



UNITED ARAB EMIRATES

SELECTED ISSUES

July 2017

This paper on the United Arab Emirates was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on June 21, 2017.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org Web: <http://www.imf.org>
Price: \$18.00 per printed copy

International Monetary Fund
Washington, D.C.



UNITED ARAB EMIRATES

SELECTED ISSUES

June 21, 2017

Approved By
Aasim M. Husain

Prepared by Aidyn Bibolov, Selim Cakir, Pilar Garcia
Martinez, Mauricio Soto, and Natalia Tamirisa

CONTENTS

ENHANCING MEDIUM-TERM FISCAL POLICY FRAMEWORK: KEY IMPERATIVE

FOR THE UAE	2
A. Introduction	2
B. Current MTFs in the UAE	5
C. Strengthening and Consolidating MTFs	7
D. Conclusion	12
References	20

ANNEXES

I. Aiming for First-Rate Education and Healthcare	14
II. Public-Private Partnerships	18

BANK LIQUIDITY AND MARKET DEVELOPMENT **21**

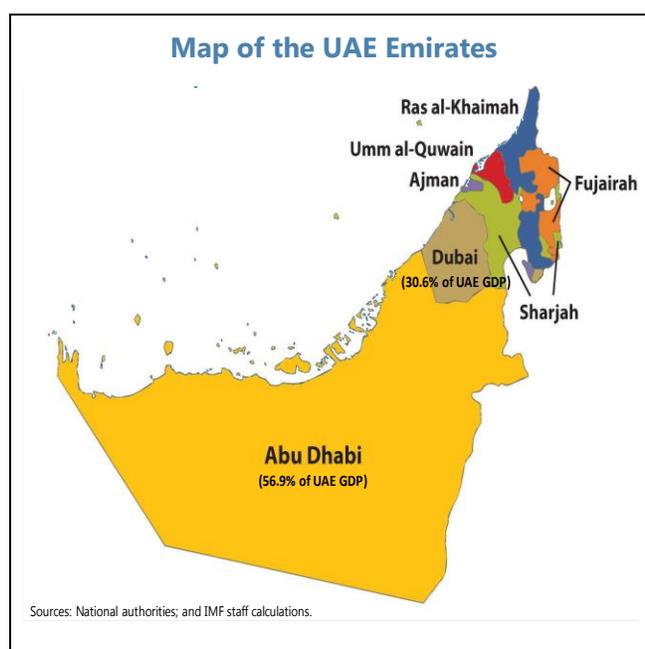
A. Introduction	21
B. Brief Overview of the UAE's Financial System	22
C. The CBU's Liquidity Management Framework	24
D. New Challenges	26
E. Towards Active Liquidity Management and Market Development	27
F. Conclusion	29

ENHANCING MEDIUM-TERM FISCAL POLICY FRAMEWORK: KEY IMPERATIVE FOR THE UAE¹

The UAE is adjusting to the new “lower-for-longer” oil environment. A consolidated Medium-Term Fiscal Framework (MTFF), which is comprehensive and forward-looking, could set a clear direction for fiscal policy for the country as a whole and better align resource allocation with local and national developments plans underpinned by goals embodied in the Vision 2021. High quality of public financial management systems overall is also key ingredient of an appropriate MTFF. Building on the progress made, both at the local and federal levels, existing fiscal frameworks could be integrated, their coverage expanded, and intergovernmental coordination and fiscal transparency improved. The framework could consider explicitly expenditure needs in critical areas such as education and health care. Monitoring of contingent liabilities needs to be strengthened, including covering private and public partnerships (PPPs) and government related enterprises (GREs) including their global subsidiaries. Data-sharing across all levels of governments, including the central bank, could also be strengthened.

A. Introduction

1. The UAE is a federation of seven emirates, each of which maintains autonomy over its oil resources, fiscal policy, and debt issuance. Each emirate exercises power in matters that are not assigned to the jurisdiction of the federal government. Natural resources and wealth in each emirate are the public property of that emirate. While monetary and exchange rate policy (in the context of a peg to the U.S. dollar) is the responsibility of the UAE’s central bank, each emirate manages its own budget. No emirate has an obligation to contribute to the budget of any other emirate. In terms of the share of sub-national government spending, the extent of fiscal decentralization in the UAE is the highest in the world. Emirates government spending accounts for 88.5 percent of total government

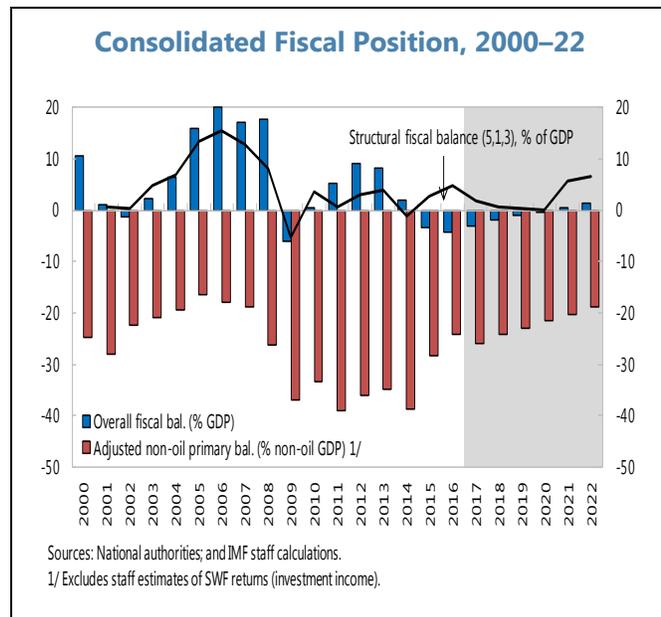


¹ Prepared by Pilar Garcia Martinez (MCD) and Mauricio Soto (FAD) with inputs from Selim Cakir (MCD), on public-private partnerships, under the guidance of Natalia Tamirisa and with the assistance of Brian Hiland and Diana Kargbo-Sical. FAD (Luc Eyraud, Jason Harris, Christine Jane Richmond, Amanda Sayegh and Elif Ture) provided helpful comments and input.

spending. By comparison, in Canada Emirates government spending amounts to 75 percent of the total government spending and in Switzerland 65 percent of the total government spending.²

2. The federal government is partially funded by transfers from the two largest emirates, Abu Dhabi and Dubai. The emirates of Abu Dhabi and Dubai contribute agreed amounts to the federal budget. Abu Dhabi also separately contributes to cover security and defense expenditures, which are federal responsibility, but managed by Abu Dhabi. The federal government's own resources, based on fees and other revenue (including royalties and dividends from Etisalat, a public company) amount to about 75 percent of its total revenue.

3. Over the past years, local and federal governments have made progress in strengthening their medium-term frameworks for fiscal policymaking and risk analysis. The federal government has introduced a medium-term budget cycle which is published. Spending ceilings are set top-down and spending is presented on a program basis with associated performance indicators. Abu Dhabi produces an internal medium-term fiscal outlook based on realistic oil price assumptions, which orientates its annual budget process. Dubai has a medium-term fiscal framework with three-year budget targets, although the targets are not published.



4. These initiatives have been broadly in line with global and regional trends. Many countries, including resource-rich countries, have been re-orienting their budget processes to lengthen the period covered by their fiscal frameworks. Reform initiatives have included: a fiscal policy statement establishing a medium-term path for expenditure aggregates; medium-term macroeconomic forecasts; requirements for ministries to maintain budget estimates beyond the budget year and explicitly cost new measures; and hard cash budget constraints for ministries. In a number of cases, countries have introduced legislation on medium-term budget planning (e.g., Azerbaijan, Russia, Timor-Leste, and Norway). Some countries have introduced fiscal responsibility laws (e.g., Chile, Mexico, and Ecuador). MTFs have been developed in federations, including Brazil, India, Germany, Mexico, Switzerland, the United States. Most GCC countries have taken steps towards the introduction of MTF including medium-term fiscal objectives and are making progress

² In Canada, the degree of fiscal decentralization may be overstated as the federal government transfers substantial funding to the provinces, but some of which is earmarked so the decision-making power mainly remains at the federal level for some sectors (health, education).

regarding the release of annual budgets and fiscal outturns.³ For example, the Saudi authorities have published their Fiscal Balance Program 2020 recently and have made considerable progress towards initiating its implementation. They have also started publishing quarterly fiscal reports.

5. The drop in oil prices has highlighted the need to strengthen the medium-term fiscal frameworks in the UAE further.

- Consolidated fiscal balances have turned from sizeable surpluses into deficits. The medium-term fiscal balance falls 8 percentage points of GDP short of the level needed to ensure that an adequate portion of income from exhaustible oil resources is saved for future generations (see the accompanying Staff Report, Annexes I-II). A sustained fiscal adjustment effort would thus be needed over the coming years to ensure intergenerational equity. Large fiscal buffers allow fiscal consolidation to proceed gradually. The pace and composition of fiscal consolidation would need to be chosen in a way that alleviates its dampening effect on nonoil economic growth.

Overall Deficit and Debt, 201–16 1/			
	2014	2015	Est. 2016
Consolidated Government (Percent of UAE GDP)			
Overall Fiscal Balance	1.9	-3.4	-4.3
Debt	14.2	17.1	20.2
Central Government (Percent of UAE GDP)			
Overall Fiscal Balance	-0.1	-0.5	-0.4
Debt	0.0	0.0	0.0
Abu Dhabi Government (Percent of Abu Dhabi GDP)			
Overall Fiscal Balance	2.4	-5.9	-6.7
Debt	1.9	2.0	4.5
Dubai Government (Percent of Dubai GDP)			
Overall Fiscal Balance	1.8	2.6	0.3
Debt	32.0	31.3	30.6

Sources: Country authorities; and IMF staff estimates.
1/ Debt covers government and other sovereign.
For GREs' debt see Table 5 in the accompanying Staff Report.

- Emirates' fiscal policy autonomy and considerable differences in their fiscal positions, debt levels and contingent liabilities continue to require strong MTFs at the emirate level to address their specific fiscal and economic circumstances (see Table). For example, Abu Dhabi, which is more dependent on oil revenues than other emirates and has low debt, needs to consolidate its position to adjust to the lower-for-longer oil price environment⁴. More diversified Dubai has higher debt (especially if contingent liabilities of GREs are included), yet it faces increased investment needs in the runup to Expo 2020.⁵
- The importance of economic diversification has increased with the decline in oil prices. It has become more crucial to align fiscal spending with the goals embodied in the 2021 National Agenda and emirates' agendas.

³ For example, see Saudi Arabia's quarterly execution (<https://www.mof.gov.sa/en/quarterone2017/>) and medium-term discussion in the 2017 Budget (https://www.mof.gov.sa/en/budget2017/Documents/The_National_Budget.pdf); as well as on-going preparations to implement a medium-term fiscal framework in Kuwait (<http://www.cbk.gov.kw/en/images/Moody-May-2017-Report-10-123636-2.pdf>).

⁴ In 2015, Abu Dhabi generated about 77.5 percent of the UAE oil revenues.

⁵ See Table 5 in the accompanying Staff Report.

- The new oil price environment has also underscored the importance of enhanced coordination between governments and GREs regarding their investment and borrowing plans, and sovereign wealth funds (SWFs) and the CBU to facilitate cash management and liquidity forecasting.
- Fiscal vulnerabilities have risen with the decline in oil prices, calling for strengthened analysis of fiscal risks, including from a sustained further decline in oil prices, a larger increase in financing costs, and an unexpected increase in contingent liabilities arising from GRE and public-private partnership investment (PPPs).

6. A consolidated, comprehensive, and forward-looking MTFF at the country-wide level, integrated with emirates' MTFFs, can help address these needs. An MTFF lays out medium-term fiscal targets and projections, based on a consistent set of assumptions and reflecting economic and development goals of the country. Formally adopting a multi-year framework and integrating it with the annual budget process can set a direction for fiscal policy and enhance fiscal policy credibility. In particular, an MTFF can help: (i) improve macroeconomic management by delinking expenditure from short-term volatile oil revenues; (ii) anchor medium-term fiscal policy on goals of intergenerational equity and/or fiscal sustainability; (iii) integrate medium-term fiscal policy with the country's diversification agenda; (iv) facilitate risk analysis and decision-making. International experience shows that many resource-rich countries which have upgraded their fiscal policies, rules and institutions were successful in saving a larger share of their resource revenue during the 2000s, while also scaling up public investment and social spending.⁶

7. This paper takes stock of the existing fiscal frameworks and provides options to better integrate them into a fiscal vision for the UAE. Section B identifies the main building blocks of an MTFF, distilling lessons from international experience and considering the UAE-specific circumstances. Section C reviews the progress already made in strengthening budgeting processes to support fiscal policy implementation at the local and federal levels. Section D concludes with the main policy recommendations.

B. Current MTFFs in the UAE

8. The federal government and the Emirates of Abu Dhabi and Dubai have started using MTFFs to inform their fiscal policy choices, albeit to different degrees. These frameworks are integrated to the budget process in different ways, cover different time horizons, and have different disclosure practices.

- *The federal government adopted a five-year budgeting cycle for 2017–21.*⁷ Its annual and medium-term budgets are approved by the UAE's Federal National Council. The federal government's MTFF is anchored by the goal of achieving a balanced budget on a consistent

⁶ See International Monetary Fund, Fiscal Monitor, October 2015.

⁷ See <https://www.mof.gov.ae/En/budget/FederalBudgetPreparation/Pages/FrameAndSteps.aspx> and <https://www.mof.gov.ae/En/Media/Lists/PublicationsLib/Attachments/1/Budget%20Planning%20Handbook.pdf>

basis. Expenditure caps are set based on revenue forecasts and national policy priorities. Expenditure caps are presented on a sectoral basis with associated performance indicators.⁸ All federal ministries and agencies prepare their budgets based on the five-year plan using the zero-based budget principle.⁹ Detailed annual budgets, as well as their quarterly execution are regularly published on the website of the UAE Ministry of Finance. A draft federal law which will allow the federal government to issue debt is under preparation.

- *The government of Abu Dhabi develops its annual budget in line with the ceilings derived from an internal five-year fiscal framework.* The Department of Finance of Abu Dhabi prepares an MTF, where growth projections are derived from an underlying macroeconomic model. (The model also captures the feedback effects of fiscal policy on economic growth.) The MTF uses a medium-term balanced budget target as an anchor, guided by a Permanent Income Hypothesis (PIH) framework. The MTF includes revenue forecasts and an expenditure path, which guide the setting of indicative aggregate expenditure ceilings in the annual budget. The latter is approved by Abu Dhabi's Executive Council. The MTF also examines various key fiscal risks and how they should be dealt with, while transfers between GREs and SWFs are delineated. The budget preparation, among other things, is outlined in a new law aiming at establishing a more unified legal framework for managing public financial resources that was issued in 2017.¹⁰ The annual budget and MTF are not published.
- *The government of Dubai uses a three-year MTF to guide the annual budget process.* The Department of Finance of Dubai prepares a "Budget Strategy Paper," which contains macro-fiscal developments and outlook (including three-year projections for revenue, expenditure and debt), and a discussion of fiscal space, expenditure allocation, and fiscal risks.¹¹ The medium-term framework aims to maintain annual deficits under 3 percent and public debt under 30 percent of GDP, although these limits are non-binding.¹² The detailed annual budget is prepared following the Strategy Paper and considering the new initiatives planned by line entities. The annual budget is presented to Dubai's Supreme Fiscal Committee and approved by the Ruler of Dubai. During the fiscal exercise, amendments take place generally during a mid-year budget review. The main expenditure and revenue items are usually published.

⁸ The sectors include social development, government affairs, social benefits, infrastructure and economic resources, financial assets and investments, and other federal expenses.

⁹ The zero-based budgeting principle builds the budget up from zero by adding the cost of services from the entities covered by the budget.

¹⁰ See http://dof.abudhabi.ae/data/global/files/pdf/ar/finance_low.pdf.

¹¹ In 2013, the government of Dubai launched the Smart Financial Planning (SFP) initiative to standardize budget functions and help achieve fiscal discipline. The SFP bulletins describe the budget processes and report progress of the SFP overtime, see <http://www.dof.gov.ae/en-us/sfp/Pages/Bulletins.aspx>

¹² The 30 percent is a conservative operational limit preventing a breach of the 60 percent of GDP maximum used in guiding fiscal planning.

9. Efforts to create macro-fiscal forecasting capacity and increase coordination across fiscal authorities have been crucial to improve the quality of fiscal data. Macro-fiscal units have been created in the Departments of Finance of Abu Dhabi and Dubai and at the UAE Ministry of Finance. In addition, a fiscal policy coordination unit has been established at the UAE Ministry of Finance to enhance data sharing and policy coordination at the consolidated level. Following these efforts, past fiscal data are available following the Government Financial Statistics (GFS) presentation, at the consolidated general government level, as well as separately for the federal government and the combined subnational (emirate) governments.

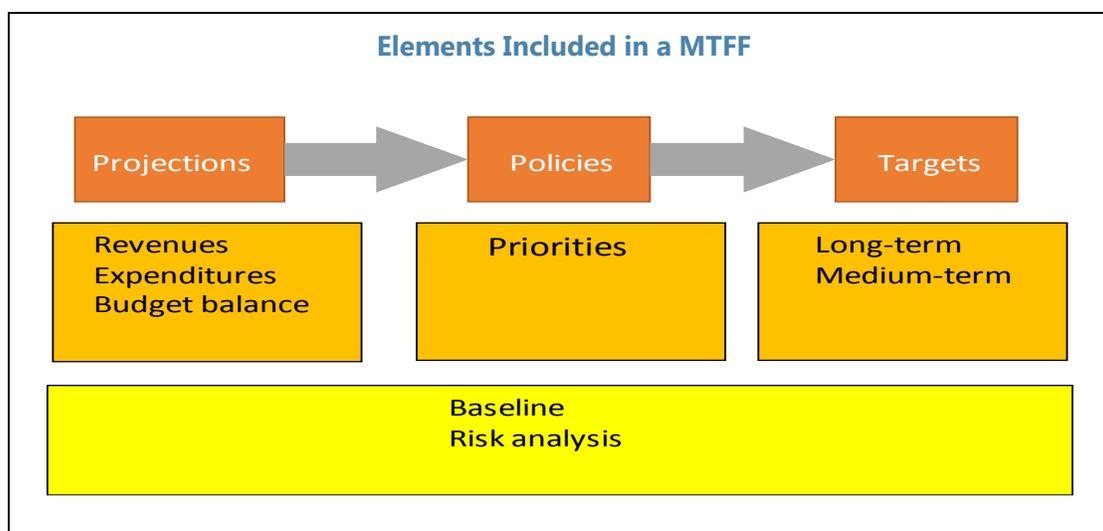
C. Strengthening and Consolidating MTFs

10. A central challenge faced by resource-rich countries is how to reconcile its long-term objectives with the need to manage the high volatility and uncertainty surrounding resource revenue. Designing an appropriate long-term strategy is a complex task where governments need to decide how much of the resource wealth to consume in any given year and how much to save. Savings can be used to accumulate financial or other assets (such as public infrastructure, or human capital, or both), with the allocation depending on the returns of the different assets. These decisions are complicated because of the need to project prices and returns in a context of large uncertainties and risks. Fiscal frameworks can help to factor in all those uncertainties in a systematic way, by providing a risk-based, comprehensive framework, which uses fiscal indicators, targets and rules, adapted to the country-specific circumstances to guide projections. In the UAE, these challenges are compounded by the high level of fiscal decentralization and differences in the degree of resource dependence among emirates.

11. Long-term objectives for the use of volatile resource revenues need to be translated into operational guidance for the annual budget. A clear linkage between near/medium- and long-term policy objectives and the annual budgets—together with a well-defined mechanism to reassess these objectives at regular intervals—is required to ensure the success of fiscal policymakers in dampening the effects of fiscal shocks while protecting future generations. The MTFF could consider nonoil growth objectives, identifying targets for non-oil revenue and public expenditure to attain these goals. For example, the MTFF could include a discussion of expenditure needs associated with the National Strategy, for example, in critical areas, such as education and health care (Annex I). The MTFF could also discuss plans to diversify nonoil revenues, while considering possible effects on competitiveness and inclusiveness. In addition, alternative macro-fiscal scenarios that present the fiscal implications of different key macroeconomic assumptions including different price and production scenarios and contingent liabilities, including those coming from PPPs (Annex II), are essential to properly assess policy implications for mitigating risks. Making budgets more comprehensive, clearly identifying transfers to and from GREs and SWFs would also provide clarity on the fiscal policy strategy. A commitment to transparency allows for informed understanding and scrutiny by external analysts, helping ensure that resources are used in line with national objectives and foster the diversification agenda by attracting foreign investors. Numerical fiscal rules based on fiscal anchors can discipline policies while providing the necessary flexibility to respond to shocks.

12. In sum, the main building blocks of an MTFF for the UAE are as follows:

- Sound macroeconomic and fiscal forecasts anchored by fiscal rules.
- Rule-based transfer system between governments, GREs, and SWFs.
- Integrating local and federal frameworks, for example, by using expenditure ceilings.
- Transparent communication.

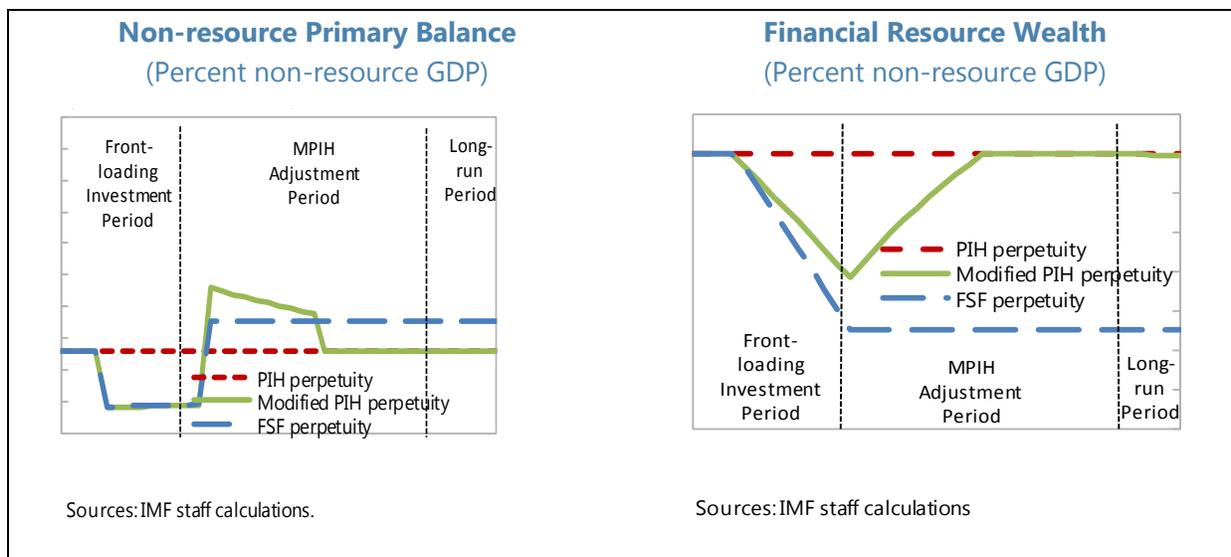


13. Using realistic macroeconomic assumptions and applying them consistently across local and federal governments are essential to ensure a high quality MTFF. Macroeconomic assumptions should include realistic oil prices, production, and nonoil economic growth targets. Economic variables in oil-exporting countries tend to be more volatile than in other economies, underlining the importance of a strong analytical capacity supported by good national accounts and international investment position statistics, reliable methodologies and well-qualified staff. Expenditure and revenue forecasting is an essential pillar of an MTFF. Country experiences demonstrate that developing good forecasting capacity takes time, particularly as it requires building technical capacity and staff, and examining past forecasting errors.¹³ Robust estimates require a sound understanding of how parameters drive annual expenditure and revenues. They also involve making repeated comparisons between the budget and the actual budget execution outturns. Different contingent scenarios should be included to calibrate prudential contingency reserves. Reliable statistics are crucial to enable good policy analysis and decision-making and enhance credibility of the MTFF.

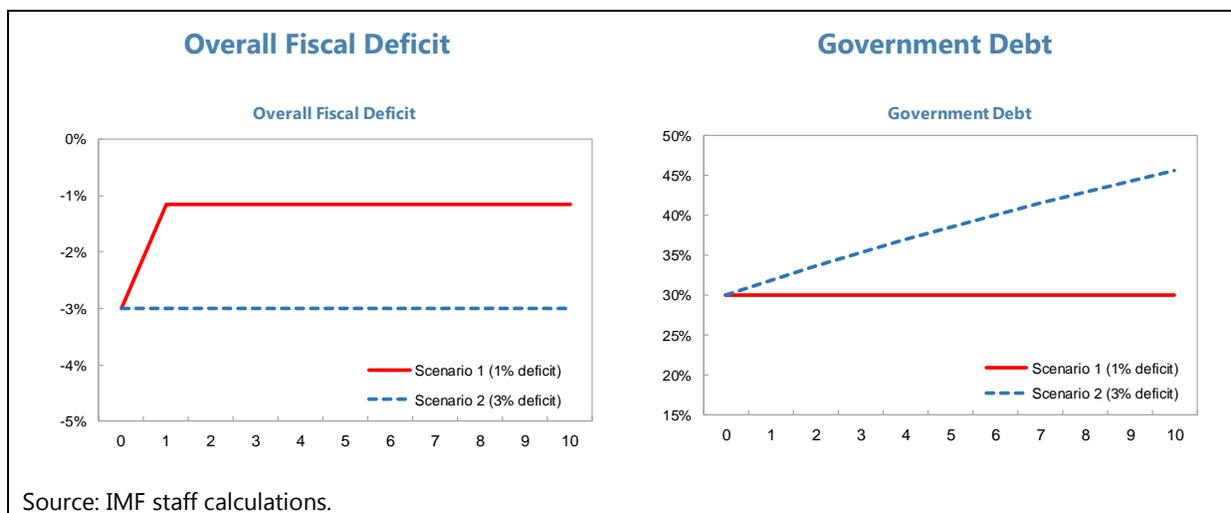
¹³ See <http://hdl.handle.net/10986/11971>.

14. A disaggregated, but coordinated and comprehensive MTFF, is appropriate for the UAE. Given the high degree of fiscal decentralization and significant differences in the degree of resource dependence among emirates, continuing with a disaggregated MTFF approach—while strengthening coordination among federal and emirate governments—is appropriate. Fiscal anchors should be based on the long-term fiscal objectives of each emirate. Each emirate could usefully design and calibrate fiscal rules to better align its fiscal policies with its goals and targets. The UAE-wide economic goals of fostering economic growth and diversification should be integrated with the individual emirates’ goals through reinforced mechanisms for intergovernmental coordination.

- The design of disaggregated fiscal rules would benefit from starting with an analysis—at the UAE level—of policy assumptions, objectives, spending priorities and financing options, and policy implications of fiscal policy actions for the country as a whole to ensure consistency at the UAE level. This analysis should consider, among others, the following variables: nonoil growth objectives, consolidated government spending targets, fiscal breakeven price, allocations for priority spending, debt objectives and financing options.
- *In oil-exporting Abu Dhabi*, where government debt is low and precautionary buffers are large, long-term fiscal policy goals should be centered on intergenerational equity. The permanent income framework aims to ensure that all generations have an equal share of both the assets in-hand and the unexploited assets under the ground and maintain constant real consumption each year. The nonoil primary deficit is estimated to be 8 percentage points of GDP higher than its PIH-based benchmark at end-2016 (see Annex I of the accompanying Staff Report). This estimate suggests that Abu Dhabi needs to gradually reduce its government spending or raise nonoil revenue to achieve intergenerational equity, while maintaining priority spending. The simulations above illustrate three alternative PIH-based rules: (1) the traditional PIH perpetuity where the nonoil primary balance remains constant over time; (2) the modified PIH which allows for an increase in the nonoil primary balance to maintain the public investment at a high level; and (3) the Fiscal Sustainability Framework (FSF) which incorporates the impact of higher public investment on economic growth and nonoil revenues. The simulations compute illustrative fiscal benchmarks for the three alternative PIH-based rules and enable comparisons and the analysis of trade-offs for the nonoil primary deficit implied using each one of these three PIH-based rules and the associated financial wealth. As the nonoil economy increases, and the country becomes more independent from oil short-term vulnerabilities, a move toward structural balances should be appropriate. This would allow the government to make a policy choice regarding which rule is most appropriate, depending on investment spending needs and their projected medium-term impact on nonoil growth.

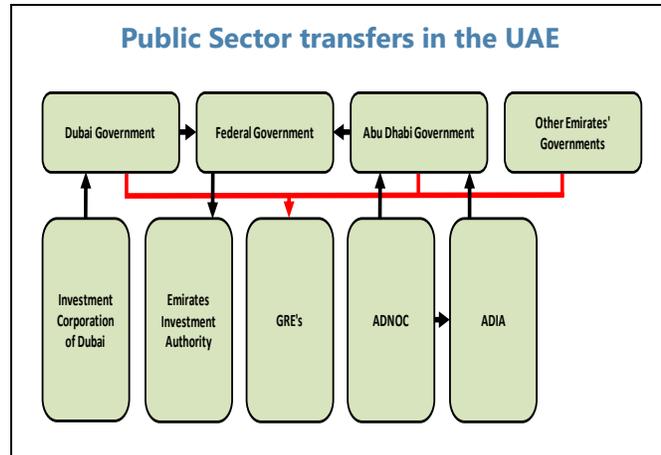


- *In diversified Dubai* where public debt stands at about 30 percent of Dubai’s GDP (115 percent if GRE debt is included), a debt ceiling operationalized by an overall deficit rule, is appropriate. It is important to ensure consistency between a target debt ceiling and a deficit rule. Staff simulations show that a binding deficit rule of 3 percent of GDP over ten years implies a rising debt trajectory with government debt reaching 45 percent of GDP in ten years. To maintain a stable debt trajectory at 30 percent of GDP, Dubai government’s indicative target, an overall deficit of 1 percent of GDP at most could be sustained.



15. Further strengthening information-sharing and eventually establishing rules for transfers among different public entities would facilitate MTF design. Improving cash management remains a priority, particularly in an environment of fiscal consolidation. Supported by credible and binding budgets, Emirates governments could expand the coverage of their Treasury Single Accounts (TSA) and improve liquidity forecasting for entities outside the TSAs. Ongoing efforts to improve information-sharing on cash management among fiscal and monetary authorities,

GREs, and SWFs could improve the predictability of financing flows, facilitate the calibration of liquidity buffers by SWFs and liquidity forecasting by the central bank (CBU). In addition, sharing information on budget preparation and MTFF at the country level would help galvanize efforts and explain how particular work of different institutions contribute to a larger goal for the country.



16. Enhancing fiscal policy

coordination mechanisms, including intergovernmental committees, would help to better align fiscal responsibilities with the country's goals. The choice of a specific mechanism for fiscal coordination depends on its appropriateness and feasibility in the country-specific constitutional and institutional setting. For example, in the UAE the balanced budget rule applies only to the federal government, although some countries have also included some type of balanced budget rules in their Constitutions or national legislation. In countries like the UAE where the autonomy of the Emirates governments is high, a cooperative approach towards designing the country's fiscal policy is most appropriate (like, for example, in Australia, Austria, Belgium, or Canada, among others). In this case, the role of capital markets and rating agencies in enforcing fiscal discipline is particularly important.¹⁴

17. The UAE could also establish expenditure benchmarks at the national level to ensure consistency of local budgets with national objectives. The European Union's expenditure benchmarks are a good example. The EU fiscal governance framework rests almost exclusively on fiscal rules. At the supranational level, only the EU has an expenditure rule that caps the annual growth of primary expenditure at long-term nominal GDP growth. The EU expenditure benchmarks include a correction for revenue measures by requiring that spending growth does not exceed medium-term economic growth, unless additional desired spending is matched by additional (discretionary) revenue measures.¹⁵

18. Continued and integrated efforts to improve monitoring and control of contingent liabilities, including PPPs, would prevent an undue buildup of risks. The necessary review and vetting of GRE's investment plans could aim to strike a balance between giving GREs flexibility to make decisions while ensuring consistency of these decisions with fiscal and development goals. PPPs can also be a source of major contingent liabilities, if not managed properly, and therefore deserve careful monitoring within the MTFF (Annex II). PPPs can mobilize additional sources of financing and can play an important role by supporting the efficient and timely provision of infrastructure. Success in PPPs requires realizing efficiency gains while effectively mitigating fiscal

¹⁴ See Shah Anwar, 2005.

¹⁵ See European Commission, 2016.

risks. The UAE authorities view PPPs favorably as a useful way to finance costly infrastructure projects; however, they have so far been vigilant in engaging in PPPs, reportedly doing so only if efficiency gains were larger than differences in the cost of capital of the government and the project. Dubai's PPP law is a step in the right direction as it establishes a framework for PPPs to reduce fiscal risks. Supporting regulations should aim at further strengthening the legal framework for PPPs in Dubai. Other governments could aim to prepare their PPP legal frameworks in line with best international practices.

19. The third building bloc of an MTFF in the UAE context should include better integration of annual and medium-term budget management at the federal and emirate levels and strengthened transparency and communication.

- An official medium-term fiscal strategy usually serves as the basis for annual budget preparation. This strategy could be based on a top-down resource envelope, which is basically a macroeconomic model estimating revenues, expenditure, nonoil balances, and a fiscal anchor (based on intergenerational equity and structural primary balance analysis). Fiscal risks analysis help to calculate the sensitivity of fiscal plans to different macroeconomic and oil sector assumptions which is part of the strategy.
- A top-down resource envelope matching with a bottom-up estimation of the costs of existing policies helps in preparing a medium-term budget framework. Scrutiny of sector policies serves to integrate bottom-up sector programs with the top-down resource envelope, which should also be integrated with the annual budget process.
- Turning the medium-term budget framework into a performance-based expenditure framework helps linking the budget funding to results, shifting the focus from controlling inputs to controlling outcomes and allocating resources accordingly.
- Enhancing timeliness and frequency of fiscal reporting on within-year budget outturns helps budget monitoring and forecasting.

D. Conclusion

20. Building on the progress already made, Emirates governments' MTFFs could be strengthened further. MTFFs would help Emirates governments to use their annual budget process to facilitate counter-cyclical government spending (in the context of the medium-term policy goals for diversification and nonoil economic growth). MTFFs would also lead to better resource allocation through linking policy, planning, and budgeting, and therefore, more efficient use of public finances to achieve the medium-term development goals. Updating expenditure projections under the development plans regularly, and linking these updates to the annual budgets on a rolling basis is important.

21. Improving fiscal data and transparency across all levels of government would facilitate decision-making and bolster the credibility of fiscal policy. Steps to further improve the

availability, quality and timeliness of consolidated and Emirates government data while generalizing accrual accounting are needed. To this end, the capacity of macro-fiscal units at all levels of government needs to be strengthened further. Improving other statistics, particularly national accounts and IIP, is also critical. Greater transparency regarding annual budgets' approval and implementation as well as medium-term forecasts would strengthen monitoring and credibility of the budgeting process and fiscal policy more generally.

22. Fostering fiscal coordination across the different levels of governments would be crucial to integrate them into an MTFF for the country as a whole. At the technical level, Abu Dhabi and Dubai have come a long way in setting up the foundation for establishing robust fiscal frameworks to reflect their specific characteristics. Looking forward, the authorities could consider using a common and consistent macroeconomic framework across emirates, which could be coordinated by the federal government with input from Emirates governments. To this end, an important step would be to share the fiscal frameworks across emirates and with the federal government, aiming to produce one national document with a coherent fiscal strategy for the country, considering the regional asymmetries. Improving information-sharing among fiscal and monetary authorities, and establishing explicit rules for transfers among the SWFs, GREs and the local and federal governments could facilitate cash management and liquidity forecasting. In addition, strengthened intergovernmental coordination mechanisms could help integrate objectives at the local and national levels.

23. Enhancing the role of institutions, including the Fiscal Councils. Fiscal responsibility laws and independent intergovernmental fiscal agencies may be useful complements to the fiscal rules. In addition, enhanced public financial management systems and a credible political commitment to the annual and medium-term fiscal targets would help ensure sound overall fiscal policies at the local, federal and consolidated level.

Annex I. Aiming for First-Rate Education and Healthcare

A key goal of the National Agenda is moving to a more diversified and productive economy supported by a skilled and healthy population. To distill lessons from international experience, it is crucial to consider the UAE's special characteristics, including a relatively young population, large share of labor migrants, and important role of the private sector in the provision of health and education services. Accounting for these characteristics, the analysis suggests that (i) there is scope to improve educational outcomes while containing costs; (ii) gradually raising public resources for healthcare might be necessary to reach the Agenda's goals; and (iii) ensuring equitable outcomes requires coordination to equalize education and healthcare standards and outcomes across regions and systems.

Education

Public expenditure on education is high relative to OECD peers. Education spending is estimated at 1.6 percent of GDP per year. Although at first glance this seems low compared to the OECD average of 4.5 percent of GDP, a proper comparison requires adjusting for large differences in the role of the private sector (in the UAE, 80 percent of primary and secondary students are enrolled in private institutions compared to 31 percent in the OECD) and demographics (in the UAE, the school-age population is 17 percent of the working age population compared to 29 percent in the OECD) (Box 1). Accounting for these differences, the UAE's public education spending exceeds that in the OECD countries with the highest levels of public education spending (Norway, Denmark, Finland). Expenditure per student is above \$22,000, more than twice as in the average OECD economy.

	Public education spending (percent of GDP)	Adjustment for private sector size and demographics			Expenditure per student (\$)	Students per teaching staff	PISA scores (average of science, reading, and math)
		Percent of students in private education	School-age population to population 20-64	Adjusted public education spending (percent of GDP)			
UAE	1.6	69	17	1.6	22,055	13	433
OECD average	4.5	16	29	0.9	9,052	14	492
Denmark	6.1	3	31	0.8	11,838	12	504
Finland	5.6	2	28	0.7	11,046	12	523
Norway	6.2	15	31	0.7	15,310	10	534

Sources: Ministry of Education, OECD, UN, and IMF staff calculations.

However, education outcomes are substantially lower than those in the OECD peers. The considerable resources devoted to education have not yet translated into strong outcomes. For example, the UAE's PISA scores are at the bottom of those in the OECD economies. Importantly, in all subjects over 40 percent of students are at or below level 2—a proficiency level deemed by the OECD as necessary to participate fully in a globalized world.

Going forward, the challenge is to address the performance gap within the same resource envelope while ensuring equitable outcomes. In the UAE’s institutional context, the Ministry of Education sets the broad national guidelines and regulations, and administers public schools in Dubai and the Northern Emirates; the Abu Dhabi Education Council (ADEC) manages public schools and oversees private schools in Abu Dhabi; and the Dubai Knowledge and Human Development Authority (DKHA) is responsible for the quality of private education in Dubai.

- *Increasing the efficiency of education spending.* The performance gap is not explained by expenditure levels. As a share of GDP and in inputs (student-per-teacher ratios are comparable to the OECD levels), the UAE is well positioned to achieve strong outcomes. Ongoing initiatives could help bridge the performance gap without raising costs by implementing new quality standards for teachers and schools, developing curriculums, introducing a common framework for school evaluation, and promoting STEM and innovation. As performance monitoring is enhanced, granting greater autonomy to schools could be considered.
- *Ensuring equitable outcomes.* The education system is largely divided between the type of providers (public schools with 27 percent of students and private schools with the rest), curriculum (Ministry of Education or international), and jurisdiction (Abu Dhabi with 35 percent of the students and Dubai and Northern Emirates with the rest). The fragmentation of the education system risks causing disparities in outcomes. For example, in Dubai, private schools that follow international curricula perform better in PISA than private or public schools that follow MOE curricula. Furthermore, even within public schools, there are substantial differences: average spending per student is estimated to be 50 percent higher in the ADEC public schools compared to other public schools. Furthermore, differences in gender outcomes are rising among nationals, with lower rates of secondary school graduation and tertiary enrollment for males. It is crucial to continue monitoring the evolution of these outcomes, aiming to “lift all boats”. To this end, the establishment of a national exam (piloted in 2017 and planned to be adopted in 2018) should help monitor the evolution of performance across different jurisdictions (Abu Dhabi, Dubai, and Northern Emirates) and systems (public and private schools).

Healthcare

Public healthcare expenditure has been rising but remains lower than in the OECD peers.

Public healthcare expenditure in the general government increased by over 0.5 pp of GDP in 2011-16, largely reflecting efforts by the government of Abu Dhabi to improve healthcare infrastructure. Overall, the World Health Organization estimates public health expenditure at 2.6 percent of GDP, substantially below the OECD peers, even after accounting for the younger population structure in the UAE (Box 1). At nearly \$1,500 per year, total health expenditure per capita is also below the \$3,800 OECD average (about \$2,200 adjusted for demographics).¹

¹ The analysis does not distinguish between nationals and expats.

Public Health Spending									
Public health spending (percent of GDP)	Adjustment for demographics			Adjusted public health spending (percent of GDP)	Total health expenditure per capita (\$)	Doctors (per 100,000 population)	Nurses (per 100,000 population)	Healthy life expectancy (years)	Infant mortality (per 100,000 births)
	Share of population age 0-4	Share of population age 60 and older							
UAE	2.6	5.4	2.3	2.6	1,478	253	316	68.3	5.9
OECD	6.8	5.8	22.1	3.9	3,779	329	841	71.6	4.8

Sources: WHO, UN, and IMF staff calculation.

Fiscal pressures associated with healthcare are likely to rise. Improving healthcare outcomes requires boosting inputs, including raising the number of doctors and nurses over time. To approach the OECD levels, this would cost as much as 1.3 pp of GDP over the next few years. A gradual approach is warranted given fiscal and implementation constraints, while ensuring that additional resources improve outcomes. Nevertheless, the gap in outcomes and expenditures compared to the OECD underlines the importance of protecting healthcare expenditure during fiscal consolidation.²

Achieving greater integration across healthcare models could improve service delivery.

Currently, the healthcare system is a mix of a mandatory health insurance model (in Abu Dhabi and Dubai, including special insurance schemes for government employees and nationals) and a government-funded model (in the Northern Emirates). Looking ahead, a more integrated system could prevent healthcare disparities and avoid duplication of services. This could be achieved through better coordination by insurers and service providers across regions, and eventually considering a national insurance market. To this end, plans for separating the regulatory and service provision arms of the Ministry of Health would be a step in the right direction, similarly to what is being done in the education sector (Italy, Sweden and the United Kingdom also separate such roles).

Enhancing monitoring and oversight is crucial to unlock the potential for the universal insurance model at an affordable cost.

Robust regulation can help maintain proper standards across public and private service providers. To contain growth of healthcare costs, efforts to increase *price transparency* and implement payments by episode of care, whereby payments to providers are bundled by medical conditions, can increase the efficiency of service delivery. Promoting the use of *health information technology* which allows for data sharing across insurers and providers, and benchmarking of costs would also be useful. In the medium term, reviewing the *incentive and payment structure for public providers* would contain fiscal costs and improve the quality of care. Today, public providers receive a budget allocation for current and capital expenditure. Over time, these allocations could be linked to indicators of quantity and quality of care to place public providers on the same footing as private providers. Care must be exercised when considering the use of PPPs to finance healthcare initiatives (see Annex II). The Ministries of Finance and Health

² Healthcare expenditure also needs to be protected because of the need to improve healthcare outcomes and because of the demand drivers in local population, such as population growth and ageing, and the emergence of “lifestyle diseases” which will likely increase demands on the healthcare system over time.

could develop an inventory of all existing PPPs, clearly identifying existing commitments and the exposure of the government (for example, through demand guarantees).

Education and Health Care Adjustments

Public education in percent of GDP can be expressed as the product of expenditure per student to GDP per working-age population, public enrollment to total enrollment, enrollment to school-age population, and school-age population to working-age population (1).

$$(1) \quad \frac{\text{Public education spending}}{\text{GDP}} = \frac{\frac{\text{public education spending}}{\text{public school enrollment}}}{\frac{\text{GDP}}{\text{pop. 20-64}}} \times \frac{\text{public school enrollment}}{\text{total enrollment}} \times \frac{\text{total enrollment}}{\text{pop. 5-19}} \times \frac{\text{pop. 5-19}}{\text{pop. 20-64}}$$

Following this identity, it is possible to adjust the OECD expenditure to account for differences in public school enrollment (multiplying expenditure by the ratio of public school enrollment in the UAE to that in the OECD) and demographics (multiplying this result by the ratio of the school-age to working-age population ratio in the UAE to that in the OECD). That is, 4.5 percent of GDP X 30.7/84.4 X 16.5/28.8=0.9 percent of GDP. This adjusted expenditure is a counterfactual, interpreted as the level of public education expenditure the average OECD country would have assuming similar private school coverage and demographic profile to that in the UAE.

Public health spending in percent of GDP can be expressed as the product of health spending per capita for the population age 40-44 to GDP per capita and the sum of the product of the share of the population in each age group and the ratio of the health spending per capita of that group to the health spending per capita for the population age 40-44 (2).

$$(2) \quad \frac{\text{public health spending}}{\text{GDP}} = \frac{\frac{\text{health spending (age 40-44)}}{\text{pop. 40-44}}}{\frac{\text{GDP}}{\text{population}}} \times \sum_{i=0-95} \left(\frac{\text{population (age } i \text{)}}{\text{total population}} \times \frac{\text{health spending (age } i \text{)}}{\text{health spending (age 40-44)}} \right)$$

Using this identity, it is possible to control for the different demographic profiles of the UAE and OECD countries. This can be done by changing the demographic profile (the share of the population at each age group, corresponding to the first term in the sum in (2)). Using the UAE's demographic profile would reduce health spending from 6.8 to 3.9 percent of GDP. This adjusted expenditure is a counterfactual, interpreted as the level of public health care expenditure the average OECD country would have assuming demographic profile to that in the UAE.

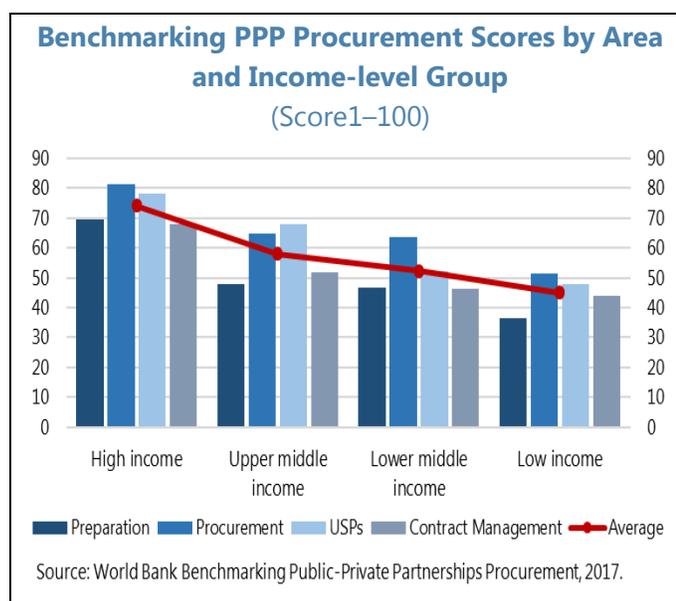
Annex II. Public-Private Partnerships

PPPs can mobilize additional sources of financing and support the efficient and timely provision of infrastructure. If not managed properly, PPPs can also be a source of major contingent liabilities. Success in PPPs requires realizing efficiency gains while effectively mitigating fiscal risks. The UAE authorities have so far been vigilant in engaging in PPPs, reportedly doing so only if efficiency gains were larger than differences in the cost of capital of the government and the project. Dubai's PPP law is a step in the right direction; regulations should aim at strengthening the legal framework by reducing fiscal risks. Other Emirates governments could aim to prepare their PPP legal frameworks in line with best international practices.

In recent years, infrastructure services across the world have been delivered increasingly through Public-Private Partnerships (PPPs). In collaboration with governments, the private sector can play an important role by supporting the efficient and timely provision of infrastructure. According to the World Bank (2017), over the past 25 years, more than 5,000 infrastructure projects in 121 low and middle income economies have been delivered through PPPs, representing investment commitment of \$1.5 trillion. Under a typical PPP, a firm provides upfront financing and designs, builds, operates, and maintains an asset in exchange for a combination of user fees and/or periodic payments by the government over the life of the contract.

In an era of lower oil prices, PPPs are becoming attractive to oil exporters such as the UAE, as a way to reduce pressure on state finances. The UAE is engaging in sizeable infrastructure projects, while the bulk of the public investment is taking place through traditional public procurement procedures, PPPs are also being considered on a case-by-case basis. Dubai is evaluating the use of PPPs for overall infrastructure developments. Dubai is also exploring the appropriateness of using PPPs in projects using renewable energy and improving energy efficiency. Dubai enacted its PPP law in 2015 and Abu Dhabi is preparing PPP rules to encourage the private sector to participate in infrastructure projects. The federal government issued PPP guidelines in 2017.

PPPs can mobilize additional sources of financing for infrastructure. When used effectively, PPPs can offer advantages over traditional public procurement in terms of mobilizing private financial resources and know-how, and improving service quality. Although private financing is typically more expensive than government borrowing, a well-designed PPP contract can generate efficiency gains that can offset the higher cost of private capital by timely and on budget construction of high



quality assets and cost recovery from those assets over time. PPP contracts can also help ensure that assets are maintained in a good, serviceable condition and redirect government focus from buying inputs and deciding on technologies and processes to defining public policies and expected outputs. Yet the World Bank's "Benchmarking PPP Procurement 2017" survey shows that in many countries PPPs fall short of best practices.

Evidence on whether PPPs can provide infrastructure more efficiently than traditional public procurement is mixed. In many countries, projects have been procured as PPPs not for efficiency reasons but to circumvent budgetary constraints, move debt off balance sheet and delay recording the fiscal costs of providing infrastructure services. PPPs can enable governments to bypass prudent borrowing or budget limits. Governments using cash-based accounting recognize the entire capital cost of traditionally procured infrastructure as expenditure when it is incurred, even if it is financed by borrowing. By contrast, PPPs can be a source of major contingent liabilities. Their benefits are often overestimated, resulting in projects that are larger or more complex than is justified by demand for services, while their costs are often underestimated. Governments may provide guarantees on risk factors such as demand, exchange rates, and/or borrowing costs. Weak government or private sector capacity results in poorly run tender processes or poorly drafted contracts, and frequent renegotiation. They can distort investment priorities. Low priority projects may go ahead simply because they are easier to do. If not properly managed, such practices may undermine macroeconomic stability.

UAE authorities have so far been vigilant in engaging in PPPs. The authorities indicated that they rejected PPP proposals where the weighted-average-cost-of-capital was higher than the cost of capital for the government and/or where the efficiency gains were insufficient to justify the higher cost. The legal framework adopted by Dubai includes several elements of good international practices. In particular, the law provides a clear definition of PPPs and describes the roles and responsibilities of the relevant institutional stakeholders, which should assure the private sector that the government would honor its commitments and hence reduce costs for the government. At the same time, the legal framework could be improved by introducing a limit on the aggregate government exposure to PPPs, strengthening the role of the Dubai Department of Finance during the whole life-cycle of the PPP project, avoiding unsolicited proposals and providing guidelines for renegotiation of PPP contracts. Additional regulations could usefully strengthen the legal framework, containing fiscal risks.

The federal government and other emirates could consider developing their own PPP legal frameworks in line with best international practices. Success in PPPs requires realizing efficiency gains while effectively mitigating fiscal risks. The government can manage fiscal risks through prioritization procedures, strong public investment management frameworks, comprehensive legal provisions that govern the processes of project selection, implementation, and management, as well as the transparent disclosure of fiscal risks. PPPs should be evaluated on a level-playing field with other public investment spending. The investment projects should be first selected and prioritized based on the cost-benefit analysis, their value-for-money and affordability.

References

Cevik, Serhan, 2011, "Policy Coordination in Fiscal Federalism: Drawing Lessons from the Dubai Debt Crisis", IMF Working Paper 11/147 (Washington: International Monetary Fund).

Daban, Teresa and Helis, Jean-Luc, 2010, "A Public Financial Management Framework for Resource-Producing Countries" IMF Working Paper 10/72 (Washington: International Monetary Fund).

Eyraud, Luc and Gomez Sierra, Raquel, 2014, "Constraints on Subnational Fiscal Policy" Chapter 3 in Designing a European Fiscal Union: Lessons from the Experience of Fiscal Federations.

Dubai Government Department of Finance, 2016, "Guide to Public Private Partnership in Dubai-First Edition."

European Commission, 2016, "Vade Mecum on the Stability and Growth Pact", European Economy, Institutional Paper 021, March 2016.

International Monetary Fund, 2008, "Managing the Oil Revenue Boom: The Role of Fiscal Institutions," IMF Occasional Paper, April 2008.

-----2012, "Macroeconomic Policy Frameworks for Resource-Rich Developing Countries" IMF Policy Paper, August 2012.

-----2015. Fiscal Monitor. "the Commodities Roller Coaster: A Fiscal Framework for Uncertain Times", October 2015.

-----2015. "Making Public Investment More Efficient", Staff Report, June 2015.

-----2015, "Strengthening Fiscal Policy and Budget Frameworks in the UAE", IMF, UAE Selected Issues Paper, July 2015.

Rial, Isabel, 2016, "PPP Legal Frameworks and Fiscal Risk Management", IMF.

Shah Anwar, 2005, "Fiscal Federalism and Macroeconomic Governance: For Better or For Worse?" Policy Research Working Paper, World Bank Group.

The Supreme Legislation Committee, 2015, "Law No. (22) of 2015 Regulating Partnership Between the Public Sector and the Private Sector in the Emirate of Dubai", September 20, 2015.

Ulgenturk, Lerzan, 2017, "The Role of Public Debt Managers in Contingent Liability Management", Working Papers on Sovereign Borrowing and Public Debt Management No.8 (Paris: OECD).

World Bank Group, 2017, "Benchmarking Public-Private Partnerships Procurement 2017."

-----2013, "Beyond the Annual Budget: Global Experience with Medium-Term Expenditure Frameworks."

BANK LIQUIDITY AND MARKET DEVELOPMENT¹

The UAE has come a long way in the development of its financial markets over the past several decades. Capital market development has become even more important in the new “lower-for-longer” oil price environment to diversify sources of funding for governments and firms and to support economic growth and diversification. The CBU’s steps towards more active liquidity management are welcome. Complementing the recent strengthening of bank liquidity regulations, these reforms should encourage banks to manage their liquidity and risks more actively and further develop capital markets. The CBU’s reforms could be usefully complemented by governments’ efforts to develop domestic debt markets, including for Islamic instruments.

A. Introduction

1. The UAE economy and banking system are facing new challenges. Oil prices have stabilized at around half of their 2014 peak and are expected to stay broadly stable at this level over the medium term. With lower oil revenues, current account surpluses have declined, and fiscal surpluses have turned into deficits. In this setting, the public sector’s propensity to accumulate deposits in the banking system has weakened. In addition, the normalization of U.S. interest rates and banking regulatory changes in the UAE are creating new challenges for banks’ management of liquidity. Yet ensuring healthy liquidity conditions and promoting financial market development is important for supporting robust credit and economic growth and diversification goals.

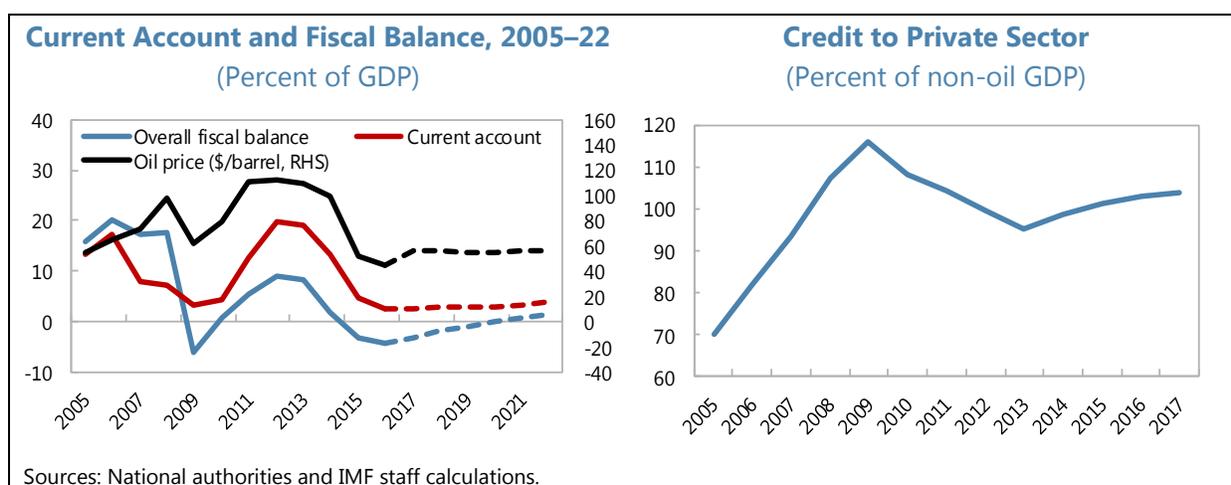
2. The new setting calls for upgrading the CBU’s liquidity management framework, along with further steps to develop domestic money and debt markets. More active management of system-wide liquidity, as is already being planned by the CBU, and streamlining the gamut of the CBU’s liquidity management instruments would encourage banks to manage their own liquidity better and develop money markets. These efforts would complement the implementation of the new Basel III-compliant liquidity requirements recently issued by the CBU. Starting the issuance of domestic government bonds would support these changes by providing another liquid asset, in addition to the CBU’s certificates of deposit (CDs), for liquidity management by the CBU and banks. These reforms are critical for the creation, deepening and/or broadening of other financial markets, including for corporate bonds and Islamic financial instruments, by facilitating pricing and integration of markets.

3. The rest of the paper is organized as follows. The next section describes the key features of the UAE banking system and financial markets. Section C reviews the current CBU framework for managing liquidity. Section D discusses challenges posed by the lower-for-longer oil price environment. Section E proposes steps for moving toward more active management of liquidity, as well as complementary reforms. The last section concludes.

¹ Prepared by Aidyn Bibolov (MCD) with inputs from Kelly Eckhold and Chris Wilson (MCM) and assistance from Brian Hiland and Diana Kargbo-Sical under the guidance of Natalia Tamirisa (all MCD).

B. Brief Overview of the UAE's Financial System

4. The UAE banking system is well developed and strong. Its 59 banks provide a full range of services to their clients. The banking system is large, with total assets amounting to AED 2.6 trillion or 204 percent of GDP at end-March 2017. The banking system is concentrated, with the largest three banks holding over 50 percent of total assets of the banking system. Banks are adequately capitalized and profitable. The capital ratio for the banking system was 18.6 percent at end-March 2017. The ratio of nonperforming loans (NPLs) to gross loans was stable over the past few years at 5.3 percent with NPLs fully covered by provisions. Return on equity was 11.7 percent at end-March 2017. Banks are efficient with the cost-to-income ratio below 38 percent. Banks' liquidity buffers are healthy. Large banks are internationally active and have high credit ratings. Islamic banking is developing rapidly with some of the world's largest Islamic banks headquartered in the country. Islamic banks in the UAE had assets of AED 522 billion or 20 percent of total bank assets at end-March 2017.



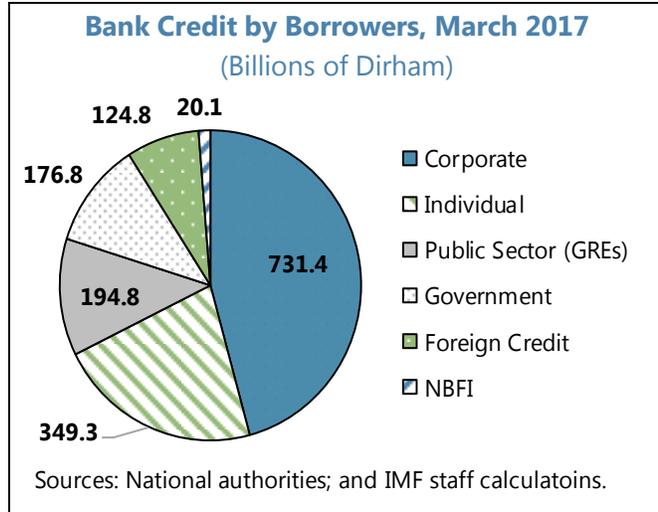
Selected Financial Soundness Indicators (In percent)					
	2013	2014	2015	2016	2017q1
Regulatory Capital to Risk-Weighted Assets	19.3	18.1	18.3	18.9	18.6
Regulatory Tier 1 Capital to Risk-Weighted Assets	17.0	16.3	16.6	17.3	17.2
Non-performing Loans Net of Provisions to Capital	9.8	7.6	5.8	5.7	5.9
Non-performing Loans to Total Gross Loans 1/	6.7	5.6	5.2	5.3	5.3
Return on Assets	1.6	1.7	1.5	1.4	1.5
Return on Equity	11.1	13.9	11.8	10.7	11.7
Non-interest Expenses to Gross Income	37.8	36.4	38.0	38.0	37.8
Liquid Assets to Total Assets (Liquid Asset Ratio) 2/	19.4	22.9	21.5	21.2	22.2
Liquid Assets to Short Term Liabilities 2/	27.7	30.3	28.8	28.6	29.8

Source: National Authorities.

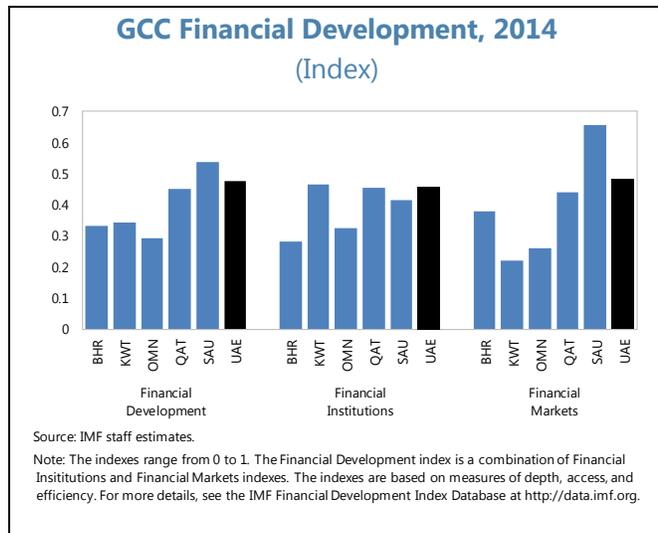
1/ Total gross loans include interbank loans.

2/ Total liabilities include interbank and interbranch placements.

5. The UAE banking system plays a key role in funding growth of the UAE economy. The private credit-to-nonoil GDP ratio has been steadily rising since 2013, reaching beyond 100 percent at end-2016. Credit goes mostly to the private sector. Outstanding loans to governments and GREs accounted for 23 percent of total loans at end-March 2017. Firms in the UAE are heavily dependent on the banking system for their domestic funding.



6. Equity and bond markets in the UAE are less developed than the banking sector. A domestic government debt market does not exist because large fiscal surpluses during oil price boom weakened incentives for the government to issue domestic debt. Emirates governments issue external debt or tap sovereign wealth funds (SWFs) to finance budget deficits (see Table 5 in the accompanying Staff Report). Without a long-term benchmark domestic yield curve, firms also tend to borrow externally to supplement their domestic bank borrowing. Likewise, banks supplement deposit funding with wholesale external funding.² Stock markets are more developed than debt markets, with market capitalization at the Abu Dhabi Securities Exchange and Dubai Financial Market reaching \$120 billion and \$84 billion in June 2017 (32 and 22 percent of the projected 2017 GDP). The UAE is also a major hub for Islamic bond issuances—during 2001–15, \$53.8 billion or 36 percent of all global sukuk issuances originated in the UAE.



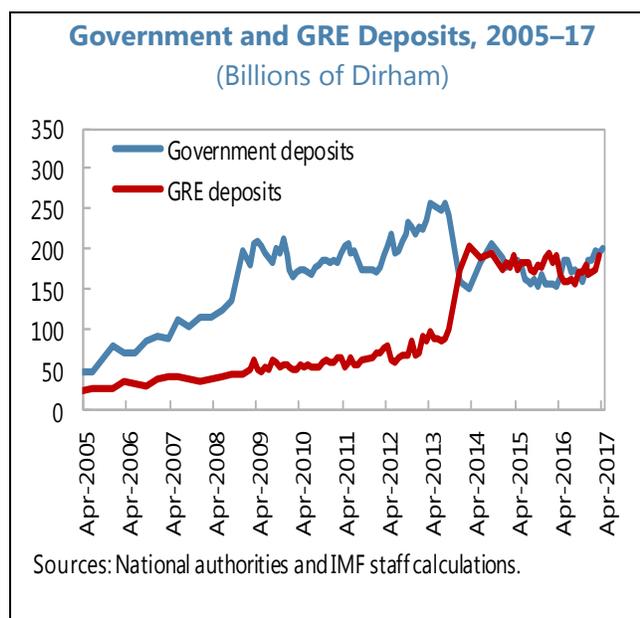
7. Money markets are shallow in the UAE. Foreign exchange (FX) swap markets are actively used to access liquidity, given the peg and significant dollarization of banks’ assets and liabilities.³ However, the FX swap market is not highly liquid and can be affected by large FX flows or shifts in market risk perceptions. In the interbank market, liquidity is traded only between a few banks with maturities up to one month.

² Wholesale bank funding accounted for about 13 percent of banks’ total liabilities at end-March 2017.

³ 36 percent of deposits and 23 percent of loans are in foreign currencies.

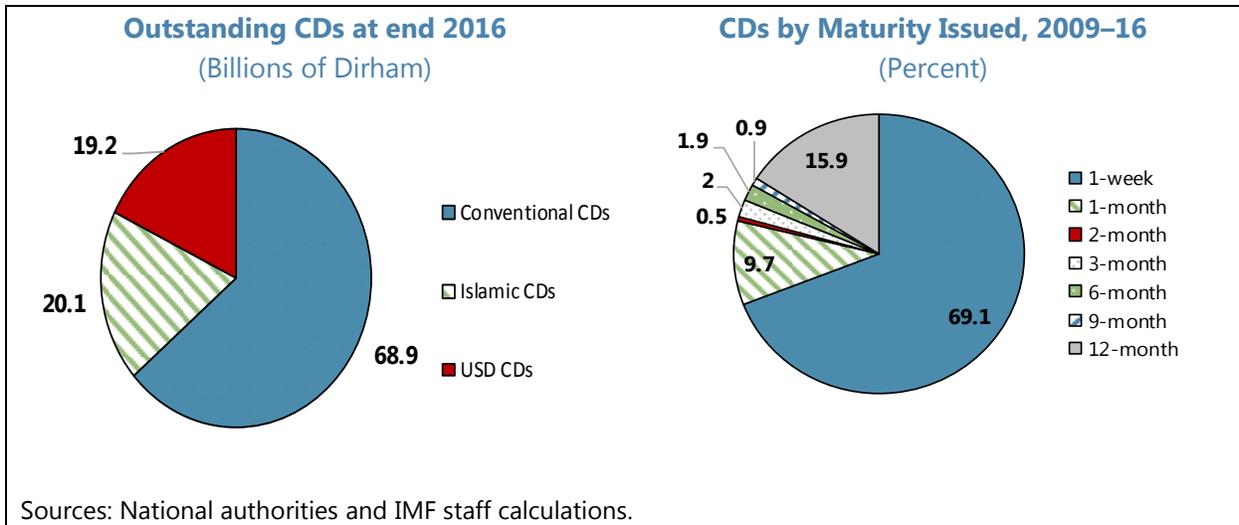
C. The CBU's Liquidity Management Framework

8. Liquidity in the UAE's banking system is driven by oil prices. Most banks are government-owned, and governments and government-related enterprises (GREs) are important providers of bank funding and borrowers from banks. Governments' and GREs' deposits make up about a quarter of total bank deposits. As a result, banks are highly, albeit indirectly, exposed to changes in oil revenues. During 2005–13, the current account surplus averaged almost 12 percent of GDP, while the fiscal surplus was 10 percent of GDP on average. Hence, there was an abundant liquidity supply to the banking system via deposits by governments and GREs, both traditionally held with the commercial banks. In the absence of domestic debt markets, banks held their liquidity at the CBU in the form of investments in remunerated CDs, required and excess reserves, and/or foreign assets.

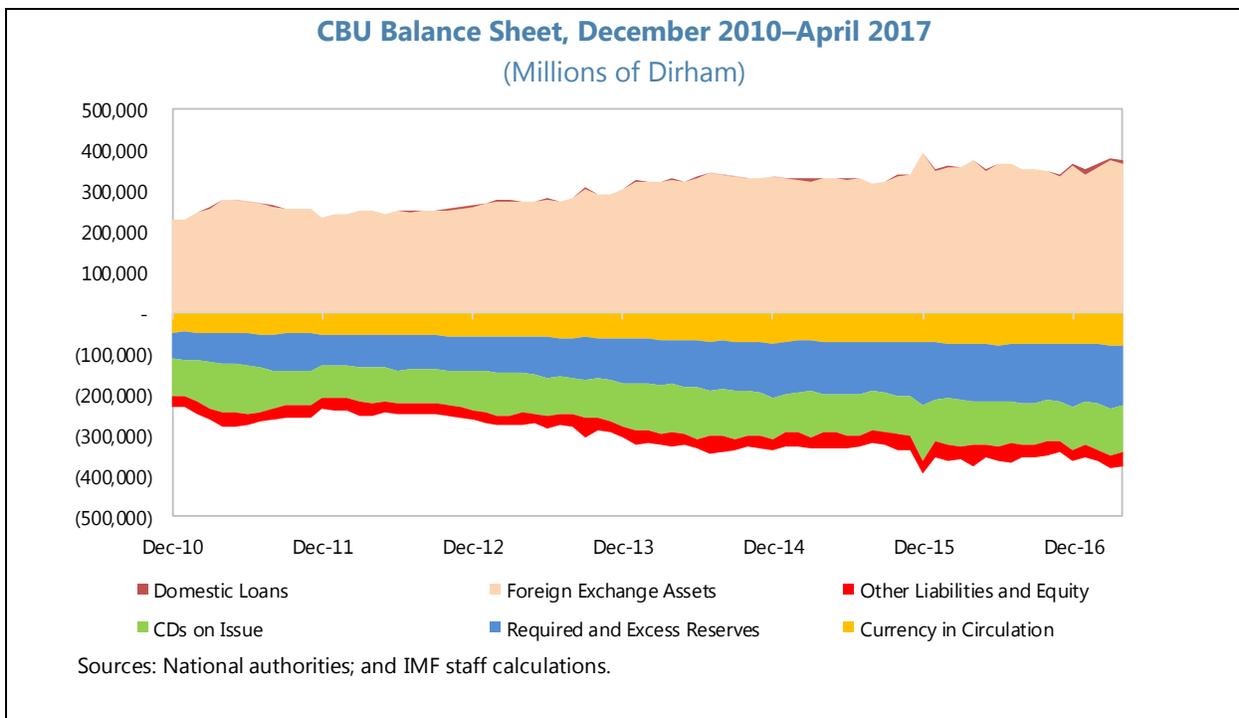


9. Given the traditional structural surplus of liquidity in the banking system, the CBU's operations have focused on absorbing excess liquidity. The CBU has used two major instruments to this end: reserve requirements and CDs. The required reserves ratio is 14 percent on current, savings, and demand accounts, and 1 percent on time deposits (maturity from 7 days onward). The ratios are the same for dirham and foreign currency deposits. The reserve requirements are currently calculated using a bank's balance sheet as of the fifteenth day of each month, with a time lag of 6 weeks between that day and the reserve maintenance period. Banks can deviate from their required daily reserves subject to a fee ranging from 150 to 300 basis points over the CBU repo rate.

10. The CBU issues a wide range of CDs. The CDs are issued daily at a fixed rate on full allotment basis. They are available in maturities from one week to 1, 2, 3, 6, 9, and 12 months. The most popular CDs for bank's purchase have maturities of 1 week, 1 month, and 12 months. The one-week CD rate is the policy rate that is adjusted following changes in the U.S. Federal Funds rate in line with the exchange rate peg arrangement. Both Islamic and conventional CDs are available. The CBU also issues U.S. dollar-denominated CDs. The CDs are non-transferrable, redeemable upon banks' request, and issued as accounting records at the CB. Thus, the CBU is the only counterparty to banks for CD trading.

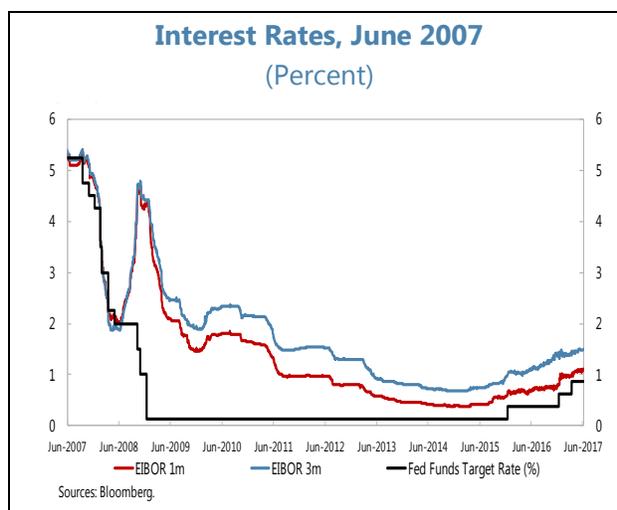


11. Together, reserve requirements and CDs absorb the structural liquidity surplus in the banking system. These instruments constituted 77 percent of banks’ assets held with the CBU at end-2016. The remainder was held primarily in banks’ excess reserves and current accounts.⁴ The supply of liquid assets by the CBU has been driven by banks’ demand that has varied with oil prices and interest rate changes required under the peg. The liquidity supply is driven by the CBU’s foreign assets, in the context of the peg arrangement.



⁴ Some banks occasionally also purchase foreign assets to place excess liquidity.

12. The 2008-2009 crisis highlighted the importance of the CBU’s role as the lender of last resort. To help banks cope with the liquidity stress and rollover challenges during the crisis, the CBU introduced several liquidity provision facilities, such as U.S. dollar swaps, borrowing against reserve requirements, and emergency liquidity support in 2008. These facilities helped to alleviate stress and avoid major disruptions in the banking system.



13. Many of the CBU’s standing facilities introduced during the crisis remain in place but are not used (except for test transactions).

Facility	Description	Collateral	Cost
Repo	Liquidity for maturities up to three months	CDs	50 basis points over the one-week CD rate
Interim Marginal Lending Facility (IMLF)	Liquidity on an overnight basis	Generally rated and tradeable securities	100 basis points over the repo rate
Borrowing Against Reserves Facility (BAR)	Emergency liquidity support	Reserve requirements	300 basis points over the repo rate
Foreign Exchange Swaps	U.S. dollar to dirham swaps up to one year	FX Currency	Fixed implied swap rates

14. In addition, banks have the option to redeem their CD holdings at any time. This feature was introduced as part of the CBU’s response in 2008 and remained since then. Per this option, banks can redeem their CDs with the central bank at their request at a market price. While it makes liquidity management easier for banks, the redemption option creates potential moral hazard as it discourages banks from managing liquidity actively.

D. New Challenges

15. The new lower-for-longer oil price environment has increased uncertainty about governments’ and GREs’ deposits. Oil revenues have declined and have become more uncertain. In 2015, as oil prices continued to fall, government had to mobilize its deposits to fund its expenses. This tightened liquidity in the banking system. In 2016, government increased its deposits, but by then GREs became more constrained and their deposits decreased. Banks would need to account for these new risks related to governments’ and GREs’ deposits when managing their liquidity.

16. In addition, expected increases in the U.S. interest rates will increase the cost of funding for UAE banks. As the U.S. Federal Reserve continues normalizing interest rates, funding costs for UAE banks will increase as domestic deposit rates rise in tandem with policy rates in the

context of the peg. The cost of external funding, which UAE banks use to complement domestic deposits, will also rise. A more active liquidity management framework would help strengthen the capacity of the CBU and banks to manage liquidity in the higher interest rate environment.

17. Banks also need to adjust to new liquidity requirements, recently introduced by the CBU in line with the Basel III Accord. The Liquidity Coverage Ratio (LCR) is already applied to the three largest banks at 80 percent with full phase-in by 2019. The Net Stable Funding Ratio (NSFR) is planned to be implemented with 100 percent phase-in by 2018. Both ratios require a significant amount of high quality liquid assets (HQLA) to be available for banks. Currently, the only major securities that qualify for this role are the CBU's CDs.

18. The importance of financial market development has increased in the new oil price environment. Lower oil revenues have weakened medium-term prospects, pointing to the need for diversifying the economy away from reliance on oil. Capital market development—including the development of Islamic finance—is important to allow companies, governments, and GREs to reduce their reliance on bank financing.

19. Developing a domestic debt market would have particularly large benefits.

- Governments would have a domestic funding source to tap if needed. This would help them diversify sources of funding and reduce reliance on bank financing, external borrowing or withdrawals from SWFs.
- The CBU would have an additional instrument for managing liquidity by conducting open market operations in the context of the peg.
- Another benefit is that a domestic debt market would make the supply of liquid assets less dependent on oil prices and the peg. From the financial stability point of view, issuing domestic securities could increase the pool of domestic securities that qualify as HQLA for the Basel III liquidity requirements. It would also provide banks with collateral that could be used for interbank operations and borrowing from the CBU, including under emergency liquidity provision. Issuing government securities would help create a yield curve at long-term tenors to provide a benchmark for bank lending.
- Domestic government debt issuance could help develop a domestic corporate bond market and interbank repo market. It would provide a useful pricing benchmark. Firms would have an opportunity to diversify their finances. As the market develops, smaller companies could follow larger ones in issuing debt, supporting economic diversification. Finally, developing the domestic debt market could attract more foreign investors to stimulate domestic activity.

E. Towards Active Liquidity Management and Market Development

20. To address the new challenges, the CBU is considering upgrading its liquidity management framework. Reforms could aim to encourage more active liquidity management on

the part of banks and foster money market development, while strengthening the interest rate transmission mechanism. Several modifications would be particularly helpful:

21. *Creating a well-defined interest rate corridor.* Standing facilities for providing liquidity could be unified into one overnight lending rate that will serve as a ceiling for the corridor. Currently, the existence of multiple standing facilities risks causing confusion in the market and potentially creating arbitrage opportunities. Using one standing facility may also help banks overcome any stigma associated with using standing facilities. In addition, introducing an overnight deposit rate would help the CBU steer interest rates in the context of the peg. At present, bank balances with the CBU are not remunerated. The deposit facility can serve as a floor for the interest rate policy rate corridor. Together, the deposit and lending rates would help the CBU to use short-term interest rates to guide the market. In tandem, the CBU would need to strengthen its liquidity forecasting capacity. For such forecasting to be efficient, cooperation and information-sharing between the CBU, governments, and SWFs would need to be strengthened to ensure that the CBU is well informed about expected cash management operations. Such cooperation is important both in the short run as well as in the context of a medium-term fiscal framework (see the accompanying Selected Issues Paper on the medium-term fiscal framework).

22. *Reforming the CD program to provide benchmark short-term instruments.* CDs could be offered at regularly scheduled auctions rather than as a daily tap facility. Such auctions could be held weekly with the results published to facilitate price discovery by market participants. The auctions would be calendarized with CD maturity profile to match maturing tranches. CDs should be traded at fixed volume variable rate auctions to provide a price signal to the CBU and banks. CDs would be issued as transferrable securities, which banks could trade with each other. Once CD auctions are well established, the early redemption feature could be removed from new CD issuances. This would incentivize banks to trade CDs with each other, fostering interbank market development, and to plan their liquidity needs better. Proper sequencing of the CD program reforms would be important to avoid disruptions to the financial system.

23. *Ensuring that the application of liquidity regulations supports incentives for banks to actively manage liquidity and participate in liquidity markets.* This would require continued efforts to apply risk management standards to all banks, develop additional guidance to complement the recently issued liquidity regulations and integrate the new liquidity ratios into regulatory reporting. The CBU could also make active use of the Pillar 2 of the Basel Accord to supervise and facilitate the development of liquidity risk management in banks.

24. *Starting issuance of domestic government debt could usefully complement the CBU's steps towards more active liquidity management.* A draft debt law is under consideration by the government and its speedy ratification could pave the way for a first domestic sovereign issuance.

25. *Governments could issue dirham-denominated debt at medium to long-term maturities.* Over time, governments may consider creating debt management offices to oversee the issuance and monitoring of debt. Sukuk issuance could be usefully incorporated in the calendar of debt issuance, deepening Islamic markets.

26. *The CBU could take operational responsibility for government debt issuance*, i.e., serve as the fiscal agent, to facilitate market creation. Close coordination between fiscal and monetary authorities on cash flow management would be needed. As the domestic debt market takes off, the CBU's CD issuance could be limited to short-term tenors only. Eventually, the development of a domestic debt market would enable the CBU to conduct open market operations and influence liquidity supply directly.

27. *Strengthening market infrastructure is an important part of the successful introduction of domestic debt market*. A key element in this regard is creating a single central securities depository (CSD). For this, a new body could be established or one of the existing CSDs on the UAE's stock exchanges would need to be strengthened. If an international CSD is to be used, its working hours should be aligned with the working week in the UAE. Such CSD would facilitate trading of government bonds and CDs between banks and other market participants to ensure liquidity and reduce transaction costs.

28. *More active liquidity management by the CBU and banks, creation of the government debt market, as well as ongoing improvements in infrastructure and regulation of other markets, would facilitate financial market development in the UAE*. Developing financial markets involves broadening the set of traded instruments (e.g., treasury bills and bonds, bills of exchange, promissory notes, etc.) and remittance facilities (e.g., through exchange houses), ensuring that each market has healthy competition (borrowers, lenders and dealers, including from other countries), fostering integration among different markets that allows funds to flow easily from one market to another, as well as integration of the interest rate structure. The Securities and Commodities Authority is taking steps to further improve the infrastructure of securities markets, while enhancing their supervision and corporate governance. The CBU is doing the same, in its role as the regulator and supervisor of exchange houses. In particular, it is taking steps to reduce the risk of withdrawal of correspondent banking relationships and prevent migration of remittances to informal channels (see the accompanying Staff Report).

F. Conclusion

29. *The CBU's and governments' plans regarding market development and liquidity management need to be accelerated*. The CBU's current liquidity management framework has served the country well. However, the new challenges posed by the lower-for-longer oil prices and expected increases in U.S. interest rates call for moving towards more active management of liquidity. Upgrading the CBU's liquidity management framework, together with governments' initiatives to develop domestic debt markets, would expand the range of liquid assets available to banks and the CBU, enabling them to manage liquidity better, consistent with the Basel III requirements. More active liquidity management by banks would increase their resilience to unexpected shocks. A more robust banking system would support healthy credit growth and contribute to further diversification of the UAE economy.