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UZBEKISTAN

DEVELOPING A MEDIUM-TERM DEBT MANAGEMENT STRATEGY

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GLOSSARY

ABP	Annual Borrowing Plan
ADB	Asian Development Bank
AT	MTDS Analytical Tool
ATM	Average time to maturity
ATR	Average Time to Refixing
bps	Basis points
DMO	Debt Management Office
DMS	Debt Management Strategy
FDI	Foreign Direct Investment
FX	Foreign Exchange
GDP	Gross Domestic Product
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IMF	International Monetary Fund
IsDB	Islamic Development Bank
Libor	London Interbank Rate
MCM	Monetary and Capital Markets
MoF	Ministry of Finance
MTDS	Medium-Term Debt Management Strategy
SOE	State-Owned-Enterprise
TA	Technical Assistance
T-bills	Treasury bills
UFRD	Uzbekistan Fund for Reconstruction and Development
USD	United States Dollar
UZS	Uzbekistan Som
WB	World Bank

PREFACE

A joint World Bank (WB) and International Monetary Fund (IMF) technical assistance (TA) mission visited Tashkent during April 1-11, 2019 to assist and advise the Ministry of Finance (MoF) on the development of a Medium-Term Debt Management Strategy (MTDS) for 2019–2022.

The mission met with Deputy Minister of Finance Odilbek Isakov and his team. A full list of participants involved in the preparation of the MTDS, and a list of persons the mission met can be found in Annex I.

The mission would like to thank Mr. Jasur Karshibaev, Ms. Sevara Atabaeva and Mr. Farruh Hamdamov for their unreserved engagement and hospitality, and all participants at the MoF during the mission for their hard work and enthusiasm in acquiring new concepts and analytical methods.

The mission's main findings were discussed with the experts from the debt management division. The final presentation of a preliminary debt management strategy took place at the concluding meeting. Based on the training provided by during the mission, the debt management division is planning to start preparing a draft DMS, scheduled to be submitted for approval along the annual budget legislation.

We also want to thank the Debt Management Facility for financing this TA.

EXECUTIVE SUMMARY

The Government of Uzbekistan is implementing economic and structural reforms, including in public finance management, with the aim of building a more open and market-oriented economy. These wide-ranging structural reforms seek to improve the country's resource allocation, stimulate private sector growth, and help attract foreign investment.

Government debt management reforms are an integral part of the reform program aimed to foster economic development¹. The program includes a roadmap of key areas of structural reforms in the Republic of Uzbekistan to be implemented during 2019-2021. The development of the medium-term Public Debt Management Strategy (MTDS) is one of the key pillars of the plan, along with development of the domestic market for government securities.

Despite the lack of an explicit debt management strategy (DMS), an implicit strategy has guided borrowing decisions. Until recently, the borrowing choices were driven primarily by maximizing borrowing on concessional terms. Multilateral and bilateral loans carry foreign currency risk, but the effect is largely compensated by the reduced refinancing and interest-rate risk, and significantly lower cost. In December 2018, the authorities set in motion efforts to develop the domestic debt market and create pricing benchmarks for corporate bonds by borrowing again from the domestic capital market, followed by a dual-tranche debut international bond issuance in February 2019. Domestic bond issuance has continued in 2019 and the intention is to continue tapping the international capital market on annual basis.

Given the shift in borrowing policy, and in line with sound international practice, it is important to formulate and publish a DMS, aligned with medium-term fiscal policy priorities. The coverage of debt portfolio presented in this report is based on the MoF records of domestic, external and guaranteed debt, for which MoF makes contribution towards debt service payments.

The main vulnerability of Uzbekistan's debt portfolio is its exposure to exchange rate risk. With 99 percent of the debt portfolio denominated in foreign currency, depreciation of the local currency carries a significant risk. Furthermore, about 40 percent of the external debt is subject to interest rate risk, arising from a combination of variable rate loans and refinancing of maturing debt.

The authorities are placing great importance on developing the domestic debt market. While domestic debt market development can help reduce exposure to exchange rate risks and support financial sector development, the introduction of short-term domestic debt has marginally elevated both refinancing and interest rate risks. A third of the domestic portfolio would need to be refinanced in 2019.

¹ "On Additional Measures for Ensuring Further Economic Development and Enhancing Efficiency of Economic Policy", No. 5614, August 1, 2019, Uzbekistan Ministry of Finance.

The mission, jointly with the technical experts from the MoF, analyzed the existing debt portfolio and provided training on design of medium term DMS using the Joint WB/IMF MTDS framework and its associated analytical tool (AT). The team also discussed with the officials the following areas for initiating the reforms in government debt management:

- Continue the development and annual update of the DMS, including evaluation of the cost and risk tradeoffs associated with different debt management strategies, as the market develops;
- Design the annual borrowing plan (ABP) for execution of the DMS, including auction calendars;
- Implement the new institutional structure of the debt management office (DMO) to strengthen debt management functions: management of complex borrowing operations, building a strong back office and enhance analytical capacities;
- Continue the domestic government debt market development, including primary and secondary markets, improve investor relations and publications;
- Review regulations and legal framework, and remove any regulatory or legal obstacles to the development of domestic debt market.

Table 1 provides a complete list of the reforms that are recommended for implementation:

Table 1. Key Recommendations

Key Recommendations	Priority	Timeframe¹
<i>Debt Management Strategy</i>		
Develop the DMS and update annually	High	Near term
Draft DMS 2019–21, approve and publish	High	Near term
Develop annual borrowing plan in line with the DMS	High	Near term
Design auction calendars for domestic government bonds	High	Near term
<i>Legal Framework</i>		
Review the legal framework to remove impediments to the development of the domestic government securities market	Medium	Medium term
Enhance the legal framework by including clear objectives of government debt management	High	Medium term
Establish a legally binding requirement to develop MTDS	High	Medium term
Institute legal requirement to develop and publish annual report of debt and government guarantee portfolio and debt management operations	High	Medium term
<i>Institutional Arrangement</i>		
Implement the new institutional structure of the DMO to strengthen debt management functions	Medium	Medium term
Continue to build capacity in the DMO, particularly the back office	High	Near term
Develop a procedure manual for the DMO based on international sound practice	Low	Long term
<i>Debt Reporting</i>		
Enhance the DMO's newsletter by refocusing the message on debt market developments	Medium	Medium term
Produce and publish a debt statistical bulletin on a regular basis	Medium	Medium term
Produce and publish an annual debt report that describes the cost-risk characteristics of the debt outstanding and in the pipeline	High	Medium term
<i>Domestic Debt Market</i>		
Establish a regular frequency of domestic government securities issuance	Medium	Near term
Phase out the maximum indicative pricing for government securities	High	Near term
Engage pro-actively with investors in the process of developing the DMS (to gauge appetite for new instruments such as inflation linked bonds)	High	Near term

¹ Near term: < 12 months; Medium term: 12 to 24 months, Long term: > 24 months.

The WB and the IMF stand ready to provide further support to the authorities on the development of their medium-term debt management strategy, domestic debt market development, and further design and implementation of debt management and institutional reforms.

Implementation of a strategy becomes even more important as the government moves to a combination of concessional and commercial borrowing. More borrowing on commercial terms opens broader borrowing options using a range of financial instruments. In this environment, it is important to closely implement a strategy based on a proper cost/risk trade-

off to steer borrowing decisions and other market transactions. It is recommended that the government ensures that all debt management transactions adhere to the framework of a published debt management strategy document, which should include targets for the main cost/risk indicators.

As reforms of government debt management functions are at an early stage, it is important to design a medium-term reform plan. Additional technical assistance under the Debt Management Facility could be provided on request. The subsequent TA in public debt management should assist the MoF to transition to a more market-based financing framework, enhance its analytical capacity through the development of DMS, and further develop domestic debt market. The road map of debt management diagnostic and reforms priorities is provided in Chapter VI on this report.

I. COUNTRY BACKGROUND AND MACROECONOMIC ENVIRONMENT

Uzbekistan's strong economic growth, robust exports and moderate borrowing during the past decade underpin the modest public debt level. Public and publicly guaranteed debt stood at about 30.5 percent of GDP at end-2018, of which guaranteed debt comprised 15.7 percent of GDP². In part, this is due to the country's track record of strong economic growth – which has averaged 6.7 percent during 2013-18 – well above the regional peers. It is also explained by Uzbekistan's traditionally prudent fiscal policy, which helped contain borrowing. Robust commodity exports helped build large foreign exchange (FX) reserves that serve as a buffer against shocks.

Despite the strong economic performance, job creation remains Uzbekistan's foremost challenge. The share of prime working age population has surged since the 1990's. Job creation – particularly in the formal sector – has not been able to keep up with labor supply. This is also evidenced by significant numbers of migrant Uzbek workers.

To address these challenges, the government launched a reform agenda with the aim of building a more open and market-oriented economy. The wide-ranging structural reforms aim to correct the country's resource allocation, stimulate private sector growth, and attract foreign investment.³ Taxation reforms, foreign exchange liberalization, inflation targeting, and improvements to data transparency are being undertaken, increasing trust in the reform agenda. Efforts to restructure state-owned enterprises (SOEs) – to improve their organizational structure and performance and create capacity for private sector involvement to boost growth – are also underway. The authorities are also considering introducing fiscal rules, including a debt ceiling.

Recognizing the importance of sound debt management, the authorities have started building a domestic market for government securities and intend to develop a public debt management strategy⁴. In 2018, the MoF began unifying various units tasked with debt management functions into a single body with the aim of establishing a DMO.⁵ The government restarted issuance of domestic government securities in late 2018.⁶ In early 2019, a first dual-tranche international government bond of USD 1 billion (bn) was issued by the Government. These changes in borrowing preferences and on-going reforms aim to enhance

² Authorities' definition and coverage.

³ Uzbekistan's history of state-led growth model directed resources largely to capital intensive production by large state-owned enterprises, proving unfavorable to foreign investments.

⁴ Decree of the President of the Republic of Uzbekistan "On Additional Measures for Ensuring Further Economic Development and Enhancing Efficiency of Economic Policy", No. 5614, 08.01.2019.

⁵ Following the decree of the President No. PP-3877 dated 21 July 2018 "On additional measures of diversification external financing resources", the Debt Management Office (DMO) was established within the Ministry of Finance.

⁶ Domestic debt market previously existed until 2012, when it was discontinued with the payment of all outstanding domestic securities.

debt management, deepen the domestic debt market, widen investor base, diversify instruments, and improve market infrastructure.

II. MEDIUM-TERM DEBT STRATEGY AND CHARACTERISTICS OF THE EXISTING DEBT PORTFOLIO

A. Objectives and Assessment of Current DMS

A DMS is designed to deliver the government's debt management objective. The standard debt management objective used by most sovereign borrowers is to raise the required amount of financing at minimum cost while giving due regard to risk, and in some cases, includes the development of the domestic debt market. Once the objectives have been formally adopted, a DMS operationalizes them, capturing the government's preferences with regard to the cost-risk trade-off to achieve the desired composition of the government debt portfolio.

In developing a DMS, debt managers need to consider: (i) the debt management objectives, strategy period, and the scope of debt covered under the strategy; (ii) the existing debt management strategy and the cost-risk characteristics of the existing debt portfolio; (iii) the macroeconomic framework and risks; (iv) potential sources of financing; and (v) the cost and risks of alternative debt management strategies.

In line with best practice, and given the marked shift in borrowing strategy, it is important to formulate and publish a DMS, aligned with Uzbekistan's medium-term fiscal policy priorities. Once a preferred strategy has been selected, it should be reviewed to ensure consistency with monetary and fiscal policies, and then submitted for approval by the Minister of Finance before it is published. It is important to review, assess and publish a DMS on an annual rolling basis, considering current macroeconomic and market conditions (see Annex II).

Despite the lack of an explicit DMS in Uzbekistan, an implicit DMS has guided borrowing decisions. Until recently, the DMS was based on maximizing borrowing on concessional terms, dominated by bilateral and multilateral creditors. However, in December 2018, in effort to develop the domestic debt market and create pricing benchmarks for corporate bonds, the government has resumed issuance of government securities in the domestic market, which was followed by a dual-tranche debut international bond issuance in February 2019. Domestic bond issuance has continued in 2019 along with the intention to carry on tapping the international capital market on annual basis (see Section III).

B. The Structure of the Existing Debt

The coverage of debt for the DMS analysis includes debt contracted directly by the government and a subset of guaranteed debt. All guaranteed loans, where the MOF makes contribution towards debt service payments, are included in their entirety in the DMS analysis. While this approach may result in raising more funds than needed, excluding or reducing debt

service payments to take into account the portion that is being serviced by final borrowers, risks underfunding, particularly if revisions to the MoF's element of burden sharing takes place without long notice. Hence, the prudent approach was chosen (see Table 2 and Figure 1).

Table 2: Uzbekistan: Structure of Existing Debt ¹

USD (million) Debt	Creditor Types			MTDS	
	Non-Resident	Resident	Total		
Total	9,946	4,821	14,767		8,023
Direct	7,094	71	7,165	✓	7,165
Own Resources	4,054		4,054	✓	
State Budget	2,583	71	2,654	✓	
Mixed Resources ²	457		457	✓	
Guaranteed	2,852	4,750	7,602		857
Own Resources	2,168	4,577	6,745	✗	
State Budget	678	173	850	✓	850
Mixed Resources ²	7	0	7	✓	7

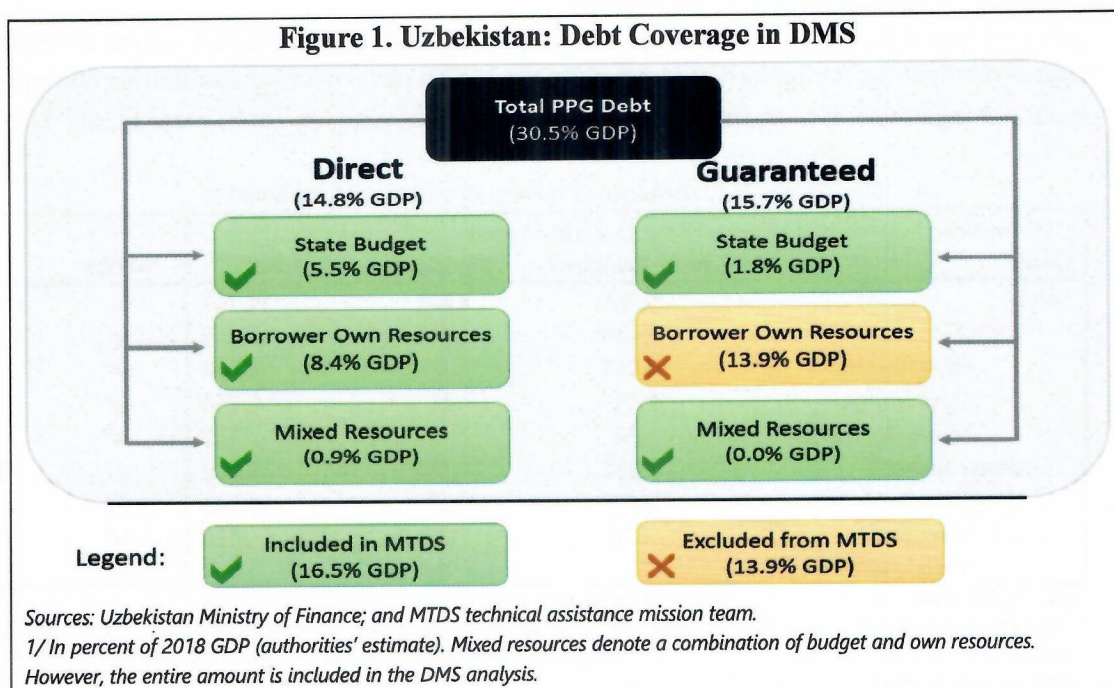
Sources: Uzbekistan Ministry of Finance and MTDS TA mission team.

¹ The debt data reporting in this report may differ from other published reports, including the IMF Staff report, due to difference in definition and scope of coverage. For example, consistent with MTDS analysis, neither contingent liabilities nor net debt is considered in this report.

² Mixed Resources denotes a combination of budget and own resources. However, the entire amount is included in the DMS analysis.

Loans are the main instrument in the existing debt. As at end 2018, more than 99 percent of debt is in form of loans, with government securities contributing less than 1 percent. Multilateral and bilateral creditors are the only non-resident creditors and hold 98 percent of total loans. The remaining 2 percent is held by the Uzbekistan Fund for Reconstruction and Development (UFRD); a hybrid of sovereign wealth fund and a development bank that channels loans to SOEs through the banking sector. The weighted average interest rate on these loans is about 2 percent.

The portion of debt that is excluded from the DMS analysis consists of guaranteed debt whose debt service is being met fully by obligors. The main creditors (holding 72 percent of outstanding loans) of such guaranteed debt are domestic commercial banks, who benefit from government guarantee on loans extended to strategic industries. The funding is obtained from UFRD. This explains the low weighted average interest rate on such loans at 7.41 percent—well below market rates including the monetary policy rate. The remaining loans which are sourced from multilateral (3 percent of total) and bilateral (25 percent) creditors, carry a weighted average interest rate of 2.4 percent. A significant size of guaranteed debt is denominated in USD (92 percent of total) and on a fixed interest rate (93 percent of total), making the portfolio susceptible to exchange rate shock.



Preparing and publishing an annual debt report that presents the characteristics of the debt portfolio is essential. Given the complexity of the debt portfolio, a debt report that includes the composition of debt, including gross versus net debt, and guaranteed debt would enhance debt transparency. Such report could usefully describe the cost-risk of existing debt portfolio, highlighting how costs and risks are expected to evolve based on committed disbursements and immediate firm borrowing plans (for example, domestic security issuance).

C. Cost and Risk Indicators of Existing Debt⁷

The main vulnerability of Uzbekistan's debt portfolio is its exposure to exchange rate risk. With 99 percent of the portfolio denominated in foreign currency, depreciation of the local currency carries a significant risk. Furthermore, about 40 percent of the external debt is subject to interest rate risk, arising from a combination of variable rate loans and refinancing of maturing debt (see Table 3 and Figure 2).

The introduction of short-term domestic debt has marginal impact on both refinancing and interest rate risks. A third of the domestic portfolio would need to be refinanced in 2019, however the size of the portfolio is small. External debt (debt denominated in foreign currency) carries low refinancing risk, with average time to maturity at ten years, and merely 4 percent of the portfolio maturing in 2019.

⁷ In the context of debt management strategy, and this document, **external debt** is defined as debt denominated in foreign currency (the definition of external debt is based on currency not residency). In line with this definition, the report does not refer to non-resident holdings of debt in Table 2 and Figure 1 as external debt.

The recent shift in strategy, specifically the plan to regularly tap the domestic debt market, will gradually reduce exchange rate risk. That said, changing the composition of debt takes time, and this is especially true for Uzbekistan because a) the outstanding foreign currency debt is mainly medium to long term, and b) the domestic market will take time to develop. Given the authorities' ambition to move towards sound public debt management practices, reducing exchange rate and interest rate risk should become a priority.

Table 3. Uzbekistan: Debt Risk Indicators at end-2018

Risk Indicators		External debt	Domestic debt	Total debt
Nominal debt as percent of GDP		16.4	0.1	16.5
Cost of debt ¹	Interest payment as percent of GDP ¹	0.3	0.1	0.4
	Weighted average interest rate (percent)	2.1	14.4	2.2
Refinancing risk ²	Average time to maturity (years)	10.8	1.2	10.7
	Debt maturing in 1 year (percent of total)	3.7	66.7	4.2
	Debt maturing in 1 year (percent of GDP)	0.7	0.1	0.8
Interest rate risk ²	Average time to refixing (years)	7.5	1.2	7.5
	Debt refixing in 1 year (percent of total)	41.9	66.7	42.1
	T-bills (percent of total)		33.3	0.3
FX risk	FX debt (percent of total debt)			99.1
	ST FX debt (percent of reserves)			1.2

Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

Note:

¹ Interest payment as percent of GDP is calculated by dividing interest payment on outstanding debt at end 2018 by 2018 GDP.

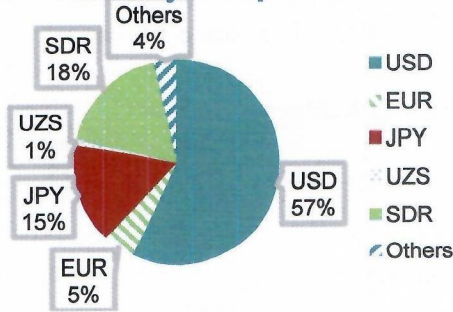
² Cost-Risk indicators that use projected cash flows such as weighted average interest rate, refinancing and interest rate risks use projected exchange rate assumptions.

Figure 2. Uzbekistan Cost-Risk Indicators of Existing Debt

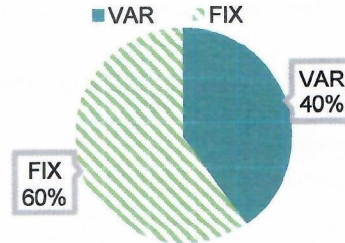
The largest exchange rate exposure is to the USD, with 57 percent of the debt denominated in USD and 18 percent in SDR.

With 40 percent of the debt portfolio in variable rate, interest rate risk is also a concern.

Currency Composition

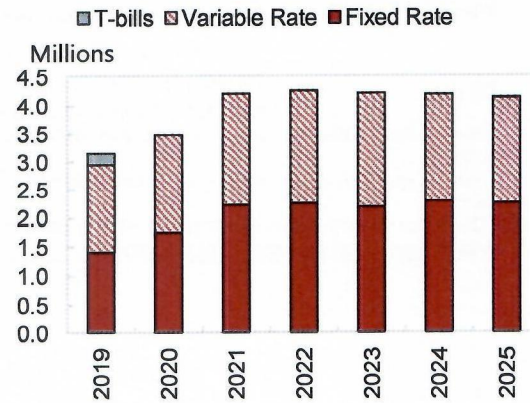
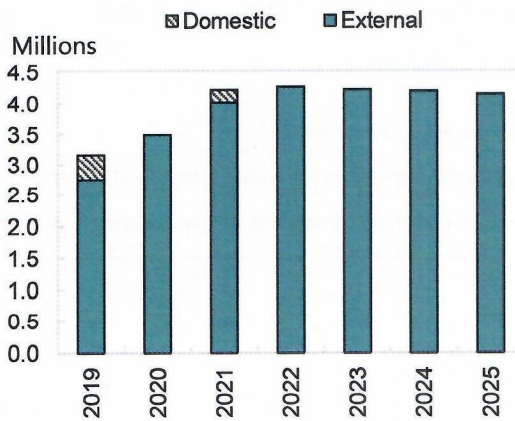


Interest Type Composition



However, redemption profile is relatively smooth, but still dominated by foreign currency

Uzbekistan's debt portfolio is vulnerable to interest rate, consequently it would be important to monitor reference rates (e.g. 6 months LIBOR).



Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

III. SOURCES OF FINANCING

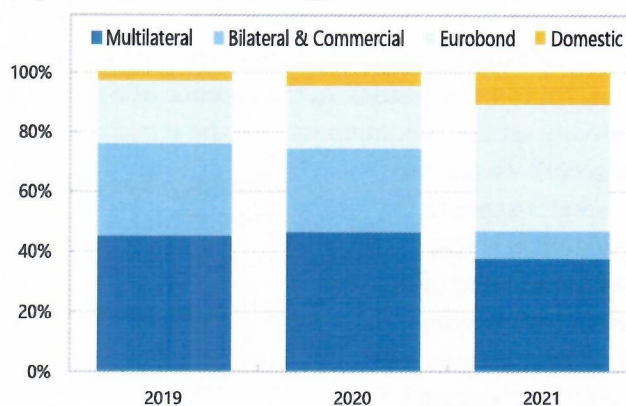
A. External Sources of Financing

External funds will remain the main source of government financing over the strategy period. After a few years of inactivity, the domestic market for government securities was re-launched in late 2018. But creating a deep market able to absorb substantial portion of financing needs will take time. Thus, with the domestic government debt market in a nascent state, financing needs over the next few years will likely be met through external sources.

Multilateral concessional and semi-concessional loans will continue to provide the bulk of financing.⁸ Loans from the

International Development Association (IDA), the Asian Development Bank (ADB), and the International Bank for Reconstruction and Development (IBRD), among others, are expected to continue providing financing for infrastructure, social, and developmental projects and programs based on concessional or semi-concessional basis. External financing will also include bilateral and commercial borrowing, albeit to a smaller degree (text chart).

Composition of Financing
(In percent of total, Current Plan Strategy)



Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

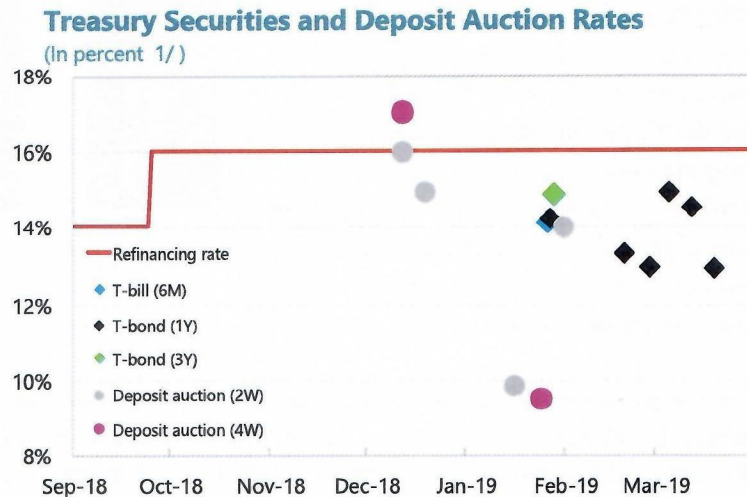
For the purposes of the DMS exercise conducted during the MTDS mission, estimates on future fiscal gap were adjusted to generate adequate financing needs that would allow the targeted issuance of domestic securities. All strategies include the authorities' figures of future disbursements of committed multilateral and bilateral loans for the entire public sector over the next three years. Financing from official creditors exceeds the financing need for year 2020 and leaves very little room for domestic issuance in years 2019 and 2021 (see Annex III).

Following the issuance of a debut international bond in early 2019, the authorities plan to continue issuing international bonds annually. This is expected to help establish a yield benchmark, raise the country's profile with international investors to install solid presence in international markets, increase transparency, and attract foreign direct investment. With this consideration, several strategies with annual USD 1 bn Eurobond issuance with varying maturities of 5, 10, and 30 years were included in the DMS analysis. The 30-year Eurobond reflects the government's intent to issue a longer-dated instrument in the international capital market.

⁸ Uzbekistan accesses IDA financing at blend credit terms. See <http://ida.worldbank.org/about/borrowing-countries>.

B. Domestic Sources of Financing

The authorities began developing the domestic government debt securities market in December 2018.⁹ The initial issuance took place on 3 consecutive days with the offer of 6-months, 1-year, and 3-year maturities, which amounted to UZS 600 bn (0.15 percent of GDP) (see Table 4 for details). In the absence of a market pricing mechanism, the government initially set the maximum rate for the securities at the level of the refinancing rate (16 percent). To test the market's appetite, additional 1-year securities were offered in 2019 with varying amounts. Despite the significant demand for FX assets due to elevated dollarization, all domestic currency government bond auctions were oversubscribed, signaling strong demand from the market, and resulting in an average yield below the refinancing rate (text chart and Table 4).¹⁰



Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.
1/ Weighted average rates shown for Treasury securities, and Central Bank deposit auctions. M=months, Y=years, W=weeks.

Commercial banks are the main investors in domestic government securities. Participation in the primary markets is restricted to licensed resident legal entities who are members of the Uzbekistan Republican Currency Exchange, where government debt securities are traded.¹¹ Essentially all commercial banks are licensed to participate in the government securities auctions, but reportedly only 6 banks with the largest liquidity buffers are currently the most active.¹² Government debt securities constitute a more profitable liquid asset than

⁹ A domestic debt market existed until 2012, when it was discontinued with the payment of all outstanding domestic securities. The Central Bank of Uzbekistan is also currently considering issuing CB-bills for liquidity purposes.

¹⁰ On March 1, 2019, the share of domestic deposits denominated in foreign currency constituted about 40 percent of total deposits, and foreign currency loans constituted about 57 percent of total loans.

¹¹ Two exchanges exist in Uzbekistan: Uzbekistan Republican Currency Exchange (UZRVB), where deposit auctions, foreign currency, and government debt securities are traded; and Republican Stock Exchange "Toshkent" (UZSE), where stocks are traded. License to participate in an exchange is granted by the Central Bank of Uzbekistan.

¹² On March 1, 2019, twenty-nine commercial banks operated in Uzbekistan, with total assets of 172 trillion UZS (42.3 percent of GDP). Of the total, 13 commercial banks had state ownership (84 percent of total assets).

cash or gold to satisfy regulatory liquidity standards.¹³ Non-bank institutional investors are small and do not currently provide any significant demand for government debt instruments. All domestic debt is issued in local currency, marginally decreasing the FX risk of the country's debt portfolio, albeit at higher cost. At UZS 850 bn (0.2 percent GDP) at end-March 2019, the outstanding value of domestic government debt remained small.

Going forward, the authorities remain committed to the development of the domestic government debt market. The assumption of gradually increasing domestic debt issuance reflects this commitment. All strategies contemplate increasing issuance of domestic government debt securities. Maturity composition of domestic debt varies by strategy.

To reflect the authorities' intent to lengthen the maturity profile of domestic debt, the MTDS AT introduced longer-dated bonds. To deepen the domestic debt market, the authorities aim to extend the maturity on government securities from the current maximum of 3 to 5, 7, and 10 years and gradually widen the investor base to allow non-resident investors enter the market. To reflect this aspiration, 5-year and 10-year domestic bonds were included in the strategies.

¹³ The Central Bank of Uzbekistan allows commercial banks to hold liquid assets in the form of deposits at the central bank, government debt securities (domestic and foreign), Central Bank paper, International Organizations' paper, cash (domestic and foreign currency), and gold. Deposits at the central bank pay slightly higher than government paper, but supply is limited.

Table 4. Domestic Government Debt Securities

Auction date	Maturity	Number of securities	Nominal value of placed securities (bn UZS)	Orderbook (bn UZS)	Nominal value of issued securities (bn UZS)	Amount to be redeemed at maturity (bn UZS)	Average annual yield
2018							
December 26, 2018	6 months	200,000	200	223	184	197	14.10%
December 27, 2018	1 year	200,000	200	229	203	232	14.22%
December 28, 2018	3 years	200,000	200	222	205	296	14.86%
2019							
February 19, 2019	1 year	60,000	60	123	61	69	13.33%
February 27, 2019	1 year	40,000	40	83	41	46	12.98%
March 5, 2019	1 year	30,000	30	30	30	35	14.94%
March 12, 2019	1 year	40,000	40	110	40	46	14.54%
March 19, 2019	1 year	80,000	80	143	81	92	12.94%
Total outstanding¹			850	1,163	845	1,012	13.99%

Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

¹ As of April 5, 2019. Average annual yield of all securities.

The government's intent to diversify debt instruments is also reflected in the addition of inflation-linked bonds. To expand the domestic government debt market, the authorities are considering introducing an inflation-linked bond. To this effect, strategies with a small share of financing needs covered with an inflation-linked bond with 5-year maturity were included in the MTDS analysis. Inflation-linked instruments could help to price fixed income securities in an environment of elevated inflation expectations and help to reduce dollarization. But in a small domestic government securities market – which is currently the case in Uzbekistan – the introduction of inflation-linked instruments could also lead to market fragmentation.

C. Stylized Instruments

Fifteen stylized instruments were created to test alternative financing strategies. Stylized instruments are used to aggregate debt-service projections of the existing debt portfolio that are extracted from the debt database on a loan-by-loan and security-by-security basis. This aggregation reflects existing financing instruments, and also considers new sources of financing potentially available to Uzbekistan over the medium term.

Nine stylized instruments were used to analyze external borrowing strategies. External borrowing instruments include loans denominated in foreign currency and Eurobonds. Instruments include:

- **Concessional loans** include loans from the World Bank (IDA) and Islamic Development Bank (IsDB), with a 30-year maturity and a 5-year grace period and carry a fixed interest rate.
- **Multilateral semi-concessional loans** are grouped in two categories, depending on the interest rate type (fixed or variable). Loans from the Asian Development Bank (ADB)

and International Bank for Reconstruction and Development (IBRD) fall into these two groups. These representative instruments have a maturity period of 25 years, including a 5-year grace period.

- **Bilateral semi-concessional loans** are also grouped by interest rate type (fixed or variable). Main bilateral creditors are currently China, Japan, Kuwait and Germany. These representative instruments have a maturity period of 20 years, including a 5-year grace period.
- **Commercial non-concessional loans** in the existing portfolio mostly carry variable interest rate. However, a similar instrument (10 years and 5-year grace) with fixed interest rate was also included in the analysis.
- **Eurobonds** with 3 maturities (5-year, 10-year, and 30-year), reflecting the 2019 issuance and the intent to issue a longer-dated 30-year Eurobond.

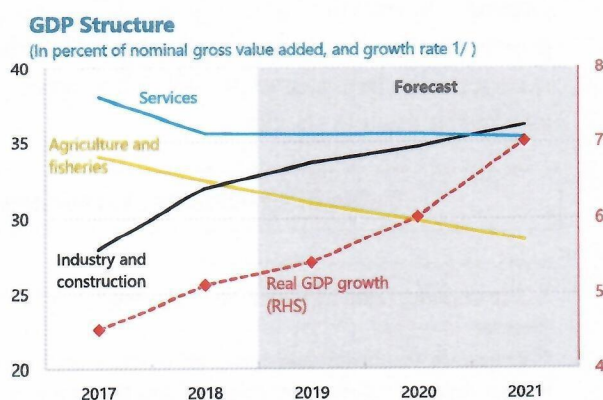
Domestic debt instruments are grouped into six categories: T-bills with a maturity of up to one year; T-bonds with a maturity of one-, three-, five-, and ten- years; commercial bank loans denominated in UZS; and inflation-linked 5-year bonds. All instruments are assumed to be repaid in full at their respective maturity dates (i.e. bullet payment).

IV. MACROECONOMIC AND MARKET ASSUMPTIONS: BASELINE AND KEY RISKS

A. Macroeconomic Developments and Baseline Assumptions

Ensuring consistency of the debt management strategy with the macroeconomic framework is paramount. A sound and realistic macroeconomic framework is necessary for the design of a comprehensive debt management strategy. An effective debt management strategy in turn can foster economic growth by helping identify vulnerabilities in order to take timely measures and minimize fiscal and balance of payments risks.

Economic growth is projected to reach 7 percent by 2021. While agriculture is expected to grow, its share in nominal GDP is expected to decline. Instead, industry and construction are projected to sustain output growth over the strategy period. Real GDP growth is projected to increase from 5.1 percent in 2018 to 7 percent in 2021 (text chart), supported by the government's reform agenda, which is expected to boost private sector growth and attract foreign investments.

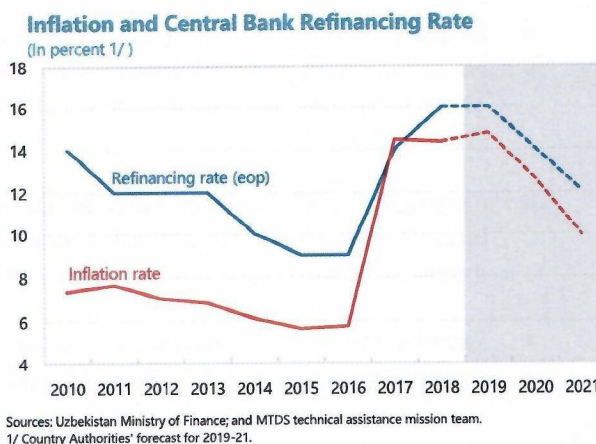


Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

1/ Sectoral contributions to nominal gross value added. Actual figures for 2017, 2018. Forecast for 2019-21.

Table 5 summarizes the authorities' key macroeconomic assumptions.

Inflation is expected to decline over the strategy period. High inflation expectations and rapid domestic demand growth are likely to keep inflation elevated but gradually set on a declining path. Inflation is projected to fall from 14.7 percent in 2018 to 9.9 percent in 2021.¹⁴ As inflation declines, the Central Bank refinancing rate is expected to fall from 16 to 14 percent in 2020, and further to 12 percent in 2021, resulting in a small increase in the real interest rate from 1.1 percent to 1.9 percent between 2019 and 2021.



Primary and overall fiscal deficits are expected to decline and turn into a small surplus in 2021.¹⁵ Total revenues are projected to remain relatively stable as a share of GDP at about 23 percent. Primary expenditures are expected to decline by about 1.4 percentage points of GDP between 2019 and 2021, as the government aims to reach fiscal balance by 2021. The declining fiscal expenditure is mainly driven by current spending and reflects the government's aim to cap wages, and lower transfers to state-owned enterprises as prices become liberalized. Public capital expenditure is expected to remain largely unchanged relative to GDP over the strategy period.

The external current account balance is expected to remain in deficit over the strategy period. The current account recorded a deficit in 2018 following the liberalization of the FX market and the depreciation of the domestic currency. The authorities expect the current account to remain in deficit over the strategy period. Exports are expected to grow in line with nominal GDP. Meanwhile, strong domestic demand and construction activity are likely to increase the demand for imports.¹⁶ The current account is expected to be financed through external borrowing and higher FDI, keeping FX reserves broadly unchanged. The government's reform agenda – aimed at building a more open and market-oriented economy – is expected to help stimulate FDI. FX reserves – which are expected to remain high – will serve as a buffer against shocks.

Table 5. Uzbekistan Authorities' Macroeconomic Assumptions^{1/}

¹⁴ The exchange rate depreciation suggested by inflation differential is significantly higher than the authorities' forecast.

¹⁵ Reference to consolidate fiscal accounts, which include state budget (republic and local budgets), and off-budget funds. Excludes Uzbekistan Fund for Reconstruction and Development. Authorities' definition of fiscal data and coverage.

¹⁶ Based on qualitative discussions with the authorities. Balance of Payment projections were not provided.

	Actual	Forecast		
	2018	2019	2020	2021
	<i>UZS billions</i>			
Revenue and grants	102,698	121,823	149,979	182,742
Primary expenditure	.	128,855	153,080	181,508
Primary balance	.	-7,032	-3,101	1,233
Nominal GDP	407,514	522,459	642,973	780,671
	<i>Percent</i>			
Primary balance (percent GDP)	.	-1.3	-0.5	0.2
Real GDP growth (percent y/y)	5.1	5.4	6.0	7.0
Nominal GDP growth (percent y/y)	.	28.2	23.1	21.4
GDP deflator (percent, y/y)	28.1	21.6	16.1	13.5
Inflation (end of period)	14.3	14.7	12.6	9.9

Sources: Uzbekistan Ministry of Finance
1/ Projections may differ from other published data, including IMF staff report, as these are based on MoF estimates.

B. Key Risk Factors

Risks to Uzbekistan's economy and debt accumulation originate from external and domestic sources:

Weaker demand for exports constitutes the main external risk. Weaker global or key trading partner growth could lead to lower exports, diminished remittances from Uzbek migrant workers, and reduced investor confidence and foreign investments, contributing to lower economic growth. A higher-than-projected fiscal deficit may result in higher gross financing needs and higher debt accumulation. Lower commodity prices, tighter global financing conditions, and trade protectionism could raise external borrowing costs.

Domestic risks stem mostly from a backsliding in the reform agenda. Termination or slow implementation of reforms could fail to generate sufficient revenues, worsen investment climate, lower regional trade, and result in higher financing needs and debt. Continued credit growth could make it difficult to curtail inflation, raising debt service costs as yields adjust to higher inflation. Weaker performance of banks and SOEs could increase fiscal costs and generate contingent liabilities. Table 6 summarizes risks to the outlook, and their potential impact on the debt management strategy.

Table 6. Macroeconomic Risks and Implications for DMS

Risks	Likelihood of Risk Event	Timeframe	Implication for Debt Management Strategy
Growth Backsliding on reforms due to reform fatigue could lead to deterioration in investment climate, regional cooperation, and subsequently lower growth.	Medium	Short- to medium-term	Gross financing needs may increase if a fiscal stimulus is introduced, resulting in higher borrowing.
Weaker global growth (or slowing key trading partners) could result in weaker exports, reduction in remittances from Uzbek migrant workers, weaker confidence and investment that leads to slower growth and job creation.	Medium	Medium-term	Gross financing needs may increase if additional fiscal stimulus is provided.
Inflation Continued rapid credit growth could make it difficult to lower inflation, resulting in persistently elevated price growth.	Medium	Medium-term	Debt service costs may increase, as yield curve adjusts to higher inflation.
Fiscal Slow implementation of tax reforms does not generate sufficiently buoyant revenues.	Low	Medium-term	If revenues fail to keep up with expenditures, gross financing needs may increase resulting in higher borrowing.
Balance of Payments Declining commodity prices, tighter global financial conditions, and trade protectionism.	Medium to High	Short- to medium-term	Borrowing externally could become somewhat costly, limiting the choices for financing.
Contingent Liabilities Weak performance of banks and SOEs, delays in the SOE reform.	Medium	Medium-term	Could increase fiscal costs (for instance, bank recapitalization, capital injection, etc.) and lead to higher gross financing needs.

Source: MTDS technical assistance mission team.

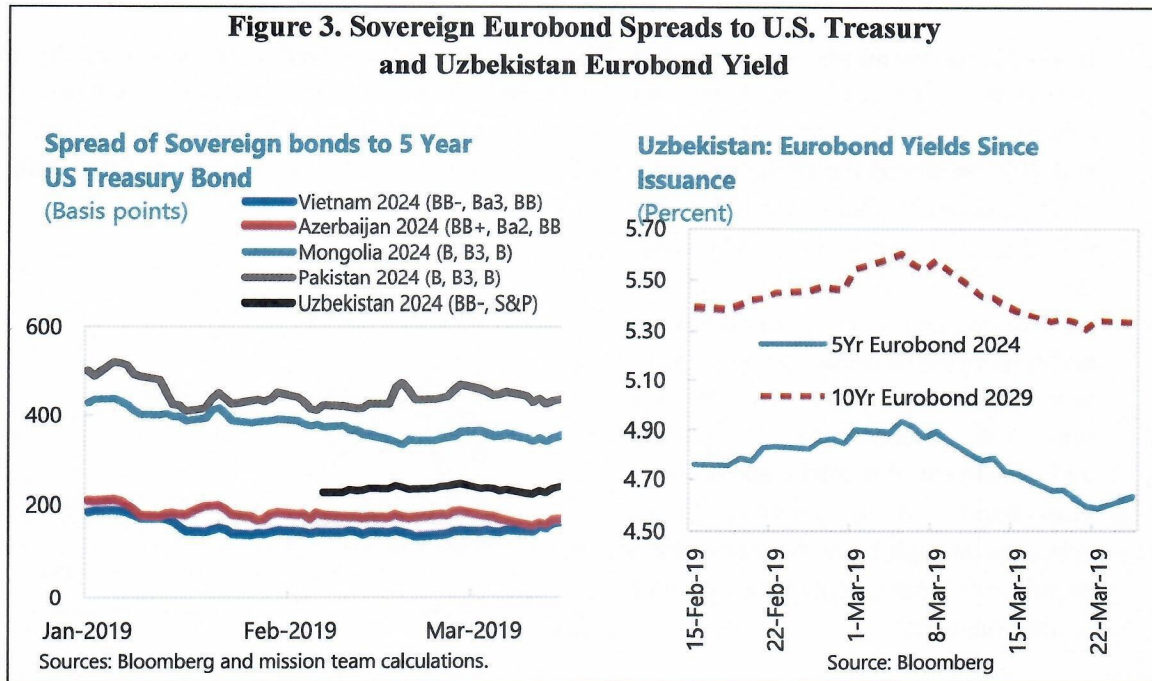
C. Baseline Interest and exchange rate development

Exchange rate assumptions

The domestic currency is projected to depreciate moderately against the U.S. dollar over the forecast period. The authorities expect that the domestic currency will remain relatively unchanged vis-a-vis the U.S. dollar in 2019, depreciate by 6 and 5 percent in 2020 and 2021, respectively.

Interest rate assumptions on external borrowing

New loans from multilateral creditors are based on the latest pricing structure. For example, IDA terms for new borrowing reflect the shorter grace period (6 years) and maturity (38 years).¹⁷ Loans from the ADB and IBRD are referenced to Libor with a spread of 50 bps. Libor rate projections were obtained from Bloomberg.



Loans from commercial banks are priced based on terms of existing loans. Based on these, variable rate loans are referenced to Libor with no margin, fixed rate loans carry an average interest rate of 2 percent. To be prudent, new loans on fixed rate from commercial banks are priced at a premium of 2 percent above bonds with similar maturity.¹⁸

Eurobond issuance prices are based on market rate. On February 14, 2019, Uzbekistan issued its maiden dual-tranche Eurobond in the international capital market. The 5-year tranche was priced at a spread of 228 basis points (bps) to the U.S. Treasury 5-year benchmark bond, and the 10-year tranche at a spread of 272 bps to the U.S. Treasury 10-year benchmark bond. Compared to similar credit rated peers, which have tapped the market more than once, Uzbekistan's primary issuance—which carries a premium—was relatively favorable (Figure

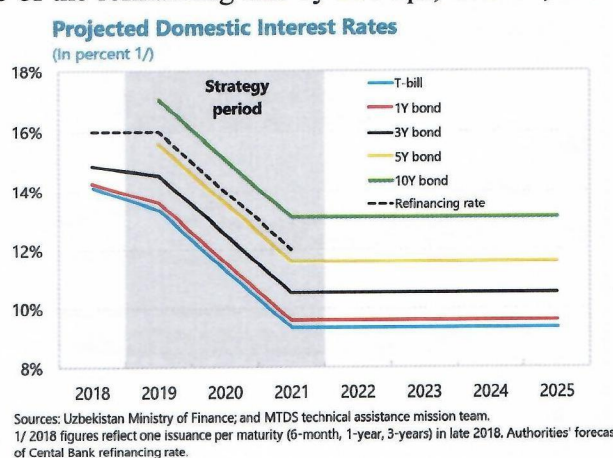
¹⁷ In line with [IDA's non-concessional borrowing policy](#), less concessional IDA terms (i.e., hardened terms) may apply if Uzbekistan breaches the agreed non-concessional financing limit.

¹⁸ Alternatively, external commercial bank loans could be priced by benchmarking against the Eurobond interest rate with an assumed margin.

3), coming in lower than the peers' secondary market prices. Since the issuance, both bonds have performed relatively well with their yields edging lower since the beginning of March (Figure 3). For Eurobond issuances in 2020 and 2021, the credit spreads to U.S. Treasury bonds are assumed to remain constant at 2019 levels and applied to the U.S. Treasury par yield forward curves. The latter are derived from the zero-coupon forward yield curve.¹⁹

Interest rate assumptions on domestic borrowing

Domestic instruments are priced in line with the refinancing rate projected by the authorities. For 2019, the 1-year bond was priced at the average weighted interest rate obtained in five auctions that took place in the first quarter 2019. The assumptions for 2020 and 2021 mirrored the projected decline of the refinancing rate by 200 bps, in 2020, and in 2021 (text chart). The 1-year T-bill was priced 25 bps below the 1-year bond. Bonds with 3 and 5 years of maturity were priced with a spread of 50 bps per additional year of maturity above the 1-year benchmark bond. The 10-year bond was priced with 30 bps per additional year of maturity above the 5-year bond. To be prudent, 5-year commercial bank loans were priced at a premium of 2 percent above bonds with similar maturity.



As domestic markets become more integrated with the international capital markets, the authorities may want to consider reviewing their pricing model for domestic instruments. The authorities, however favored benchmarking against the projected Central Bank refinancing rate – instead of benchmarking against the U.S. Treasury rate. Given limited integration of domestic and international capital markets, this approach may fit better the current state of the domestic market. But over time, this assumption is likely to become inconsistent with the authorities' expectation of strong domestic debt market, driven by large foreign investor participation.²⁰ Since the entrance of foreign investors would tend to increase integration with the international capital markets, the authorities could consider revising their pricing model for domestic instruments overtime. Annex IV provides an example of pricing model using U.S. Treasury instruments, for further considerations by the authorities.

¹⁹ For instance, given the one- and two-year zero-coupon rates, implied forward one-year zero coupon rate can be calculated assuming no arbitrage conditions. The par yield forward curves are derived by applying discount factors to zero coupon curves.

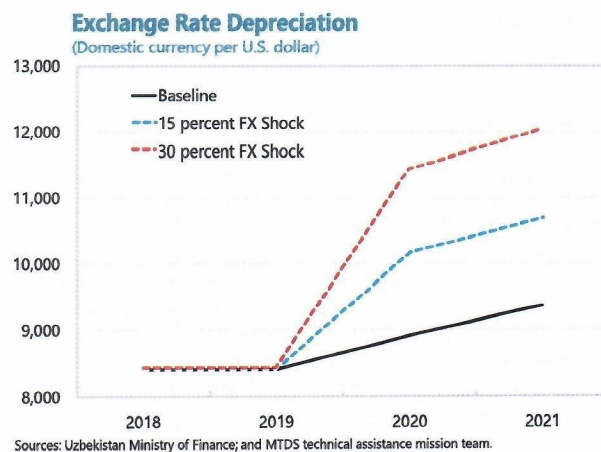
²⁰ The authorities indicated that some foreign investors have begun establishing local offices in Uzbekistan with the aim of participating in domestic debt markets using commercial banks as dealers.

Inflation-linked instruments are priced at the current real interest rate. Assuming refinancing rate of 16 percent, and the February 2019 inflation rate of about 13.8 percent, real rate of return is estimate at about 2.2 percent. To be prudent, the inflation-linked bond is assumed to have constant interest rate of about 2.5 percent over the projection period.

Table 7 summarizes the assumptions used in the projections.

D. Description of the Shock Scenarios

The DMS analysis assumes shocks to the exchange rate and interest rates. Shock scenarios allow to assess the robustness of each strategy against adverse market conditions, such as exchange rate depreciation and interest rate higher than those in the baseline scenario. The standard 15 percent depreciation for moderate and 30 percent depreciation for extreme shocks are applied to domestic currency to stress test the debt portfolio for exchange rate risk (text chart). The exchange rate shock is applied in 2020. Shocks on interest rates assume 250 basis points for moderate, and 500 basis points for extreme shocks on market and variable rate instruments.²¹ Interest rate shocks are applied to the baseline interest rates in 2019, 2020, and 2021.



²¹ Shocks applied to commercial external and commercial bank domestic are 350 and 700 basis points for moderate and extreme shocks, respectively.

Table 7. Interest Rate Projections

	Interest rate type	Interest rate projection	
		Reference rate	Spread
External			
Multilateral Concessional	Fix	Implied interest rate in the existing portfolio. Constant over time.	None
Multilateral Semi-Concessional	Var	6M Libor forecast.	Implied interest rate in the existing portfolio. ¹ Constant over time.
Multilateral Semi-Concessional	Fix	Implied interest rate in the existing portfolio. Constant over time.	None
Bilateral	Fix	Implied interest rate in the existing portfolio. Constant over time.	None
Bilateral	Var	6M Libor forecast.	Implied interest rate in the existing portfolio. ¹ Constant over time.
Commercial	Var	6M Libor forecast.	Implied interest rate in the existing portfolio. ¹ Constant over time.
Commercial	Fix	Implied interest rate in the existing portfolio. Constant over time.	None
Eurobond 5Y	Fix	U.S. Treasury forward rates 5Y	Spread over 5Y Eurobond (Feb, 2019). Constant over time.
Eurobond 10Y	Fix	U.S. Treasury forward rates 10Y	Spread over 10Y Eurobond (Feb, 2019). Constant over time.
Eurobond 30Y	Fix	U.S. Treasury forward rates 30Y	Spread over 30Y Eurobond (imputed). Constant over time.
Domestic			
T-Bills	T-bills	Weighted average 1Y domestic bond (2019) interest rate. Projected to growth with with the Central Bank refinancing rate projection.	Minus 25 bps
Bond 1Y	Fix	Weighted average 1Y domestic bond (2019) interest rate. Projected to growth with with the Central Bank refinancing rate projection.	None
Bond 3Y	Fix	Weighted average 1Y domestic bond (2019) interest rate. Projected to growth with with the Central Bank refinancing rate projection.	Plus 100 bps. Assuming 50 bps per additional year of maturity, 2 years above the 1Y instrument.
Bond 5Y	Fix	Weighted average 1Y domestic bond (2019) interest rate. Projected to growth with with the Central Bank refinancing rate projection.	Plus 200 bps. For 5Y or below maturities: assume 50 bps per additional year of maturity for 4 years above 1Y instrument.
Bond 10Y	Fix	Weighted average 1Y domestic bond (2019) interest rate. Projected to growth with with the Central Bank refinancing rate projection.	Plus 350 bps. For maturities 5Y or below: assume 50 bps per additional year of maturity for 4 years above the 1Y instrument (200 bps). For 10Y maturity: assume 30 bps for every year of additional maturity above the 5Y instrument (150 bps).
Commercial banks	Fix		Bond 5 Yr + 2% spread
Inflation-Linked 5Y	Var		Real interest rate. ² Constant over time.

Sources: Uzbekistan Ministry of Finance; and MTDS technical assistance mission team.

¹ Excludes the reference rate; only refers to the spread.

² Real interest rate computed using the Central Bank refinancing rate and inflation.

Y = year.

V. ANALYSIS OF ALTERNATIVE DEBT MANAGEMENT STRATEGIES

A. Description of Alternative Debt Strategies

Four alternative financing strategies were analyzed jointly with the authorities. These strategies represent alternative ways of financing the central government borrowing needs during FY2019–FY2022. As noted, to design the strategies, the mission considered the funds available from different sources and imposed reasonable limits on Uzbekistan’s capacity to issue debt under each stylized instrument. In particular, the expected disbursements of external loans are taken into consideration, as well as annual issuances of Eurobonds for USD 1 bn, as per authorities’ indications. Since no additional external funds are anticipated, the yearly gross external funding is the same in the four strategies (USD 3.7 bn on average in the period). The Strategy 1 is a “status quo” strategy and reflects the authorities’ policy intentions at the time of the mission. Strategies 2 and 3 aim at extending maturities of domestic securities by introducing 10-year bonds; Strategy 4 tests the impact of the introduction of inflation-linked bonds. Table 8 provides summary composition of the debt stock at end-2021.

The main features of the four strategies are the following:

- **Strategy 1 (S1): ‘Status Quo’ strategy.** This strategy reflects last year’s borrowing patterns, including the 2019 Eurobond issuances. Domestic debt portfolio is rolled over with debt instruments and tenors as maturing debt. External financing is contracted on concessional and semi-concessional terms as per the contracted and undisbursed loan pipeline. As per the intentions of the authorities, USD 1 bn Eurobonds at different maturities are issued every year.
- **Strategy 2 (S2): Gradual lengthening of domestic debt maturities.** This strategy involves a replacement of a limited stock of T-bills (16.7%) with 10-year bonds, starting from 2020. The remaining domestic financing and the external composition is the same as in strategy S1.
- **Strategy 3 (S3) Pronounced lengthening of domestic debt maturities** This strategy aims at lengthening further the maturities of domestic debt instruments, by partially replacing T-bills and 1-year bonds with 5- and 10-year bonds, starting from 2020. The external financing composition is the same as in strategy S1.
- **Strategy 4 (S4): Inflation-linked bonds.** The composition of domestic funding is the same as S3, but 3-year bonds are partially replaced by 5-year inflation linked instruments. External financing composition is the same as in strategy S1.

Table 8. Uzbekistan: Average Gross Borrowing over projection Period 2019-2021

In percent of gross borrowing - Over Projection Period		S1	S2	S3	S4
Highly concessional	FX	29.97%	29.99%	30.20%	30.21%
Multilateral_Fix	FX	1.02%	1.02	1.03%	1.03%
Multilateral_Var	FX	12.84%	12.85%	12.92%	12.92%
Bilateral_Fix	FX	24.95%	24.97%	25.11%	25.11%
Bilateral_Var	FX	0.20%	0.20%	0.20%	0.20%
Commercial_Var	FX	0.00%	0.00%	0.00%	0.00%
Commercial_Fix	FX	0.00%	0.0%	0.00%	0.00%
Eurobond_5 Y	FX	8.55%	8.55%	8.64%	8.64%
Eurobond_10 Y	FX	12.83%	12.84%	12.94%	12.95%
Eurobond_30 Y	FX	4.28%	4.29%	4.31%	4.31%
T-Bills	DX	1.61%	1.38%	0.87%	0.86%
Tbonds_1 Y	DX	1.61%	1.58%	0.87%	0.86%
Tbonds_3 Y	DX	1.40%	1.38%	1.22%	0.86%
Tbonds_5 Y	DX	0.75%	0.74%	1.0%	0.99%
Commercial Banks	DX				
Tbonds_10 Y	DX		0.21%	0.71%	0.71%
Inflation-linked_5 Y	DX				0.35%

Source: The MTDS mission team estimates

B. Evaluation of Alternative debt Strategies

The central government debt is expected to increase over the medium-term. The central government debt as a share of GDP is projected to increase from 16.5 percent as of end FY2018 to 22.1 percent by end FY2021. The four strategies lead to similar debt/GDP ratio and debt composition, given the common assumptions on the external funding (accounting for more than 95 percent of the total borrowing needs). Within these constraints, the four strategies show different outcomes in terms of cost/risk of the domestic debt portfolio, as summarized in Table 9 below.²²

²² Standard risk indicators are produced by the MTDS Analytical Tool. These measures include a (i) refinancing risk, calculated as an average time to maturity (ATM), a percent of debt maturing in one year; (ii) interest rate risk, assessed as an average time to re-fixing (ATR), a share of fixed rate debt in total debt and (iii) exposure to foreign currency exchange rate risk, measured as a share of external debt, among others.

Table 9. Uzbekistan: Cost and Risk Indicators of Alternative Debt Management Strategies

Risk Indicators		2018	As at end 2021			
		Current	S1	S2	S3	S4
Nominal debt as percent of GDP		16.5	22.1	22.1	22.1	22.1
Present value debt as percent of GDP		12.7	16.6	16.6	16.6	16.6
Interest payment as percent of GDP		0.4	0.5	0.5	0.5	0.5
Implied interest rate (percent)		2.2	2.5	2.5	2.5	2.5
Refinancing risk	Debt maturing in 1yr (percent of total)	4.2	3.5	3.4	3.0	3.0
	Debt maturing in 1yr (% of GDP)	0.8	0.8	0.8	0.7	0.7
	ATM External Portfolio (years)	10.8	12.8	12.8	12.8	12.8
	ATM Domestic Portfolio (years)	1.2	1.7	2.1	3.6	3.8
	ATM Total Portfolio (years)	10.7	12.6	12.6	12.6	12.6
Interest rate risk	ATR (years)	7.5	11.5	11.5	11.6	11.6
	Debt refixing in 1yr (percent of total)	42.1	17.4	17.3	16.8	17.0
	Fixed rate debt incl T-bills (percent of total)	60.0	85.0	85.0	85.0	84.8
	T-bills (percent of total)	0.3	0.4	0.3	0.1	0.1
FX risk	FX debt as % of total	99.1	97.9	97.8	98.0	97.9
	ST FX debt as % of reserves	1.2	1.7	1.7	1.7	1.7

Source: The MTDS mission team estimates.

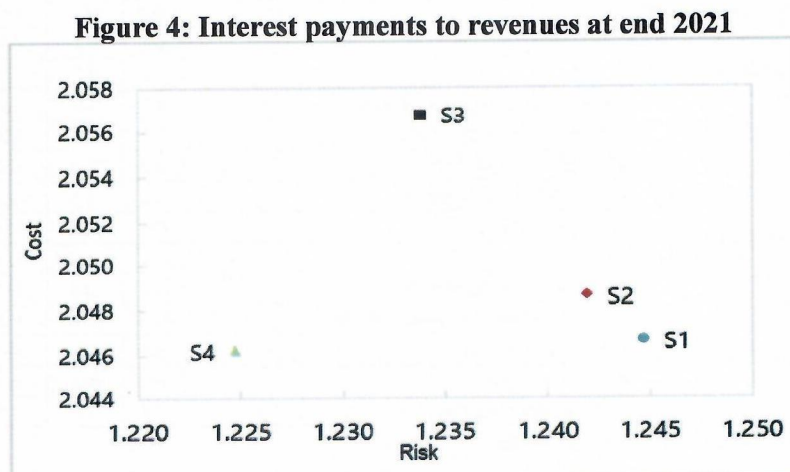
FX exposure remains the main source of risks affecting the debt portfolio. Despite the gradual expansion of the domestic securities market in every strategy, the existing pipeline of multilateral and bilateral loans, coupled with the Eurobond issuances, keeps the debt portfolio almost entirely denominated in foreign currency under the four strategies. The FX risk, which becomes more pronounced given the increasing size of the debt stock, should be taken in consideration when exploring the opportunity of tapping international market.

Under all strategies the average time to maturity (ATM) for the total debt portfolio improves by the end of the projection period. ATM for total debt portfolio increases from 10.7 years to about 12.6 years, mainly driven by long term concessional and semi-concessional financing sources available. Given the larger issuances of long-term bonds, the rollover vulnerabilities in the domestic debt portfolio are more significantly addressed under S3 and S4 (ATM of the domestic portfolio increases from 1.2 to 3.6 and 3.8 years, respectively).

Interest rate risk is reduced, with small differences among the strategies reflecting the refinancing profile of the domestic debt. Under all strategies, the share of debt carrying fixed rate would increase significantly and remain stable at 85 percent, except for S4 where the introduction of inflation-linked bonds would reduce the share a little. However, interest rate risk – at least in the domestic portfolio – mainly stems from the roll-over of securities at maturity; therefore, as for the refinancing risk, S3 and S4 marginally outperform the other strategies.

The performance of the four alternative financing strategies under shock scenarios confirms the cost/risk trade-off of lengthening the maturity of domestic debt. Considering the interest payment-to-revenue ratio, the highest increase in costs over the baseline

assumptions is generated by an extreme shock to interest rates.²³ Therefore, S2 and S3, although marginally costlier, would involve less risk than S1, due to the lower amount of domestic debt to be refinanced (Figure 4). Based on the reduction in inflation anticipated by the authorities, S4 represents a potential borrowing option from both the cost and risk perspective.²⁴



Source: Mission team calculations.

The authorities expect that the DMS will to support the development of the domestic market, to the extent that higher interest rates do not present significant risks to the budget. The feasibility of lengthening the maturity of domestic debt instruments over the medium term will depend on macroeconomic stability and inflationary expectations, given the current low demand for longer-term instruments. Therefore, the authorities may benefit from setting up an investor communication strategy; building confidence in the fiscal strategy, and implementing anti-inflationary policies, which are important pre-requisites for market development.

The issuance of inflation-linked bonds is an option worth exploring. If properly designed, these instruments may allow for an extension of the domestic maturities, and generate a reduction in future interest rates, should inflation decline. The issuance of these new instrument should be conducted gradually and in line with the market demand for longer term securities.

On external financing side, the maximization of available concessional loans should be considered as a primary goal in any strategy. Multilateral and bilateral loans carry FX risk,

²³ While cost is the debt ratio value under the baseline, risk is the worst-case outcome across the four stress scenarios: extreme exchange rate shock, joint moderate interest and exchange rate shock, moderate and extreme interest rate shocks applied separately.

²⁴ The exchange rate shock – although not insignificant – represents a smaller increase in cost than the interest rate shock.

but this effect is largely compensated by the low refinancing and interest-rate risk, and low cost.²⁵ To fill-in the residual external financing needs, the issuance of the Eurobond is planned by the MoF. It would allow Uzbekistan to build a reference for corporate issuances and diversify its investors' base. However, should the issuances be sizeable – as indicated by the authorities – these benefits may be offset by higher FX exposure, increased cost-of-carry of the raised funds, and rollover risk generated by the payment concentration.

VI. FOLLOW-UP ACTIONS

The main objective of the work summarized in this report has been to foster technical capacity of debt management expert team to develop a medium-term debt management strategy by applying the latest MTDS AT. The work focused on technical assistance and training to enable the Uzbek officials to understand the cost-risk concepts and have hands on experience with the MTDS AT. The strategies analyzed in this report are relevant but mainly serve an illustrative purpose of how cost and risk characteristics of the portfolio evolve depending on the selected sources financing.

As a next step, the authorities may want to update the macroeconomic framework based on the government's MTFE for 2020-2022 and to recalibrate strategies used for the analysis. The analytical base included in this report is sound, including analysis of the portfolio costs and risks.

A debt management strategy document is different from an MTDS TA report. While the MTDS TA report illustrates the type of analysis and steps required to develop a debt management strategy, the strategy document should focus on the chosen strategy, its targets and guidelines. Hence, the strategy document should not discuss alternative strategies. Overall, the strategy should be presented in a clear and concise document that could effectively steer government borrowing operations based on key conclusions of analysis.

The approved debt management strategy document should be published by the MOF. Publication of the strategy is an important mechanism for enhancing accountability of debt management, as well as transparency of debt management operations (see Annex IV for legal requirements related to DMS).

The strategy should play a central role in steering debt management activities. It is recommended that the government ensures that all debt management transactions are taken within the framework of an agreed and published debt management strategy document, which should include targets for the main cost/risk indicators. Unless steered by a DMS and an

²⁵ Although loans from ADB and IBRD carry some interest rate risk as they are based on variable interest rates.

Annual Borrowing Plan (ABP), inconsistencies in decisions regarding external and domestic debt are likely to create fiscal and operational risks.

Implementation of a strategy becomes even more important as the government moves to a combination of concessional and commercial borrowing. More borrowing on commercial terms opens broader borrowing options using a range of financial instruments. In this environment, it is important to closely implement a strategy based on a proper cost/risk trade-off to steer borrowing decisions and other market transactions. Absence of a formal strategy and coordination of activities by various units can easily lead to poor choices and amplify risks.

The design of an ABP supports strategy implementation. As mentioned above, the strategy should be updated annually. Following the strategy update, the ABP, covering both domestic and external debt, should be developed, consistent with the goals and targets set in the strategy. The ABP should then be viewed as an instrument to implement the strategy. The ABP should be more granular in terms of size of the disbursement or issuances and connected to the funding requirements established in the annual budget. The greater level of detail in the ABP will facilitate monitoring. The debt management office should monitor both the strategy and the ABP implementation.

Both the strategy and the ABP are important instruments to communicate with creditors and investors. The strategy provides stakeholders (investors, rating agencies, and others) with relevant information on the evolution of the risk profile of the debt portfolio and the government plans regarding market issuances. The ABP gives investors high level information on amounts and instruments that will be issued in the domestic markets, so they are able to plan their participation in the market accordingly, and this information is then supplemented by the quarterly auction calendar.

The debt management strategy should be subject to regular and systematic monitoring. Formal monitoring of debt management outturns is useful, as is normally done with fiscal outturns. In terms of a formal review, at a minimum, the strategy should be reviewed once a year to determine whether key underlying assumptions remain valid. An annual review of debt management operations should be published. An external audit of the debt management operations will also strengthen the monitoring and review process.

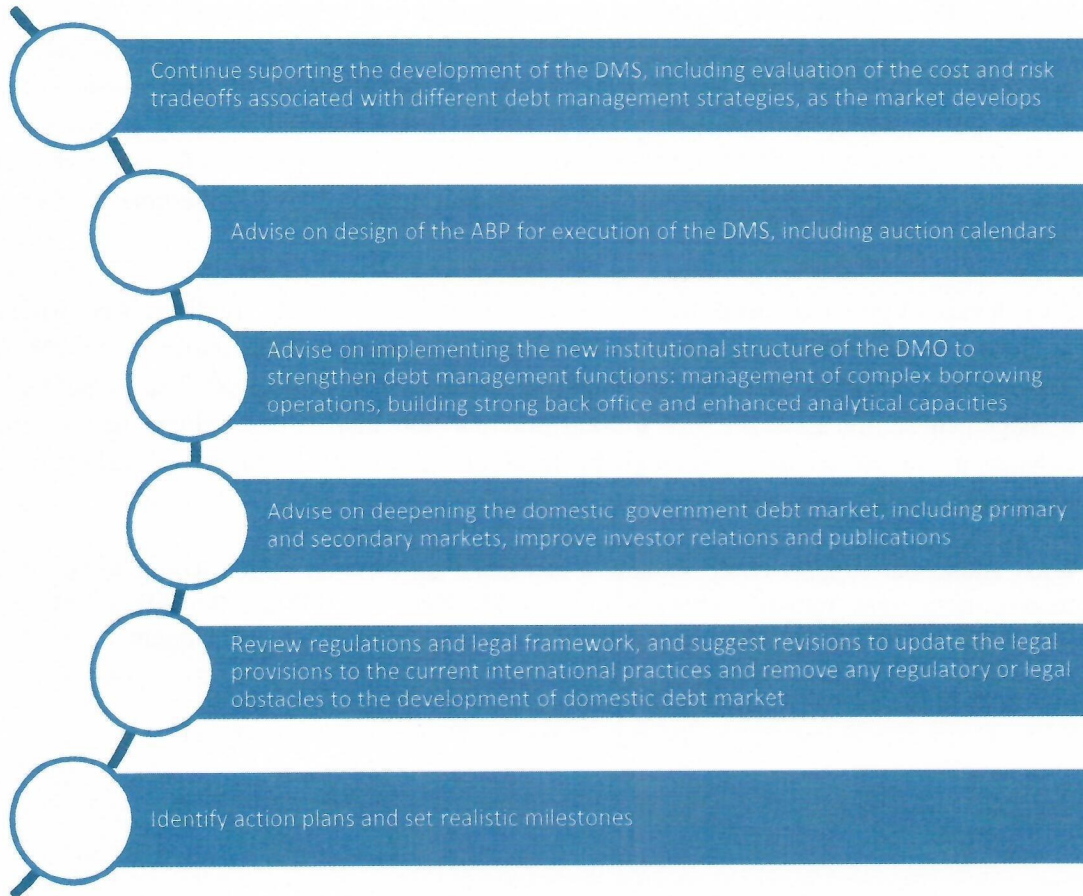
Staff technical capacity could be further improved. The key staff of the debt management office are very motivated, eager to learn and have relevant academic backgrounds. However, most of them would benefit from further exposure and work experience with the analysis of debt management portfolio or development of medium-term government debt and fiscal policy priorities. Supporting staff to attend regional and international trainings and providing in-house trainings is very important to bring the technical capacity of the debt office at par with the expectations for a well-functioning DMO (see Annex V).

The establishment of a dedicated DMO website is a helpful start. The website should contain all data and publications relevant to debt management. This includes data on public

debt position, government securities in issue, debt management cost and risk indicators, and all publications relevant to debt management, including DMS, an ABP, issuance calendars and operational rules for market participants. Some of the information currently published on the central bank website, such as auction announcements and results, should be moved to the centralized DMO website; if necessary, with hyperlinks on the central bank website that directs investors to the DMO website. In addition to debt publications, relevant macroeconomic indicators, including fiscal, monetary and inflation statistics should be easily accessible from the DMO website. With all this information in one location it will be easier for new and existing investors to obtain all pertinent information for investing in Uzbek government bonds (see Annex VI).

As reforms of government debt management functions are only starting, it is important to design a medium-term reform plan. Additional technical assistance under the Debt Management Facility could be provided on request. The subsequent TA in public debt management should assist the MoF to transition to a more market-based financing framework, enhance its analytical capacity through the development of DMS, and further develop domestic debt market (see Annex VII).

Such additional support could include a Reform Plan mission which would focus on debt management areas mutually agreed with the authorities. The WB and the IMF are also ready to provide inputs and feedback to the new debt management strategy document.

Suggested road map of follow-up TA:

Annex I. List of Persons Met

Name	Entity
1. Isakov, Odilbek	Deputy Finance Minister, MOF
2. Karshibaev, Jasur	Director, DMO, MOF
3. Ochilov, Nodir	CBU, Deputy Director of monetary policy Department
4. Inagamov, Sarupjan	CBU, Head of Unit of monetary policy Department
5. Holmuradov, Dilshod	CBU, Director of statistics and research Department
6. Batirov, Farrukh	CBU, Head of Department
7. Khamraev, Bexzod	CBU, Director of monetary policy Department
8. Nigmatova, Nargiza	Debt management office, MOF
9. Sardor, Abdullaev	Chief specialist, MOF
10. Muydinov, Umid	Debt management office, MOF
11. Sherkhon, Sayfitdinov	Head of Division, MOF
12. Abruev, Jamshid	Head of Budget Department, MOF
13. Raimbaev, Azim	Director, JSCB "UzPromstroybank"
14. Bakhramov, Ravshan	Deputy Director, Risk management Department, Ipoteka Bank
15. Atabaeva, Sevara	International Ratings Department, MOF

Annex II. Outline of DMS document

Objectives and Scope

- Describes the objectives surrounding debt management, the scope of the DMS, and the types of risks being managed under the DMS.
- Existing Debt Portfolio
- Provides the historical context for the debt portfolio, describing changes in its size (including relative to GDP) and composition through time. Changes in relevant market variables should be included, along with commentary concerning significant events in the evolution of the debt.
- The Environment for Debt Management Going Forward
- Describes the environment for debt management in the future, including fiscal and debt projections, assumptions about exchange and interest rates, and constraints on portfolio choice, including those relating to market development and the implementation of monetary policy.
- The DMS
- Describes the analysis that has been undertaken to support the recommended DMS. The assumptions used, and limitations of the analysis should be made clear.
- Sets out the recommended strategy and its rationale. Describes the desired debt composition and the core arguments for such composition. This should include a discussion of the key risk factors that influenced the choice of strategy.
- Describes the progress to be made toward the desired composition over the planning horizon (three to five years). Specifies ranges for the key risk indicators of the portfolio and the financing program.
- The documented strategy should also outline any specific measures or projects that are planned for managing nonquantifiable risks and/or in support of debt market development, such as plans to introduce new debt recording systems, or a primary dealer framework.

The documented strategy should also outline the periodic review process that will apply in order to check whether key assumptions continue to hold and that the DMS remains appropriate. The document should also highlight the process that would be followed if circumstances were to change significantly outside that regular review cycle.

Annex III. On-lending Adjustments

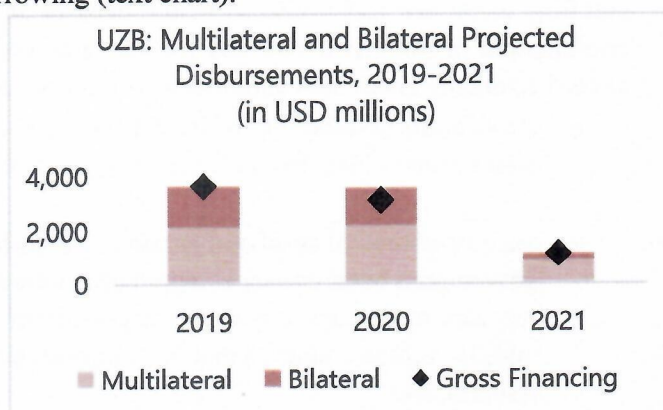
As part of plausible sources of financing, the authorities identified committed disbursements from multilateral and bilateral creditors for the entire public sector, including SOEs (text chart). The coverage of public sector debt is larger than the scope of debt for the MTDS analysis. The latter includes only a subset of public sector debt, comprising government debt and a portion of guaranteed debt, where the Ministry of Finance shares the responsibility for meeting debt service payments (Section II). In addition, the authorities plan to continue issuing Eurobond every year in the amount of USD 1 billion. As was done with the proceeds of the 2019 Eurobond issuances, the proceeds from future Eurobond issuances will likely be deposited at commercial banks who are expected to make use of the funds by providing loans largely to SOEs.²⁶

Taking into account the on-lending that the MoF expects to make from external disbursements, a mismatch exists between available (and committed) external financing and gross financing need; where the latter includes the projected on-lending but excludes debt service payments from new borrowing.²⁷ For year 2020, available external financing exceeds financing need even before considering domestic borrowing (text chart).

Estimating on-lending

The mission team initially used the “on-lending” projections from the Ministry of Finance. However, this was insufficient to generate sufficient financing gap that would allow issuance of domestic securities. For the purpose of MTDS AT training, the mission team estimated on-lending by employing the following approach.

To allow for domestic government issuance in line with the government’s projections, and in the absence of on-lending data that generates sufficient financing need for the strategy period 2019-2021, the mission team estimated on-lending based on a) request to include all of Eurobond issuance proceeds which will be deposited at commercials for on-lending in line



²⁶ Interest payments on deposits are expected to cover the cost of Eurobond issuance, though details were not made available to the mission team.

²⁷ Uzbekistan: Ministry of Finance
Estimates of on-lending in USD millions

2019	2020	2021	2022	2023
2,250.801	2,251.584	698.103	143.892	79.695

with government's policy, and b) public sector debt composition based on MTDS coverage (i.e. covered under the MTDS, versus outside MTDS). This approach is purely to provide solution to the mismatch between gross financing need and available funding. It should not be perceived as encouraging on-lending. As discussed in Section II, of the USD 14.77 bn total public sector debt, USD 8.02 bn (54 percent) is covered under the MTDS and USD 6.75 bn (46 percent) sits outside. The intention was to use 46 percent as a proxy for on-lending; that is assume that 46 percent of non-Eurobond external disbursement is used for on-lending. While this approach was sufficient to eliminate the discrepancy for years 2019 and 2021, a large gap remained for year 2020, where further adjustments was made to the ratio of 46 percent (revising it upwards) to derive on-lending projections that would generate reasonable financing gap.²⁸

Observations and recommendations

The above exercise makes it clear that the primary deficit projections (fiscal projections above the line) do not correspond with financing projections below the line. The adjustments made in this annex (by increasing expenditure via on-lending) makes a fundamental assumption, which is that both projections (fiscal and financing) are essentially correct but the misalignment possibly arose from different coverage of debt. However, this assumption would need to be carefully examined and revisions would need to be made to disbursements, on-lending or a combination of both. If it is found for the same coverage of debt, disbursement projections exceed financing need, then authorities would need to weigh:

- the benefits (availability of funds) and costs (commitment fee) of maintaining large disbursement lines from official creditors; and
- the cost of annual eurobond issuance for on-lending purposes (unlike domestic government bond issuance, tapping the international capital market does not require repeated operations to maintain access; indeed, this is evident from those lower-middle income countries that have tapped the market they tend to be opportunistic issuers), and
- the need to develop the domestic government bond market.

With excessive external borrowing, the role of the domestic sovereign bond market could be overshadowed.

²⁸ Please note that this methodology has drawbacks which include: a) debt stock is not necessarily an indicator for disbursement (cash flow), and b) past on-lending figures (which is what the debt stock represents) may underestimate future on-lending given the government's ambitious investment program.

Annex IV. Legal Framework

The legal framework for government debt management comprises both primary legislation (laws enacted with approval of the Parliament) and secondary legislation (executive orders, decrees, ordinances etc.) determined by the President / Council of Ministers or individual Ministers. Not only does this promote transparency, discipline and accountability through reporting and auditing requirements, a comprehensive legal framework sets out a clear mandate and responsibilities for those delegated to carry out debt and debt-related functions on behalf of government. In addition, it sets a foundation for sound debt management policies which helps to ensure effective management of borrowed funds and public debt sustainability.

Uzbekistan's legislation governing government debt management roles and responsibilities and related operations such as management of guarantees and on-lending, are included, but not limited to the following primary and secondary legislation:

- The Law on External Borrowing (LEB) No. 263-1, 29 August 1996;
- The Law of Central Bank of the Republic of Uzbekistan (LCBRU) No. 154-I, 21 December 1995;
- The Law of Government Securities (LGC) No. PF-5614, 15 May 2015
- The Parliament Resolution No.PS-348-III 13 December 2018, "On state budget of the Republic of Uzbekistan and state targeted funds and main direction of fiscal policy for 2019"

If existing legal framework doesn't include the necessary provisions for debt management operations, a Presidential decree is developed and submitted for approval to bridge the identified gap. In parallel, MoF is developing legal amendments to the relevant legislation.

According to the LEB, the authority for external debt borrowing is delegated to the Cabinet of Ministers, while issuance of government guarantees is commenced based on the proposals submitted by the Ministry of Finance (MOF). The MOF is also responsible for all the government debt negotiation and borrowing processes (art.8). The LEB specifies that annual limit for external borrowing must be established in the Annual Budget Law (art.4). However, the team could not confirm that this provision is implemented.

The LGS establishes key rules and requirements for issuance, registration and circulation of securities, including government securities issued by the MOF on the domestic market (art. 13). Further details for issuance and circulation of government securities are provided in the regulatory framework established through the Presidential decrees. Fiscal agency role of the

Central Bank of Uzbekistan is established in the LCBRU. This law also requires Government to consult CBU on government debt operations and share information on debt transactions.

The Parliament Resolution No.PS-348-III, among others, established the key areas of government fiscal policy and sets the fiscal deficit ceiling for further formulation of the budget parameters. Based on this resolution, the President approves annual and medium-term budget estimates. For example, Presidential Decree No. PP-4086, 26 December 2018, “On forecast of core macroeconomic indicators for the state budget of republic of Uzbekistan for 2019 and budget estimates for 2020-2021” includes provision allowing the Government to issue the Eurobond (art.32).

A specific resolution for the first Eurobond issuance in 2019 was approved through the Presidential Resolution No. PQ-4141, 29 January 2019; “On Measures to Facilitate Issuance of International Bonds of the Republic of Uzbekistan and to Maintain the Sovereign Credit Rating”.

Finally, series of the ambitious reforms implemented by the Government of Uzbekistan were formulated early this year in the Presidential Edict No. PF-5614, 08 January 2019; “On Additional Measures to Ensure Further Economic Development and Increase in Economic Effectiveness”. The Edict includes a roadmap of key areas of structural reforms in the Republic of Uzbekistan to be implemented during 2019-2021. Development of the medium-term Public Debt Management Strategy is included as one of the key pillars of the plan, along with development of domestic market of government securities. The plan also requires the MOF to set the “ceiling” for external and domestic debts as well as for public debt.

Overall, existing legal framework for government debt management in Uzbekistan requires a thorough revision and enhancement in order to establish: i) clear objectives of government debt management, ii) specify debt management purposes, iii) establish legally binding requirement to develop medium term debt management strategy, and iv) development and publication of an annual report of government debt management operation and overview of government guarantees’ portfolio and its efficiency.

Given the on-going efforts by the Government to amend the legal framework, amendment of debt management provisions in the legislation should also be initiated.

Annex V. Institutional Arrangements

A. Sound practice for institutional structure of the DMO

For the DMO of the central government, sound practices suggest to have an organization according to the debt management functions, such as debt servicing and recording (back office), cost-risk analysis and strategy development (middle office) and executing borrowing transactions (front office). In practice, there are many variations around this basic structure. Key from an operational risk management point of view is separating the responsibility for debt recording from the responsibility of undertaking transaction. Often functions – such as those related to IT and legal – are placed outside of the basic front, middle, and back office structure, but can be part of the broader DMO.

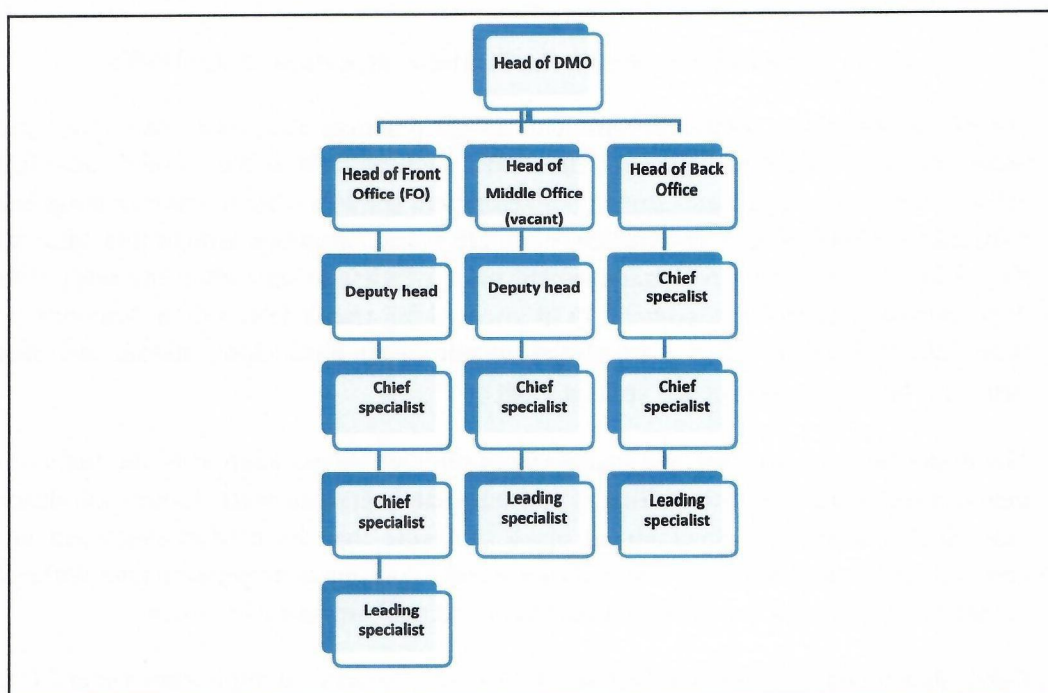
The organizational structure and management policies should support sound human resource management practices with sufficient and adequately trained staff, formal job descriptions, individual training and development plans to ensure that the debt management unit has a commitment to each staff to provide training and to outline a progression path within the debt management function for career development and performance assessments.

Public debt managers need to invest in capacity and resources to implement a sound framework for assessment of cost and risks in borrowing and guarantee issuance decisions. Different approaches to cost and risk analysis and measurement require different skills. For example, the front and middle office staff should be able to assess the cost implications for different financing alternatives, varying in currency, interest type (variable vs fixed) and maturity. Front office staff should be able to access and utilize financial market information in evaluating the compliance of a certain borrowing choice with the debt management strategy. Fundamental risk analysis (e.g. credit scoring) requires an understanding of industries and their respective risk drivers. Governments will model their risk management framework around available capabilities and financial resources and adapt the framework over time as capacities improve through training, hiring of new staff, and support from external consultants.

B. Implementation of the debt management functions in the MOF

In Uzbekistan, the debt management functions are currently fragmented across several departments and divisions at the MOF, both from the statutory and the operational side. Formally, there is one debt management office, organized along front, middle, back office responsibilities, comprise of 16 staff (see Figure VI.1). In practice, however, its operations are limited to external borrowing from multilateral and bilateral creditors, as well as issuance of the first international sovereign bond, and selected back office functions, such as debt recording and monitoring. Middle office personnel were predominantly in charge of preparation of necessary analytical and debt statistics for the recent Eurobond issuance and have not been involved in any cost/risk analysis of debt portfolio or new borrowing.

Figure V.1. Current structure of the DMO



Other departments involved in government debt management operations include:

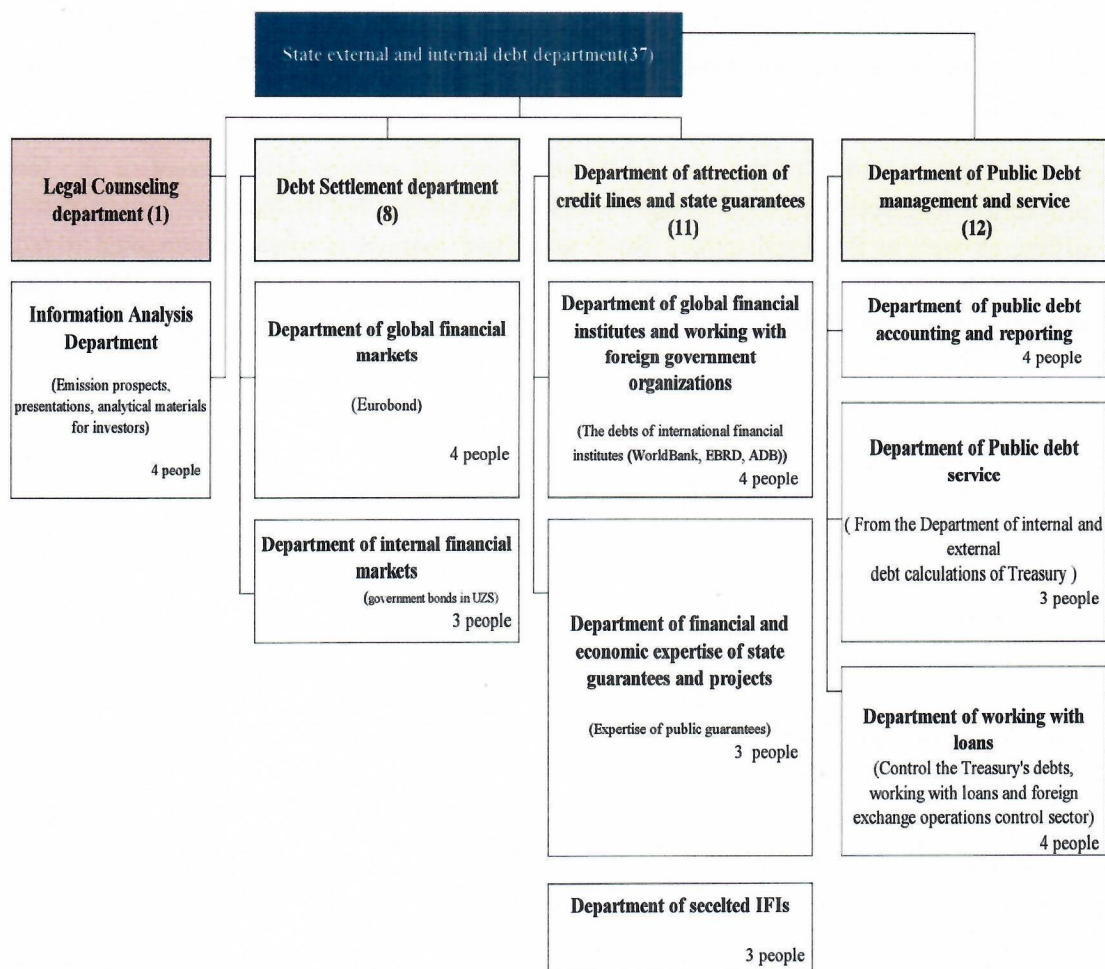
The MOF's Treasury, which was in charge of the debt service function, transferred from the debt office in 2018 but is planned to be transferred back to the back office during this year;

Department of International Financial Relations, which acts as front office for borrowing from IFIs and preparation of government guarantees;

Department of Government Securities Market and interactions with financial institutions, acting as front office for issuance of government securities.

As part of the on-going reorganization of the MoF's structure, the management is planning to consolidate all debt management functions into one Debt Management Department, which will also include the staff of the current debt management division. A new DMO will consist of 37 staff, as illustrated in the Figure V.2 below.

Figure V.2. New structure of the consolidated DMO



The new institutional structure of the DMO is expected to be approved shortly. Thereafter, staff members from several departments in the MOF will be transferred to the new DMO to continue implement their debt management responsibilities. Although formally the new department is organized along front, middle and back office roles, the implementation of such structure will take time and dedication. Importantly, a capacity building plan must be implemented in order to ensure that officials acquire skills needed to perform respective new functions.

Given the ongoing effort to strengthen government debt recording and reporting function, a stronger emphasis is needed to enhance capacity of the back-office staff for timely recording of all borrowing, debt service and debt disbursement transactions in a consolidated debt database. In parallel, it is important to designate an IT officer to assist the DMO in the management of the debt recording system recently procured from UNCTAD. Delays in

transferring government debt database into one system will further hinder its debt reporting and analytical functions. In the meantime, unification of the existing loan-by-loan debt records in Excel might rationalize the consolidation of government debt and guarantees' data and help maintain accurate debt records until transition to the debt recording system is completed.

A full implementation of the new DMO structure will require development of the formal procedures to describe all the functions which are to be fulfilled by the front, middle and back office, as well as the legal expert. Such procedure manual is often documented based on international sound practice in management of debt portfolio and guide the DMO staff in executing their day-to-day functions.

Annex VI. Debt Transparency

The Uzbek DMO has recently acquired the latest version of UNCTAD's Debt Management and Financial Analysis System (DMFAS 6), but the recording of the existing debt database in DMFS is not finalized. Since the DMFAS installation in December 2018, one third of external debt portfolio and the domestic securities have been entered. A thorough validation process against physical loan agreements is on-going. As a result, the original deadline for the completion of the data entry (April 2019) has been postponed to July 2019.

For the time being, the DMO must rely on Excel spreadsheets to provide the debt data needed for the MTDS exercise.²⁹ The MTDS tool calculates expected financing needs based on the projected primary balance and the debt service projections coming from the existing debt, as well as from the new borrowings assumed in the various strategies. Therefore, it is of the utmost importance that the database is comprehensive, accurate and up to date before the start of the MTDS exercise. Although debt records proved accurate, some classifications are not in line with international standards and need to be revised (e.g. on-lent loans).

In the last years significant progress has been achieved in debt reporting. Since 2017, DMO updates and publishes debt statistics on a quarterly basis on the website of the MoF, including debt stock, disbursements, and principal and interest payments. The data are also disaggregated to reflect direct debt and debt guarantees, and show main creditor groups, such as multilateral, bilateral, and commercial subcategories.

To strengthen investor relations, the DMO issued its first newsletter in March 2019. The newsletter outlines macroeconomic developments; monetary policy and banking sector reforms; summary of the media coverage of Uzbekistan in the global debt markets; main developments in the DMO; and the country's borrowing information; and an anticipated table of economic indicator data release. In addition to the aggregate figures on debt level, the newsletter provides detailed information on recent domestic and Eurobond issuances. Going forward, the newsletter could be rearranged to focus more on major debt developments.

To increase transparency, the DMO should begin producing a full-fledged debt statistical bulletin on a regular basis. It would be beneficial for the MoF to supplement the statistics with an annual debt report, which would include detailed information on debt outstanding and in pipeline, along with the associated cost and risk indicators. A section of the same document could assess the strategy implementation and provide explanations if the actual borrowing is not in line with the MTDS objectives.

²⁹ A previous version of the DMFAS was used until 1998, when it was decided to develop an in-house system, eventually dropped in 2016. Given the challenges in maintaining previous recording systems, Excel files have been the main source of debt data until now.

Annex VII. Domestic Debt Management Issues and Alternative Domestic Interest Rate Pricing Model

After five years of absence from the market, the government resumed domestic government securities issuance in December 2018. By establishing a government bond yield curve, the government anticipates facilitating the pricing of corporate bonds, which are expected to emerge as the program of SOE privatization begins.

Primary and secondary market development

In the primary market, frequency of issuance should be made regular and maximum indicative pricing should be phased out. With excess liquidity in the system and deposit auction rates (the interest rate on banks' deposit at the central bank) well below the maximum yield on government securities, demand for government securities has exceeded supply. While the banks met by the mission found the cap on yields to be helpful, the practice should be phased out to encourage market pricing discovery. Furthermore, to promote predictability and transparency, auctions should be held at regular intervals, and ideally announced at least a week in advance, instead of the current three days.³⁰ To the extent alternative investment opportunities remain limited and excess liquidity prevails, demand for government securities is likely to remain high. However, should the conducive issuance conditions change, for example, if the central bank begins liquidity draining operations using its own instrument, the current restriction on pricing and holding auctions with a few days' notice may restrain demand.

Secondary market is non-existent given that the market is at its early stage of development. Eligible participants in the primary market, which includes all banks, expect to satisfy their demand at auctions. Indeed, one of the banks the mission met confirmed that although unsuccessful in the first auction, it was able to satisfy its demand in the subsequent auctions. Potential demand from non-bank financial sector in the medium-term, such as pension fund and insurance sector which are yet to mature, will remain subdued, with the exception of deposit insurance fund, who is seeking to invest in long tenor government securities once it has put in place internal requirements.³¹

As the government develops its debt management strategy and bond issuance intensifies, the responsibility to pro-actively engage with investors becomes increasingly important. In developing its MTDS, consultation meetings with banks and non-banks, would help to understand the appetite for government securities for different instruments (for instance,

³⁰ Even though auctions are announced three days in advance, as banks must reserve funds for the auction one day before, the notice period is effectively two days.

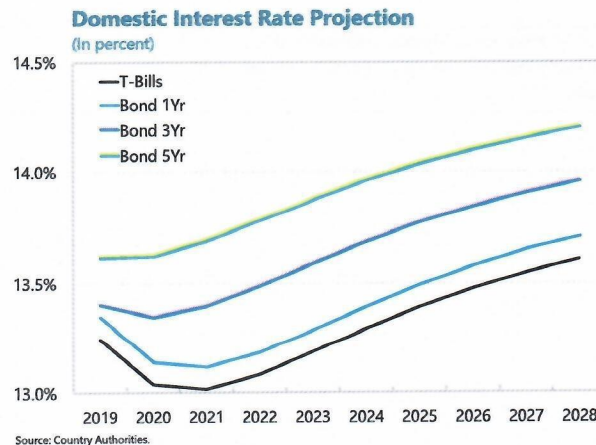
³¹ Non-residents are not eligible to invest. In any case, regulations (the ability to exit the market and repatriate funds) and market infrastructure (e.g., settling through international clearing houses).

inflation linked, retail bonds) and maturities (short versus long tenor bonds), and also provide the opportunity to market government securities and communicate the context and macroeconomic policy underpinning the debt management strategy.

Domestic Interest Rate Pricing Model

An alternative approach to pricing domestic instruments could be considered when the domestic debt market becomes more integrated with the international capital market. In the absence of foreign participation in the domestic debt market, its integration with the rest of the world remains limited. But as the investor base becomes more diversified, increasing foreign participation, the authorities should consider an alternative model for pricing domestic securities against instruments in other highly liquid markets, such as the U.S. This appendix provides a brief discussion of this methodology.

As an alternative to pricing domestic instruments to the refinancing rate, domestic instruments can be priced against the U.S. Treasury forward rates. In absence of an established yield curve, conventional domestic instruments – T-bills, and 1-, 3-, and 5-year T-bonds – could be priced in reference to the U.S. Treasury instruments (text chart). The same technique can be applied to each instrument; projected interest rates may be split into reference rates – to which shocks are later applied – and risk spreads. For the *reference rate*, derived from U.S. spot forward rates, the US par yield forward rates of the maturity corresponding to the instrument can be used. The *risk spread* can be computed for each maturity instrument for 2019 and kept constant over the projection period. The risk spread is the sum of two components:



- *Credit risk spread:* For credit risk spread calculations, the spread of the 5- and 10-year Eurobonds issued in February 2019 over the U.S. Treasury benchmark bonds can be used generating 227.7 and 272 bps spreads, respectively. This implies that for every additional year of maturity, average credit spread increases by about 10 bps. Using this information, estimates for credit spreads can be imputed for 1- and 3- year instruments.
- *Other risks spread:* Other risks spread is a catchall element that incorporates all other risk premia, including foreign exchange risk, liquidity risk, inflation risk, etc. It can be estimated by taking the difference between the weighted average 1-year yield rate based on issuance that has taken place so far in 2019 and the yield derived based on

U.S. Treasury par yield curve plus credit risk (on the basis of the two Eurobonds that had been issued).

Table VII.1 summarizes the main approaches to interest rate projections.

	Interest rate type	Interest rate projection	
		Reference rate	Spread
Domestic			
T-Bills	T-bills	U.S. Treasury forward 1Y	<i>Credit risk spread</i> (implied by Eurobond) + <i>other risk spread</i> (implied by domestic bond issuance)
Bond 1Y	Fix	U.S. Treasury forward 1Y	<i>Credit risk spread</i> (implied by Eurobond) + <i>other risk spread</i> (implied by domestic bond issuance)
Bond 3Y	Fix	U.S. Treasury forward 3Y	<i>Credit risk spread</i> (implied by Eurobond) + <i>other risk spread</i> (implied by domestic bond issuance)
Bond 5Y	Fix	U.S. Treasury forward 5Y	<i>Credit risk spread</i> (implied by Eurobond) + <i>other risk spread</i> (implied by domestic bond issuance)
Bond 10Y	Fix	U.S. Treasury forward 10Y	<i>Credit risk spread</i> (implied by Eurobond) + <i>other risk spread</i> (implied by domestic bond issuance)

Sources: MTDS technical assistance mission team.
¹ Excludes the reference rate; only refers to the spread.
 Y = year.