	-1,385	151	690	726	1,356	1,478	1,300	1,262	1,114
FDI	37	30	-7	37	137	122	137	147	147
Inflow	49	43	5	50	150	135	150	160	160
External debt (net)	28	11	5	7	214	219	219	149	97
Errors and omissions (net)	-105	-77	-149	0	0	0	0	0	0
Overall balance	-376	220	-157	-3	-4	-5	-7	-6	-9
Financing									
Change in net foreign assets	376	-220	157	3	4	5	7	6	9
				(In percent of GDP)					
Current account	27.0	7.7	-18.9	-3.4	-18.2	-19.4	-18.9	-17.9	-17.8
Trade balance	-14.9	-20.5	-19.5	-19.8	-27.7	-28.2	-26.4	-25.2	-23.6
Exports	0.4	0.6	0.7	0.4	0.8	0.9	1.0	1.1	1.3
Imports	-15.3	-21.0	-20.2	-20.2	-28.5	-29.1	-27.4	-26.3	-24.8
Services (net)	-14.7	-18.7	-19.1	-18.7	-18.9	-18.5	-16.3	-14.8	-16.0
Income (net)	52.8	41.6	19.7	34.8	24.0	22.5	18.7	16.8	16.4
Current transfers (net)	3.9	5.3	0.0	0.3	4.4	4.8	5.1	5.3	5.4
Capital and financial accounts	-33.8	1.9	18.7	3.3	18.1	19.2	18.7	17.7	17.5
Overall balance	-9.3	7.1	-5.7	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3
				(In millions of U.S. dollars, unless otherwise indicated)					
Memorandum items:									
Public foreign assets (end-period)	16,850	16,655	16,125	16,062	15,318	14,422	13,667	12,922	12,292
(In months of imports of G&S)	157	153	167	166	126	114	111	104	91
(In percent of GDP)	417	537	584	581	532	487	442	395	347
of which: Central bank reserves	311	438	281	278	274	270	263	256	247
Petroleum Fund balance 3/	16,539	16,217	15,844	15,784	15,043	14,153	13,405	12,666	12,045
(In percent of GDP)	409	523	574	571	523	478	434	387	340

Sources: Data provided by the Timor-Leste authorities; and IMF staff estimates.

1/ Excludes trade in goods and services of entities located in the Joint Petroleum Development Area which are considered non-resident entities.

2/ Excludes petroleum exports, the income of which is recorded under the income account.

3/ Closing balance.

Table 4. Timor-Leste: Monetary Developments, 2014–2018

	2014	2015	2016	2017 June	2017 Projections	2018 Projections
	(In millions of U.S. dollars)					
Banking system 1/						
Net foreign assets 2/	**757**	**1,016**	**1,096**	**1,027**	**1,040**	**1,036**
Gross reserves	311	438	281	281	278	274
Other foreign assets	521	661	876	799	823	823
Foreign liabilities	76	83	61	53	61	61
Net domestic assets	**-157**	**-373**	**-362**	**-355**	**-248**	**-131**
Net credit to central government	-207	-339	-420	-403	-420	-420
Net credit to state and local government	-1	0	0	-6	0	0
Net credit to public nonfinancial corporations	0	0	-1	-2	0	0
Credit to private sector	192	212	208	227	218	240
Other items (net)	-142	-246	-149	-171	-46	48
Broad money	**600**	**642**	**734**	**672**	**793**	**905**
Narrow money	343	398	464	383	501	572
Currency in circulation 3/	10	12	15	16	16	18
Transferable deposits	333	386	450	367	486	555
Other deposits	257	245	270	289	291	333
Central Bank						
Net foreign assets 2/	**300**	**427**	**271**	**270**	**268**	**264**
Gross reserves	311	438	281	281	278	274
Foreign liabilities	11	11	10	11	10	10
Net domestic assets	**-154**	**-214**	**-179**	**-179**	**-179**	**-179**
Net credit to central government	-181	-238	-215	-131	-215	-215
Net credit to other depository corporations	71	75	90	15	90	90
Other items (net)	-44	-50	-54	-63	-54	-54
Monetary Base	**147**	**213**	**91**	**92**	**88**	**85**
Currency in circulation	10	12	15	16	16	18
Other liabilities to depositary corporations	137	201	77	76	73	67
Others 3/	0	0	0	0	0	0
	(12-month percentage change)					
Broad money growth	19.9	7.1	14.3	16.6	8.0	14.2
Reserve money growth	71.4	45.4	-57.2	51.4	-3.1	-4.3
Credit to the private sector growth	5.5	10.5	-1.8	7.5	4.8	10.2
Memorandum items	(In percent, unless otherwise indicated)					
Credit/non-oil GDP	13.2	13.2	12.4	12.3	11.8	11.5
Broad money/non-oil GDP	41.3	40.0	43.9	36.5	43.0	43.4
Credit/deposits 4/	32.5	33.6	28.9	35.4	27.5	26.8
Amounts of non-perfoming loans (in millions of U.S. dollars)	47.4	43.7	28.0	…	…	…
Non-performing loans/total loans	26.8	22.9	15.3	…	…	…
Loan rate 5/	12.9	13.5	14.2	…	…	…
Deposit rate 6/	1.1	1.0	1.0	…	…	…

Sources: Central Bank of Timor-Leste; and IMF staff estimates.
1/ Includes the Central Bank, four commercial banks (including three branches of foreign banks).
2/ An oil fund was created in September 2005 and the deposits were moved off-shore and onto the Government balance sheet.
3/ Includes only coinage issued by the Central Bank. No data is available for notes due to dollarization of the financial system.
4/ Excludes government deposits.
5/ Rate charged by other depository corporations on loans in U.S. dollars. The rate is weighted by loan amounts.
6/ Rate offered by other depository corporations on three-month time deposits in U.S. dollars. The rate is weighted by deposit amounts.

Table 5. Timor-Leste: Medium-Term Scenario, 2014–2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
			Est.			Projections			
Real sector									
GDP at current prices (in millions of U.S. dollars)	4042	3102	2762	2764	2877	2960	3090	3273	3541
Non-oil GDP	1451	1607	1672	1843	2085	2371	2695	3069	3541
Oil GDP	2591	1496	1090	921	792	590	395	204	-
Real non-oil GDP growth (percentage change)	4.3	4.0	5.5	3.0	5.0	5.7	5.5	5.5	5.2
CPI (percentage change, period average)	0.7	0.6	-1.3	1.0	2.7	3.6	3.8	3.9	4.0
CPI (percentage change, end-period)	0.3	-0.6	0.0	2.0	3.5	3.7	3.8	4.0	4.0
Private sector credit (annual percent change)	5.5	10.5	-1.8	4.8	10.2	9.7	9.7	9.9	11.4
Central government operations				(In percent of GDP)					
Revenue	26.5	33.2	33.7	29.9	30.0	28.9	27.5	26.1	24.9
Domestic revenue	4.2	5.5	7.8	6.8	7.6	7.9	8.0	8.0	8.4
Estimated Sustainable Income (ESI)	15.6	20.6	19.7	17.4	16.8	15.5	13.9	12.4	10.8
Grants	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Expenditure	39.8	50.2	64.5	49.9	70.6	73.8	63.9	57.8	50.9
Recurrent	22.6	33.2	36.3	33.4	35.7	35.8	36.0	36.2	35.2
Net acquisition of nonfinancial assets	10.5	9.9	22.1	10.9	29.3	32.4	22.3	16.0	10.1
Donor project	6.7	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6
Net lending/borrowing	23.4	3.7	-31.0	-2.6	-33.3	-37.6	-31.4	-27.2	-20.3
				(In percent of non-oil GDP)					
Revenue	176.1	104.2	55.3	71.0	51.6	45.1	37.2	32.6	30.5
Domestic revenue	11.6	10.6	12.9	10.2	10.5	9.8	9.2	8.6	8.4
Petroleum revenue (incl. PF interest)	145.9	79.7	32.3	52.4	33.4	28.3	21.6	18.0	16.5
Grants	18.6	13.9	10.1	8.5	7.7	6.9	6.4	5.9	5.6
Expenditure	110.8	97.0	106.5	74.9	97.5	92.1	73.2	61.6	50.9
Recurrent expenditure	62.9	64.0	59.9	50.1	49.3	44.7	41.2	38.6	35.2
Capital expenditure	29.3	19.1	36.4	16.3	40.5	40.5	25.6	17.1	10.1
Donor project	18.6	13.9	10.1	8.5	7.7	6.9	6.4	5.9	5.6
Overall balance	65.3	7.2	-51.1	-3.8	-45.9	-47.0	-36.0	-29.0	-20.3
Non-oil overall balance	-80.6	-72.6	-83.5	-56.2	-79.3	-75.3	-57.6	-47.1	-36.9
				(In millions of U.S. dollars, unless otherwise indicated)					
Current account balance 1/	1,093	239	-523	-95	-523	-574	-585	-585	-630
Trade balance	-603	-635	-539	-548	-797	-834	-815	-823	-835
Exports 2/	16	18	20	12	23	27	32	37	45
Imports	618	653	559	559	820	861	847	861	879
Services (net)	-594	-580	-527	-516	-543	-547	-504	-484	-567
Petroleum revenue (incl. PF interest)	2,117	1,281	540	965	696	672	583	554	585
Petroleum Fund balance	16,539	16,217	15,844	15,784	15,043	14,153	13,405	12,666	12,045
(In months of imports)	154	149	164	163	124	112	109	102	89
				(In percent of non-oil GDP, unless otherwise indicated)					
Current account balance 1/	75.3	14.9	-31.3	-5.2	-25.1	-24.2	-21.7	-19.1	-17.8
Trade balance	-41.6	-39.5	-32.2	-29.7	-38.2	-35.2	-30.3	-26.8	-23.6
Exports 2/	1.1	1.1	1.2	0.6	1.1	1.1	1.2	1.2	1.3
Imports	42.6	40.6	33.4	30.4	39.3	36.3	31.4	28.0	24.8
Services (net)	-40.9	-36.1	-31.5	-28.0	-26.0	-23.1	-18.7	-15.8	-16.0
Public external debt									
(In millions of U.S. dollars)	22	46	77	87	304	527	749	902	1,002
(In percent of GDP)	0.5	1.5	2.8	3.1	10.6	17.8	24.3	27.6	28.3
Memorandum items:									
Petroleum Fund balance (in millions of U.S. dollars) 3/	16539	16217	15844	15784	15043	14153	13405	12666	12045
(In months of imports)	154	149	164	163	124	112	109	102	89
(In percent of GDP)	409	523	574	571	523	478	434	387	340
Crude oil prices (U.S. dollars per barrel, WEO) 4/	96	51	43	49	49	50	52	53	55

Sources: Timor-Leste authorities; and IMF staff estimates and projections.

1/ Excludes trade in goods and services of entities located in the Joint Petroleum Development Area which are considered non-resident entities.

2/ Excludes petroleum exports, the income of which is recorded under the income account.

3/ Closing balance.

4/ Simple average of UK Brent, Dubai, and WTI crude oil prices; July 2017 WEO assumptions.

Annex I. Main Recommendations of Past Article IV Consultations

Past Staff Recommendations	Implementation
Fiscal Policy	
Greater focus on fiscal sustainability with a front-loading strategy in line with implementation and absorptive capacity should see expenditure envelope stabilized at $1.3 billion.	Broadly accepted by the authorities. The 2017 budget reflects a modest expenditure envelopment of US$1.39 billion due to significant slowing of capital spending envisaged in an elections year. The multi-year budget projects a continuation of frontloaded capital spending for 2018-21.
Improve the composition of government expenditure, including rigorous cost-benefit analysis for large scale projects, scaling back planned infrastructure for cases ahead of demand, higher recurrent budget for maintenance cost for infrastructure development, curtail rapid increase in transfer and subsidies.	On-going progress but challenges remain. The authorities recognized public investment plans should be subject to robust appraisal but need to build capacity.
Mobilize non-oil domestic revenues.	Fiscal Reform Commission is working on the introduction of value-added tax in the medium term. Establishment of the new custom authority and tax authority would increase tax collection efficiency and raise compliance.
Financial Sector	
Implement the Financial Sector Master Plan to strengthen financial system oversight and development. Need to strike a balance between expanding financial inclusion and safeguarding financial stability. Put in place a strategy to resolve legacy NPL.	BCTL is making progress in building up supervisory and regulatory capacity covering banks and non-bank financial institutions. Substantial part of the legacy NPL was resolved in 2016 with the remaining amount expected to be largely resolved in 2017.
The financial system in Oecusse special economic zone continues to be within the mandate of the BCTL.	Accepted by the BCTL authorities.
Vigilant to the build-up of contingent fiscal liabilities in setting up a development bank.	The authorities are in board agreement with staff's views and there has been no further progress in the conceptualization of a development bank.
Faster progress in reform of the land law to improve the availability of collateral to expand lending and borrowing.	Early attention to be given to enable moveable property to be used as collateral; follows by the use of immoveable property such as land and building as collateral when land titles have been clarified. The Land Law has been promulgated on June 1, 2017.
Establishing appropriate AML/CFT framework.	Good progress is being made with the introduction of the risk based approach.
The use of the U.S. dollars remains appropriate given institutional capacity constraints and limited financial development.	The authorities agreed with the staff's views on full dollarization given competing development goals and while institutions and financial markets remain underdeveloped.
Structural Reforms	
Non-oil real GDP growth averaging around 5 percent over the medium term led by the private sector is more inclusive and sustainable.	Non-oil GDP growth is assumed at 6-6.5 percent in 2018-19 with the frontloading of public investments creating a conducive environment ofr strong growth in private sector investment.
Measures to alleviate impediments to private sector development and economic diversification	Ongoing progress but challenges remain.

Annex II. Risk Assessment Matrix[1]

Sources of Risks	Relative Likelihood (high, medium or low)	Time Horizon	Expected Impacts if Realized (high, medium or low)	Recommended Policy Responses
1. Weaker-than-expected global growth	**Medium** (i) Significant China slowdown and its spillover which would lower commodity prices, roil global financial markets, and reduce global growth. **Medium** (ii) Turning of the domestic credit cycle generating disorderly deleveraging in large emerging economies and potential spillbacks to advanced economies.	**Short to Medium Term** **Short Term**	**Medium/Low** The impact via lower commodity and oil prices is limited by the insulating role of the Petroleum Fund (PF) and low levels of non-oil trade and capital account integration. Nonetheless, weaker growth in Timor-Leste's trading partners may slow the growth in tourism and FDI inflows, hampering economic diversification.	Government expenditure plans need to be scalable to mitigate sharp slow-down in growth. Efforts to raise non-oil revenues need to be intensified and the PF should be maintained at an adequate level as an ongoing revenue source and to provide fiscal buffer.
2. Tighter global financial conditions	**High** Fed normalization, and tapering by ECB increase global rates, strengthens the U.S. dollar and the euro vis-à-vis other currencies, and corrects market valuations. Adjustments could be disruptive if there are policy surprises.	**Short Term**	**Medium/Low** PF would gain from higher global interest rates but could incur capital losses on its PF's bond portfolio. Renewed global shocks that affect international banking operations could impact local liquidity conditions. No crisis management or contingency planning frameworks are yet in place.	The BCTL's regulatory and supervisory framework and crisis management toolkit need to be enhanced. Fostering competition among banks to appropriately increase credit supply and narrow interest rates spread.
3. Lower energy prices	**Low** Driven by stronger-than-expected U.S. shale production and/or recovery of oil production in the African continent.	**Short to Medium Term**	**Medium** Lower energy prices delay investment decisions in new oil fields and reduce profit. The lack of augmentation to PF saving raises fiscal risk in the medium and long term.	As for 1 above.
4.Higher inflation	**Medium** Inability to moderate the scaling up of public expenditures raises inflation as the absorptive capacity of the economy is limited.	**Medium Term**	**Medium** High inflation adversely affects the poor and vulnerable. Higher transfers to compensate and higher public sector wages add to fiscal pressures.	Fiscal policy needs to be adaptable to maintain macro-stability, preserve competitiveness and better protect the poor.
5.Over investment in projects with low returns	**Medium** This could arise due to the implementation of capital-intensive projects with ambitious cost-benefit analysis.	**Medium Term**	**High** Capital-intensive projects that have limited economic linkages would have limited impact on job creation and poverty reduction while depleting PF and risk fiscal sustainability.	Projects should be subject to transparent and realistic cost benefit assessments and risk analysis, and only go ahead if the social returns are higher than the opportunity costs.
6.Failure to secure inclusive growth	**Low/Medium** Discontent could be triggered by public perception of low growth dividend, that oil wealth is not trickling down and not reducing poverty.	**Medium Term**	**High** Higher rent seeking behavior and pressures to raise expenditures may lower the expected return and quality of public investments. Foreign investment, vital for private sector growth and economic diversification, may be discouraged.	Sound policy frameworks and governance structures to be reinforced, especially through more transparency and accountability.
7. Development of Greater Sunrise or other oil fields	**Low** Upside risk if production at Greater Sunrise which is expected to take 5-7 years after finalization of agreement with Australia starts generating receipts early in the medium term.	**Medium Term**	**High** Higher fiscal spending could be supported and to some extent help enhance long-term growth prospects.	Fiscal resources should be prudently spent in line with absorptive capacity to avoid overheating and focus on growth enhancing projects.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent; "medium" a probability between 10 and 30 percent; and "high" a probability of 30 percent or more). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities.

Annex III. Expenditure Rule for Safeguarding Long-Term Fiscal Sustainability[1]

1. **Since the Petroleum Fund (PF) Law was introduced in 2005, Timor-Leste adopted the estimated sustainable income (ESI)**—calculated as 3 percent of the financial assets of the PF and the net present value of future oil and gas receipts—to facilitate its macroeconomic management. The ESI functions as a fiscal rule, as the implied limitations on the use of fiscal resources help to ensure long-term sustainability. The ESI has served Timor-Leste well, especially during the asset accumulation phase of the PF.

2. **Following the amendment to the Petroleum Fund Law in 2011 that provides more flexibility in the use of PF assets to finance the country's development needs with parliamentary approval, the effectiveness of the ESI has been weakened by the need to balance preserving fiscal sustainability and increasing the country's growth potential through financing investments in infrastructure.** In this context, consideration should be given to complementing the ESI with an expenditure fiscal rule.

3. **Expenditure rules usually set permanent limits on total, primary, or current spending in absolute terms, growth rates, or in percent of GDP.** An expenditure rule therefore helps to ensure long-term fiscal sustainability by limiting fiscal spending. Furthermore, it helps shield the domestic economy from overheating due to sudden surges in government spending. While capital expenditure (the golden rule) has in practice been frequently excluded from targeted fiscal aggregates because such spending contributes to growth over the long run, there are concerns that not all capital expenditure is necessarily productive and health and education expenditures may raise productivity more.[2] In the context of Timor-Leste, a ceiling on primary expenditure will help ensure a more moderate pace of spending increase to maintain macroeconomic stability. This would also give time to strengthen the public investment management process to ensure the right projects that are most supportive to economic growth are selected.[3]

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[1] Prepared by Fazurin Jamaludin.

[2] IMF (2009) Fiscal Rules—Anchoring Expectations for Sustainable Public Finances.

[3] IMF (2015) Making Public Investment More Efficient.

Annex IV. Revenue and Expenditure Reform Scenario versus Baseline Forecast[1]

1. The baseline fiscal scenario reflects lower capital spending in line with implementation capacity when compared to the 2017 Budget. The government net borrowing and lending is projected to remain in deficit while narrowing to 26 percent of GDP by the end of the medium term (2018-22), and gradually narrowing to 5 percent of GDP in the long term (2023-37).

- Given capacity constraints, the baseline scenario assumes that only 70 percent (past average execution rate) of the multi-year (2018-21) capital expenditures allocation plan under the 2017 Budget will be implemented. Recurrent spending is expected to remain broadly at 35 percent of GDP in 2022 but decline to 18 percent of GDP in 2037 due to compression of public transfers and goods and services expenditures when confronted with a fiscal cliff caused by a depleting PF balance (see below).

- In the absence of tax reforms, domestic revenue is expected to rise marginally, hovering around 8 percent of GDP over the medium term, and reach 17 percent of GDP in the long term.

- The baseline scenario also assumes a cap on the withdrawal of the PF of US$1.3 billion per annum beyond the medium term, broadly in line with the notional budget envelope proposed during the 2014 Yellow Road Workshop discussions of domestic stakeholders that will help ensure fiscal sustainability.

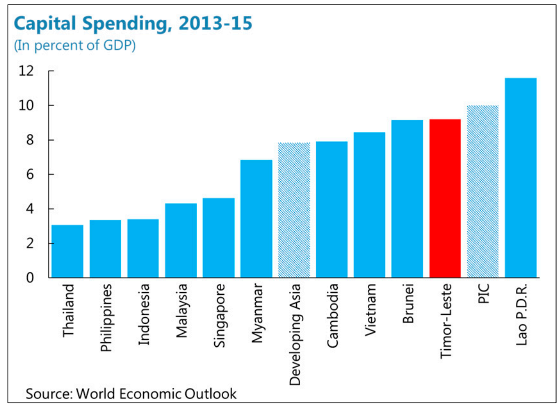
- Total external borrowing during 2017–37 is expected to reach US$3.8 billion, with outstanding debt at 22 percent of GDP in the long term. Continued reliance on excess PF withdrawals would lead to rapid reduction in the PF balance to US$12 billion in 2022 (340 percent of GDP) and to US$639 million (3.5 percent of GDP) by 2037.

2. The staff's proposed reform scenario entails a three-pronged strategy to safeguard long-term fiscal sustainability. Under this scenario, net borrowing/ lending is expected to improve to a deficit of 6 percent of GDP in the medium term, and further narrow to about 1½ percent of GDP in the long term. Over the long term, total revenue is projected to be about 11 percent of GDP higher than that under the baseline scenario which would allow an expenditure envelop of about 7 percent of GDP larger and a rebuild of the PF assets in nominal terms.

- **More moderate levels of spending.** Capital spending should be scaled up at a lower level averaging 14½ percent of GDP in the medium term and be anchored at no more than 10 percent of GDP in the long term. This more moderate and even-paced capital spending level would be better aligned with the country's implementation and absorptive capacity while still meeting the government's objective of frontloading capital expenditure. This level in the medium term is also still higher than the average of about 8 percent of GDP among developing

[1] Prepared by Racha Moussa and Fazurin Jamaludin.

economies in Asia. Recurrent spending should be reduced to 22 percent of GDP in the medium term, through lowering wages and salaries, goods and services, as well as public transfers (including to ZEESM as it completes its initial stage of major development), while preserving pro-poor social spending. An operating balance target of zero, or a surplus such that budgeted recurrent spending is financed by domestic revenue and the ESI, could be considered.

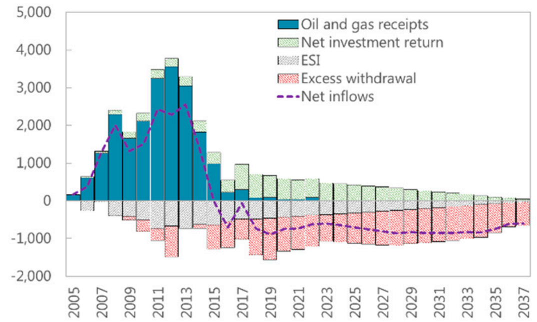


- **A value-added tax (VAT) implemented by 2020.** A VAT which replaces the sales and service taxes, should be introduced by 2020, accompanied by an increase in excise duties yielding an additional 3 percentage points of GDP in revenue. With the government's proposed VAT rate of 7.5 percent (envisaged in the draft VAT law), VAT is expected to raise revenues up to 5 percent of GDP in the medium term. The authorities should further consider raising the VAT rate to 10 percent—in line with IMF past TA recommendation—starting from 2028, to coincide with the cessation of excess withdrawal of the PF (see below). Moreover, tax administration reforms that broaden the tax base and increase compliance would raise direct taxes and other indirect taxes.

- **A commitment plan to stop PF excess withdrawal.** Beyond capping PF withdrawal at US$1.3 billion over the medium term, PF withdrawals in excess of the ESI should not be permitted starting from 2028, to rebuild the PF balance. The resulting financing gap from lower PF withdrawal could be met by external concessional borrowing. Total borrowing is projected at US$4.5 billion over the long term (2017-37), about 18 percent higher than that under the baseline given the lower reliance on PF withdrawal. Outstanding external debt is expected to rise to 24½ percent of GDP in the medium term but should decline to 8 percent in the long term. A combination of lower medium-term spending and lower long-term PF withdrawal is expected to reverse the decline in the PF balance to around US$15.6 billion (468 percent of GDP) in 2022, and reaching US$17.7 billion (93 percent of GDP) in 2037.

Petroleum Fund Dynamics (flow): Baseline Scenario

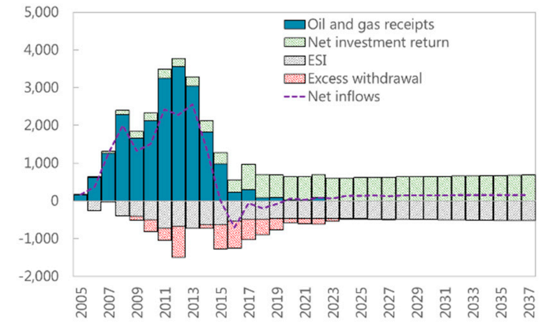
(In millions of US dollars)



Sources: Banco Central de Timor-Leste; IMF staff calculations

Petroleum Fund Dynamics (flow): Reform Scenario

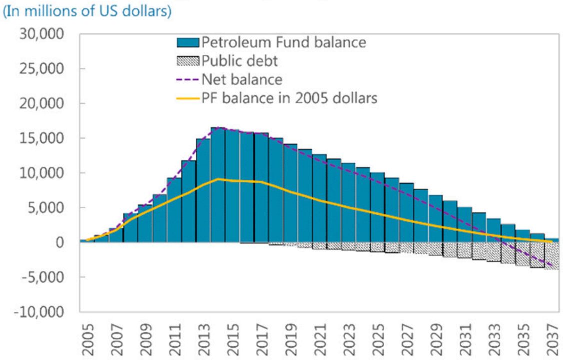
(In millions of US dollars)



Sources: Banco Central de Timor-Leste; IMF staff calculations

Petroleum Fund Dynamics (stock): Baseline Scenario

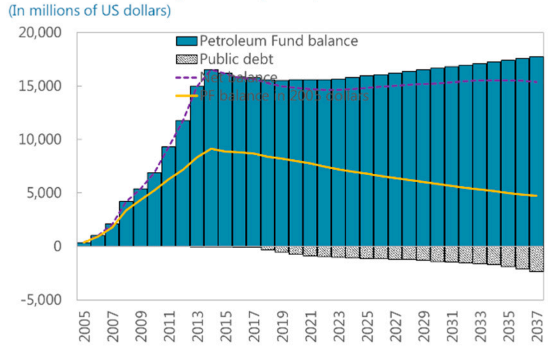
(In millions of US dollars)



Sources: Banco Central de Timor-Leste; IMF staff calculations

Petroleum Fund Dynamics (stock): Reform Scenario

(In millions of US dollars)



Sources: Banco Central de Timor-Leste; IMF staff calculations

Timor-Leste: Illustrative Revenue and Expenditure Reform Strategy vs. Baseline Forecast

(In percent of GDP)

				Baseline						Reform					
	2015	2016	2017	2018	2019	2020	2021	2022	2037	2018	2019	2020	2021	2022	2037
		Est.				Proj.						Proj.			
Total revenue	33.2	33.7	29.9	30.0	28.9	27.5	26.1	24.9	21.6	29.7	29.7	33.8	33.5	33.0	32.6
Domestic revenue	5.5	7.8	6.8	7.6	7.9	8.0	8.0	8.4	16.7	8.2	8.6	13.3	13.8	14.3	25.2
Tax revenue	3.9	5.7	5.0	5.4	5.6	5.7	5.8	6.0	11.7	5.9	6.2	10.9	11.4	11.9	19.8
Direct tax	1.7	2.7	2.2	2.4	2.5	2.5	2.5	2.7	7.4	2.9	3.0	3.1	3.1	3.6	9.0
VAT	-	-	-	-	-	-	-	-	-	-	-	3.4	3.8	3.8	5.0
Other indirect tax	2.1	2.9	2.7	3.0	3.1	3.2	3.2	3.3	4.3	3.0	3.2	4.4	4.4	4.5	5.8
Nontax revenue	1.6	1.9	1.6	2.1	2.1	2.2	2.2	2.3	4.9	2.1	2.3	2.3	2.3	2.2	5.4
Estimated Sustainable Income	20.6	19.7	17.4	16.8	15.5	13.9	12.4	10.8	0.2	17.0	16.5	15.9	15.2	14.2	2.8
Donor grants	7.2	6.1	5.7	5.6	5.6	5.6	5.6	5.6	4.8	4.6	4.6	4.6	4.6	4.6	4.6
Total expenditure	50.2	64.5	49.9	70.6	73.8	63.9	57.8	50.9	26.7	51.8	47.6	44.7	42.8	38.7	34.0
Total expenditure excluding grants	43.1	58.3	44.3	65.1	68.2	58.3	52.2	45.3	23.3	47.2	43.0	40.1	38.2	34.1	29.4
Recurrent spending	33.2	36.3	33.4	35.7	35.8	36.0	36.2	35.2	17.9	32.2	28.0	25.1	23.2	21.6	19.4
Wages and salaries	5.6	6.5	6.6	7.3	7.3	7.3	7.3	7.3	7.3	6.6	6.6	6.6	6.5	6.3	6.0
Goods and services	13.6	12.7	12.2	13.7	13.7	13.7	13.7	13.3	5.1	13.2	11.0	9.1	8.1	7.6	5.4
Public transfers	13.9	17.0	14.5	14.6	14.6	14.6	14.7	14.1	5.0	12.3	10.2	9.0	8.0	7.1	7.2
Interest payment	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.6	0.5	0.2	0.4	0.6	0.8	0.8	0.3
Capital spending	9.9	22.1	10.9	29.3	32.4	22.3	16.0	10.1	5.4	15.0	15.0	15.0	15.0	12.5	10.0
Gross operating balance	-7.1	-8.7	-9.2	-11.4	-12.4	-14.0	-15.7	-15.9	0.3	-7.0	-3.0	4.1	5.8	6.8	8.6
Net borrowing and lending	-17.0	-30.8	-20.1	-40.7	-44.8	-36.3	-31.7	-26.0	-5.1	-22.0	-18.0	-10.9	-9.2	-5.7	-1.4
Primary balance	-17.0	-30.8	-20.1	-40.6	-44.6	-35.9	-31.2	-25.5	-4.6	-21.8	-17.6	-10.3	-8.4	-4.9	-1.1
Financing:															
PF excess withdrawal	20.6	25.3	19.7	33.1	37.3	29.1	27.0	23.2	3.4	14.4	10.3	3.4	4.3	4.2	0.0
Borrowing	0.8	1.1	0.4	7.6	7.5	7.2	4.7	2.8	1.7	7.7	7.7	7.5	4.9	1.5	1.4
Petroleum Fund balance	522.8	573.7	571.1	522.8	478.1	433.8	387.0	340.2	3.5	548.6	537.3	524.3	502.4	467.8	93.1
Outstanding public debt	1.5	2.8	3.1	10.6	17.8	24.3	27.6	28.3	21.9	14.8	24.0	32.3	36.9	35.8	11.5
Memorandum items															
Petroleum Fund balance (in millions of US dollars)	16,218	15,844	15,784	15,044	14,153	13,405	12,666	12,046	639	15,589	15,510	15,573	15,605	15,602	17,729
Real GDP growth	4.0	5.5	3.0	5.0	5.7	5.5	5.5	5.2	5.2	4.7	4.8	4.8	4.8	4.8	6.5
Inflation	-0.6	0.0	2.0	3.5	3.7	3.8	4.0	4.0	4.0	2.0	2.0	3.0	3.0	4.0	4.0
Current account balance (in percent of GDP)	7.7	-18.9	-3.4	-18.2	-19.4	-18.9	-17.9	-17.8	-1.5	-8.0	-6.5	-10.2	-12.3	-15.0	-1.2

Sources: Timor-Leste authorities; and IMF staff calculations.

Annex V. The Macroeconomic Impact of Scaling Up Public Investment[1]

This Annex looks at the macroeconomic implications of the proposed public investment scale up outlined under the 2017 Budget, baseline fiscal scenario, and staff's proposed reform scenario described in Annex IV, all using the Debt-Investment-Growth (DIG) model.[2]

The DIG Model

1. **The DIG model considers a small open economy with two production sectors, two types of households (savers and non-savers) and an active government.** The government collects taxes, and supplements domestic income by foreign and domestic borrowings. Revenues are used to finance public investment, government consumption and makes transfer payments to households. Financing modalities for the government to finance public investment can range from domestic borrowing, external concessional to commercial financing. With financing options set, taxes and transfers adjust to reasonable levels allowing debt to be paid down as painlessly as possible.

2. **The model goes beyond comparing the rate of return on public investment and the cost of funding.** It frames debt sustainability analysis in a framework that incorporates differences in the efficiency of public spending, the response of the private sector to the investment plan, and the ability of the government to adjust taxes and spending.

3. **The DIG model is calibrated for Timor-Leste using specific macroeconomic and microeconomic data.** Public investment efficiency is assumed at 50 percent, in line with the findings in Timor-Leste's public investment management assessment (PIMA) report. This is broadly consistent with the average efficiency level of 60 percent for low-income countries and 75 percent for emerging market economies. The return on public investment is assumed to be 15 percent based on the cross-country estimates of marginal productivity of capital.[3] The assumed rate of return is also close to the average rate of returns on the Timor-Leste's public investment projects financed by the World Bank and evaluated by the Independent Evaluation Group. The model is also adapted to reflect the availability of finance via drawing down of savings from the Timor-Leste Petroleum Fund (PF).

[1] Prepared by Daniel Zerfu Gurara (SPR).

[2] Buffie, E., A Berg, C Pattillo, R Portillo, & L-F Zanna. 2012. Public Investment, Growth, and Debt Sustainability: Putting Together the Pieces. IMF Working Paper No. WP/12/144. International Monetary Fund. Washington D.C.

[3] IMF (2014). Solomon Islands: Third Review Under the Extended Credit Facility Arrangement and Request for Modification of Performance Criteria—Staff Report. IMF Country Report No. 14/170. IMF, Washington D.C.

Macroeconomic Implications

4. **The model analysis highlights the sustainable outcome from a more gradual scaling up of public investments, along with efforts to improve public investment efficiency.** Panels A and B of the Figure present key results for the following three scenarios:

- Under the frontloaded scale up plan as envisaged in Budget 2017, capital expenditure is scaled up by an average of 39 percent of GDP in 2018-2021 and maintained at 11 percent of GDP, the historical level, thereafter. The model assumed one-third of the scale up investment is financed by concessional loan and the remaining two-thirds financed through excess withdrawal of the PF. Under this scenario, the model suggests a large increase in effective public capital stock (96 percent relative to its initial level) but declines after the scale up period. Without the allocation of adequate resources for operation and maintenance in the outer years to maintain the large built-up in the ramp up period,[4] public capital stock could be eroded by 12 percent compared to its peak level within a decade after the scaling up period (see Panel B).

- The baseline scenario considers a lower level of scale up, 30 percent lower than the budget scenario based on the historical execution rate of capital spending and post frontloading capital spending is maintained at 11 percent of GDP, similar to the budget scenario. In terms of the financing mix, the model assumed 40 percent of the investment is financed by concessional loan and the remaining through excess withdrawal of the PF. The model under the baseline suggests that effective public capital stock expands at a lower magnitude (63 percent of GDP) as compared to the budget scenario but also suffers a similar deterioration of effective public capital stock in the outer years. Effective capital stock would decline by 10.7 percent as the incremental investments in the outer years are not sufficient to cover capital depreciation.

- The reform scenario considers a moderate scaling up along with improvement in efficiency. Public investment increased to 15 percent of GDP during 2018-2021 and stabilizes at 10 percent of GDP thereafter. By implementing recommendations outlined in the PIMA report (Annex 3), the efficiency of public investment is assumed to improve over a decade from its current level of 46 percent to 75 percent—the current level of emerging market countries. Concessional loans are assumed to finance about 95 percent of the public investment and the remaining through excess withdrawal from the PF. The model under this scenario suggests that effective public capital stock increases by about 52 percent at the end of the scale up period. The assumed improvement in public investment efficiency would more than offset assumed capital depreciation. In contrast to the budget and baseline scenarios, effective public capital stock would expand by about 60 percent—relative to its initial point—a decade after the end of the scale up period.

[4] Historical capital spending at 11 percent of GDP assumed in the both the budget and baseline scenarios is not sufficient to cover the assumed 5 percent depreciation of capital stock due to high inefficiency rate. The model assumed a depreciation rate of 5 percent as there is no estimate of the actual depreciation rate for Timor-Leste.

5. The model results also highlight a more even and sustainable growth and debt trajectory with a more gradual scale up of public investments. In both the budget and baseline scenarios, real GDP growth would accelerate in the scaling up period but tapper off in the long term.[5] Similarly, external debt level would increase sharply before declining gradually after the scale up period. Private investment would increase over the medium term as public capital accumulates although its pace declines over time as public capital stock declines. In contrast, the reform scenario suggests a moderate impact on real GDP growth, external debt would also accelerate but to a much lower level as compared to the budget and baseline scenarios (Panels C-F). The gradual scale up would support private investment and, over the long term, its impact on private investment would surpass marginally those under the budget and baseline scenarios.

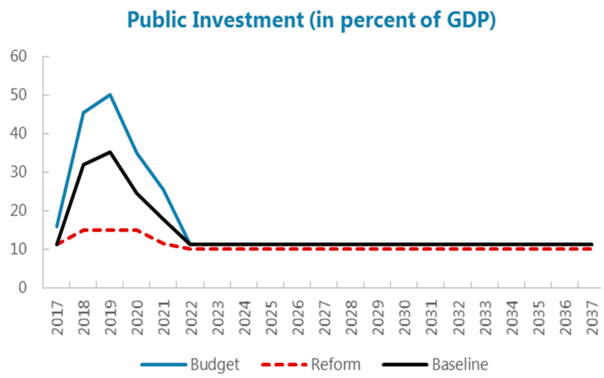
Conclusion

6. The frontloaded public investment scaling up plan could build-up capital stock rapidly but runs the risk of public capital erosion in the long term due to the high-level of resources needed for maintenance. At the current level of public investment efficiency of 50 percent and assuming a public capital stock depreciation rate of 5 percent, the long-term investment level would need to be significantly higher than the historical average capital spending level of about 11 percent of GDP to protect the public capital stock from deterioration. As it is difficult for most countries to rapidly scale up and improve efficiency simultaneously, it would be desirable to decelerate the pace of the scale up to save investment resources. As the reform scenario illustrates, decelerating the pace of scale up while improving public investment efficiency over time could more sustainably build up public capital.

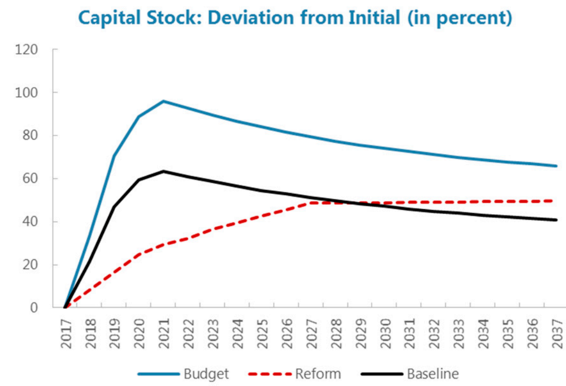
[5] The growth and debt forecasts of the DIG model are different from the macro-framework owing to differences in the structure of the model and some underlying assumptions.

Macroeconomic Impact Under Three Scenarios of Public Investment Scale Up

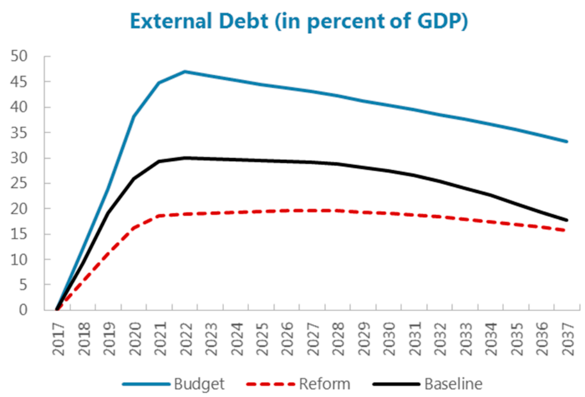
Panel A: Public investment scale up is the most moderate under the reform scenario.



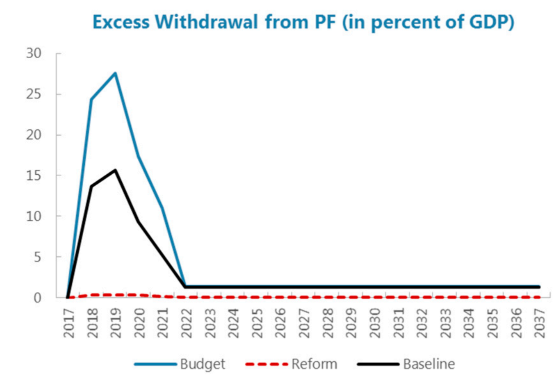
Panel B: Effective public capital declines after the massive scale up period in the budget and baseline scenarios while increases in investment efficiency offsets stock deterioration under the reform scenario.



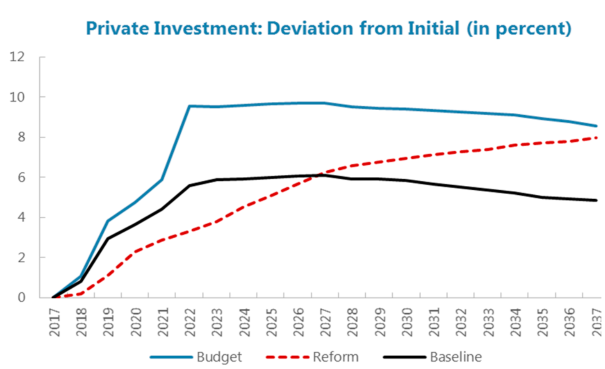
Panel C: External debt accumulates to different levels in the scale up period but decline thereafter.



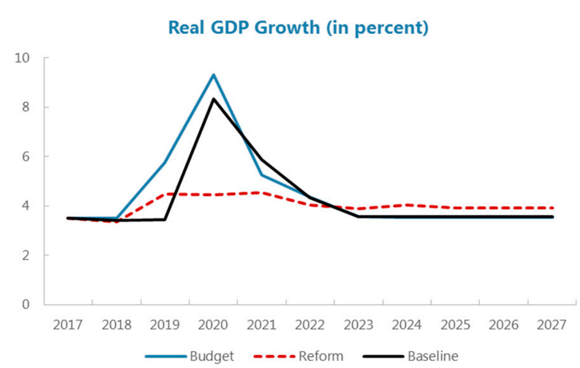
Panel D: Excess withdrawal from the Petroleum Fund is kept at a minimum due to small funding gap under the reform scenario.



Panel E: Private investment increases following the scale up.



Panel F: Real GDP growth spikes during the scale up but is not sustainable.



Source: IMF staff calculations.

Annex VI. Other Countries' Experiences in Value-added Tax (VAT) Implementation[1]

Success of the implementation of VAT in Timor-Leste would hinge on the design and modalities of implementation of the VAT law.

Based on the experiences of IMF member countries, a successful introduction of a VAT depends on high-level political commitments, implementation readiness of tax administration, and ensuring full public understanding. Adequate preparation time is needed between enacting legislation and implementing the tax.

Overall, a legal framework for VAT administration that comprises a well-designed VAT law (including an appropriate registration threshold, a single positive rate, and limited exemptions) and provides an appropriate balance between the rights of taxpayers and the powers of the tax agency is crucial to ensure success in VAT implementation. In this context, some considerations that could be contextualized to meet Timor-Leste's specific needs include:[2]

- **Efficient organizational structure and staffing arrangements**, featuring strong headquarters; function-based organizational design; minimal management layers and appropriate spans of control; streamlined field operations; organizational alignment to key taxpayer segments (e.g., a focus on large taxpayers); and sufficient numbers of staff assigned to each level and function of the organization.

- **Effective management arrangements**, including an appropriate set of strategic, operational, and individual performance measures that create accountability for results.

- **A system of self-assessment** that minimizes interference by revenue officials in the actions by complying taxpayers while concentrating enforcement initiatives on those representing a higher risk.

- **Streamlined VAT filing and payment systems and procedures** aimed at securing timely revenues without imposing undue compliance costs and inconvenience on the business sector.

- **Service oriented approaches** whereby the tax administration operates as a trusted advisor and educator, ensuring that taxpayers have the information and support needed to understand and meet their obligations voluntarily.

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[1] Prepared by Fazurin Jamaludin and Margaret Cotton (FAD).

[2] Sources: Keen, Michael and Victor Thuronyi (2005), "The Challenges of Value-Added Taxes," May, *IMF Survey* Vol. 34, No. 9, Fiscal Affairs Department, IMF; Toro, Juan; Junji Ueda, John Brondolo, Ricardo Fenochietto, and Stephen Howlin (2016), "Thailand: Improving the Performance of the Value-Added Tax," March, Fiscal Affairs Department; IMF (2015), Malaysia: Selected Issues; and Williams, David (1996), "Value-Added Tax," in *Tax Law Design and Drafting* (Volume 1), Victor Thuronyi (Ed.).

- **Risk-based audit and other verification programs** aimed at detecting taxpayers who present the greatest risks to the tax system, supported by effective dispute resolution process.

- **Extensive use of information technology** to assist taxpayers to file tax returns accurately online using real-time validation, gather and process taxpayer information, undertake selective checking based on risk analysis, automatically exchange information between government agencies, and provide information to support management planning and decision making.

- **Modern human resource management practices** that provide incentives for high performance and non-corrupt behavior among tax officers as well as developing staff skills and professionalism.

Annex VII. Credit Guarantee Scheme for SMEs in Timor-Leste[1]

The Central Bank of Timor-Leste is planning to establish a credit guarantee scheme (CGS) of small- and medium-sized enterprises (SMEs) to support financial inclusion and inclusive growth. International experience suggests that CGSs generally increase credit access for targeted groups, but their effectiveness and sustainability depend on design and operation.

1. **Public credit guarantee schemes are widespread globally.** CGS are mechanisms in which a third party—the guarantor—commits to repay the entire or part of the loan to the lender in case the borrower defaults. It provides credit risk mitigation to lending financial institutions to improve credit availability for targeted groups or financially constrained firms, typically SMEs. CGS targeting SMEs are widespread in both developed and developing countries. Public sector is often involved in the establishment and financing of CGS with the aim of increasing credit access to SMEs as they often face limited access to credit or unfavorable borrowing terms due to high transaction costs relative to loan sizes, information asymmetry, and lack of collateral.[2]

2. **Timor-Leste SMEs have limited access to finance.** Notwithstanding their growing economic importance, the financing gap for SMEs is large in Timor-Leste, with a small portion of SMEs having access to bank loans (text figure). A lack of access to credit is often cited as one of major business constraints.

3. **CGS can be useful and efficient when appropriately targeted and managed.** CGS can contribute to the expansion of SME finance by mitigating credit risk for financial institutions, resulting in increased access to credit and more favorable borrowing conditions (e.g., lower collateral requirement, longer maturities, and lower rates), which is generally corroborated by international experience. CGS is considered more cost effective than more direct public intervention, such as subsidies, if lending decisions under the scheme are made by market-based financial institutions.[3] CGS also normally requires relatively small public funding or cash outlays at the initial phase, but expose the government to future cash outflows as credit losses materialize.

4. **CGSs however may create moral hazard and contingent liabilities.** First, CGS may generate little additional credit if financial institutions provide loans to SME borrowers which could gain credit even without CGS. Second, CGS can increase moral hazard on the part of lenders if substantial credit risks are transferred to CGS, reducing lenders' incentives to adequately conduct risk assessment and monitoring, and encourage lending to high-risk borrowers with high interest rates and on the part of SMEs as they face a smaller cost in case of default. Third, public sector

---

[1] Prepared by Tadaaki Ikoma.

[2] This Annex benefitted from World Bank (2015) "Principles for Public Credit Guarantee Schemes for SMEs"; and Gozzi, J.C. and Schmukler, S. (2016) "Public Credit Guarantees and Access to Finance" (Warwick Economics Research Paper Series).

[3] Gozzi and Schmukler (2016) argued that even if temporary subsidies to encourage lending into a new market are deemed necessary, the government could provide a direct subsidy to financial institutions and the public sector would face no credit risk.

support to full or even partial CGS could create significant public contingent liabilities and therefore greater fiscal risks.

5. Maximizing CGS effectiveness requires that the CGS be well designed and operated. To achieve the aim of broadening credit access to economically viable SMEs in a financially sustainable way, appropriate design and operation are key. Among them, special attention should be paid to the following issues:

- **Preconditions.** Legal, regulatory and institutional reforms to mitigate market failures related to SME credit market, including improving the availability of SME information[4] and efficient methods for recovering debt, should be implemented.
- **Eligibility on borrowers, lenders, and credit types.** Typical eligibility criteria on borrowers include firm size, defined by maximum number of employees, value of assets, and sales, lending institutions are evaluated based on their compliance with risk management capacity and practices. Priority should be given to new working and investment capital rather than refinancing of existing loans without credit guarantee.
- **Partial guarantee and loss sharing.** Proper sharing of credit risk among all parties is essential to minimize moral hazard. Guarantee coverage ratio should reflect an appropriate balance between ensuring lenders retain sufficient credit risk and attracting lenders to the scheme. A guarantee of more than 60 percent would risk increasing moral hazard and financing requirement. It is also likely to be more effective if losses are shared rather than guarantee covering fully the first tranche of losses.
- **Guarantee triggers and claim management.** CGS would need to set clear triggers for payout. Also, the establishment of efficient claim management process in case of borrowers' default, in a form that generates incentives for loan loss recovery before submitting claim payments, is important.
- **Risk-based fee pricing.** Similarly, guarantee fees should be charged based on risk level of lending and sufficiently high to keep the scheme financially sustainable.
- **Adequate regulation and supervision.** The BCTL or a regulatory committee should evaluate CGS's performance on a regular basis, set adequate regulation/supervision to ensure that the CGS is financially sustainable including capital adequacy and reporting requirements, and take corrective actions when necessary.
- **Governance.** Ensuring sound governance is also key to achieve efficient operation of the scheme. Mixed ownership between public and private sectors would help establish sound governance by making the decision process more transparent, as well as add to its knowledge and financial base. Consideration could be given to funding the CGS by equity endowments which can be complemented by concessionary loans. Limits on public fiscal support should be made clear to minimize moral hazard.

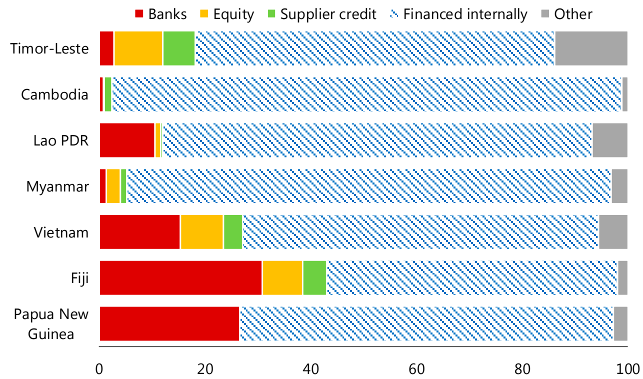
[4] World Bank *Doing Business* (2017) shows that depth of credit information in Timor-Leste lags regional peers.

6. The Decree-Law on Credit Guarantee Scheme for SMEs was approved in May 2017 and the BCTL is currently preparing regulations for implementation of the scheme. Key features defined in the Decree-Law include, targeting SMEs (i.e., small enterprises employing between 6-20 workers and for midsize enterprises between 21-50 workers), defining eligibility (e.g., for loans in priority areas for the diversification of the economy), and limiting maximum guarantee coverage up to 70 percent. Staff encourages best practices listed above, such as eligibility only to new loans, and clarification of the claim and recovery processes, and regulatory requirement to be factored into the regulation.

Timor-Leste: Firms' Access to Finance

Financing from banks accounts for a relatively small portion of firms' investment in Timor-Leste.

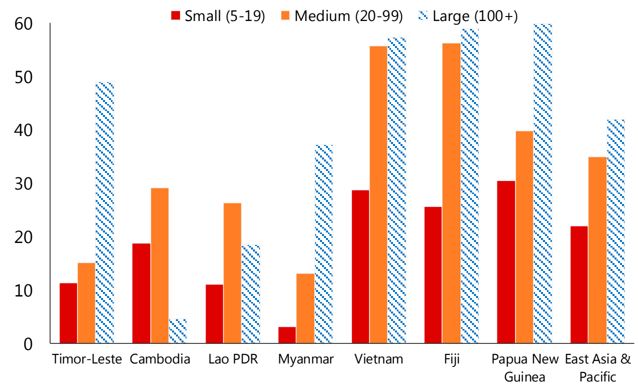
Sources of Financing for Investment
(In percent of total financing)



Sources: Enterprise Survery (Timor-Leste as of 2015; others latest available).

The proportion of SMEs with access to bank financing is low.

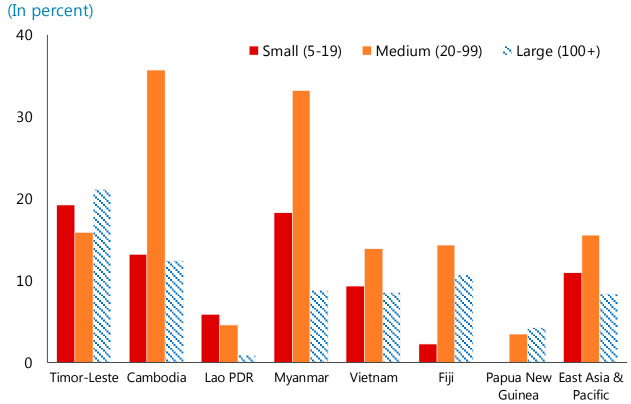
Firms with a Bank Loan or Line of Credit
(In percent of total firms)



Sources: Enterprise Survery (Timor-Leste as of 2015; others latest available).

As a result, the number of firms that consider credit access a key constraint is high, especially among small firms in Timor-Leste.

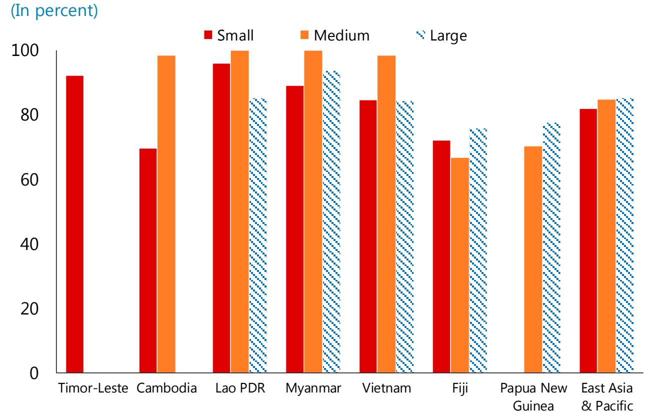
Firms Identifying Financial Access as a Major Constraint
(In percent)



Sources: Enterprise Survery (Timor-Leste as of 2015; others latest available).

Firms are required to provide collateral for most of the loan application....

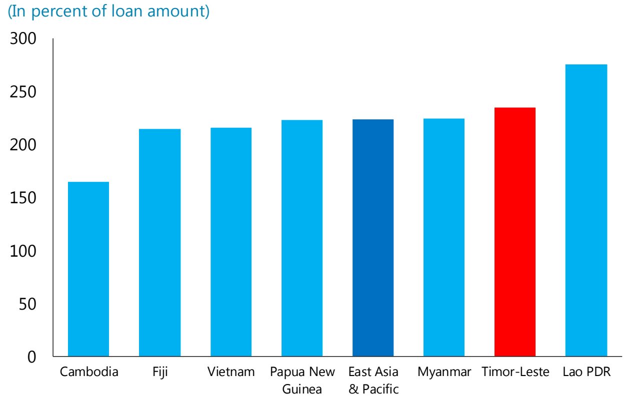
Proportion of Loans Requiring Collateral
(In percent)



Sources: Enterprise Survery (Timor-Leste as of 2015; others latest available).

... as well as collateral valued about 2.5 times as high as underlying loans

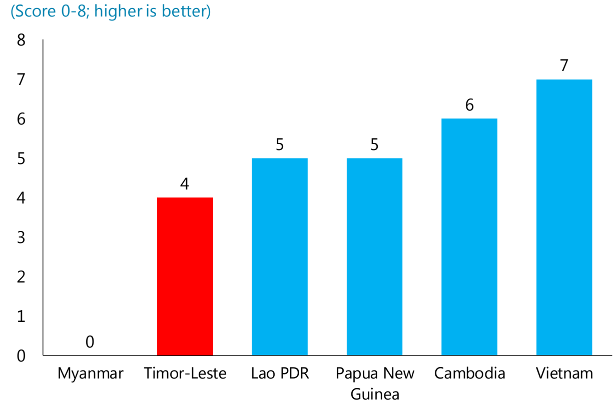
Value of Collateral Needed for a Loan
(In percent of loan amount)



Sources: Enterprise Survery (Timor-Leste as of 2015; others latest available).

The low quality of credit information can be an obstacle to SME financing.

Depth of Credit Information Index
(Score 0-8; higher is better)



Sources: World Bank Doing Business 2017.

INTERNATIONAL MONETARY FUND

DEMOCRATIC REPUBLIC OF TIMOR-LESTE

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION — INFORMATIONAL ANNEX

November 15, 2017

Prepared By

Asia and Pacific Department
(In consultation with other departments)

CONTENTS

FUND RELATIONS

(As of October 20, 2017)

Membership Status
Joined: July 23, 2002; Article VIII

General Resources Account

	SDR Million	Percent Quota
Quota	25.60	100.00
Fund holdings of currency	21.25	83.01
Reserve position in Fund	4.35	17.00

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	7.73	100.00
Holdings	3.40	43.98

Outstanding Purchases and Loans: None

Latest Financial Arrangements: None

Projected payments to Fund:
(SDR Million; based on existing use of resources and present holdings of SDRs)

			Forthcoming		
	2017	2018	2019	2020	2021
Principal					
Charges/Interest	0.01	0.02	0.02	0.02	0.02
Total	0.01	0.02	0.02	0.02	0.02

Exchange Rate Arrangements
The exchange rate arrangement (de jure and de facto) is an exchange arrangement with no separate legal tender. On January 24, 2000, the U.S. dollar was adopted as the official currency of then East Timor by the United Nations Transitional Administration in East Timor (UNTAET). This arrangement has been maintained after Timor-Leste's independence on May 20, 2002. At present, the monetary authority does not undertake foreign exchange transactions; they are handled by commercial banks on the basis of rates quoted in the international markets. Timor-Leste has accepted the obligations under Article VIII, Sections 2(a), 3 and 4, and maintains an exchange system that is free of restrictions on the making of payments and transfers for current international transactions.

Article IV Consultations
Timor-Leste is on a 12-month consultation cycle. The last Article IV consultation was concluded on May 11, 2016. The press release and staff report may be found at http://www.imf.org/en/Publications/CR/Issues/2016/12/31/Republic-of-Timor-Leste-2016-Article-IV-Consultation-Press-Release-Staff-Report-and-44006.

Technical Assistance (TA) and Training
TA has been provided by HQ based staff and experts in collaboration with the Pacific Financial Technical Assistance Centre (PFTAC), in close collaboration with development partners. Significant TA has been provided in areas of public financial management, including on critical calculations for Estimated Sustainable Income (ESI). TA on statistics is continuing including on the Government Financial Accounts and external sector statistics. Current and planned technical assistance is described in more detail below:

Fiscal Affairs Department(FAD)/PFTAC: Significant TA has been provided to the Ministry of Finance on treasury and expenditure management, developing non-oil revenues, and the ESI calculation. The ESI is a key input to the budget and IMF assistance in this area has played an important role in maintaining the credibility of the fiscal rules-based approach. In collaboration with PFTAC, a Public Investment Management Assessment was conducted in Dili in July, 2016 and a Public Financial Management scoping mission conducted in October 2017.

FAD/Institute for Capacity Development (ICD)/PFTAC: Representatives from Timor-Leste participated in a high-level dialogue in June 2015 that was co-hosted by the IMF and the Government of Fiji in Nadi, Fiji, which focused on strategies and policies to make Pacific Island economies more resilient to natural disasters. It was preceded by a three-day workshop on fiscal framework organized by the IMF and PFTAC with funding from the Australian Government. The workshop was designed to give mid-level officials responsible for fiscal planning an overview of key elements of the fiscal planning process, with a focus on strengthening the linkages between policy formulation, planning and execution. Timor-Leste officials also participated in the High-Level Pacific Island Dialogue and Workshop on Building Resilience to Natural Disasters and Climate Change, co-hosted by the Fund and the Government of Fiji, with funding support from AsDB, JICA, and the IMF, in April 2017.

Monetary and Capital Markets Department (MCM): Recent TA has focused on the financial sector and on the Petroleum Fund as it develops its investment strategy to encompass a wider range of investments. In November 2013, an MCM TA mission to the Central Bank of Timor-Leste (BCTL) assessed gaps in institutional capacity in key areas—banking supervision, crisis management, payments system, and research and analysis. This laid the basis for a multi-year TA work program on financial sector issues that is currently being discussed with the authorities and development partners. There is also scope for follow up work on enhancing the Petroleum Fund's investment strategy.

MCM/PFTAC: Two missions to Timor-Leste were conducted by PFTAC's Financial Supervision Sector during the first half of 2014, aimed at reviewing the status of the country's non-bank sector. This was followed in 2015 with the drafting of a Credit Union Act, with the assistance of the IMF Legal Department. An on-site examination program was initiated in mid 2015 with the support of a short-term expert who provided training with on-site examination preparedness and provided support with the execution of the on-site examination of a commercial bank. In consultation with the BCTL, PFTAC continued to provide technical support to the Supervision Department by implementing a banking supervision training program in 2016, aimed at providing the staff with the tools required to adequately perform the examination of a financial institution. The credit union program resumed in 2016 with the staging of a workshop on credit union financial reporting. This also included a training component for the staff of the BCTL on how to adequately perform the oversight of the credit union sector.

Statistics Department (STA)/PFTAC: Recent missions have focused on: (i) government finance statistics as part of an ongoing project regarding the compilation of fiscal data for operational and statistical purposes and publishing Timorese data in the International Financial Statistics; and (ii) balance of payments including on ensuring compliance with the Balance of Payments and International Investment Position Manual (BPM6). The latest GFS/PFTAC mission was in February 2017 and focused on improving the compilation and dissemination of annual and quarterly government financial statistics in line with the GFSM2014. The national accounts statistics have been supported in the last few years by donor-funded experts and the Australian Bureau of Statistics and PFTAC has had reduced involvement other than having staff attend training workshops. Officials from BCTL, Ministry of Finance and Genera Directorate of Statistics participated in the PFTAC Regional Workshop on Compiling and Forecasting GDP in Fiji in October 2017.

Singapore Training Institute (STI): Government officials from Timor-Leste attend IMF training courses on macroeconomic and financial policies offered by the STI, both in Singapore and in the region.

Summary of Recent Technical Assistance:

- High-Level Pacific Island Dialogue and Workshop on Building Resilience to Natural Disasters and Climate Change (IMF/AsDB/JICA)—2017
- Government Finance Statistics (STA)—2013, 2017
- Public Investment Management Assessment (FAD)—2016
- Peer review of draft Value Added Tax Law (FAD, LEG)—2016
- Banking Supervision and Regulation (PFTAC)—2015; Draft Credit Union Act (LEG)—2015
- High-Level Dialogue on Building Resilience to Natural Disasters and Workshop on Strengthening Fiscal Frameworks (APD/FAD/ICD/PFTAC)—2015
- Estimated Sustainable Income (FAD)—2014, 2015
- Balance of Payments Statistics (STA)—2013, 2015

Resident Representative

The resident representative office in Dili, established in August 2000, closed at end-June 2009.

WORLD BANK—IMF COLLABORATION

The World Bank Group assistance to Timor-Leste is guided by the Country Partnership Strategy (CPS) that was approved by the Executive Board in February 2013. The CPS outlines a program that supports Timor-Leste by utilizing financing available from IBRD and IDA and trust fund resources to support investments in critical infrastructure that reduces poverty and boosts shared prosperity, improve service delivery and effective macroeconomic, social and fiscal management.

The Bank and Fund country teams for Timor-Leste, led by Mr. Macmillan Anyanwu (World Bank Country Representative) and Ms. Yu Ching Wong (IMF mission chief), are cooperating closely on macroeconomic and macro-critical structural reform issues. The Bank's country economist, Mr. David Knight, participated in the 2017 Article IV consultation mission.

Timor-Leste's main macroeconomic challenges lie in developing a stronger non-oil economy that creates employment, reduces poverty and safeguards long-term fiscal sustainability. Both teams agreed that to meet these challenges, Timor-Leste needs to shift to a sustainable and poverty reducing growth path while ensuring macroeconomic stability. Achieving fiscal sustainability will require prioritization of public investments through rigorous investment appraisal and further strengthening of public financial management, mobilizing non-oil revenues, and adhering to a medium-term fiscal consolidation plan. An acceleration of reforms to promote productivity and competitiveness is also important.

The two teams have worked closely on the following:

- **Macroeconomic developments and economic updates**: There has been close dialogue throughout the year on macro policies and economic developments. There is regular sharing of information and development of common policy recommendations.

- **Growth prospects and economic diversification**: The teams exchanged views on potential areas of structural reforms and key policies to support economic diversification away from the oil sector. The Bank's forthcoming Timor-Leste Systematic Country Diagnostic will outline key priorities to support growth and economic diversification.

- **Fiscal sustainability and investment management**: Both teams highlighted long-term fiscal sustainability as a major challenge facing Timor-Leste, particularly in light of the recent large withdrawals in excess of the estimated sustainable income from the Petroleum Fund. Following the Infrastructure Public Expenditure Review published in March 2015, the World Bank is working with the authorities on a macro-fiscal public expenditure analysis note. The Public Investment Management Assessment was conducted jointly in July 2016 and advised on public investment institutions and practices, especially related to planning, appraisal, selection and implementation of investments. The Fund and the Bank stand ready to provide further support on fiscal policy and public expenditure analysis.

- **Domestic revenue mobilization**: Both teams have discussed domestic revenue mobilization potential and policy reforms underway. The Fund and the World Bank, respectively, peer reviewed the draft VAT Law during which the draft was circulated for consultation with stakeholders in 2016. The Bank is providing technical assistance to the authorities on domestic revenue mobilization reform. Both institutions stand ready to provide further assistance to support the implementation of key aspects of the government's fiscal reform program.

- **Debt management**: The teams have continued to engage closely on the Timor-Leste government's strategy to more effectively utilize external concessional financing and jointly recommend the need to strengthen debt management systems and strategy. The Bank has provided a debt management technical assistance mission in June 2017. The Bank and the Fund stand ready to further provide complementary technical assistance upon government's request.

- **Debt Sustainability Analysis**. A DSA was collaboratively updated and was jointly presented during the Article IV consultation mission in October 2017. The Fund has recently completed the Review of the joint IMF-World Bank Debt Sustainability Framework for Low-Income Countries (LIC DSF). In preparation for the revised framework to become operational on July 1, 2018, [the Fund/Bank] will deliver training for officials.

The teams agreed to continue the close cooperation going forward. The Table below details the specific activities planned by the two country teams in 2017-18 period.

Title	Products	Provisional Timing	Expected Delivery of Output
1. Bank Work Program	Support to Living Standards Measure Survey and Poverty Profile	Completed	
	Support to Poverty Analysis	Ongoing	June 2018
	Macro-fiscal public expenditure analysis	Ongoing	November 2017
	Systematic Country Diagnostic	Ongoing	December 2017
	Timor-Leste half-yearly economic report	Planned	December 2017
2. Fund Work Program	2018 Article IV Consultations	Staff visit in April 2018 and Article IV mission in September 2018	December 2018
	Financial institutions supervision enhancement TA	Planned	
	PFM reform TA	Ongoing	
	Government Finance Statistics TA	Ongoing	
	External Sector Statistics TA	Ongoing	
3. Joint Work Program	DSA update	September 2018	December 2018
	Domestic revenue reform TA	Ongoing	
	Debt management TA	Ongoing	

RELATIONS WITH THE ASIAN DEVELOPMENT BANK

(As of October 2017)

Timor-Leste joined the Asian Development Bank (AsDB) in 2002. The relationship has evolved from an initial focus on rehabilitation and reconstruction to development of the infrastructure and institutional capacity needed for growth and poverty reduction. AsDB is supporting the implementation of Timor-Leste's Strategic Development Plan 2011-2030 (SDP). AsDB's support to Timor-Leste is guided by a country partnership strategy guided for the period 2016-2020. The strategy aims to support the growth of a sustainable non-oil economy through carefully targeted investments in the infrastructure, human resources, and institutions to support inclusive private sector led growth.

Timor-Leste first accessed the Asian Development Fund (ADF) in 2005. The ADF has provided grants for road rehabilitation, water supply and technical and vocational education and training projects. AsDB has also worked closely with the government to build capacity for infrastructure management and is currently helping the government to develop prioritized plans to improve transport connectivity, expand access to clean drinking water, and increase the efficiency of the electricity sector. AsDB is also providing a range of technical assistance to support growth and economic diversification. This includes helping Timor-Leste to prepare for membership of the Association of Southeast Asian Nations, develop a competitive financial sector, and develop the coffee and forestry sub-sectors.

The AsDB helped establish the Institute of Microfinance in Timor-Leste, which, in July 2011, became the country's first locally owned commercial bank, the Banco Nacional Comércio de Timor-Leste (BNCTL). AsDB continues to support the growth and commercialization of BNCTL and is also helping the government to establish a legal framework for bankruptcy and secured transactions. The AsDB provided technical support for the establishment of the Petroleum Fund and other core elements of public sector management. Recent support for public financial management has focused on fiscal reforms and has included fiscal policy analysis, assessment of the governance frameworks for autonomous public agencies, and the design of a new value added tax. As part of its support to the energy and water sector reforms, AsDB is also assisting the Government in reviewing the performance of basic services, namely water and electricity, and exploring institutional options to build capacity for efficient and sustainable service delivery, thereby reducing the burden on the Government's budget.

The availability of AsDB resources increased following Timor-Leste's reclassification as a group B member country in 2011. This change enabled Timor-Leste to access AsDB's market based lending resources while retaining access to the concessional lending window. There has been a further increase in resource availability following the merger of the balance sheets for AsDB's OCR and ADF lending operations in 2016. Since 2011, Timor-Leste has borrowed US$91.86 million on concessional terms and a further US$135.63 million on market-based terms to finance upgrading of national roads. Further lending for investment in roads, urban water supply and electricity services is planned for 2017–2019. AsDB continues to promote the provision of a range of infrastructure services, by the private sector and will help the government to leverage private sector expertise.

The indicative concessional lending allocation for 2018–2020 is US$74.28million and the indicative OCR allocation for 2016–2018 is US$218.00 million. Actual allocations will depend on demand and on portfolio performance.

STATISTICAL ISSUES

(As of October 2017)

I. Assessment of Data Adequacy for Surveillance
General: Data provision to the Fund has serious shortcomings that significantly hamper surveillance. The main data weaknesses are in national accounts and there is a need to improve the periodicity and timeliness of GDP data. The enhancement of the General Directorate of Statistics within the Ministry of Planning and Finance is an ongoing priority.
National Accounts: GDP is compiled using a contemporary base period (2015), however estimates are not timely. Net exports in the Balance of Payments and national accounts diverge due to an inconsistent classification of petroleum production undertaken in the Joint Petroleum Development Area.
Price Statistics: The monthly, national CPI uses expenditure weights derived from the 2011 Household Income and Expenditure Survey. Data are also released monthly for Dili, and regions other than Dili.
Government Finance Statistics: Annual and quarterly GFS is compiled and disseminated: annual data for 2010−2015 are reported for Government Finance Statistics Yearbook, and quarterly data are disseminated in the quarterly fiscal bulletin. PFTAC is currently providing capacity development support through a GFS resident advisor.
Monetary and Financial Statistics: The Banco Central de Timor-Leste (BCTL) compiles monetary statistics generally following the methodology of the *Monetary and Financial Statistics Manual*. However, data are incomplete because of the absence of official data on public currency holdings—which are difficult to compile under the current currency regime—and of banks' positions with public nonfinancial corporations. The BCTL reports detailed monthly monetary data for the central bank and other depository corporations using the standardized report forms (SRFs). Data for other financial corporations, mainly insurance companies, are not compiled. An integrated monetary database meeting the monetary data needs of the BCTL, APD, and STA is in operation.
Financial Sector Surveillance: Only basic market based indicators are available, and their coverage, valuation and timeliness vary across such indicators. Data are not sufficiently available to conduct stress tests of the banking system or Balance Sheet Approach analysis. Cross border exposure data for financial corporations are not available. Financial soundness indicators are not reported to STA.
External Sector Statistics (ESS): While progress has been made, measuring non-Petroleum Fund-related current account transactions accurately remains a work in progress. Monthly merchandise trade data are now published regularly but there are significant gaps in the series

for 2006 and 2007. Data on monthly merchandise exports and imports are based on the Automated System for Customs Data (ASYCUDA). Service transactions are largely estimated with data collection largely limited to the official and tourism sectors. Interest revenue from oil/gas is recorded as primary income.

Quarterly balance of payments and international investment position (IIP) data are available for 2006–Q1/2017. While methodology to produce basic annual estimates of the balance of payments statistics are in place, further development is needed to address limitations of existing data sources, in particular, merchandise trade statistics and service transactions. This includes work to ensure consistency between current account data and the new National Accounts Statistics, particularly related to the exports of commodities and imports of services.

There is limited information on remittances from Timorese working abroad and improvement in the estimation and compilation procedures of such remittances should be pursued.

The October 2015 External Sector Statistics (ESS) Technical Assistance (TA) Mission assessed the progress made in the improvement of Timor-Leste's ESS during the JSA ESS Project and found that important progress regarding coverage, periodicity, timeliness, and methodology of ESS have been made. However, there are still important recommendations pending implementation. Important improvements have been made on the integrated international investment position (IIP); the treatment of the Petroleum Fund's positions; and IMF-related accounts (reserve position in the IMF, SDR allocations, and SDR holdings). Progress was also verified on actions toward Timor-Leste's participation in IMF's Coordinated Direct Investment (CDIS). However, the recommendation on improving the coverage of the direct investment survey to include Joint Petroleum Development Area (JPDA) companies' equity valued at own funds at book value was not implemented. Also, the treatment in ESS of the JPDA companies' activities consistent with national accounts, is still pending. According to the BCTL officials, this is due to the difficulty of obtaining source data from the National Petroleum Authority (NPA).

II. Data Standards and Quality

Timor-Leste began participating in the IMF's General Data Dissemination System (now the enhanced GDDS) in 2012, marking a major step forward in the development of its statistical system.	No data ROSC is available.

III. Reporting to STA

Data on government finance statistics is available in the *GFS Yearbook* for the 2015. Timor-Leste do not report to the Quarterly Public Sector Debt database (QPSD), jointly developed by the World Bank and IMF. Beginning in February 2008, monetary data have been reported to the IMF for publication in the *IFS*. Quarterly balance of payments and IIP data are reported timely to STA for publication in the IFS.

Table of Common Indicators Required for Surveillance

(As of October 31, 2017)

	Date of latest observation	Date received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of Publication[6]
Exchange Rates	10/2017	10/2017	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	09/2017	10/2017	M	M	M
Reserve/Base Money	09/2017	10/2017	M	M	M
Broad Money	09/2017	10/2017	M	M	M
Central Bank Balance Sheet	09/2017	10/2017	M	M	M
Consolidated Balance Sheet of the Banking System	09/2017	10/2017	M	M	M
Interest Rates[2]	09/2017	10/2017	M	M	M
Consumer Price Index	08/2017	10/2017	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	2016	10/2017	A	A	A
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	2016	10/2017	A	A	A
Central Government and Central Government-Guaranteed Debt	2016	10/2017	A	A	A
External Current Account Balance	Q2/2017	8/2017	Q	Q	Q
Exports and Imports of Goods and Services	Q2/2016	8/2016	M	M	M
GDP/GNP	2015	04/2017	A	A	A
Gross External Debt	12/2016	3/2017	Q	Q	Q
International Investment Position[5]	Q2/2017	8/2017	Q	Q	Q

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.
[2] Market-based rates, including lending and deposit rates.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and st and local governments.
[5] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[6] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A); NA: Not Available.

INTERNATIONAL MONETARY FUND

DEMOCRATIC REPUBLIC OF TIMOR-LESTE

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITY ANALYSIS

November 15, 2017

Approved By
Paul Cashin and Ali Mansoor (IMF) and John Panzer (IDA)

Prepared by Staff of the International Monetary Fund and the International Development Association[1]

The Debt Sustainability Analysis (DSA) indicates that Timor-Leste's external debt remains at moderate risk. This reflects a projected increase in concessional borrowing to finance frontloaded infrastructure spending, in line with the authorities' strategy to moderate the drawdown of the assets of the Petroleum Fund (PF). Timor-Leste's net public asset position is currently strong at US$15.7 billion at end-2016 due to oil-related savings accumulated in PF assets and low level of public debt. However, staff's assessment under the baseline scenario suggests that existing expenditure plans are unsustainable as the PF will be depleted in the long term given large excess withdrawals. Staff's illustrative fiscal reform scenario demonstrates that revenue and expenditure reforms can ensure fiscal and debt sustainability. Safeguarding long-term fiscal and debt sustainability requires policy reforms to: maintain a more moderate level of public spending, reduce large front-loaded public investment in line with implementation capacity, raise investment efficiency, mobilize domestic revenues, and commit to a medium-term plan to reduce PF excess withdrawals to rebuild the PF assets.

[1] This DSA has been prepared by IMF staff with input from World Bank Group staff, using the debt sustainability framework for low-income countries approved by the Boards of both institutions.

BACKGROUND

1. **Timor-Leste's net public asset position is currently strong due to oil-related savings accumulated in Petroleum Fund (PF) assets and low level of public debt.** [2] The PF balance at end-2016 stood at US$15.8 billion (574 percent of GDP), covering 164 months of goods and services imports. The PF balance has seen two years of consecutive decline due to a combination of higher outflow from large PF withdrawals in excess of the Estimated Sustainable Income (ESI)[3] and lower inflow due to smaller oil and gas receipts. Nonetheless, against a low level of public external debt (see below), Timor-Leste's net public asset stood at US$15.7 billion at end-2016.

2. **Outstanding public external debt stood at US$77 million (2.8 percent of GDP) in 2016.** External loans signed since 2012 to end-2016 totaled US$321 million (11.6 percent of GDP) in eleven loans under seven loan packages. Owing to a prudent policy of utilizing external concessional financing, the loan profile consisted of concessional loans from the Asian Development Bank, Japan International Cooperation Agency, the World Bank Group, as well as a new loan from the China EXIM Bank. These loan packages are for rehabilitation and upgrading of national roads and for upgrading Dili's drainage infrastructure. As the public sector only borrows externally while the Timorese private sector has negligible medium- or long-term external liabilities, this DSA does not separately assess external and public sector external debt sustainability.

MACROECONOMIC ASSUMPTIONS

3. **This DSA is based on the macroeconomic projections underlying the 2016 and 2017 Article IV consultations.** The current DSA maintains the broad macroeconomic assumptions on GDP growth, inflation, oil receipts, government expenditure, and financing made during the 2016 Article IV DSA (see IMF Country Report No. 16/183). The baseline macroeconomic assumptions for both DSAs are summarized in Table 1. To illustrate the impact of different policy options on debt sustainability, two scenarios—baseline and reform—are considered in this DSA.

[2] The quality of Timor-Leste's policies and institutions, as measured by the Country Policy and Institutional Assessment (CPIA) index, averaged 3.04 over the past three years. Hence the country is classified under "weak" policy performance (for CPIA average score at or below 3.25) and is assessed against lower thresholds compared to countries with medium or strong performance.

[3] The ESI is set at 3 percent of petroleum wealth, which consists of the PF balance and the projected net present value of future petroleum revenues.

Table 1. Macroeconomic Assumptions

	Current (2017 Article IV)				Previous (2016 Article IV)			
	2016	2017	2017-22	2023-37	2015	2016	2016-21	2022-35
Real GDP growth (%)	-7.9	-8.0	-3.7	5.2	-0.6	-8.8	-8.8	5.0
Real non-oil GDP growth (%)	5.5	3.0	5.0	5.2	4.3	5.0	5.7	5.5
Inflation (CPI annual average, %)	-1.3	1.0	3.2	4.0	0.6	1.5	3.6	4.0
Revenues (% GDP)	27.5	24.2	22.3	15.9	30.9	34.0	27.9	12.9
Current expenditure (% GDP)	36.3	33.4	35.1	23.1	39.1	49.3	44.2	24.0
Net acquisition of non-financial assets (% GDP)	22.1	10.9	20.2	5.4	11.7	17.4	19.1	5.0
Net lending/borrowing (% GDP)	-30.8	-20.1	-33.3	-12.9	-20.3	-32.7	-35.3	-16.0
Net incurrence of liabilities (% GDP)	1.1	0.4	5.0	2.1	0.9	5.1	7.3	0.7
Borrowing (in millions of USD, period average)	30.6	10.0	154.2	191.0	23.8	107.0	195.6	37.1
Exports of G&S (y/y growth)	5.7	-1.6	14.6	20.8	-2.6	15.2	14.4	12.0
Imports of G&S (y/y growth)	-11.1	-0.2	6.1	6.1	-3.4	9.5	5.7	6.9
Current account balance (% GDP)	-18.9	-3.4	-15.9	-4.1	16.5	2.0	-9.0	-15.8

Key macroeconomic assumptions are:

- **Real GDP growth** is expected to continue to fall in the medium term due to declining oil output with the existing oil field estimated to cease production by around 2022. Non-oil real GDP growth is expected to moderate in 2017 due to lower government expenditure and a slowdown of economic activity due to the delay in forming the government after parliamentary elections. Growth is projected to hover in the range of 5-6 percent over the medium term supported by public investment and increasing FDI inflows, stabilizing at around 5¼ percent per annum in the long term. Growth assumptions are broadly in line with the 2016 DSA.

- **Inflation** is expected to increase steadily over the medium and long term to about 4 percent on account of higher global food and fuel prices and spillovers from public investment activity.

- **The current account balance** is expected to remain in deficit over the medium term, reflecting lower oil and gas receipts and higher imports of goods and services generated by demand from infrastructure projects. Exports in the DSA include exports of goods and services as well as oil-related incomes. The projected current account deficit in the medium term is larger compared to the previous DSA, due to projected higher imports of goods and services and lower oil and gas receipts, but lower in the long term due largely to slower growth in imports of goods and services with the completion of frontloaded public investment.

- **The primary fiscal balance** is projected to remain in deficit of about 33 percent of GDP (2017-22 average) over the medium term, reflecting larger capital expenditure, but gradually narrowing to about 5 percent in the long term.

- **Public sector revenue** is defined as non-oil domestic revenues plus the ESI from the PF. The financing gap is covered by PF withdrawals in excess of ESI and external borrowing.

- **Debt servicing** projections used in this DSA are calculated based on information from creditors as the authorities do not have a system for estimating debt servicing payments.

- **The grant element of loans** is assumed to stabilize over the long term at about 32 percent after the higher borrowing needed to finance frontloaded infrastructure projects is over. This

DSA assumed that most debt contracted by the central government for the funding of infrastructure projects should be on a concessional basis.

- **The risk of natural disasters and climate change** on the macroeconomy (especially, growth, external and fiscal balances) is estimated to be very small for Timor-Leste and is therefore not incorporated in the DSA. For instance, a recent empirical study by Lee et al. (forthcoming IMF Working Paper) estimated the negative impact of natural disasters on Timor-Leste's real GDP growth in the range of 0.04 percent to 0.12 percent.
- **No off-budget debt** is accumulated including by state-owned enterprises based on available information.

4. Under the baseline, projected capital expenditure is lower than planned reflecting past low implementation rates. A 70 percent implementation rate is assumed for the planned $4.3 billion multi-year (2018-21) capital spending envisaged under the 2017 Budget. The current total capital spending plan is about US$0.9 billion higher than that of the 2016 Budget reflected in the previous DSA.

- Domestic revenue to GDP ratio is expected to rise gradually in the absence of VAT implementation, from 6 percent in 2017 to 8 percent in the medium term and 16 percent in the long run. Increases in domestic revenue are assumed to be driven by increased compliance and a broadening tax base. At the same time, the ESI in nominal terms will decline due to a progressively lower PF balance under the baseline scenario (see below).
- Total withdrawals from the PF are capped at US$1.3 billion per annum beyond the medium term, broadly in line with the notional budget envelope proposed during the 2014 Yellow Road Workshop discussions of domestic stakeholders. This will help ensure fiscal sustainability. As the government is relying on PF excess withdrawals to meet financing needs for public investments, the PF balance is projected to fall to US$12 billion in 2022 (340 percent of GDP) and further depleted to US$640 million (3½ percent of GDP) by 2037.
- External borrowing in the medium term (2017–22) is projected to total US$0.9 billion, lower than the multi-year borrowing amount envisaged in the 2017 Budget, by assuming that about 70 percent of the planned borrowing amount will be disbursed taking into account past low implementation rate of external financing. This is also lower than the total borrowing projected under the previous DSA (US$1.1 billion), despite the higher financing needs from a larger capital spending envelope reflected in the 2017 Budget. Total external borrowing in the DSA horizon (2017–37) is projected to be US$ 3.8 billion. As a result, the outstanding external debt is projected to increase from 2.8 percent of GDP in 2016 to 28 percent in 2022.

5. The reform scenario illustrates the staff's proposed three-pronged strategy to safeguard fiscal sustainability. This scenario retains the main thrusts of the staff's recommendations in the 2016 Article IV consultation staff report and the corresponding adjustment scenario in the previous DSA which called for bold fiscal consolidation.

- ***More moderate levels of spending***. Capital spending should be scaled up more slowly averaging 14½ percent GDP in the medium term and be anchored at 10 percent of GDP in the long term, with the support of an expenditure rule. This more moderate and even-paced capital spending level would be better aligned with the country's implementation capacity while still meeting the objective of frontloading capital expenditure. Recurrent spending should be reduced to 22 percent of GDP in the medium term, from 36 percent of GDP in 2016, largely through lowering public transfers, and goods and services expenditure, while preserving pro-poor social spending.

- ***Domestic revenue mobilization***. To achieve the government's domestic revenue target of 15 percent of non-oil GDP, a value-added tax (VAT) would need to be implemented by 2020. The VAT is estimated to generate revenue of about 3¾ percent of GDP based on a VAT rate of 7.5 percent (tentative) in the medium term. VAT revenue should increase to at least 5 percent of GDP in the long term to meaningfully cover the financing needs.
- ***A commitment plan to stop PF excess withdrawal.*** Beyond capping PF withdrawals at US$1.3 billion over the medium term, PF withdrawals in excess of the ESI should cease from 2028 to rebuild the PF balance. The resulting financing gap from lower PF withdrawal could be met by external borrowing.
- As a result of the above measures, the more moderate levels of spending coupled with higher domestic revenue should help reverse the decline in PF assets with the PF balance increasing to about US$15.6 billion (468 percent of GDP) in 2022, and stabilizing at US$17.7 billion (93 percent of GDP) in 2037.
- Total external borrowing under the reform scenario is projected at US$0.9 billion in the medium term at similar level with the baseline scenario, and US$2.3 billion over the long term (2017-37) which is lower than that under the baseline scenario. Outstanding external debt is expected to rise to 36 percent of GDP in the medium term but should decline to 11½ percent of GDP in the long term.

Table 2. Macroeconomic Assumptions Under the Baseline and Reform Scenarios

			Baseline scenario		Reform scenario	
	2016 Est.	2017 Proj.	2017-22	2023-37	2017-22	2023-37
Real GDP growth (%)	-7.9	-8.0	-3.7	5.2	-4.2	6.0
Real non-oil GDP growth (%)	5.5	3.0	5.0	5.2	4.5	6.0
Inflation (CPI annual verage, %)	-1.3	1.0	3.2	4.0	2.5	4.0
Revenues (% GDP)	27.5	24.2	22.3	15.9	26.8	28.2
Current expenditure (% GDP)	36.3	33.4	35.1	23.1	26.9	18.9
Net acquisition of non-financial assets (% GDP)	22.1	10.9	20.2	5.4	13.9	9.8
Net lending/borrowing (% GDP)	-30.8	-20.1	-33.3	-12.9	-14.3	-1.1
Net incurrence of liabilities (% GDP)	1.1	0.4	5.0	2.1	4.9	1.0
Borrowing (in millions of USD, period average)	30.6	10.0	154.2	191.0	145.9	93.2
Exports of G&S (y/y growth)	5.7	-1.6	14.6	20.8	13.8	21.6
Imports of G&S (y/y growth)	-11.1	-0.2	6.1	6.1	5.4	7.8
Current account balance (% GDP)	-18.9	-3.4	-15.9	-4.1	-9.2	-3.9

Table 3. Projected Medium-Term Fiscal Funding Gaps Under the Baseline and Reform Scenarios 1/

(In millions of US dollars)

	2017	2018	2019	2020	2021	2022	Total
Baseline scenario							
Funding gap	555	1,171	1,327	1,123	1,038	921	6,135
Excess Petroleum Fund withdrawal	544	953	1,104	900	885	821	5,209
Borrowing	10	217	223	222	153	100	925
Reform scenario							
Funding gap	554	626	519	325	286	190	2,500
Excess Petroleum Fund withdrawal	544	409	297	102	134	140	1,625
Borrowing	10	217	223	222	153	50	875
Memorandum item:							
2017 Budget Framework 2/							
Funding gap	699	1,577	1,799	1,475	1,296	-	6,845
Excess Petroleum Fund withdrawal	597	1,266	1,338	1,157	1,078	-	5,435
Borrowing	102	311	461	318	218	-	1,409

1/ Funding gap is defined as financing need not met by the Estimated Sustainable Income (ESI) and domestic revenue.
2/ Timor-Leste State Budget 2017 Book 1.

ASSESSMENT

A. Baseline Scenario

6. **Timor-Leste's risk of debt distress is moderate due to projected higher external borrowing.** Although the baseline scenario does not breach any thresholds, stress tests breach all thresholds (Figure 1). As in the previous DSA, the moderate risk of debt distress reflects the government's strategy to increase public external borrowing via concessional loans to meet the funding gap arising from the projected frontloading of public investment in infrastructure projects. Over the medium term, the present value of external debt is projected to reach 20 percent of GDP, 86 percent of exports, and 142 percent of revenues. Although the increasing use of concessional loans helps to reduce somewhat PF withdrawals, due to the lack of fiscal consolidation measures and domestic resource mobilization, the government will continue to rely on drawing down the PF in excess of the ESI to close the remaining funding gap, thereby further eroding PF wealth. Figure 2b provides complementary analysis to Figure 2a, showing the projected path of net debt taking into account the PF wealth.

B. Reform Scenario and Stress Tests

7. **The staff's reform scenario demonstrates that fiscal consolidation coupled with fiscal reforms can ensure long-term fiscal sustainability.** Under this scenario, debt ratios are projected to remain well below indicative thresholds.

8. Debt dynamics show vulnerability to shocks. These stress tests include shocks to real GDP growth, exports, non-debt creating flows, and a combination of these shocks. Stress tests with the most severe shock result in breaches for all indicators. Timor-Leste's high vulnerability to shocks is a reflection of its very small exports and revenue bases, and therefore exposed to high debt services payment risks if its positive assets position is not taken into account.

9. Debt recording and monitoring capacity need to be strengthened. The greater use of external borrowing should be accompanied by development of institutional framework and debt management policies and procedures as well as capacity building. In the near term, improvement should be made to have comprehensive debt servicing projections for existing debt. The World Bank's recent TA on debt management provided recommendations on the adoption of simple debt recording and management systems; strengthening the organization and capacity of the debt management unit; and for the government to prepare guidelines on the terms and conditions for external borrowing, and a medium-term debt management strategy including cost-risk analysis.

10. A strong debt management and asset-liability framework would complement a prudent fiscal policy focused on long-term sustainability. The increased use of concessional financing and increased avenues for the government's exposure to contingent liabilities—such as via increased use of public-private partnerships (PPPs)— are expected to increase the complexity of the consolidated government balance sheet. Also, major capital-intensive projects tend to have complex financing structures and the cost-benefit of public participation in these projects can be difficult to assess. In this context, PPPs need to be undertaken with realistic and transparent project assessments to reduce contingent liabilities. Off-balance sheet activities should be avoided. This is particularly relevant for state-owned companies such as the oil company, Timor GAP, which could undertake equity positions in joint venture projects or issue liabilities in overseas markets. Further fiscal autonomy of the Special Zone of Social Market Economy of Oecusse and Atauro (ZEESM) would raise risks of engaging in off-budget expenditures and to contract external debt. Lastly, the provisions to allow the PF to guarantee government debts (up to 10 percent of the PF's assets) is potentially risky and should be avoided.

AUTHORITIES' VIEWS

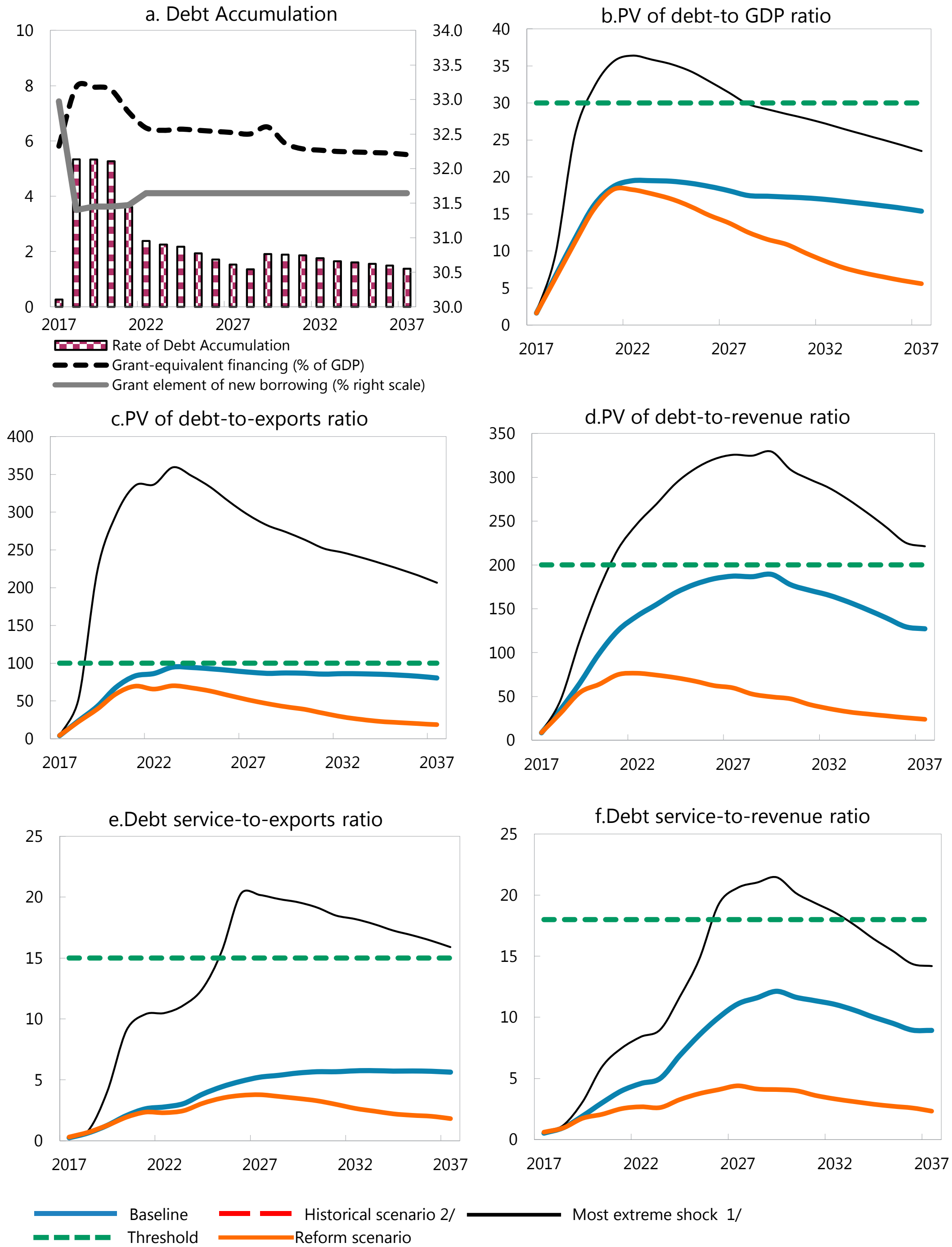
11. The authorities consider the risk of debt distress to be contained, despite higher borrowing. While the authorities are in broad agreement with staff on the need to implement bold fiscal consolidation measures to preserve fiscal sustainability, they noted the importance of accounting for the country's specific circumstances, especially the existence of a significant buffer from the PF.

CONCLUSION

12. Timor-Leste continues to be at moderate risk of debt distress driven by projected higher external borrowing. The greater use of concessional financing reflects the government's frontloaded infrastructure spending and strategy to preserve the wealth of the PF. Meeting the financing gap through external loans as guided by the DSA is warranted, especially if the borrowing cost is lower than the opportunity cost of tapping into the PF (as measured by the PF's expected investment return). Non-concessional debt should be avoided. Discipline of debt sustainability monitoring by creditors may also come with the transfer of knowledge by these multilateral or bilateral institutions.

13. Fiscal reforms are needed to safeguard long-term fiscal and debt sustainability. These reforms include adopting a more moderate pace of capital spending in line with implementation capacity, rationalizing recurrent spending, mobilizing domestic revenues, and committing to a medium-term plan to preserve the PF assets wealth as an ongoing revenue source and as a fiscal buffer to mitigate shocks. Prioritization of government expenditure to facilitate high-return infrastructure investments is crucial to ensuring medium- to long-term fiscal and debt sustainability.

Figure 1. Timor-Leste: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2017-2037

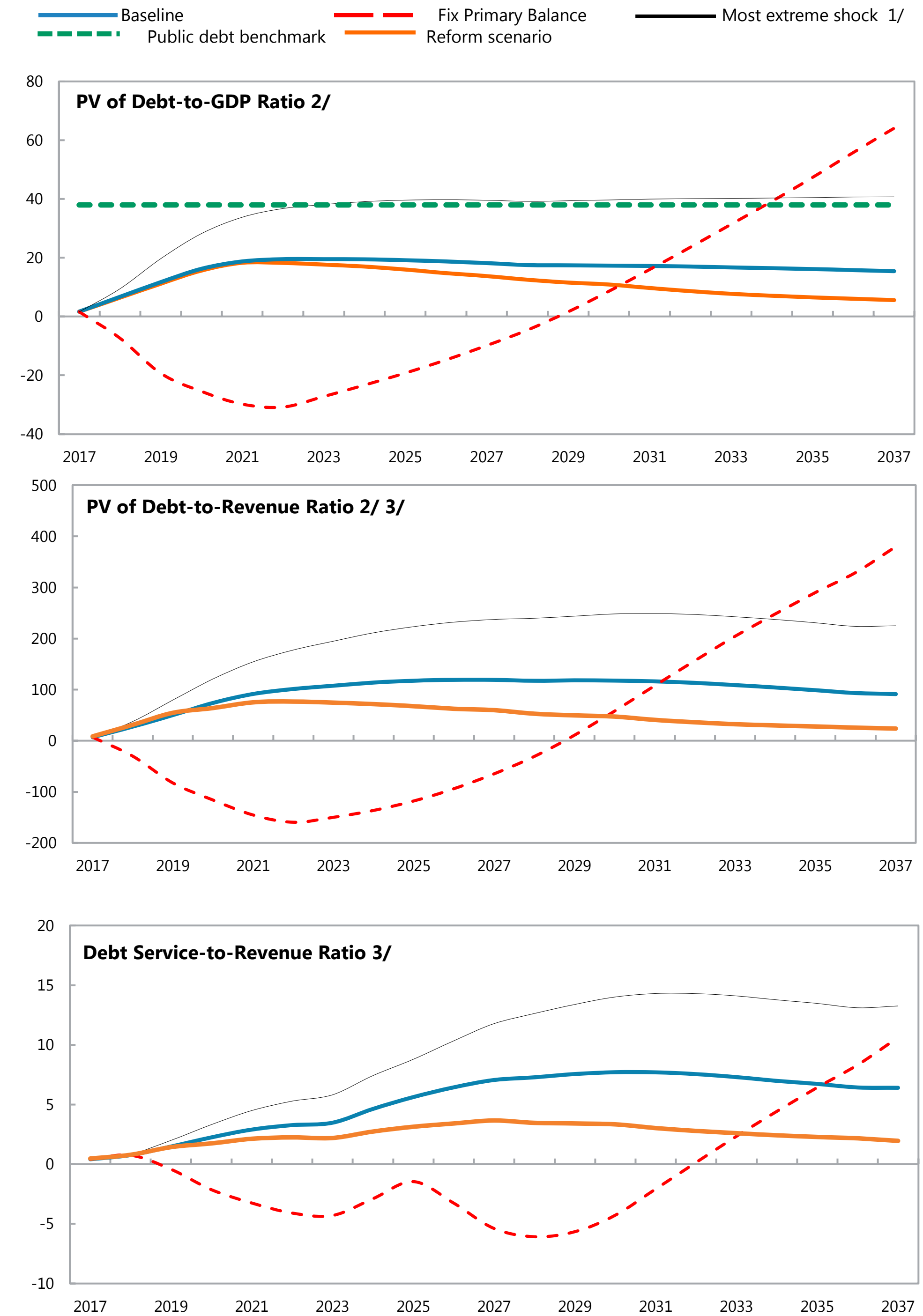


Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027. In figure b. it corresponds to a Combination shock; in c. to a Exports shock; in d. to a GDP deflator shock; in e. to a Exports shock and in figure f. to a Combination shock

2/ Under the historical scenario, debt-to-GDP ratio is negative after 2018, due to large current account surpluses. Net debt creating dynamics are assumed to depend on the historical average of non-interest current account balances. However, these do not reflect declining oil production in future.

Figure 2a. Timor-Leste: Indicators of Public Debt (Gross) Under Alternative Scenarios, 2017-2037



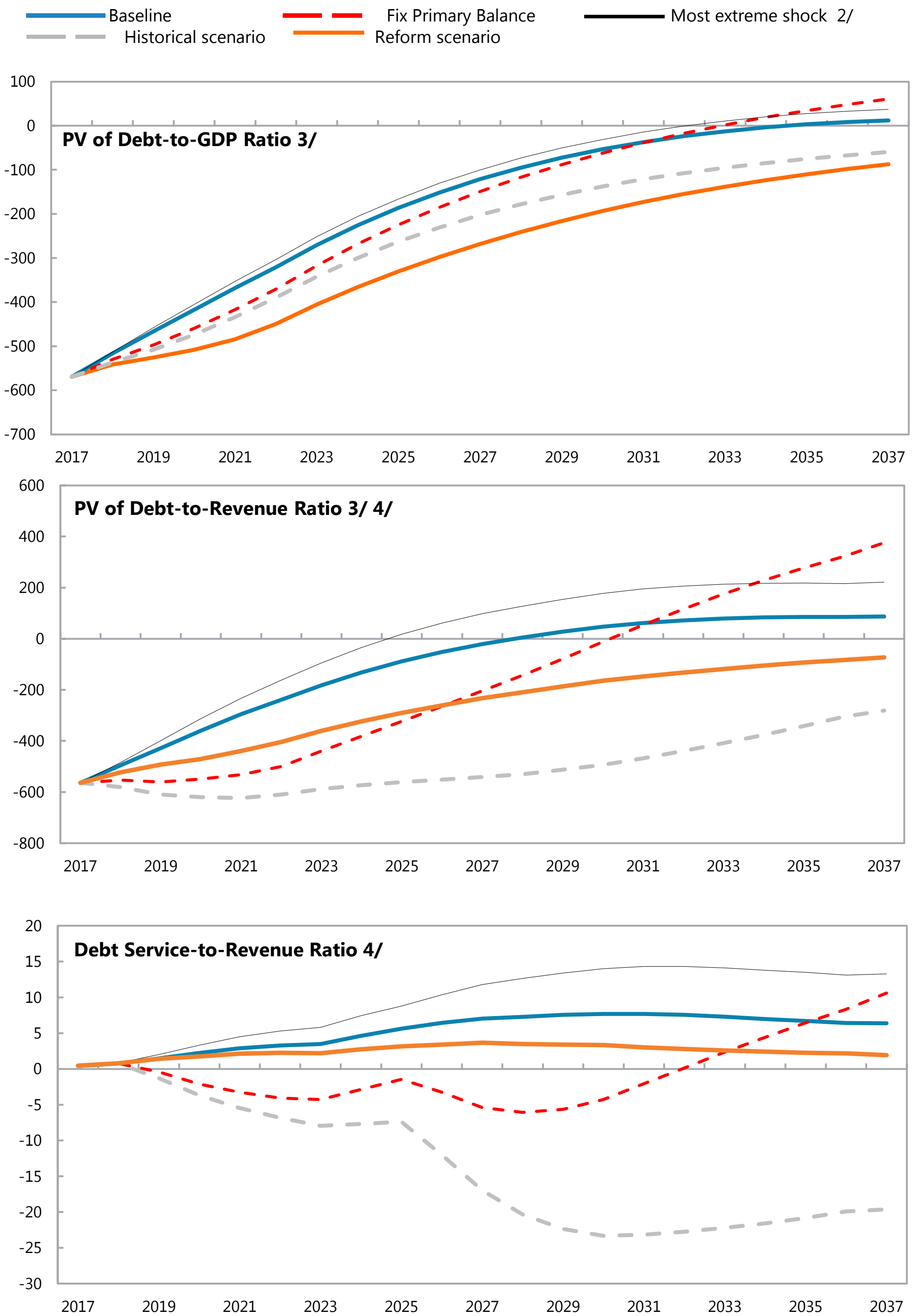
Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027.

2/ Negative debt burden indicators arise because the strong current account surpluses historically led to the accumulation of net assets.

3/ Revenues are defined as exclusive of grants.

Figure 2b. Timor-Leste: Indicators of Public Debt (Net) Under Alternative Scenarios, 2017-2037 1/



Sources: Country authorities; and staff estimates and projections.

1/ Net debt is calculated by subtracting the PF assets from gross debt.

2/ The most extreme stress test is the test that yields the highest ratio on or before 2027.

3/ Negative debt burden indicators arise because the strong current account surpluses historically led to the accumulation of net assets.

4/ Revenues are defined as exclusive of grants.

Table 1a. Timor-Leste: External Debt Sustainability Framework, Baseline Scenario, 2014-2037 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average 5/	Standard Deviation 5/	Projections									
	2014	2015	2016			2017	2018	2019	2020	2021	2022	2017-2022 Average	2027	2037	2023-2037 Average
External debt (nominal) 1/	**0.5**	**1.5**	**2.8**			**3.1**	**10.6**	**17.8**	**24.3**	**27.6**	**28.3**		**25.3**	**21.4**	
of which: public and publicly guaranteed (PPG)	0.5	1.5	2.8			3.1	10.6	17.8	24.3	27.6	28.3		25.3	21.4	
Change in external debt	0.4	0.9	1.3			0.4	7.4	7.2	6.5	3.3	0.7		-0.9	-0.6	
Identified net debt-creating flows	-27.9	-8.5	19.4			2.3	13.4	15.7	15.1	14.0	14.3		3.1	0.8	
Non-interest current account deficit	**-27.0**	**-7.7**	**18.9**	**-31.5**	**21.2**	**3.4**	**18.1**	**19.1**	**18.5**	**17.4**	**17.2**		**4.5**	**1.4**	3.8
Deficit in balance of goods and services	-23.4	-2.9	18.1			3.6	22.4	24.0	23.8	23.0	23.1		8.0	0.2	
Exports	55.2	45.0	23.9			38.4	28.2	27.1	23.8	22.6	22.6		20.6	19.1	
Imports	31.8	42.1	42.1			41.9	50.6	51.1	47.6	45.6	45.7		28.6	19.4	
Net current transfers (negative = inflow)	-3.9	-5.3	0.0	-7.3	4.6	-0.3	-4.4	-4.8	-5.1	-5.3	-5.4		-4.0	-2.2	-3.5
of which: official	-6.7	-7.2	-6.2			-5.7	-5.6	-5.6	-5.3	-5.0	-4.6		-2.7	0.0	
Other current account flows (negative = net inflow)	0.2	0.5	0.8			0.2	0.1	0.0	-0.2	-0.4	-0.4		0.5	3.3	
Net FDI (negative = inflow)	**-0.9**	**-1.0**	**0.3**	**-0.7**	**0.6**	**-1.4**	**-4.8**	**-4.1**	**-4.4**	**-4.5**	**-4.2**		**-0.8**	**0.0**	-0.7
Endogenous debt dynamics 2/	**0.0**	**0.2**	**0.2**			**0.2**	**0.1**	**0.7**	**1.0**	**1.1**	**1.2**		**-0.7**	**-0.6**	
Denominator: 1+g+r+gr	0.7	0.8	0.9			1.0	1.0	1.0	1.0	1.1	1.1		1.1	1.1	
Contribution from nominal interest rate	0.0	0.0	0.0			0.0	0.1	0.3	0.4	0.5	0.6		0.5	0.5	
Contribution from real GDP growth	0.0	-0.1	0.1			0.2	0.0	0.5	0.6	0.6	0.7		-1.2	-1.0	
Contribution from price and exchange rate changes	0.0	0.3	0.1			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**28.3**	**9.4**	**-18.1**			**-2.0**	**-6.0**	**-8.5**	**-8.7**	**-10.6**	**-13.6**		**-4.0**	**-1.4**	
of which: exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt	...	...	1.4			1.6	6.7	11.7	16.2	18.7	19.5		18.2	15.4	
In percent of exports	...	...	5.7			4.2	23.7	43.0	68.2	83.0	86.3		88.2	80.4	
PV of PPG external debt	**...**	**...**	**1.4**			**1.6**	**6.7**	**11.7**	**16.2**	**18.7**	**19.5**		**18.2**	**15.4**	
In percent of exports	**...**	**...**	**5.7**			**4.2**	**23.7**	**43.0**	**68.2**	**83.0**	**86.3**		**88.2**	**80.4**	
In percent of government revenues	**...**	**...**	**6.3**			**8.7**	**35.5**	**65.5**	**99.0**	**125.4**	**142.1**		**187.2**	**127.2**	
Debt service-to-exports ratio (in percent)	**0.0**	**0.0**	**0.0**			**0.3**	**0.7**	**1.3**	**2.1**	**2.6**	**2.8**		**5.2**	**5.6**	
PPG debt service-to-exports ratio (in percent)	**0.0**	**0.0**	**0.0**			**0.3**	**0.7**	**1.3**	**2.1**	**2.6**	**2.8**		**5.2**	**5.6**	
PPG debt service-to-revenue ratio (in percent)	**0.0**	**0.0**	**0.0**			**0.5**	**1.0**	**1.9**	**3.0**	**4.0**	**4.6**		**11.1**	**8.9**	
Total gross financing need (Billions of U.S. dollars)	-1.1	-0.3	0.5			0.1	0.4	0.5	0.5	0.4	0.5		0.3	0.4	
Non-interest current account deficit that stabilizes debt ratio	-27.5	-8.6	17.6			3.1	10.7	11.9	12.1	14.0	16.5		5.4	1.9	
Key macroeconomic assumptions															
Real GDP growth (in percent)	-26.0	20.9	-7.9	0.4	13.5	-8.0	-0.7	-4.7	-3.7	-2.6	-2.6	-3.7	5.2	5.2	5.2
GDP deflator in US dollar terms (change in percent)	-3.2	-36.5	-3.3	3.3	22.6	8.8	4.9	8.0	8.4	8.7	11.1	8.3	6.0	6.0	6.0
Effective interest rate (percent) 4/	0.0	0.0	0.0	0.0	0.0	0.2	3.1	2.5	2.4	2.3	2.2	2.1	2.2	2.3	2.3
Growth of exports of G&S (US dollar terms, in percent)	-34.3	-37.4	-52.7	10.5	52.4	60.4	-23.6	-0.9	-8.5	0.6	8.4	6.1	10.9	11.7	10.3
Growth of imports of G&S (US dollar terms, in percent)	13.0	1.6	-11.1	15.2	38.8	-0.2	25.5	4.0	-2.7	1.4	8.4	6.1	7.3	7.3	5.6
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	33.0	31.4	31.4	31.4	31.5	31.6	31.7	31.6	31.6	31.6
Government revenues (excluding grants, in percent of GDP)	13.1	18.9	21.4			18.5	18.8	17.8	16.4	14.9	13.7		9.7	12.1	10.7
Aid flows (in Billions of US dollars) 6/	0.3	0.2	0.2			0.2	0.2	0.2	0.2	0.2	0.2		0.4	1.0	
of which: Grants	0.3	0.2	0.2			0.2	0.2	0.2	0.2	0.2	0.2		0.3	0.9	
of which: Concessional loans	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.1	
Grant-equivalent financing (in percent of GDP) 7/	...	...	...			5.8	8.0	8.0	7.9	7.1	6.5		6.3	5.5	6.0
Grant-equivalent financing (in percent of external financing) 7/	...	...	...			95.0	60.3	60.4	61.1	68.4	76.6		79.7	77.6	76.8
Memorandum items:															
Nominal GDP (Billions of US dollars)	4.0	3.1	2.8			2.8	2.9	3.0	3.1	3.3	3.5		6.1	18.1	
Nominal dollar GDP growth	-28.4	-23.2	-11.0			0.1	4.1	2.9	4.4	5.9	8.2	4.3	11.5	11.5	11.5
PV of PPG external debt (in Billions of US dollars)			0.0			0.0	0.2	0.3	0.5	0.6	0.7		1.1	2.8	
(PVt-PVt-1)/GDPt-1 (in percent)						0.3	5.3	5.3	5.3	3.6	2.4	3.7	1.5	1.4	1.7
Gross workers' remittances (Billions of US dollars)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	1.4			1.6	6.7	11.7	16.2	18.7	19.5		18.2	15.4	
PV of PPG external debt (in percent of exports + remittances)	...	...	5.7			4.2	23.7	43.0	68.2	82.9	86.2		88.1	80.4	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	0.0			0.3	0.7	1.3	2.1	2.6	2.8		5.2	5.6	

Sources: Country authorities; and staff estimates and projections.

1/ Includes only public sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Current-year interest payments divided by previous period debt stock.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

6/ Defined as grants, concessional loans, and debt relief.

7/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

Table 1b. Timor-Leste: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017-2037

(In percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to GDP ratio								
Baseline	2	7	12	16	19	20	**18**	15
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	2	-25	-53	-81	-110	-141	**-256**	-384
A2. New public sector loans on less favorable terms in 2017-2037 2/	2	8	15	22	25	26	**26**	24
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	2	8	15	20	23	24	**23**	19
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	2	11	27	31	34	34	**27**	18
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	2	9	20	28	33	34	**32**	27
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	2	11	20	25	27	28	**23**	17
B5. Combination of B1-B4 using one-half standard deviation shocks	2	10	26	32	36	36	**31**	23
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	2	9	16	23	26	27	**25**	22
PV of debt-to-exports ratio								
Baseline	4	24	43	68	83	86	**88**	80
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	4	-89	-196	-342	-488	-622	**-1242**	-2003
A2. New public sector loans on less favorable terms in 2017-2037 2/	4	30	56	91	111	116	**125**	125
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	4	24	43	68	83	86	**88**	80
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	4	53	223	297	335	337	**296**	207
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	4	24	43	68	83	86	**88**	80
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	4	40	75	105	121	123	**113**	87
B5. Combination of B1-B4 using one-half standard deviation shocks	4	26	70	100	116	119	**113**	91
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	4	24	43	68	83	86	**88**	80
PV of debt-to-revenue ratio								
Baseline	9	35	65	99	125	142	**187**	127
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	9	-133	-299	-495	-738	-1025	**-2638**	-3169
A2. New public sector loans on less favorable terms in 2017-2037 2/	9	45	86	131	168	192	**265**	198
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	9	40	82	124	157	178	**234**	159
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	9	61	151	192	226	247	**280**	146
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	9	46	114	172	218	247	**326**	221
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	9	59	115	152	183	202	**240**	138
B5. Combination of B1-B4 using one-half standard deviation shocks	9	51	144	196	238	265	**324**	194
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	9	50	92	139	176	199	**262**	178

Table 1b. Timor-Leste: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2017-203 (concluded)

(In percent)

Debt service-to-exports ratio								
Baseline	0	1	1	2	3	3	**5**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	0	1	-2	-6	-10	-14	**-53**	-136
A2. New public sector loans on less favorable terms in 2017-2037 2/	0	1	1	3	4	5	**9**	9
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	0	1	1	2	3	3	**5**	6
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	0	1	4	9	10	10	**20**	16
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	0	1	1	2	3	3	**5**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	0	1	2	3	4	4	**7**	6
B5. Combination of B1-B4 using one-half standard deviation shocks	0	1	2	3	4	4	**7**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	0	1	1	2	3	3	**5**	6
Debt service-to-revenue ratio								
Baseline	1	1	2	3	4	5	**11**	9
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	1	1	-4	-9	-16	-23	**-113**	-215
A2. New public sector loans on less favorable terms in 2017-2037 2/	1	1	2	4	6	8	**18**	15
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	1	1	2	4	5	6	**14**	11
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	1	1	3	6	7	8	**19**	11
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	1	1	3	5	7	8	**19**	16
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	1	1	3	5	6	6	**16**	10
B5. Combination of B1-B4 using one-half standard deviation shocks	1	1	3	6	7	8	**21**	14
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	1	1	3	4	6	6	**16**	13
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	30	30	30	30	30	30	**30**	30

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 2a. Timor-Leste: Public Sector Debt Sustainability Framework, Baseline Scenario, 2014-2037

(In percent of GDP, unless otherwise indicated)

	Actual					Projections									
	2014	2015	2016	Average 5/	Standard Deviation 5/	2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	0.5	1.5	2.8			3.1	10.6	17.8	24.3	27.6	28.3		25.3	21.4	
of which: foreign-currency denominated	0.5	1.5	2.8			3.1	10.6	17.8	24.3	27.6	28.3		25.3	21.4	
Change in public sector debt	0.4	0.9	1.3			0.4	7.4	7.2	6.5	3.3	0.7		-0.9	-0.6	
Identified debt-creating flows	20.0	24.3	37.1			25.7	46.1	50.1	41.2	35.9	29.5		19.3	7.6	
Primary deficit	20.0	24.2	36.9	15.6	9.1	25.7	46.2	50.1	41.5	36.8	31.0	38.5	21.5	9.4	17.6
Revenue and grants	19.8	26.1	27.5			24.2	24.4	23.4	22.0	20.5	19.3		15.3	16.9	
of which: grants	6.7	7.2	6.1			5.7	5.6	5.6	5.6	5.6	5.6		5.6	4.8	
Primary (noninterest) expenditure	39.8	50.2	64.5			49.9	70.6	73.5	63.4	57.3	50.3		36.8	26.3	
Automatic debt dynamics	0.0	0.2	0.2			0.0	0.0	0.0	-0.3	-0.8	-1.5		-2.2	-1.8	
Contribution from interest rate/growth differential	0.0	-0.1	0.1			0.2	0.1	0.6	0.8	0.7	0.8		-1.2	-1.0	
of which: contribution from average real interest rate	0.0	0.0	0.0			0.0	0.0	0.0	0.1	0.1	0.0		0.1	0.1	
of which: contribution from real GDP growth	0.0	-0.1	0.1			0.2	0.0	0.5	0.7	0.6	0.7		-1.3	-1.1	
Contribution from real exchange rate depreciation	0.0	0.3	0.1			-0.2	-0.1	-0.6	-1.1	-1.6	-2.3		...	...	
Other identified debt-creating flows	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	-19.6	-23.4	-35.8			-25.4	-38.7	-42.9	-34.7	-32.6	-28.8		-20.2	-8.1	
Other Sustainability Indicators															
PV of public sector debt	...	...	1.4			1.6	6.7	11.7	16.2	18.7	19.5		18.2	15.4	
of which: foreign-currency denominated	...	...	1.4			1.6	6.7	11.7	16.2	18.7	19.5		18.2	15.4	
of which: external	...	...	1.4			1.6	6.7	11.7	16.2	18.7	19.5		18.2	15.4	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	20.0	24.2	36.9			25.8	46.3	50.5	42.0	37.4	31.7		22.6	10.5	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	4.9			6.7	27.4	49.9	73.9	91.4	101.1		119.0	91.2	
PV of public sector debt-to-revenue ratio (in percent)	...	...	6.3			8.7	35.5	65.5	99.0	125.4	142.1		187.2	127.2	
of which: external 3/	...	...	6.3			8.7	35.5	65.5	99.0	125.4	142.1		187.2	127.2	
Debt service-to-revenue and grants ratio (in percent) 4/	0.0	0.0	0.0			0.4	0.8	1.5	2.2	2.9	3.3		7.1	6.4	
Debt service-to-revenue ratio (in percent) 4/	0.0	0.0	0.0			0.5	1.0	1.9	3.0	4.0	4.6		11.1	8.9	
Primary deficit that stabilizes the debt-to-GDP ratio	19.5	23.2	35.6			25.4	38.7	42.9	35.0	33.5	30.3		22.4	10.0	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	-26.0	20.9	-7.9	0.4	13.5	-8.0	-0.7	-4.7	-3.7	-2.6	-2.6	-3.7	5.2	5.2	5.2
Average nominal interest rate on forex debt (in percent)	0.0	0.0	0.0	0.0	0.0	0.2	3.1	2.5	2.4	2.3	2.2	2.1	2.2	2.3	2.3
Average real interest rate on domestic debt (in percent)	...	...	...	0.0	0.0	...	...	...	...	...	...	0.0	...	...	0.0
Real exchange rate depreciation (in percent, + indicates depreciation)	5.1	59.2	4.8	3.2	25.4	-6.4	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	-3.2	-36.5	-3.3	3.3	22.6	8.8	4.9	8.0	8.4	8.7	11.1	8.3	6.0	6.0	6.0
Growth of real primary spending (deflated by GDP deflator, in percent)	23.7	52.7	18.1	9.6	17.5	-28.8	40.3	-0.7	-16.9	-12.1	-14.4	-5.4	1.1	2.4	0.8
Grant element of new external borrowing (in percent)	...	...	...	...	...	33.0	31.4	31.4	31.4	31.5	31.6	31.7	31.6	31.6	...

Sources: Country authorities; and staff estimates and projections.

1/ Covers gross debt of central government.

2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues excluding grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 2b. Timor-Leste: Sensitivity Analysis for Key Indicators of Public Debt, 2017-2037

		Projections						
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	2	7	12	16	19	20	18	15
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	2	-14	-30	-40	-47	-50	-63	-56
A2. Primary balance is unchanged from 2017	2	-7	-19	-25	-30	-31	-10	64
A3. Permanently lower GDP growth 1/	2	7	14	20	25	28	38	73
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	2	9	20	28	34	37	40	41
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	2	-8	-21	-16	-13	-11	-3	6
B3. Combination of B1-B2 using one half standard deviation shocks	2	-13	-31	-25	-21	-18	-5	11
B4. One-time 30 percent real depreciation in 2018	2	6	10	14	16	17	17	14
B5. 10 percent of GDP increase in other debt-creating flows in 2018	2	14	19	23	26	26	23	17
PV of Debt-to-Revenue Ratio 2/								
Baseline	7	27	50	74	91	101	119	91
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	7	-58	-132	-186	-237	-270	-402	-277
A2. Primary balance is unchanged from 2017	7	-30	-83	-116	-146	-160	-65	380
A3. Permanently lower GDP growth 1/	7	30	57	89	117	138	221	353
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	7	38	80	121	154	178	238	225
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	7	-33	-88	-73	-63	-56	-19	38
B3. Combination of B1-B2 using one half standard deviation shocks	7	-51	-130	-112	-99	-89	-29	62
B4. One-time 30 percent real depreciation in 2018	7	26	45	65	80	90	109	84
B5. 10 percent of GDP increase in other debt-creating flows in 2018	7	56	80	105	125	135	148	103
Debt Service-to-Revenue Ratio 2/								
Baseline	0	1	1	2	3	3	7	6
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	0	1	-1	-4	-5	-7	-17	-20
A2. Primary balance is unchanged from 2017	0	1	0	-2	-3	-4	-5	11
A3. Permanently lower GDP growth 1/	0	1	2	3	4	4	11	18
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	0	1	2	3	4	5	12	13
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	0	1	-1	-2	-2	-1	-4	2
B3. Combination of B1-B2 using one half standard deviation shocks	0	1	-1	-4	-3	-3	-6	2
B4. One-time 30 percent real depreciation in 2018	0	1	2	3	4	5	10	10
B5. 10 percent of GDP increase in other debt-creating flows in 2018	0	1	2	3	4	4	9	7

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined exclusive of grants.