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United Arab Emirates: Selected Issues and Statistical Appendix

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UNITED ARAB EMIRATES

Selected Issues and Statistical Appendix

Prepared by Gabriel Sensenbrenner, Serhan Cevik, Vincenzo Guzzo, and Arthur Ribeiro da Silva

Approved by the Middle East and Central Asia Department

April 6, 2011

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I. Risks Posed by Government-Related Entities in the United Arab Emirates[1]

A. Introduction

1. **Government-related entities (GREs) have been a major source of growth and development for the United Arab Emirates (U.A.E.) economy.** The U.A.E. economy is dominated by a web of commercial corporations, financial institutions, and investment arms, owned directly by the Government of Dubai (GD), the Government of Abu Dhabi (GAD), or the ruling family under the umbrella of major holding companies (Figure I.1). Benefiting from government transfers and from extensive borrowing—in light of a perceived implicit government guarantee—in 2004–08, Dubai Inc.[2] funded a major push into large-scale commercial and residential property developments. Dubai became a regional hub, and the economy achieved high growth rates. More recently, Abu Dhabi has also been developing major infrastructure projects through its GREs.

2. **The global financial and economic crisis has, however, unveiled the fiscal and financial risks posed by GREs.** Despite government support in 2008–09, the global financial crisis and the price correction in the local property market, combined with the maturity mismatch between short-term liabilities and long-term cash flows, forced Dubai World (DW), one of the main GREs in Dubai, to restructure its debt. The DW debt restructuring led to an increase in Dubai sovereign debt, with ramifications for the banking sector and financial markets. Other Dubai GREs are also in DW-style debt restructuring type negotiations with banks.[3] There are also signs that some Abu Dhabi GREs heavily investing in the real estate sector are undergoing financial difficulties.[4]

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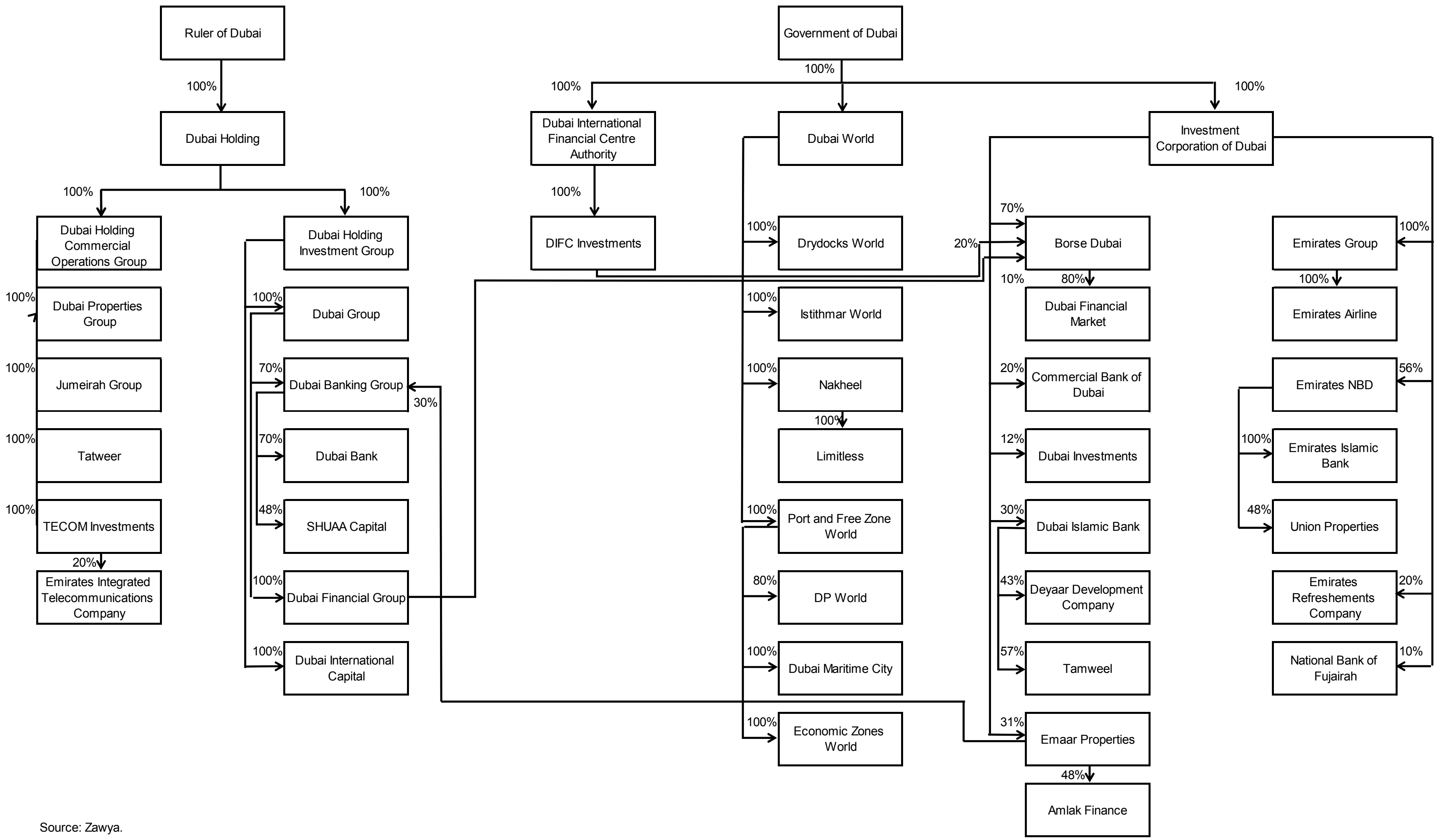
[1] Prepared by Vincenzo Guzzo and Arthur Ribeiro da Silva.

[2] Dubai Inc. is the collection of enterprises and banks that are substantially owned and controlled by the GD, the Ruler of Dubai, or jointly. It does not include a number of joint holdings with Abu Dhabi (e.g., EMAL) or the Federal Government (e.g., Etisalat).

[3] In July 2010, Dubai Holding Commercial Operations Group (DHCOG), a subsidiary of Dubai Holding (DH) covering commercial operations in Dubai, secured a two-month extension on a US$555 million loan, which was later allowed to further roll over twice through year-end. Later, press reports have indicated that DHCOG has reached an agreement, for which the revolving debt would be converted into a five-year loan. In November 2010, Dubai Group (DG), also a DH subsidiary with participations in financial services firms in Dubai and abroad, missed two scheduled loan payments worth US$1.8 billion and started restructuring its US$6.2 billion liabilities. In December 2010, Dubai International Capital (DIC), the investment arm of DH, has also successfully agreed with bank creditors to restructure US$2.5 billion worth of bank loans: US$2 billion would be extended to 2016 at 2 percent; US$500 million extended to 2014 at an unchanged interest rate.

[4] In January 2011, the GAD stepped in with a US$5.2 billion package to support Aldar, the Emirate's largest developer by market capitalization. In the context of this transaction, Aldar would sell about US$3 billion worth of assets and place a US$760 million convertible bond with another government-owned shareholder Mubadala.

Figure I.1. Dubai Inc.



Source: Zawya.

3. **Looking forward, GREs will likely continue to pose significant risks to the sovereign balance sheet and the financial system.** Although little information is available on the financial situation of most GREs, with an estimated US$60 billion of debt due in 2011–12, the U.A.E. face rollover risk and would need to manage this carefully in light of continued turmoil in global markets. Moreover, with the restructuring of Dubai Inc., a significant amount of debt has been shifted to the medium term with potential bunching risks in 2014–15. The overhang in the real estate sector means that these risks can affect the sovereign balance sheet as contingent liabilities may materialize; they can affect local banks that hold GRE debt; and they can have broader implications for capital markets through higher cost of borrowing.

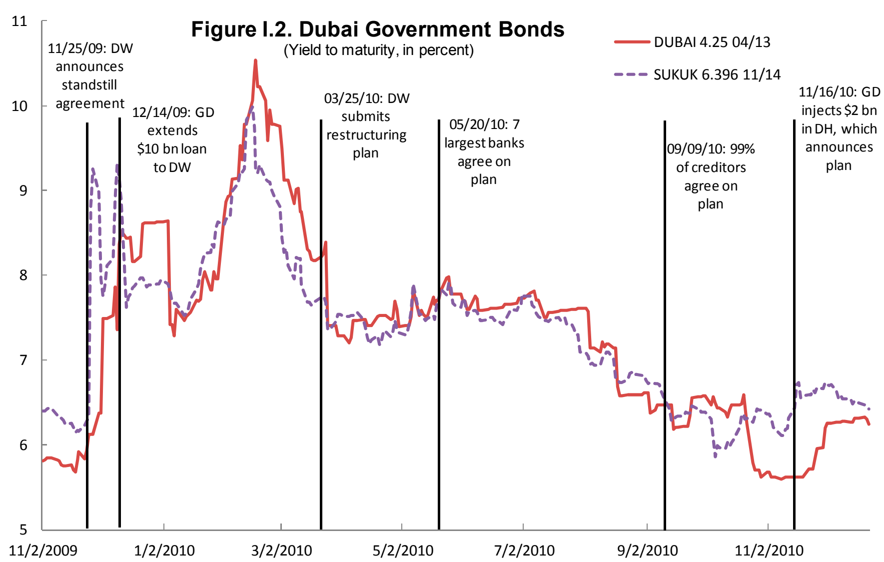
4. **The objective of this paper is to identify the risks posed by financially underperforming GREs.** The note will assess the impact of the Dubai debt restructuring on capital markets, the sovereign balance sheet, and the banking sector, and it will identify future potential risks, particularly in terms of contingent liabilities for the government.

B. Which Types of Risks Emerged in the Context of Dubai's Debt Restructuring?

Market risk

5. **Following the DW debt standstill announcement conditions in secondary markets deteriorated rapidly.** Yields on both conventional and Sukuk bonds immediately shot up by several hundreds of basis points. The extension of a US$10 billion loan from the GD to DW had only a temporary impact and Dubai government bonds kept selling off through most of the first quarter of 2010 with yields peaking at over 10 percent. It was only with the submission of the restructuring plan in March 2010 and the subsequent agreement among a large number of creditors that yields entered a sustained downward trend, although they remain somewhat above pre-crisis levels (Figure I.2).

Figure I.2. Dubai Government Bonds
(Yield to maturity, in percent)



Source: Bloomberg.

6. **Market access for the sovereign and the GREs themselves were significantly affected.** Only, in September 2010, the GD regained market access, though at higher costs than its peers. In the post-DW issues, Dubai paid more than 120 basis points (over benchmark) compared to the same period a year earlier. Comparisons with peers indicate that Dubai issued at spreads comparable with sovereigns in the single B rating category, such as Ukraine (B+/B2/B), as highlighted in Table I.1. As for the GREs, in April 2010, the Dubai Electricity & Water Authority (DEWA) had been the first Dubai's GRE to regain market access after the DW's announcement, but it had funded at over 8.6 percent on a US$1 billion issue, to the tune of 300 basis points above similarly rated emerging market corporate issuers. Most Dubai's GREs have not still re-entered capital markets.

Table I.1. 2010 Select Sovereign Issues

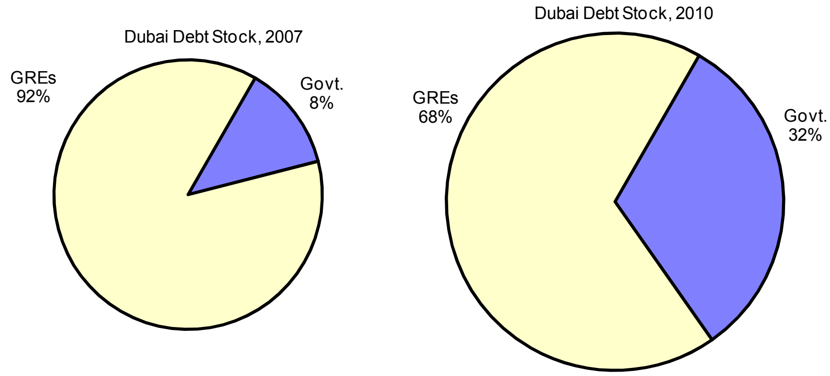
Sovereign	Date	Value (US$ million)	Years to Maturity	Yield to Maturity (%)	Currency Code	S&P Issuer Rating	Moodys Rating	Fitch Issuer Rating	Spread to USD Benchmark (bps)
Belarus (B+)	26-Jul-10	600	5	9.21	USD	B+	B1		727
Dubai	**29-Sep-10**	**500**	**5**	**6.81**	**USD**				**543**
Ukraine (B+)	16-Sep-10	500	5	6.99	USD	B+	B2	B	541
Dubai	**29-Sep-10**	**750**	**10**	**7.90**	**USD**				**527**
Ukraine (B+)	16-Sep-10	1,500	10	7.90	USD	B+	B2	B	499
Barbados (BBB)	27-Jul-10	200	12	7.33	USD	BBB	Baa3		416
Lithuania (BBB)	4-Feb-10	2,000	10	7.77	USD	BBB	Baa1	BBB	402
Croatia (BBB)	6-Jul-10	1,250	10	6.87	USD	BBB	Baa3	BBB-	381
Dominican Republic (B)	29-Apr-10	750	11	7.64	USD	B	B1	B	377
Sri Lanka (B+)	27-Sep-10	1,000	10	6.35	USD	B+		B+	373
Vietnam (BB)	26-Jan-10	1,000	10	7.07	USD	BB	Ba3	BB-	333
Lithuania (BBB)	7-Sep-10	750	7	5.32	USD	BBB	Baa1	BBB	320
Jordan (BB)	8-Nov-10	750	5	4.17	USD	BB	Ba2		301

Source: Dealogic.

Fiscal risk

7. **The DW debt restructuring translated into higher sovereign debt.** The Central Bank of the U.A.E. (CBU) extended a five year US$10 billion loan to the GD in March 2009; the GAD extended a further US$6.3 billion in December 2009 following the DW debt standstill. Our estimate of Dubai's government and government guaranteed debt stands at US$36 billion at end-2010 (34 percent of 2010 Dubai and northern emirates GDP), up from US$12.2 billion at the end of 2008 (Figure I.3).

Figure I.3. Dubai: Total Debt Stock, 2007, 2010



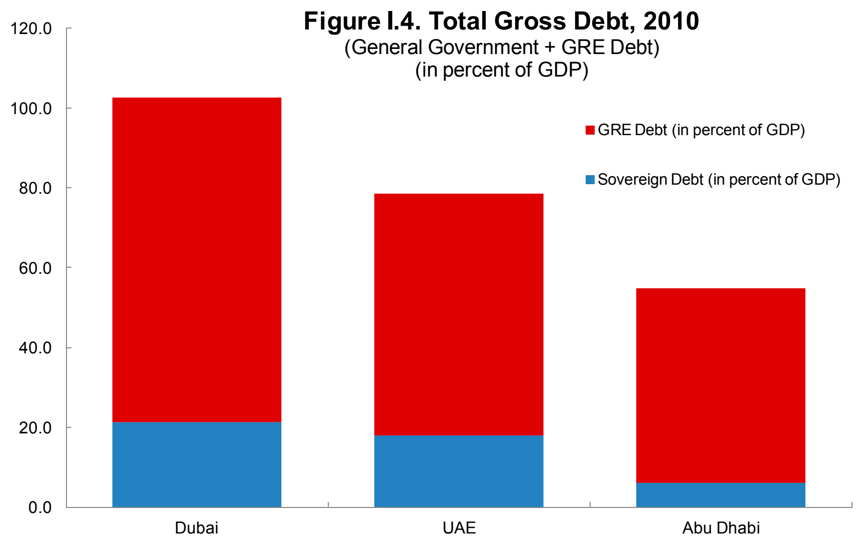
Source: Dealogic.

Financial risk via local banks

8. **Dubai banks were affected by their exposure to GREs.** The banking system's overall lending to Dubai GREs is estimated at 9 percent of total loans, and 16 percent of loans for Dubai banks. For DW, local banks were owed 40 percent of the debt subject to restructuring (US$14.4 billion), of which 60 percent is concentrated in Dubai banks. Provisions on DW restructured loans have been completed and amount to US$500 million, implying an average haircut of 9 percent. For Dubai Holding, the limited information available suggests that local banks are owed over 50 percent of the debt to be restructured (i.e. US$5.2 billion), of which 90 percent is with Dubai banks.

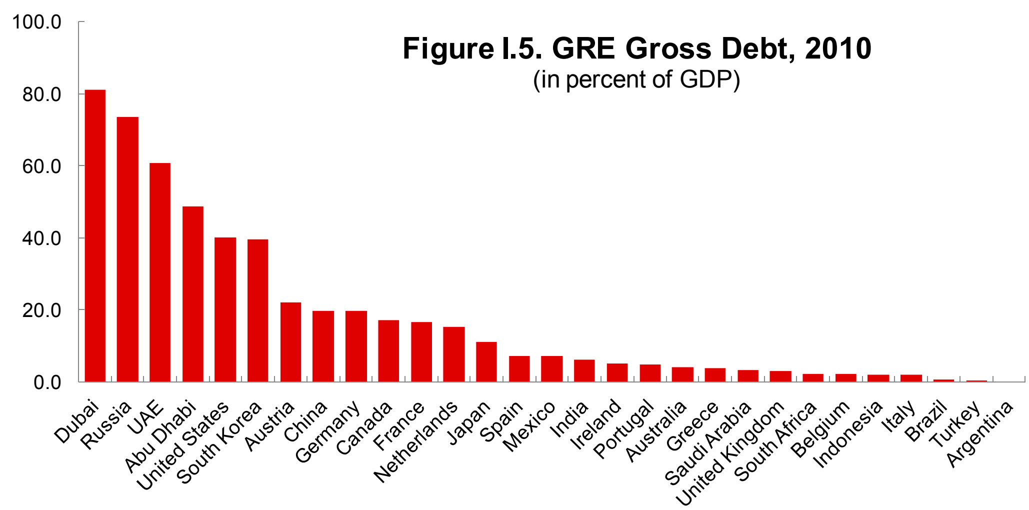
C. What Are the Main Risks Posed by the GREs Going Forward?

9. **Sovereign debt is low both in Dubai and Abu Dhabi, but a large share of public debt stems from GREs.** Dubai's publicly-held debt stands at US$113 billion (102.5 percent of Dubai and northern emirates GDP). The bulk of this debt is from Dubai Inc. which accounts for US$89.4 billion (Figure I.4) or 81.2 percent of Dubai and northern emirates GDP. Abu Dhabi's debt amounts to US$104 billion (54.8 percent of Abu Dhabi GDP), and although the expansion of GREs started more recently, most of it also stems from GRE debt (US$92.4 billion or 48.6 percent of Abu Dhabi GDP).

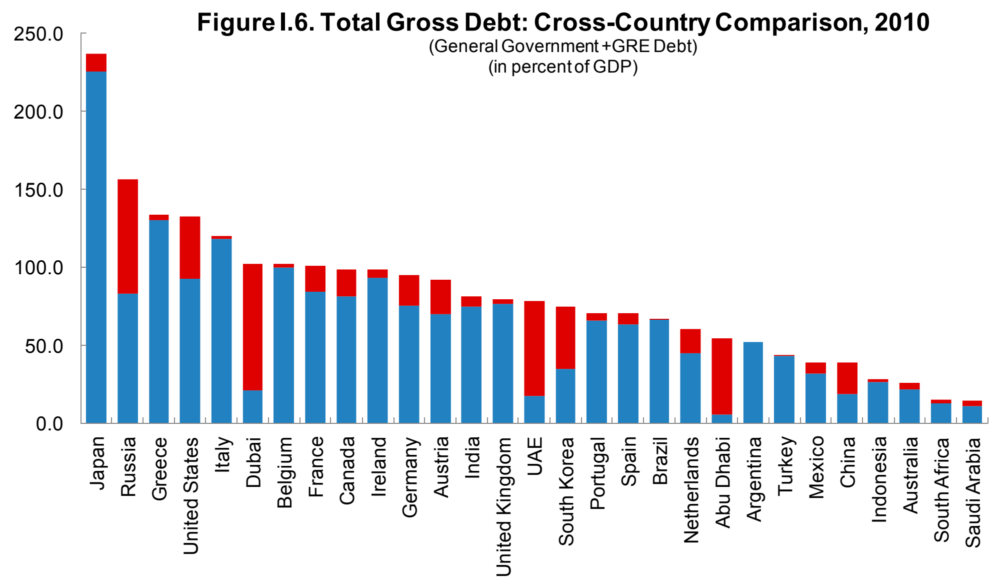


Sources: World Economic Outlook ; Dealogic.

10. **GRE debt is large by international comparisons.** The size of Abu Dhabi's publicly-held sovereign debt is rather small (6.1 percent of Abu Dhabi GDP); Dubai faces a sovereign debt (excluding guarantees) of 21.4 percent of Dubai and northern emirates GDP, also far from large by international comparisons. It is only when the debt of the GREs is accounted for (Figure I.5) that the full scale of the problem becomes visible. On this metric, Abu Dhabi's debt rises to 54.8 percent of Abu Dhabi's GDP and Dubai's climbs to as much as 102.5 percent of GDP (Figure I.6).

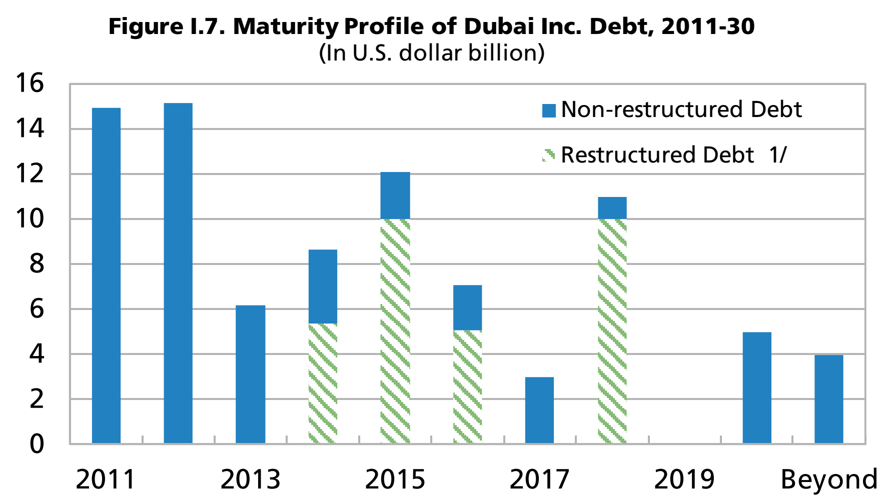


Sources: World Economic Outlook; Dealogic.



Sources: World Economic Outlook ; Dealogic.

11. **With US$60 billion maturing in 2011-12, both Dubai and Abu Dhabi face short-term rollover risk.** Our estimates suggest that US$31.2 billion of Dubai's debt will come due in 2011–12 (Figure I.7), with DW and ICD accounting for US$9.6 and US$12 billion respectively (see Box I.1 and Table I.2 for details). Over $27.6 billion of Abu Dhabi's debt will also come due in 2011–12 (Table I.3). Short-term roll-over risk may translate into a new shock in the cost of funding. The government and the corporates might have to roll over debt at a higher cost and, in extreme cases, because of exceptionally large increases in government funding costs, might not be able to refund at all, ultimately putting further strains on fiscal accounts and on the financial system.



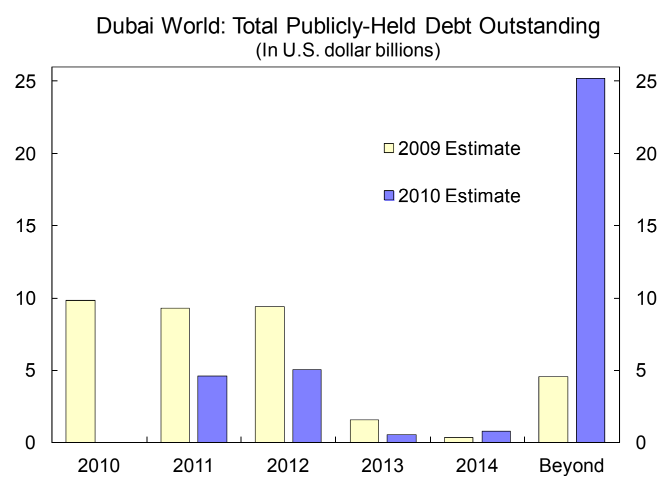
Sources: Dealogic; Bloomberg; country authorities; and Fund staff estimates.

1/ Preliminary estimates based on public information about Dubai Holding and other GRE ongoing debt restructurings, as well as Dubai World's completed restructuring; including debt guaranteed by the Dubai government.

12. **Dubai faces more rollover risk in 2014–15, partly because of the bunching of the restructured debt**. The restructured DW debt of US$14.4 billion is split in two tranches, of US$4.4 billion in 2015 and US$10 billion in 2018. Thus, nearly half of DW's US$36.1 billion of debt is due in 2015 and beyond. Similarly, DH has US$6.9 of its US$14.4 billion of debt due in 2015 and beyond, a good part of it being restructured debt. ICD has about US$7 billion of its US$22.2 total debt outstanding due in 2015 and beyond, mainly on account of Emirates Airline Group. Altogether, US$41.3 billion or 37.5 percent of Dubai's stock of outstanding debt will come due in 2014–15, implying further potential refunding risk.

Box I.1. Dubai Inc. Rollover Risk

DW has US$9.6 billion of debt maturing in 2011–12, or 27 percent of its total debt. Roughly ¾ of this debt is associated with DP World and Drydocks, i.e., not real-estate related. The rest is associated with Nakheel, Istithmar World, and Limitless, DW's private equity arm. The authorities have indicated that: (i) Nakheel bonds will be paid in full and on time; (ii) negotiations are on-going to extend the maturity of Nakheel loans on commercial terms; (iii) limitless does not need debt restructuring; and (iv) the private equity debt is located in Special Purpose Vehicles.



DH has US$2.7 billion of its debt due in 2011-12, about 20 percent of its total of US$14.4 billion. DH is in negotiations with creditors on restructuring debt related to real estate and private equity ventures. Creditors have agreed to convert a US$555 million facility from June 2010 into a five-year term loan. The GD has injected roughly US$2 billion into the company, and has said it would do more if necessary. DIC, an investment arm of DH, restructured bank loans worth US$2.5 billion, with US$0.5 billion maturing in 2014 and the remaining US$2 billion in 2016. Finally, DG has recently started to restructure US$6.2 billion of bank loans.

More than half of ICD's debt, or US$12 billion of the total US$22.2 billion, matures in 2011–12. This debt is concentrated with the banks (Emirates NBD, Dubai Islamic Bank and Commercial Bank of Dubai) and with Emirates Airlines. This total also includes a US$1 billion Emaar loan, and another US$0.6 billion in DUBAL loans.

Other Dubai Inc. issuers have US$5.7 billion due in 2011-12 (34 percent of the US$16.7 billion total). These include US$2.2 billion DEWA debt maturing in 2012, US$1 billion for Department of Civil Aviation in 2011, and US$1.25 billion from DIFC in 2012.

Table I.2. Dubai: Publicly-Held Debt in the Form of Bonds and Syndicated Loans 1/ 2/

(In millions of U.S. dollars)

As of: December, 2010	Debt Type	2011	2012	2013	2014	2015	Beyond		Total
Dubai World and subsidiaries									
	Bonds	750	2,043	0	350	3,200	3,600		9,943
	Loans	3,824	3,000	546	409	6,662	11,739		26,180
	Total	4,574	5,043	546	759	9,862	15,339		36,123
Dubai Holding and subsidiaries									
	Bonds	241	500	93	995	0	977		2,806
	Loans	2,007	0	0	3,645	705	5,220		11,577
	Total	2,248	500	93	4,640	705	6,197		14,383
Investment Corporation of Dubai and subsidiaries									
	Bonds	1,534	1,678	890	67	0	2,543		6,711
	Loans	4,381	2,282	2,080	93	510	3,273		12,619
	Total	5,915	3,960	2,970	160	510	5,816		19,330
Other Dubai Inc. 4/									
	Bonds	0	1,250	871	0	1,000	2,000	3/	5,121
	Loans	1,581	2,639	1,100	3,090	0	2,163		10,573
	Total	1,581	3,889	1,971	3,090	1,000	4,163		15,694
Total Dubai Inc.		14,318	13,391	5,580	8,649	12,077	31,515		85,530
Other Dubai Inc. 5/									
	Bonds	0	750	599	0	0	220		1,569
	Loans	635	1,000	0	0	0	686		2,321
	Total	635	1,750	599	0	0	906		3,890
Government of Dubai									
	Bonds	0	0	1,770	20,479	0	0	6/	22,249
	Loans	1,045	68	68	68	34	0		1,283
	Total	1,045	68	1,838	20,547	34	0		23,532
Total Dubai Debt		15,998	15,209	8,017	29,195	12,111	32,421		112,952
In percent of Dubai 2010 GDP		14.5	13.8	7.3	26.5	11.0	29.4		102.6
Memorandum items:									
Restructured Debt		0	0	0	5,400	10,005	15,100		30,505
Dubai Inc. banks		25,388	20,484	10,995	13,576	8,473	33,722		112,639
Government guaranteed 7/		4,543	1,515	2,737	226	812	2,658		12,492
Total GD including Guarantees		5,589	1,583	4,574	20,773	846	2,658		36,024

Sources: Dealogic, Zawya, Bloomberg, Dubai authorities, and Fund staff estimates.

1/ Excluding bilateral bank loans and accounts payable.
2/ Regardless of residency of debt holders.
3/ Assuming DEWA fully draws its receivables-securitization program under Thor Asset Purchase (Cayman) Ltd.
4/ Includes DEWA, DIFC, DAE, Borse Dubai, and others.
5/ Dubai GREs with government ownership below 50% (Emaar, DIB, CBD).
6/ Assuming Abu Dhabi direct and indirect support is fully drawn.
7/ Mainly ICD holding level and DEWA debt, in addition to the governments'.

Table I.3. Abu Dhabi: Publicly-Held Debt in the Form of Bonds and Syndicated Loans
(In millions of U.S. dollars)

As of: December, 2010	Debt Type	2011	2012	2013	2014	2015	Beyond	Total
Abu Dhabi Investment Council 1/								
	Bonds	1,540	896	365	1,933	1,148	1,942	7,824
	Loans	1,000	882	400	0	0	40	2,322
	Total	2,540	1,778	765	1,933	1,148	1,982	10,146
Abu Dhabi Water & Electricity Authority 2/								
	Bonds	99	1,500	1,993	1,000	0	3,412	8,004
	Loans	3,150	0	989	0	213	7,796	12,148
	Total	3,249	1,500	2,982	1,000	213	11,208	20,152
Etihad								
	Bonds	0	0	0	0	0	0	0
	Loans	0	0	0	0	0	1,068	1,068
	Total	0	0	0	0	0	1,068	1,068
International Petroleum Investment Company 3/								
	Bonds	0	0	0	0	1,000	1,500	2,500
	Loans	2,434	850	4,359	0	0	0	7,643
	Total	2,434	850	4,359	0	1,000	1,500	10,143
Mubadala Development Company 4/								
	Bonds	19	0	0	1,250	0	1,699	2,968
	Loans	0	0	5,300	0	0	8,482	13,782
	Total	19	0	5,300	1,250	0	10,181	16,750
Tourism and Development Investment Company								
	Bonds	0	0	0	2,000	0	0	2,000
	Loans	0	0	0	0	0	0	0
	Total	0	0	0	2,000	0	0	2,000
Other Abu Dhabi Inc. 5/								
	Bonds	0	0	0	0	0	0	0
	Loans	0	0	0	500	0	150	650
	Total	0	0	0	500	0	150	650
Other Loans								19,561
Total Abu Dhabi Inc.		11,502	7,388	16,666	9,943	5,621	29,349	80,470
Other Abu Dhabi Inc. 6/								
	Bonds	2,589	470	1,021	1,250	0	0	5,330
	Loans	2,554	1,425	0	640	0	1,951	6,570
	Total	5,143	1,895	1,021	1,890	0	1,951	11,900
Government of Abu Dhabi								
	Bonds	0	1,000	0	1,500	0	1,500	4,000
	Loans	335	214	310	311	312	5,670	7,152
	Guarantees							490
	Total	417	1,296	392	1,893	394	7,252	11,642
Total Abu Dhabi Debt		17,062	10,579	18,079	13,726	6,015	38,552	104,012
In percent of Abu Dhabi 2010 GDP		9.0	5.6	9.5	7.2	3.2	20.3	54.8

Sources: Dealogic, Zawya, Bloomberg, Abu Dhabi authorities, and Fund staff estimates.

1/ Includes ADCB, NBAD, UNB
2/ Includes TAQA & US$6.6 billion non-recourse debt for IWPP
3/ Includes US$2.5 billion Nov issuance
4/ Includes Dolphin, EMAL
5/ Includes ADPC, GHC
6/ Below 50 percent government-owned entities; include Aldar, FGB, NCCC, Sorouh.

D. Which GREs are Currently the Main Sources of Contingent Risk?

13. **Currently, several GREs pose contingent risk to the sovereign balance sheet**.[5] Over the past few years, GREs have been offered what the market perceived as implicit guarantees and, lately, actual transfers have been made to support specific companies. Several GREs seem to be lacking sufficiently strong governance structure. For most non-listed GRE annual reports are not published, including audited balance sheets and income statements. Information on off-balance sheet liabilities is often unavailable and so are data about overall activity, employment, and investment. On this ground, several GREs in Dubai (e.g. some subsidiaries of DW and DH and few ones in ICD) and Abu Dhabi should be regarded as sources of risk for the sovereign balance sheet.

14. **The deterioration in the financial conditions of some GREs point to continued risk.** Bottom-up analysis of available GREs' financial statements reveals areas of profitability—albeit eroding from a year earlier—countered by outright losses for several real estate companies and some financial services entities (Tables I.4 and I.5).[6] For Dubai GREs, profit margins, computed as net profits over operating revenues or interest income (in the case of conventional financial institutions) or income (for Islamic banks), were down to a ratio of -0.17 in the third quarter of 2010 from 0.18 a year earlier on a set of 15 companies. It is worth pointing out, however, that the largest losses were concentrated in DCHOG. Once this entity is excluded, profit margins were actually slightly up from a year earlier. In Abu Dhabi, average profit margins for a sample of 18 GREs were slightly down, the main exception being Mubadala, which benefited from significant government capital injections during the period under consideration.

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[5] The assessment of the risk posed by a public enterprise is based on a set of criteria, which include managerial independence, relations with the government, governance structure, financial conditions and sustainability, and several other factors. The criteria could be further broken down in more specific areas of performance: *Managerial independence:* (1) pricing; (2) employment policies; *Relations with the government;* (3) subsidies and transfers; (4) quasi-fiscal activities; (5) the regulatory and tax regime; *Governance structure;* (6) periodic outside audits; (7) publication of comprehensive annual reports; (8) shareholders' rights; *Financial conditions and sustainability;* (9) market access; (10) less than full leveraging; (11) profitability; (12) record of past investments; and *Other risk factors;* (13) vulnerability; and (14) importance.

[6] The bottom-up analysis of the GREs' financial statements aims to assess the financial performance of a selected number of GREs that account for a relevant share of total actual and contingent liabilities for the sovereign. The information gathered is rearranged into ratios capturing the main areas of financial performance and compared to that observed over the same quarter a year earlier. The analysis focuses on the extent to which the GREs rely on debt financing (leverage) and on their ability to generate earnings (profitability).

Table I.4. Dubai GREs: Select Indicators

	Sector	Government Ownership	Select Financial Ratios as of Q3/10 (or latest available): Debt Ratio	Debt-Equity Ratio	Profit Margins	ROA	ROE
Dubai Holding	Financial Services	100%					
Dubai Holding Commercial Operations Group	Financial Services	100%	0.84	7.51	-2.40	-13.7%	-122.5%
Dubai Properties Group	Real Estate	100%					
Jumeirah Group	Leisure & Tourism	100%					
Tatweer	Financial Services	100%					
TECOM Investments	Real Estate	100%					
Dubai Holding Investment Group	Financial Services	100%					
Dubai Group	Financial Services	100%					
Dubai International Capital	Financial Services	100%					
Dubai World	Financial Services	100%					
Drydocks World	Transport	100%					
Economic Zones World	Real Estate	100%					
Jebel Ali Free Zone	Real Estate	100%					
Istithmar World	Financial Services	100%					
Limitless	Real Estate	100%					
Nakheel	Real Estate	100%					
Port and Free Zone World	Financial Services	100%					
Dubai Maritime City	Real Estate	100%					
DP World	Transport	80%	0.50	1.38	0.14	0.9%	2.4%
Investment Corporation of Dubai	Financial Services	100%					
Dnata	Leisure & Tourism	100%					
Dubai Aluminum Company	Mining & Metals	100%					
Dubai Duty Free	Retail	100%					
Dubai Electricity and Water Authority	Power & Utilities	100%					
Dubai World Trade Centre	Real Estate	100%					
Emirates Airline	Transport	100%	0.64	2.06	0.08	4.8%	15.4%
Emirates National Oil Company	Oil & Gas	100%					
Emirates NBD	Financial Services	56%	0.88	7.70	0.23	0.5%	4.4%
Emirates Islamic Bank	Financial Services	100%	0.91	10.17	0.09	0.1%	1.7%
Union Properties	Real Estate	48%	0.70	2.34	-0.36	-3.5%	-11.9%
Cleveland Bridge and Engineering Middle East	Mining & Metals	51%					
Dubai Cable Company	Industrial	50%					
National Bonds Corporation	Financial Services	50%					
Emaar Properties	Real Estate	31%	0.51	1.04	0.26	2.6%	5.3%
Amlak Finance	Financial Services	48%	0.84	6.23	0.00	0.0%	0.1%
Dubai Islamic Bank	Financial Services	30%	0.89	7.87	0.29	0.7%	6.3%
Tamweel	Financial Services	57%	0.79	3.66	0.04	0.1%	0.6%
Deyaar Development Company	Real Estate	43%	0.38	0.62	-1.44	-3.6%	-5.9%
Noor Investment Group	Financial Services	25%					
Commercial Bank of Dubai	Financial Services	20%	0.84	5.38	0.52	1.5%	9.9%
Dubai Investments	Financial Services	12%	0.35	0.58	0.34	3.7%	6.1%
Borse Dubai	Financial Services	uncertain					
Dubai Financial Market	Financial Services	80%	0.06	0.06	1.37	0.7%	0.8%
Deira Investment Company	Real Estate	uncertain					
Dubai Aerospace Enterprise	Transport	uncertain					
Emirates Investment and Development Company	Financial Services	uncertain					
Dubai International Financial Centre	Financial Services	100%					
Other Dubai Inc.							
Total			**0.79**	**4.03**	**-0.17**	**-1.3%**	**-6.9%**
Total ex-DHCOG			**0.78**	**3.67**	**0.13**	**1.0%**	**5.0%**
Real Estate			0.53	1.12	0.09	0.8%	1.7%

Sources: Zawya and Fund Staff estimates.

Table 5. Abu Dhabi GREs: Select Indicators

			Financial Ratios as of Q3/10 (or latest available)				
	Sector	Government Ownership	Debt Ratio	Debt-Equity Ratio	Profit Margins	ROA	ROE
Abu Dhabi Airports Company (ADAC)	Transport	100%					
Abu Dhabi Investment Council (ADIC)	Financial Services	100%					
Al Hilal Bank	Financial Services	100%					
Abu Dhabi Investment Company	Financial Services	98%					
National Bank of Abu Dhabi	Financial Services	70%	0.89	8.09	0.56	1.0%	9.4%
Abu Dhabi Commercial Bank	Financial Services	65%	0.89	8.17	0.00	0.0%	0.0%
Union National Bank	Financial Services	50%	0.87	6.91	0.48	1.2%	9.2%
Abu Dhabi National Chemicals Company	Oil & Gas	40%					
Abu Dhabi Aviation	Transport	30%	0.33	0.70	0.15	4.3%	9.1%
Abu Dhabi National Insurance Company	Financial Services	24%	0.42	0.74	0.09	2.7%	4.7%
Al Ain Ahlia Insurance Company	Financial Services	20%	0.42	0.75	0.07	1.4%	2.4%
Abu Dhabi National Hotels	Leisure & Tourism	18%	0.10	0.11	0.19	2.0%	2.2%
Emirates Insurance Company	Financial Services	12%	0.50	1.01	0.18	4.1%	8.3%
Abu Dhabi Islamic Bank	Financial Services	8%	0.91	10.74	0.35	1.0%	11.3%
Sorouh Real Estate Company	Real Estate	7%	0.48	1.05	0.22	1.2%	2.6%
National Corporation for Tourism and Hotels	Leisure & Tourism	5%	0.52	1.10	0.23	5.4%	11.4%
Abu Dhabi National Exhibition Company (ADNEC)	Real Estate	100%					
Abu Dhabi Ports Company (ADPC)	Real Estate	100%					
Abu Dhabi Water and Electricity Authority (ADWEA)	Power & Utilities	100%					
Abu Dhabi National Energy Company (TAQA)	Power & Utilities	51%	0.85	12.02	0.05	0.5%	6.8%
Etihad Airways	Transport	100%					
General Holding Corporation	Industrial	100%					
International Petroleum Investment Company (IPIC)	Oil & Gas	100%					
Mubadala Development Company	Financial Services	100%	0.43	0.78	0.37	4.1%	7.4%
Abu Dhabi Aircraft Technology	Transport	100%					
Abu Dhabi Future Energy Company	Real Estate	100%					
Advance Technology Investment Company	Financial Services	100%					
Al Taif Technical Services	Transport	100%					
Al Yah Satellite Communications Company	Media	100%					
Injazat Data Systems	IT	60%					
Abu Dhabi Finance	Financial Services	52%					
Dolphin Energy Limited	Oil & Gas	51%					
John Buck International	Real Estate	51%					
LeasePlan Emirates	Transport	51%					
Emirates Aluminum Company	Mining & Metals	50%					
Emirates Ship Investment Company	Transport	50%					
Abu Dhabi Ship Building Company	Transport	40%	0.78	3.80	0.09	2.5%	12.0%
Agility Abu Dhabi Company	Transport	37%					
Dunia Finance	Financial Services	31%					
Abu Dhabi Terminals	Transport	25%					
Al Maabar International Investments	Real Estate	20%					
Emirates Integrated Telecommunications Company	Telecommunications	20%	0.61	1.70	0.08	2.6%	7.1%
Advanced Micro Devices	IT	19%					
Aldar Properties	Real Estate	19%	0.73	2.94	-1.63	-1.9%	-7.7%
Waha Capital	Financial Services	15%	0.55	1.29	0.29	1.2%	2.9%
National Central Cooling Company	Power & Utilities	11%	0.81	4.63	0.16	1.0%	6.0%
First Gulf Bank	Financial Services	5%	0.84	4.81	0.55	1.9%	10.6%
Tourism Development and Investment Company (TDIC)	Real Estate	100%	0.40	0.83	-2.34	-1.1%	-2.3%
Other Abu Dhabi Inc.							
Total			0.79	4.06	0.21	1.0%	5.1%
Real Estate			0.59	1.67	-0.86	-1.3%	-3.6%

Sources: Zawya and Fund staff estimates.

15. **GREs in the real estate sector face significant financial constraints.** Five real estate GREs are included in the sample. These are Aldar Properties, Sorouh Real Estate, and TDIC for Abu Dhabi; Deyaar Development Company, Emaar Properties, and Union Properties for Dubai. In aggregate, this set of companies posted net losses worth AED 0.9 million in the third quarter of 2010. Aldar Properties, Deyaar Development Company, TDIC and Union Properties posted losses, and Sorouh Real Estate reported a significant contraction in profits from a year earlier. The sector's performance would have been much worse if Emaar Properties had not recorded major progress in the period under consideration.

16. **Regional comparisons confirm the problems faced by the Emirati GREs operating in the real estate sector.** The losses reported by real estate companies in Dubai and Abu Dhabi are in stark contrast with the financial performance registered by several regional peers. Table I.6 compares the performance of five UAE real estate GREs and five large companies operating in the same sector in Qatar, Saudi Arabia, and Egypt as of the third quarter of 2010 (or latest available). The average profit margin ratio for the latter group is +0.39, while the same ratio for U.A.E. GREs is -0.03. The discrepancy is even larger, if Emaar is excluded from the sample. ROA and ROE highlight similar dynamics. Also, U.A.E. GREs tend to exhibit higher leverage ratios than their regional peers.

Table I.6. U.A.E. Real Estate GREs vs. Regional Peers: Select Indicators

		Select Financial Ratios as of Q3/10 (or latest available)				
	Country	Debt Ratio	Debt-Equity Ratio	Profit Margins	ROA	ROE
ALDAR Properties	U.A.E.	0.75	3.00	-1.63	-1.9%	-7.7%
Barwa Real Estate Company	Qatar	0.83	5.26	1.29	0.9%	5.7%
Company	Saudi Arabia	0.38	0.64	0.36	3.7%	6.1%
Deyaar Development Company	U.A.E.	0.39	0.62	-1.44	-3.6%	-5.9%
Emaar Properties	U.A.E.	0.51	1.04	0.26	2.6%	5.3%
Ezdan Real Estate Company	Qatar	0.13	0.15	0.54	0.4%	0.5%
Sorouh Real Estate Company	U.A.E.	0.54	1.17	0.22	1.2%	2.6%
Talaat Mostafa Group Holding	Egypt	0.54	1.20	0.19	1.2%	2.7%
Union Properties	U.A.E.	0.70	2.37	-0.36	-3.5%	-11.9%
United Development Company	Qatar	0.64	2.08	0.55	3.2%	10.3%
Total U.A.E. Real Estate GREs		0.61	1.57	-0.03	-0.2%	-0.4%
Total U.A.E. Real Estate GREs ex-Emaar		0.68	2.09	-0.58	-1.9%	-5.9%
Total Regional Peers		0.56	1.32	0.39	1.4%	3.3%

Sources: Zawya; and Fund staff estimates.

17. **At least US$20 billion of contingent liabilities may stem from GREs in Dubai and Abu Dhabi.** Not all GREs should be seen as sources of sovereign risk, but, most entities operating in the real estate sector appear to be falling in this category, given the weak performance of the sector. Accordingly, if we assume that all debt issued by real estate GREs or their subsidiaries, together with that of those entities currently reporting losses, will be a

contingent liability in the sovereign balance sheet, at least US$20 billion of contingent risk can be foreseen for Dubai and Abu Dhabi, with over half of that debt coming due in 2011–12.

18. **There are several caveats to this estimate**. First, other companies, primarily non-listed entities, which do not disclose financial statements, may also be registering losses. Second, the performance of profitable companies operating outside the real estate sector may also be subject to deterioration over the coming years, ultimately triggering sovereign support. Third, for several GREs, the liabilities requiring sovereign support may exceed significantly the level of publicly held debt. Finally, sovereign support may well go beyond guaranteeing the stock of outstanding liabilities and requiring capital injection. While all these factors should be taken into account when assessing the perimeter of contingent risk, on a more positive note, the net impact of these companies on the sovereign balance sheet might also turn out to be lower when assets are accounted for.

19. **Local banks appear prepared to absorb losses on exposures to GREs operating in the real estate**. A staff stress test assumes that local banks need at least 16 percent capital adequacy to stay in line with regional peers. Under this assumption, banks could take a 90 percent write-down on the estimated US$20 billion debt of both Dubai and Abu Dhabi GREs operating in the real estate sector or reporting outright losses. If one focuses on Dubai only, the local banks could take a 25 percent write-down on all Dubai nonbank GRE debt of around US$70 billion. These are rough system-wide estimates based on publicly available information that generally excludes bilateral bank loans.

E. Policies to Manage GRE Risk

20. **The U.A.E.'s stock of government debt is relatively low, but GREs pose significant contingent risk on the emirates' sovereign balance sheets.** The size of U.A.E.'s publicly-held government debt is rather small. It is only when the debt of the GREs is accounted for that the full scale of the risk faced by the sovereign balance sheet becomes visible, as well as its potential implications for the domestic banking sector and debt capital markets.

21. **Most GREs operating in the real estate sector should be seen as sources of sovereign risk**. Financial conditions vary considerably across companies. Bottom-up analysis of GREs' financial statements reveals outright losses for several real estate companies and some financial services entities.

22. **Furthermore, with US$60 billion maturing in 2011–12, both Dubai and Abu Dhabi face short-term rollover risk.** Short-term roll-over risk may translate into a new shock in the cost of funding. The government and the companies might have to roll over debt at a higher cost and, in extreme cases, because of exceptionally large increases in government funding costs, might not be able to refund at all, ultimately putting further strains on fiscal accounts and on the financial system.

23. **The recent GRE bailouts and the expansion of GRE borrowings in several emirates underscore the need to have a proper risk management framework for GREs.** Such a framework entails assessing, monitoring, and reporting of contingent liabilities arising from the GREs, and transparent reflection of GRE contingent liabilities in government accounts. To this end, the debt management offices should have dedicated units collecting frequent data on GRE outstanding liabilities, their maturity profile, income and cash-flow statements, and assessing potential contingent liabilities to the sovereign. The authorities should also consider including a statement of this contingent risk as part of the annual budget documents, including discussion of past experiences, forward-looking estimates as well as a presentation of as well as risk mitigation strategies.

24. **Containing GRE borrowing is a pre-condition for fiscal sustainability and financial stability at the emirate level and requires a strong institutional framework.** With nearly US$60 billion of debt expected to mature over these two years, governments and corporates might have to roll over debt at a higher cost and, in extreme cases, because of exceptionally large increases in government funding costs, might not be able to refund at all, ultimately putting further strains on fiscal accounts and on the financial system. In order to contain further risk-taking, the authorities should consider introducing a mechanism to manage GRE borrowing (including through setting limits on changes in GRE borrowings or overall GRE liabilities) to avoid sustainability problems emerging from these entities over the medium term. Any GRE borrowing at the emirate level would then require the assent of the emirate finance department. This would provide a strong signal of debt sustainability and broader financial market stability.

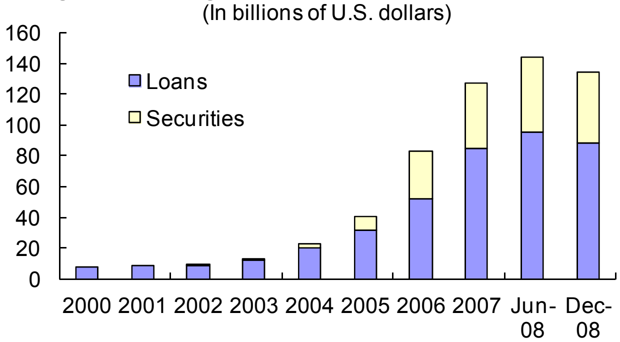
25. **Improved corporate governance and transparency are also key for mitigating the risks posed by GREs**. An assessment of corporate governance against the OECD standard would be useful. In particular, it would be important to delineate clearly between the commercial and noncommercial operations carried by GREs, clarify the government support strategy to the GREs, and standardize the accounting, auditing, and financial reporting practices of GREs. The GAD has made important progress in this area by disclosing the list of GREs that it would support and including explicit transfer in the budget for the noncommercial operations of the GREs. Better information disclosure about GRE financial accounts would also help attract investors and ultimately translate into lower funding costs.

II. Ensuring Financial Sector Stability in the United Arab Emirates[7]

A. Introduction

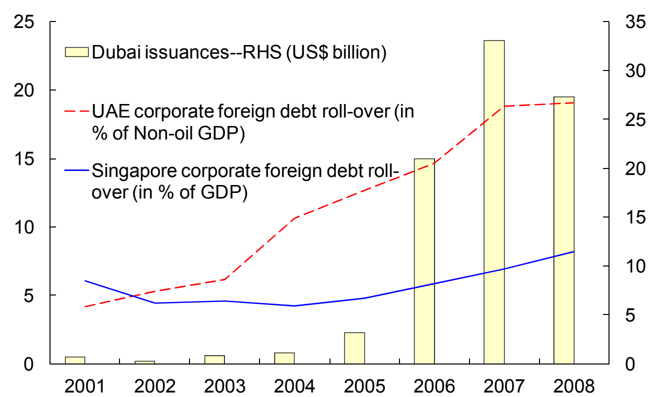
26. **Dubai embarked on large-scale property development and overseas investments to accelerate the diversification of its economy that led to boom and subsequent bust.** Given the scale of financing needed relative to the small local banking system, Dubai's GREs borrowed abroad in the form of syndicated loans, bonds and Islamic sukuks (Figure II.1). Consequently, the surge in Dubai foreign borrowing led to significant roll-over risk (Figure II.2).

Figure II.1. Foreign Debt of U.A.E. Corporates, 2000–08
(In billions of U.S. dollars)



Sources: JEDH.org and Fund staff estimates and calculations.

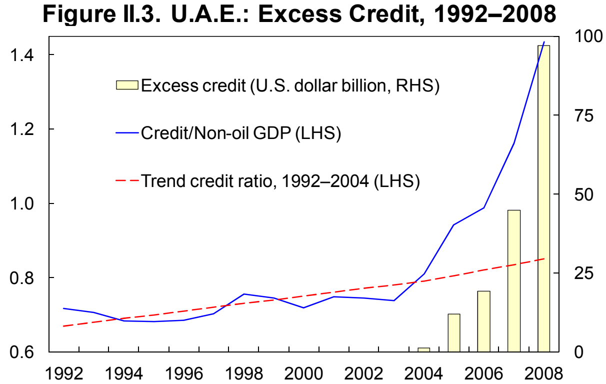
Figure II.2. Foreign Roll-Over Needs of Corporates, 2001–08



Sources: JEDH, Dealogic, and IMF staff estimates.

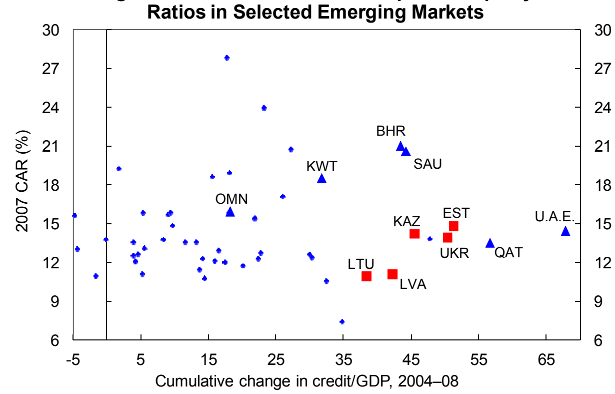
27. **The U.A.E. banking sector played a role in the overheating cycle of Dubai.** Domestic credit expanded on average at 40 percent per year during 2004–08, much above trend (Figure II.3) and out of line with other emerging markets (Figure II.4). At the same time, capital dropped from 19 percent of risk-weighted assets in 2003 to 13 percent in 2008. The credit surge, encouraged by negative real interest rates, went mainly to the suppliers of Dubai GREs and personal loans for business purposes (name lending).

Figure II.3. U.A.E.: Excess Credit, 1992–2008



Sources: Central Bank and Fund staff estimates and calculations.

Figure II.4. Credit Growth and Capital Adequacy Ratios in Selected Emerging Markets



Source: Fund staff estimates.

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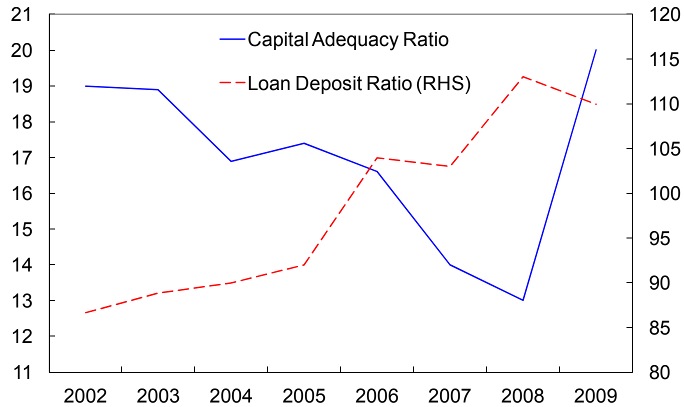
[7] Prepared by Gabriel Sensenbrenner. Based on aggregate banking data up to end-December 2010.

28. **Short-lived speculative deposit inflows amplified the end of the cycle.** The growing differential with U.S. inflation encouraged speculative bets on a currency appreciation starting in mid-2007, in the form of deposits in local banks. These reversed abruptly in the second quarter of 2008 when it became clear that the commitment to the peg was strong. By then, loan/deposit ratios had risen above 100 percent (Figure II.5).[8] The U.A.E. deposit base is skewed toward deposits from large corporates, as wage earners are primarily expatriates that remit earnings abroad.

Figure II.5. U.A.E. Local Banks Capital and Liquidity Buffers, 2002–09



Sources: Central Bank and Fund staff estimates and calculations.

29. **Looking forward, banks and the authorities need to prepare for aftershocks emanating from Dubai and the broader real estate sector.** On-going debt restructurings in the Dubai GREs as well as further nonperforming loans (NPLs) from still falling property values will require more provisions and continue to dampen profitability, more so in Dubai banks than in Abu Dhabi banks. Banks with a greater proportion of restructured loans in their books should also be prepared to absorb the roll-over risk as these loans start to mature, and the scheduled decline in government capital support starting in 2012. Finally, banks will need to lengthen the maturity of their funding and improve its stability in light of the Basel III liquidity requirements.

30. **The paper is organized as follows:** Section B provides an overview of the policy responses to the crisis. Section C discusses current conditions and remaining vulnerabilities of the banking system. Section D highlights the main risks facing the system. Section E discusses policies to ensure the stability of the system.

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[8] CBU regulations impose a ceiling of 100 percent on the loan to stable resources ratio, where stable resources are defined as 85 percent of deposits plus market funding above six months.

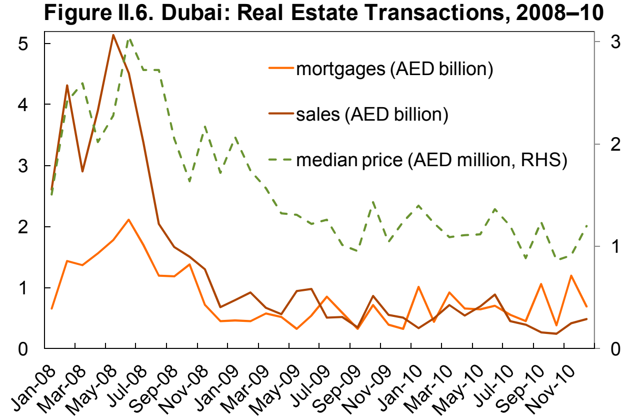
B. Policy Responses to the Crisis

31. **The crisis had three main phases:**

- The reversal of deposit inflows in the second quarter of 2008 and the correction in Dubai property prices (Figure II.6).

- The sharp increase in Dubai borrowing costs after Lehman Brothers (in the fourth quarter of 2008; Figure II.7) and the sudden shut-down of international debt markets for Dubai borrowers (Figure II.8).

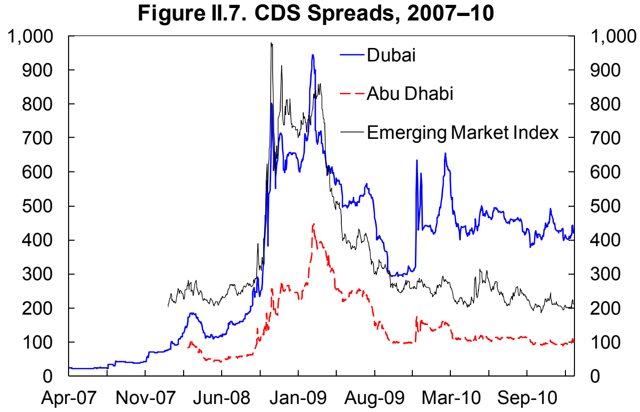
Figure II.6. Dubai: Real Estate Transactions, 2008–10



Sources: Dubai Land Department, and Fund staff estimates and calculations.

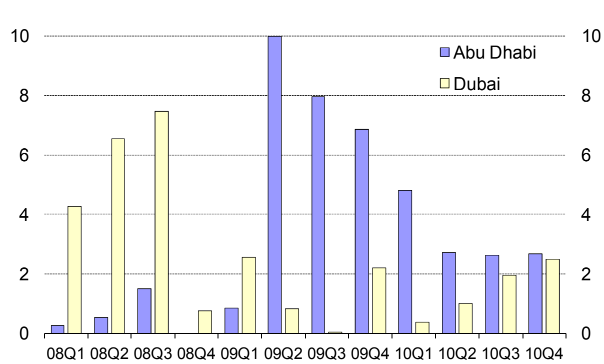
The Dubai World debt restructuring at the end of 2009.

Figure II.7. CDS Spreads, 2007–10



Source: Markit.

Figure II.8. External Debt Issuances, 2008Q1–2010Q4,
(U.S. dollar billions)



Sources: Dealogic, and Fund staff estimates and calculations.

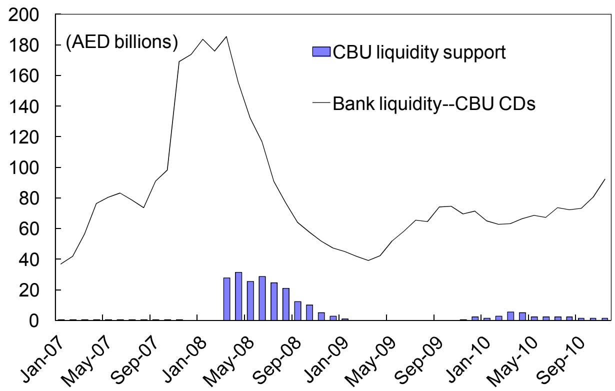
32. **The authorities took swift action in 2008 and early 2009 to support the local banks.**

- The CBU provided liquidity support (repos) to help banks handle the sharp reversal of deposit inflows, as seen in the drop of banks' holdings of central bank CDs. By end-2008, central bank repos were replaced by government deposits funded by an AED 70 billion loan from the CBU to the federal government (Figure II.9).

- The authorities also recognized quickly that capital ratios of 13 percent would be too low in the new environment. A plan was put in place to boost capital. In the event, capital adequacy rose to 19 percent by mid-2009, a combination of tier 1 capital from emirate governments and conversion of federal and emirate government term deposits into tier 2 capital (Figure II.10).[9]

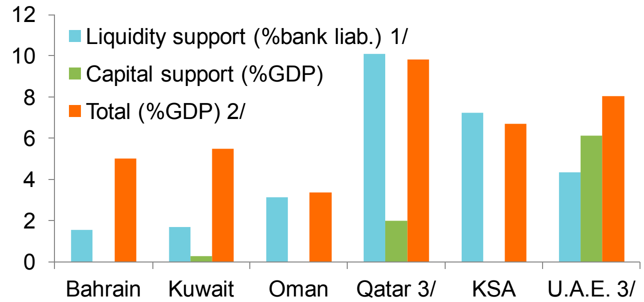
- A three-year blanket guarantee on bank liabilities was introduced. This guarantee has not been formalized and there is no levy on banks into an insurance fund.

Figure II.9. Bank Liquidity and CBU Support, 2007–10



Sources: Central bank and Fund staff estimates and calculations.

Figure II.10. GCC Bank Support Packages, 2008–09



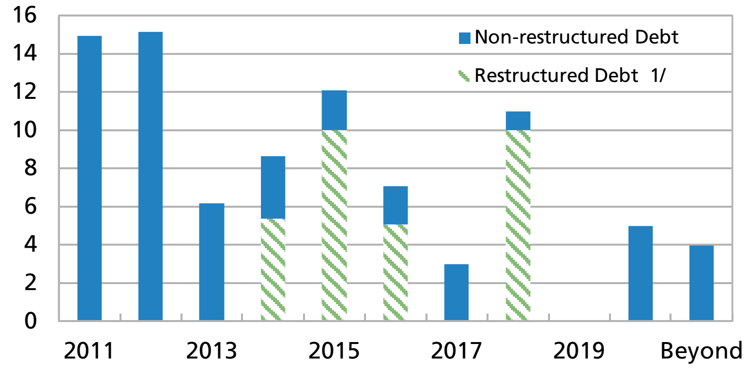
Source: Fund staff estimates.
1/ Pre/post crisis change in gov. deposits and use of central bank facilities.
2/ Includes purchases of bank assets, stock market interventions, etc.
3/ Some double counting of capital and liquidity support.

33. **The local banks also benefitted from various official loans to the GD, which benefited Dubai GREs, including Dubai World.** The central bank bought a $10 billion bond from the GD in the first quarter of 2009 which the GD lent on to its GREs. However, it became clear by the end of 2009 that most Dubai borrowers would not regain market access at reasonable cost. Abu Dhabi provided further loans to GD after Dubai World called a debt standstill in November 2009. The central bank and Abu Dhabi loans helped the GREs maintain some payment to contractors and suppliers and keep interest payments on bank loans current, thereby minimizing provisioning while negotiating debt restructuring. The restructuring deal for Dubai World that was agreed in mid-2010 allowed key developers to resume some activity and payments to the supply chain.

[9] Tier 1 support amounted to $4 billion (mainly Abu Dhabi) and tier 2 was $16 billion.

34. **The DW debt restructuring has generated limited provisioning requirements for local banks**. The DW restructuring has been used as a template for other GREs. In broad terms, the template involves senior creditors extending principal by several years and haircuts that depend on a menu of interest rate options—the haircuts translate into net present value (NPV) losses that are recognized upfront as specific provisions under IFRS. In exchange, the GD increased its equity in the companies. Bonded debt is paid in full and on time to minimize coordination delays and ensure that negotiations can focus on the larger bank debt. As a result, more than $30 billion of Dubai GRE debt has been shifted from 2010–11 to 2014–18 (Figure II.11). Provisions for NPV losses for DW restructured loans amount to AED 1.8 billion for local banks, about 9 percent of the value of their exposure. It is expected that NPV losses/provisions on on-going GRE debt restructuring could be somewhat higher.

Figure II.11. Maturity Profile of Dubai GRE Debt, 2011-30
(In U.S. dollar billion)



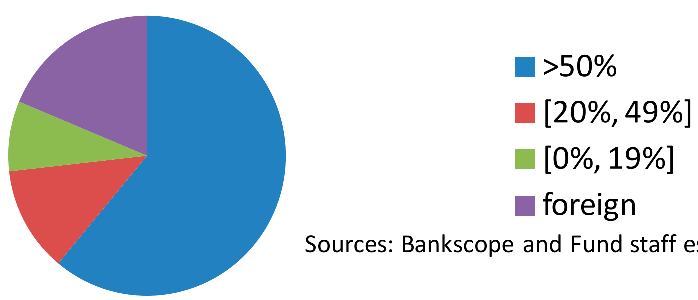
Sources: Dealogic; Bloomberg; country authorities; and Fund staff estimates.

1/ Preliminary estimates based on public information about Dubai Holding and other GRE ongoing debt restructurings, as well as Dubai World's completed restructuring; including debt guaranteed by the Dubai government.

C. Current Conditions and Vulnerabilities

35. **Although strong government backing is viewed as a source of strength in the current environment, the large public ownership of banks raises governance issues.** Rating agencies consider that banks' intrinsic financial strength is moderate to weak, in line with other banks in the GCC. However, overall financial strength, taking into account the presumption of government support, is the highest. Local banks are controlled substantially by governments, ruling families, or GREs, with the exception of one of the 10 largest banks, which is owned by a Dubai merchant family. Banks majority-owned by the public sector control 75 percent of local banking assets—90 percent when including substantial minority shareholdings (Figure II.12). The central bank has regulatory caps on related-party and large exposures, but some banks have reportedly obtained exemptions. The international experience indicates that large public ownership dulls the incentives of management to protect the interests of the bank and minority shareholders. It can also distort the incentives of supervisors. It is worth noting that no bank has ever failed in the U.A.E.

Figure II.12. Government Ownership of Banks
(Percent of assets)

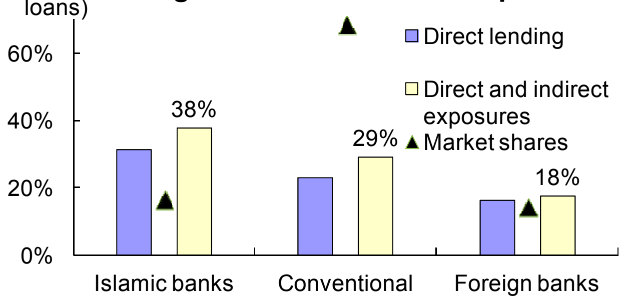


Sources: Bankscope and Fund staff estimates.

36. **The concentration of lending to GREs creates vulnerabilities for Dubai banks.** Under conservative assumptions, an estimated 16 percent of Dubai banks' loans are to Dubai GREs; 4 percent for Abu Dhabi banks. Dubai banks show already NPL ratios almost twice as high as Abu Dhabi banks. NPLs would be higher if GRE restructured loans were classified systematically as nonperforming; DW and Dubai Holding restructured loans would push the system-wide NPL ratio from 6 percent (November 2010) to 10 percent.[10] Exposure to GRE debt increases the potential for debt restructuring, hence for more provisions in 2011.

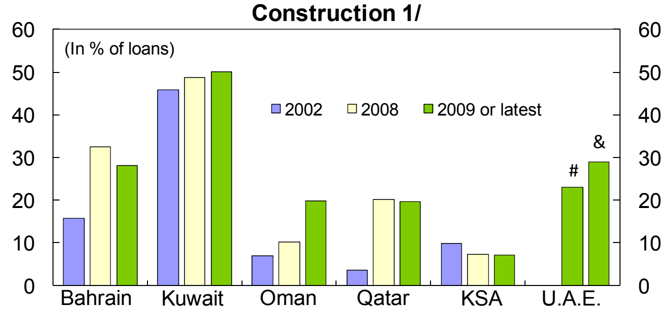
37. **Exposure to real estate is higher in Islamic banks**. The first comprehensive information on exposure to real estate risk for U.A.E. banks has become available at end-2010. This data comprises direct lending to individuals, corporate and developers for the purchase and construction of real estate, as well as indirect exposures (financial guarantees, loans to and shares in real estate investment companies). Exposure to real estate accounts for 38 percent of Islamic banks' lending; 29 percent for conventional banks (Figure II.13). Overall, U.A.E. banks would have the second highest exposure to real estate and construction in the GCC, after Kuwait (Figure II.14). The size of the property overhang in Dubai and the lack of transactions in less favorable locations imply that some of these exposures may have to be written down sharply. In some cases, this could happen over several years, as many loans to Dubai real estate-related GREs have been restructured to mature after 2014.

Figure II.13. Real Estate Exposures



Sources: Central bank and Fund staff calculations.

Figure II.14. Share of Credit to Real Estate and Construction 1/



Sources: Country authorities; and Fund staff estimates.
1/ Data for Oman and Qatar may understate household real estate borrowing. # = direct loans; & = loans, investments & commitments.

38. **The CBU has issued new regulations to harmonize loan classification and provisioning practices across banks, and to move toward forward-looking provisioning.** U.A.E. banks follow the International Financial Reporting Standard (IFRS) under which there are two categories of provisions: specific impairment; collective impairment (general

[10] Although auditors have advised banks to report DW loans as NPLs, reporting has been somewhat inconsistent, although the effects are disclosed in notes to financial statements. Banks that classified DW loans reported higher NPLs but lower provisioning ratios, because NPV losses have been low.

provisions).[11] Differences in banks' models and risk management protocols, as well as the relative importance of these categories in the mix of lending across banks, have made it difficult to compare the adequacy of such provisions under IFRS. To complement IFRS, the central bank issued in 2010 new loan classification and provisioning guidelines to help ensure greater uniformity across banks and increase the banks' forward looking general provisions (Box II.1). Preliminary indications from 2010 financial reports are that provisioning ratios have converged across local banks.

Box II.1. Central Bank Regulations on Loan Classification and Provisioning

Circular 28/2010 of November 11, 2010 can be summarized as follows:

- Corporate loans under banks' internal loan grading systems: a minimum of five loan buckets (normal; watch-list; substandard, doubtful, loss) and minimum provisioning for the bottom three categories (25, 50, and 100 percent), as well as for accrued interest. Specific provisions must be booked in the quarter in which losses become quantifiable. In the past, some banks would wait to book provisions after discussions with auditors during the annual exercise. This implied that some provisions could "catch up" as late as four quarters after the fact;
- Guidelines on whether overdraft loans are considered performing;
- Consumer loans must be provisioned based on past due criteria (90, 120, 180 days);
- Greater uniformity in general provisions, which currently stand at 1.25 percent of risk-weighted assets in the aggregate, but with significant variations across banks. New guidelines require each bank individually to have general provisions in excess of 1.5 percent by 2014.

In a separate instruction, the CBU has increased its mandated provisioning on impaired Saudi corporate exposures from 50 percent at end- 2009 to 80 percent at end-2010.

D. Outlook and Risks

39. **Local banks seem able to withstand further provisioning requirements in the short term from their core earnings.** Classified loans have almost doubled since the crisis, the second highest increase in the GCC after Kuwait (Table II.1). Net interest margins have remained resilient so far, and have been sufficient to cover the associated provisions. As a result, banks have remained profitable in the aggregate both in 2009 and 2010. The capital adequacy ratio has increased from the lowest in the GCC (13 percent in December 2008) to the highest (20.8 percent), mostly because of government support.[12]

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[11] Specific provisions apply to loans that are monitored individually because they are materially significant; provisioning occurs when the loan is impaired and the loss is quantifiable. General provisions pertain to two types of exposures: (i) individually significant exposures for which loss is likely but cannot yet be quantified—this would have been the case for DW before terms were known; (ii) small loans of similar characteristics such as residential mortgage cohorts, credit card or car loans, where banks use models to calculate provisions.

[12] The regulatory minimum capital is 12 percent since June 2011, of which 8 percent must be tier 1.

Table II.1. GCC: Selected Financial Soundness Indicators 1/
(In percent)

	Nonperforming Loans		Capital Adequacy		Provisioning Rate		Return on Assets		Return on Equity	
	2007	Latest	2007	Latest	2007	Latest	2007	Latest	2007	Latest
Bahrain	2.3	3.9	21.0	19.6	74.0	60.3	1.2	1.2	18.4	10.6
Kuwait	3.2	9.7	19.4	18.0	48.2	38.5	3.6	0.8	29.4	6.9
Oman	3.2	3.5	15.8	15.5	111.8	104.0	2.1	1.4	14.3	10.0
Qatar	1.5	1.7	13.5	16.1	90.7	84.5	3.6	2.6	30.4	19.3
Saudi Arabia	2.1	3.3	20.6	16.5	142.9	89.8	2.8	2.0	28.5	25.8
U.A.E. 2/	2.9	5.9	14.0	20.8	100.0	88.6	2.0	1.4	19.3	8.4

Source: Country authorities.

1/ End-2009, unless otherwise indicated.

2/ Local banks, December 2010. Assuming half of 2010 profits retained. Provisions are collective and specific under IFRS.

40. **High capital and earnings for the aggregate banking system mask the greater pressure on Dubai-based banks (Table II.2).** Dubai banks have NPLs almost twice as high as Abu Dhabi banks. The associated provisioning has dampened their profitability to half the level of Abu Dhabi banks. Efforts of Dubai banks to improve their liquidity profile, including by shrinking lending, have also weighed on profits. Provisioning ratios are identical across local banks; they are lower in foreign banks, reflecting possibly the reporting of DW loans.

Table II.2. United Arab Emirates: Disaggregated Financial Soundness Indicators, December 2010

(in percent)	Dubai banks	Abu Dhabi banks	Other local banks	All local banks	Foreign banks
Capital					
Regulatory capital ratio 1/	20.2	20.3	28.0	20.8	16.5
Tier 1 ratio	14.3	16.1	25.2	16.9	13.6
Risk-weighted assets/total assets	75%	81%	78%	78%	72%
Asset quality					
Classified credit/total credit	8.0	4.4	4.3	5.9	9.7
Provisions/classified credit	87	89	98	89	68
Selected exposures (percent of loans)					
Real estate (direct) 1/	23	25	17	23	17
Dubai GREs	16	4	2	..	..
Liquidity/funding					
Stable funding ratio per regulation	88	91	85	87	77
Loan/deposit ratio	97	108	101	103	84
Government deposits (% of deposits)	15	30	..	..	..
Earnings					
ROA	0.8	1.6	2.7	1.4	1.5
ROE	4.9	9.8	12.6	8.4	12.7
Leverage (equity/assets)	16.3%	16.3%	21.4%	16.7%	11.8%
Memo items					
Loan market shares	33%	44%	6%	84%	16%
Deposit market shares	34%	41%	6%	81%	19%
Credit growth (Sep 2009/Sep 2010)	-5.4%	8.6%	9.0%	2.5%	0.8%
Deposit growth (Sep 2009/Sep 2010)	-4.0%	9.0%	12.2%	3.3%	5.4%

Sources: Central Bank and Fund staff estimates and calculations.

1/ Assuming half of 2010 profits retained.

41. **Over the medium term, some banks may need to make up for the decline in capital support by the federal government.** Federal government support in the form of capital notes qualifies as tier 2 capital until 2012. Thereafter, the notes amortize at the rate of 20 percent per year until maturity in 2017. The rate of amortization implies that banks' capital adequacy will

decline by 1 percentage point per year between 2013 and 2017, which, all else equal, would reduce the current CAR from 21 percent to 16 percent. Banks could counter this erosion through retained earnings in order to replace the maturing notes with tier 1 equity. The relatively high interest rate of the capital notes provides strong banks with an incentive to exit government support: they have the option to pay back starting in 2014.

42. **Banks also need to prepare for a potential new bout of stress when restructured loans mature in a few years.** Real estate related loans are being restructured with longer maturities in Dubai on the premise that prices will have recovered in a few years. If wrong, there is a risk that these borrowers (GREs and private entities) will not be able to repay their loans when these start to mature after 2014. Thus, the potential scramble to sell property at that time to repay the loans, which coincides with the progressive decline of government capital support, could mean a further bout of pressure on banks.

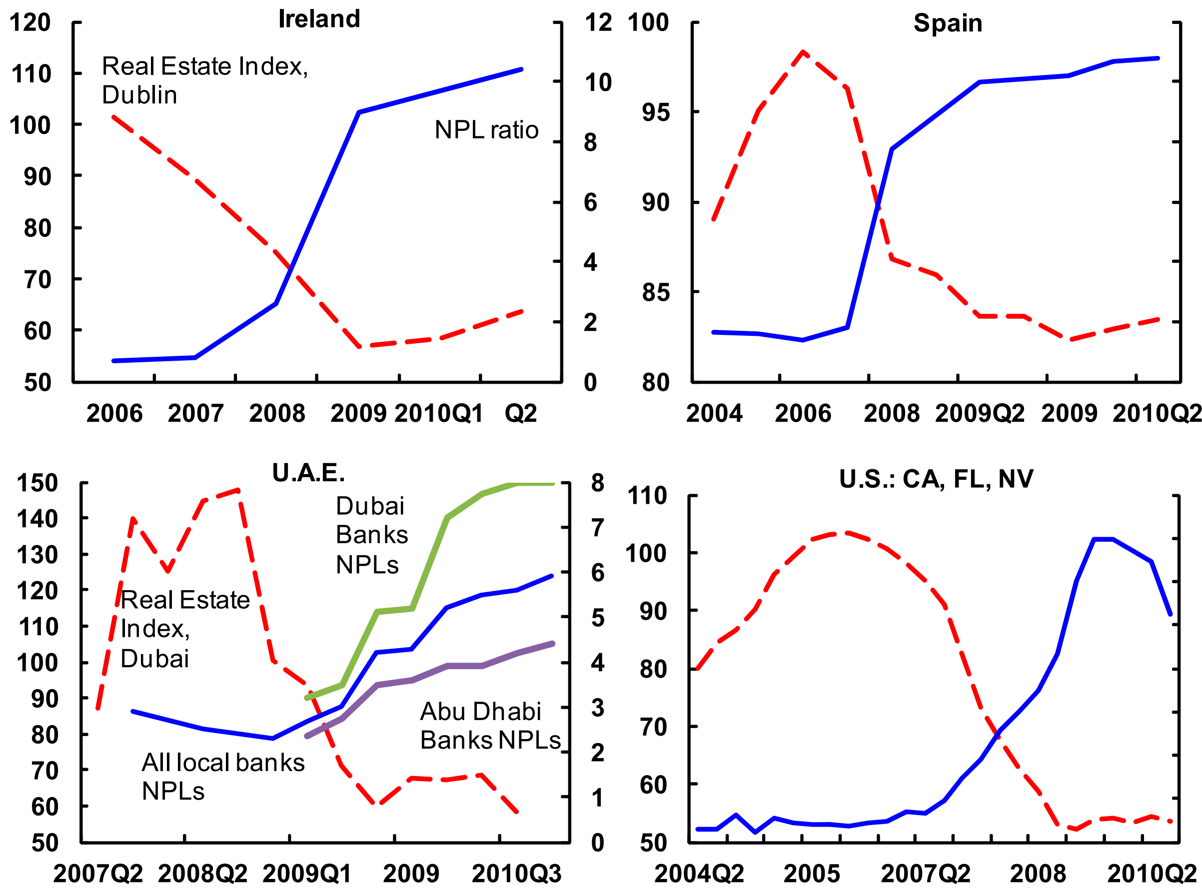
Credit risk

43. **Credit risk remains the dominant risk, a function of falling property prices and the associated impact on growth and employment.** Real estate prices in Dubai have stabilized somewhat over the past year although less desirable locations have had continued price drops. Property brokers expect some further price deterioration before buyers come in, more on the commercial than on the residential side.

44. **The experience of banking stress in markets with acute property bubbles has been used to gauge the potential for further loan deterioration.** In these markets, NPLs currently range from 6 percent (Spain) to 10–11 percent (Florida, Ireland). Most of these markets have experienced more severe recessions than Dubai, as well as weaker growth prospects in 2011. In the U.S. markets, loan deterioration has peaked as a result of economic recovery. While Dubai's economy has entered a recovery phase, its property prices are still expected to fall, which could result in higher NPLs going forward.

45. **A severe stress scenario could boost NPLs to 15 percent, which would be higher than currently in Ireland.** A less severe scenario would push NPLs to 10 percent, or above current levels in Spain or U.S. states. (Figure II.15). At end-2010, NPL stood at 5.9 percent for the system as a whole and 8 percent for Dubai banks, up from less than 3 percent before the crisis in both cases. Under the scenarios, banks maintain the provisioning ratio at 90 percent (IFRS general and specific); provisions would need to be constituted in 2011; 2010 profits are 50 percent retained; and 2011 pre-provision earnings are half the levels of 2009–10 from a combination of higher funding costs and lower lending rates. The scenario subsumes further write-offs in the value of investments, which represent about 10 percent of bank assets. The test is conducted on the aggregate balance sheet of local banks and, separately, on the aggregate balance sheet of Dubai banks.

Figure II.15 NPL Paths in Selected Banking Markets with Acute Property Bubbles



Sources: Haver; Case/Shiller (San Francisco, Los Angeles, San Diego, Miami, Tampa, Las Vegas); Dubai Land Dep.; Bank of Spain; Bankscope; GFSR; CBU.

46. **The severe scenario on end-2010 data suggests that the system could withstand the stress.** System CAR would fall to 14.8 percent under the severe scenario, and 10.9 percent for the tier 1 ratio (Table II.3). Banks are required to be above 12 percent and 8 percent respectively. Aggregate system capital would fall below levels of peers in the GCC assuming these other banking systems are immune from stress.

Table II.3. U.A.E.: Stress Test for Aggregate Local Banks

	Regulatory capital	Tier 1 capital	Comments
2009 CAR	19.9%	16.0%	tier 2 capital provided by government
2010 pre-provision earnings	32,000	32000	
2010 profits (AED millions)	18,000	18,000	
2010 CAR	20.8%	16.9%	assuming 50% profits retained 1/
NPL ratio (end-2010)	5.9%	5.9%	
Provision rate (end-2010)	89%	89%	IFRS general and specific
Provisions if NPLs rise to 10% in 2011	38,000	38,000	assuming provision rate of 90% on new NPLs 2/
2011 CAR with NPLs of 10%	18.7%	14.8%	assuming 50% lower pre-provision earnings
2011 CAR with NPLs of 15%	14.8%	10.9%	
Memo items			
Min regulatory capital	12%	8%	
Total assets (AED billions)	1,352	1,352	
Risk-weighted assets (AED billions)	1,055	1,055	

Sources: Central bank and Fund staff estimates and calculations.

1/ In line with central bank instructions to limit distribution of 2010 profits.
2/ Including Dubai Holding provisions of 20% of original principal.

47. **The severe scenario shows somewhat greater pressure on Dubai banks, particularly as concerns tier 1 capital levels.** CAR for Dubai banks would fall to 15.3 percent under the severe scenario, and 9.4 percent for the tier 1 ratio (Table II.4). Although Dubai banks would still meet the regulatory minima in the aggregate, it is possible that individual banks would not. Indeed, the test on aggregate data ignores idiosyncratic risks that could exist in individual banks, for example, from large exposures to troubled borrowers or sectors. The greater pressure on Dubai banks comes mainly from lower levels of tier 1 capital. It is worth pointing out that tier 2 capital is provided by the federal government, and could be readily converted into tier 1. In case of such interventions, the share of government ownership would increase further, with the novelty that the federal government would now also have a direct stake.

Table II.4. U.A.E.: Stress Test for Aggregate Dubai Banks

	Regulatory capital	Tier 1 capital	Comments
2009 CAR	19.7%	13.8%	tier 2 capital provided by government
2010 pre-provision earnings	11,000	11,000	
2010 profits (AED millions)	4,500	4,500	
2010 CAR	20.2%	14.3%	assuming 50% profits retained 1/
NPL ratio (end-2010)	8.0%	8.0%	
Provision rate (end-2010)	87%	87%	IFRS general and specific
Provisions if NPLs rise to 10% in 2011	10,000	10,000	assuming provision rate of 90% on new NPLs 2/ 3/
2011 CAR with NPLs of 10%	19.2%	13.3%	assuming 50% lower pre-provision earnings
2011 CAR with NPLs of 15%	15.3%	9.4%	
Memo items			
Min regulatory capital	12%	8%	
Total assets (AED billions)	550	550	
Risk-weighted assets (AED billions)	411	411	

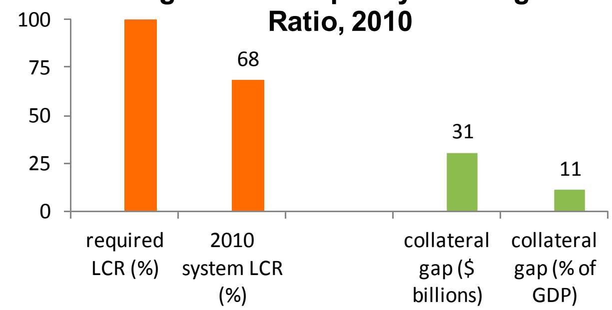
Sources: Central bank and Fund staff estimates and calculations.

1/ In line with central bank instructions to limit distribution of 2010 profits.
2/ Including Dubai Holding provisions of 20% of original principal.
3/ Assuming local banks' exposure to Dubai Holding is 90 percent with Dubai banks.

Liquidity risk

48. **The banking system would meet 69 percent of the Basel III requirement**, compared to 98 percent under the Basel Committee impact study of comparable banks in the Committee's member countries. This assessment was done by the central bank on September 2010 data, using the Basel standard that will come into effect in 2015.[13] To meet the required 100 percent by 2015, the system would need to hold an extra stock of high quality assets worth about 11 percent of GDP (Figure II.16).[14] The central bank's impact study suggests that the opportunity cost of holding more high quality assets could lower aggregate bank earnings by about 20 percent.

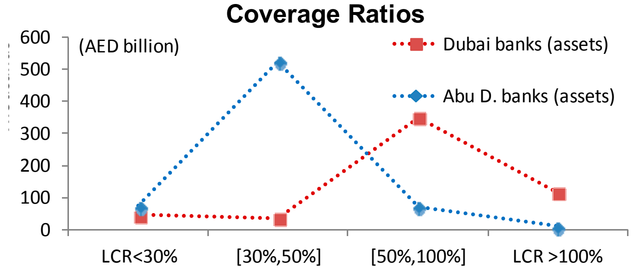
Figure II.16. Liquidity Coverage Ratio, 2010



Sources: Central bank and Fund staff calculations.

49. **The Dubai banks have less liquidity deficit than the Abu Dhabi banks.** When measured by size of assets, the large Abu Dhabi banks have liquidity coverage ratios below 50 percent (Figure II.17). Their large ownership by the Abu Dhabi government allows them to operate with lower liquidity buffers. This reflects the financial wealth of the Abu Dhabi government.

Figure II.17. Distribution of Liquidity Coverage Ratios



Sources: Central bank and Fund staff calculations.

50. **To help meet the Basel standard by 2015, the authorities are considering issuing federal government securities for the first time.** The authorities are about to promulgate a public debt law that would allow the federal government to issue local debt. The securities would be held on banks' balance sheet, hence would have limited liquidity. However, they would be eligible collateral for central bank liquidity in case of stress, as well as being collateral for secured term funding abroad and interbank repos. The issuance of federal government securities would however be hampered by the small revenue base of the federal government and

[13] The Basel III liquidity coverage ratio penalizes U.A.E. banks on two counts: (i) on the asset side, the lack of high quality collateral in the form of local government debt; (ii) a funding structure that features price-sensitive corporate deposits rather than stickier retail deposits (households and SMEs), which under the liquidity test, have differentiated drain rates.

[14] One-third of the banks met the liquidity coverage ratio requirement in September 2010.

the low overall ceiling in the law. Accordingly, the potential additional volume appears limited. The need for high quality assets would be lower to the extent banks increase the proportion of retail deposits (considered more stable) or foreign term funding in their liability mix. However, the development of retail deposits is constrained by an economic model that relies on large-scale expatriate labor and remittances.

E. Policies for Financial Stability

51. **There is merit in conducting an in-depth diagnostic of bank governance.** The prevalence of government control of local banks, as well as concentration risk in some banks, highlights the potential for governance issues. Good governance complements effective supervision and is integral to the implementation of the risk-based approach to oversight. The diagnostic would evaluate specific aspects of the legal and regulatory framework and the way in which the supervisor emphasizes governance. The approach is based on the 2006 guidelines of the Basel Committee, "Enhancing Corporate Governance for Banking Organizations," and is conducted by the World Bank.

52. **Recent central bank measures to harmonize provisioning practices across banks will help strengthen confidence.** The 2010 CBU circulars on provisioning and loan classification will improve banks' financial strength by ensuring harmonization of practices across banks. The CBU could also require banks to report the restructured part of their loan book by sector and monitor the maturity profiles of such loans, with particular attention to bunching. On-site inspections should examine the classification and provisioning of loans that become serially restructured. In case of significant divergence of practices across banks, the CBU could consider minimum standards for the classification and provisioning of such loans. With the more comprehensive data on real estate exposure now available, the CBU should also monitor closely the risk management practices of banks with large exposure to real estate risk.

53. **The central bank could contain dividend distribution over the next few years to ensure that the banks are ready for an eventual roll-over risk without new government support.** To this end, the CBU could run stress tests with a uniform set of parameters across the industry and link the approval of dividend distribution to the results of these tests. A push to retain earnings and provision in line with risks will provide a strong signal of confidence to depositors and investors, while preparing banks to absorb the potential release of losses should risks related to restructured loans materialize in a few years.

54. **The CBU could consider additional measures to prepare for the Basel III liquidity standard that would come into effect in 2015.** Given the limited role that federal debt can play in improving bank liquidity, the authorities could explore the possibility of a greater role for term funding from non-traditional sources, such as government sources.

III. Fiscal Policy and Fiscal Coordination in the United Arab Emirates: Drawing Lessons From the Crisis[15]

A. Introduction

55. **Procyclical fiscal policies and the build-up of contingent liabilities during the boom years exacerbated the severity of the crisis**.[16] Since the U.A.E. has a pegged exchange rate and consequently a limited capacity to use monetary policy, the onus of macroeconomic stabilization falls on fiscal policy. The excessive fiscal stimulus prior to the crisis, however, exacerbated the economic cycle and contributed to the build-up of vulnerabilities. With the global financial crisis, the unraveling of Dubai's growth model has also raised concerns over the sustainability of public finances, especially in light of the risks stemming from government-related entities (GREs). In addition to the contingent liabilities that contaminated the sovereign balance sheet, the crisis revealed the predicament of implicit government guarantees—a manifestation of moral hazard in a federal system with an asymmetric distribution of resources.

56. **This paper analyses fiscal policy in the run-up and after the crisis and suggests a set of measures to strengthen fiscal policy management in the U.A.E.** As the crisis is partly a materialization of heterogeneous and diverging sub-national fiscal capabilities, Section B describes the main institutional features of fiscal federalism in the U.A.E. Section C presents estimates of the cyclically-adjusted nonhydrocarbon primary budget balance before and after the crisis at the consolidated and sub-national level. Section D contains an analysis of fiscal sustainability in the U.A.E. as a whole and in the Emirate of Dubai. Finally, Section E sets out policy lessons to develop a set of rules to anchor fiscal policy and to improve coordination between the various levels of government.

B. Fiscal Federalism in the U.A.E.

57. **The U.A.E. is a confederation of emirates, with each maintaining full autonomy over hydrocarbon resources and fiscal policies.** In 1971, the seven emirates—Abu Dhabi, Ajman, Dubai, Fujairah, Ras al-Khaimah, Sharjah and Umn al-Qaiwain—formed the U.A.E. with a provisional constitution. Each emirate can exercise power in all matters that are not assigned to the jurisdiction of the federal government, and the natural resources and wealth in each emirate are the public property of that emirate. As a result, while monetary and exchange rate policy is managed on a federal basis by the Central Bank of the U.A.E., each emirate manages its own budget on an independent basis and no emirate has an obligation to contribute to the budget of any other emirate.

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[15] Prepared by Serhan Cevik.

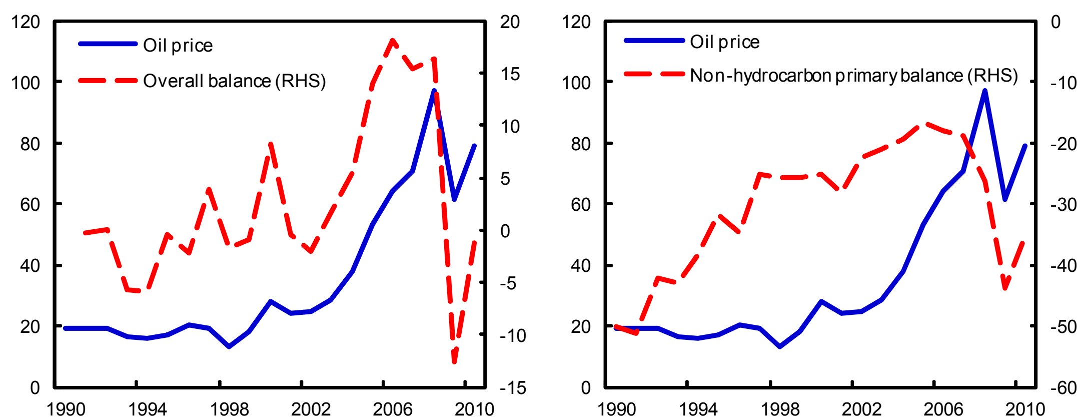
[16] After a decade-long above-trend expansion at an annual real GDP growth rate of 7 percent between 1999 and 2008, the U.A.E. economy is estimated to have contracted by 2.6 percent in 2009 as lower hydrocarbon prices and the shutdown of international capital markets led to a sharp correction in real estate prices.

58. **The U.A.E. federal government lacks an independent fiscal base and remains dependent on transfers from Abu Dhabi and Dubai.** The largest and wealthiest emirates of Abu Dhabi and Dubai make contributions to the federal budget in agreed amounts, and Abu Dhabi also separately contributes to fund security and defense, which are federal responsibilities but managed by Abu Dhabi. The federal government has a limited revenue base, with its budget amounting to about 4 percent of GDP and 10 percent of total public expenditure in the U.A.E.

C. Cyclicality of Fiscal Policy Before and After the Crisis

59. **The cyclically-adjusted nonhydrocarbon primary balance is the appropriate measure of the fiscal stance in a hydrocarbon-based economy.** The overall and primary fiscal balances are widely used indicators to assess the government's net financing requirement—or accumulation of net financial assets—and its fiscal vulnerability. Because of the volatility of oil prices, however, it can give a misleading picture of the underlying fiscal stance and possible structural imbalances in a hydrocarbon-based economy (Figure III.1). The nonhydrocarbon primary balance, factoring out resource-based revenue, including investment income of the sovereign wealth fund, provide a better indication of the fiscal stance.[17] Furthermore, since the actual balance reflects cyclical or temporary effects on the budget, as well as structural or permanent influences, it is important to refine the measurement of the fiscal stance further by constructing a cyclically-adjusted nonhydrocarbon primary balance, which reflects government revenues and expenditures adjusted for the impact of the economic cycle.

Figure III.1. The U.A.E.: Oil Price and Budget Balances, 1990–2010



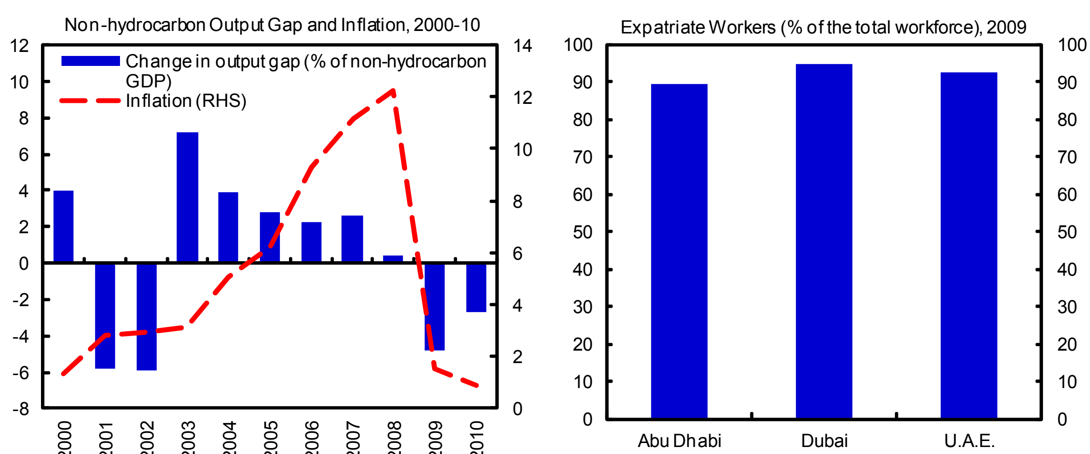
Source: Author's calculations.

[17] Investment income is usually reinvested abroad and therefore does not influence domestic aggregate demand.

60. **Fiscal policy is expansionary (contractionary) when the change in the cyclically-adjusted nonhydrocarbon primary balance is negative (positive).** After separating the change in the nonhydrocarbon primary balance into the change in the cyclical nonhydrocarbon primary balance and the change in the cyclically-adjusted nonhydrocarbon primary balance, we can define fiscal policy as expansionary (contractionary) when the change in cyclically-adjusted nonhydrocarbon primary balance is negative (positive). To assess whether fiscal policy is countercyclical (procyclical), we have to examine the link between changes in the output gap and the change in the cyclically-adjusted primary balance. Expansionary (contractionary) fiscal policy when the change in the output gap is positive (negative) would be procyclical, exacerbating pressures in the economy, while expansionary (contractionary) policy when the change in the output gap is negative (positive) is countercyclical, dampening cyclical fluctuations in the economy.

61. **Estimates of potential output are subject to uncertainty in an economy like the U.A.E. with a perfectly elastic labor supply.** The U.A.E. economy moved from below potential growth during 1998–2004 to above potential growth in 2005–08. The boom period, starting in 2003, led to a swing of more than 19 percentage points in the output gap from -11.8 percent of nonhydrocarbon GDP in 2002 to 7.3 percent in 2008. However, output gap estimates are subject to uncertainty, especially with a short time series and in an economy with a highly elastic labor supply (Figure III.2). When expatriate workers account for about 90 percent of the workforce, the concept of the "natural rate of unemployment" is not informative as to whether the economy is operating below or above its potential. Furthermore, the estimated increase in potential GDP during the boom years may have been partly a result of the easy availability of credit and the real estate bubble, and consequently not as sustainable as a productivity-driven improvement. Nevertheless, despite the empirical shortcomings, estimates of potential GDP and output gap are consistent with inflation trends before, during and after the crisis, and therefore present a reasonable gauge of deviation from trend growth.

Figure III.2. The U.A.E.: Output Gap, Inflation and Expatriate Workers

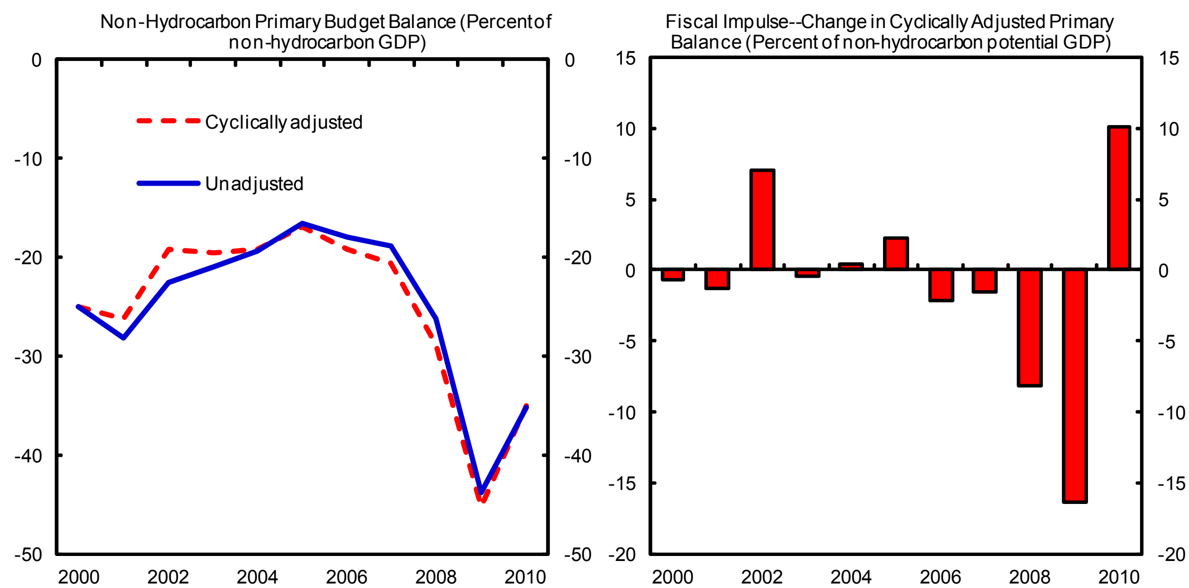


Sources: National Bureau of Statistics, Ministry of Labor, author's calculations.

62. **The U.A.E.'s consolidated fiscal stance has been expansionary before and after the crisis, irrespective of measurement techniques.** The nonhydrocarbon primary budget deficit, excluding investment income, widened from 16.5 percent of nonhydrocarbon GDP in 2005 to 26.3 percent in 2008, while the cyclically-adjusted nonhydrocarbon primary deficit increased from 17 percent to 28.8 percent. As a result, the fiscal impulse—measured by the change in the cyclically-adjusted nonhydrocarbon primary balance as a share of nonhydrocarbon potential GDP—amounted to 11.8 percentage points on a cumulative basis over this period (Figure III.3). Facing a steep economic downturn, the authorities responded with countercyclical measures, pushing the cyclically-adjusted nonhydrocarbon primary deficit to 45.2 percent of nonhydrocarbon GDP in 2009.

63. **Comparing the change in the cyclically-adjusted nonhydrocarbon primary balance and the output gap shows the cyclicality of fiscal policy.** The combination of positive changes in the output gap with positive fiscal impulse implies a procyclical fiscal policy stance. Using this methodology, we find that fiscal policy was procyclical prior to the crisis when the U.A.E. economy experienced an unprecedented above-potential boom and sustained inflationary pressures. After the crisis, facing a negative output gap, the authorities adopted a countercyclical stance and raised the cyclically-adjusted nonhydrocarbon primary budget deficit to 45.2 percent of nonhydrocarbon GDP in 2009. However, in 2010, the fiscal policy stance turned contractionary and procyclical, with the cyclically-adjusted nonhydrocarbon primary deficit narrowing to 35.1 percent of nonhydrocarbon GDP.

Figure III.3. The U.A.E.: Fiscal Policy Stance, 2000–10



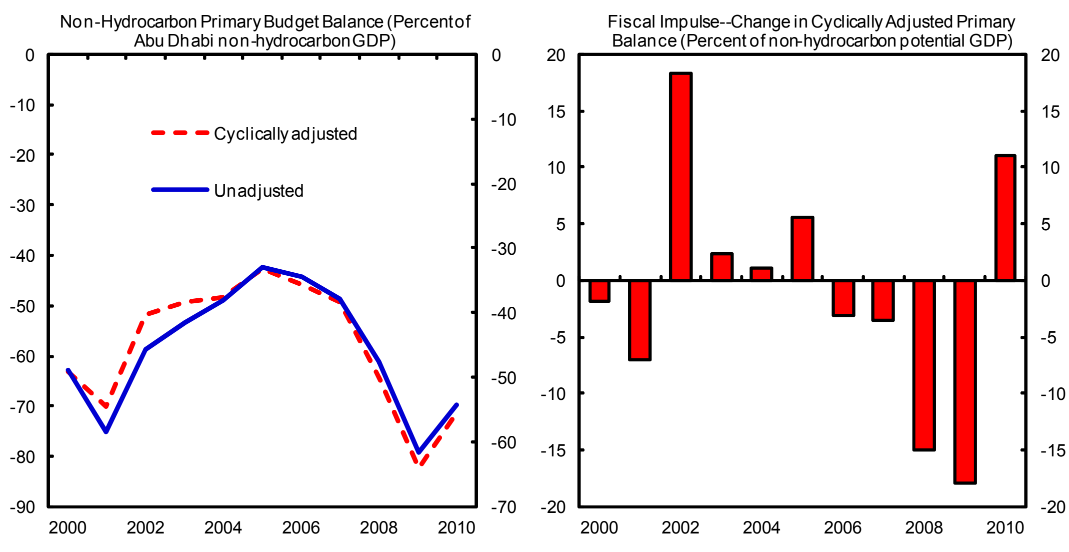
Source: Author's calculations.

64. **Both Abu Dhabi and Dubai adopted procyclical fiscal policies prior to the crisis**.

- Abu Dhabi, accounting for almost 70 percent of government revenues, dominates the U.A.E.'s consolidated fiscal position. Abu Dhabi is the largest and most wealthy emirate, controlling more than 95 percent of the country's hydrocarbon reserves, and therefore enjoys abundant fiscal space relative to other emirates. The nonhydrocarbon primary budget deficit widened by 19.2 percentage points of Abu Dhabi nonhydrocarbon GDP in 2006-08; and the cyclically-adjusted nonhydrocarbon primary budget deficit, excluding investment income, also shows a fiscal impulse of 21.7 percentage points of Abu Dhabi nonhydrocarbon potential GDP during the same period (Figure III.4).

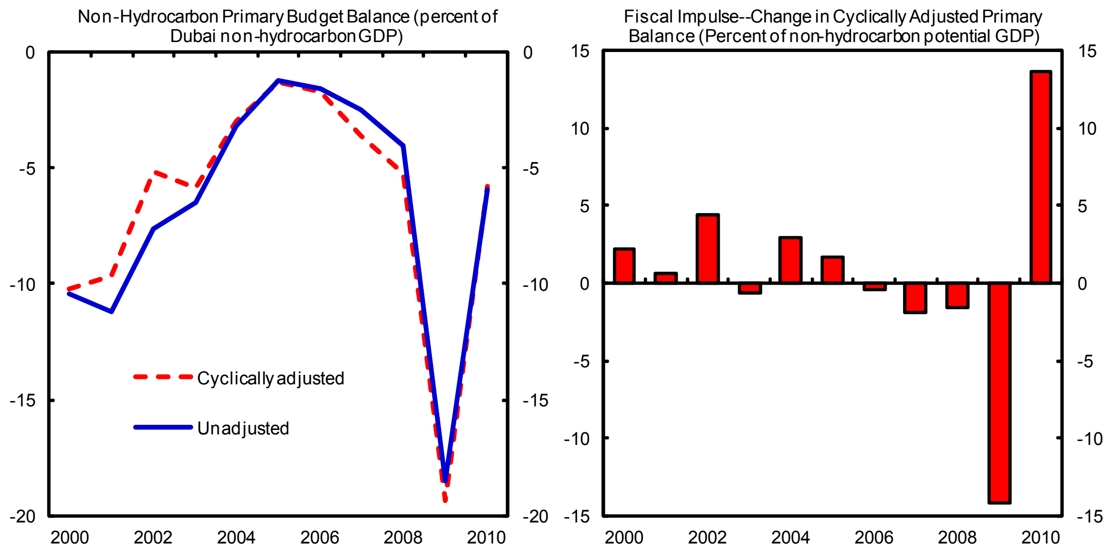
- Dubai has a relatively more diversified economy with nonhydrocarbon sectors representing over 95 percent of GDP. Nevertheless, the development of its revenue mobilization capabilities have not developed rapidly when compared to other diversified emerging market economies. Similar to Abu Dhabi, the cyclically-adjusted nonhydrocarbon primary deficit widened by 4 percentage points of Dubai and northern emirates GDP on a cumulative basis during 2004-08. However, these figures may significantly underestimate the extent of expansionary fiscal operations in Dubai where GRE investments were substantial (Figure III.5).

Figure III.4. Abu Dhabi: Fiscal Policy Stance, 2000–10



Source: Author's calculations.

Figure III.5. Dubai: Fiscal Policy Stance, 2000–10



Source: Author's calculations.

65. **Following the crisis, both Abu Dhabi and Dubai adopted countercyclical policies in 2009 and returned to the procyclical stance in 2010.**

- In the wake of the global shock, the government of Abu Dhabi introduced a fiscal impulse of 18 percentage points of Abu Dhabi nonhydrocarbon potential GDP, which consequently led the cyclically-adjusted nonhydrocarbon primary deficit to an estimated 82.3 percent of Abu Dhabi nonhydrocarbon GDP in 2009. Moreover, these figures may not reflect the true extent of expansionary fiscal operations, given the significant role of GREs in the economy. The high share of GREs in Abu Dhabi's total public sector debt—about 70 percent—implies that the fiscal impulse would be even greater if GRE spending were accounted for. In 2010, however, Abu Dhabi's fiscal policy stance turned contractionary and procyclical, with the cyclically-adjusted nonhydrocarbon primary deficit narrowing by more than 11 percentage points to 71.2 percent of Abu Dhabi's nonhydrocarbon GDP.

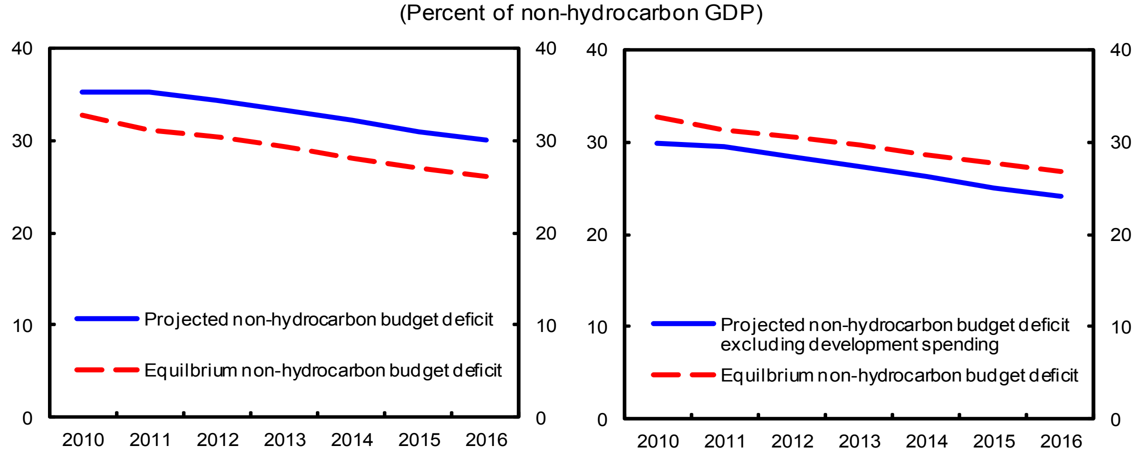
- Dubai's cyclically-adjusted nonhydrocarbon primary deficit widened to 14.1 percent of Dubai and northern emirates GDP in 2009. Although Dubai's fiscal stance turned countercyclical after the crisis, the shift was made possible by the financial support from Abu Dhabi and the Central Bank of the U.A.E., which accounted for 45 percent of government spending—and 9.6 percent of Dubai and northern emirates nonhydrocarbon GDP—in 2009. Accordingly, Dubai's fiscal policy stance became contractionary in 2010, with the cyclically-adjusted nonhydrocarbon primary deficit narrowing by 13.6 percentage points to 5.8 percent of Dubai and northern emirates GDP.

D. Fiscal Sustainability

66. **Fiscal sustainability has moved to center stage in light of the post-crisis contamination of the sovereign balance sheet by the materialization of contingent liabilities.** Gross government debt, excluding bank bilateral loans, rose from 3.6 percent of GDP in 2007 to 6.6 percent in 2008 and 15.8 percent in 2010. Though debt sustainability is not an immediate issue for the U.A.E. as a whole, there are considerable differences at sub-national level. For example, Abu Dhabi, with its substantial hydrocarbon reserves and accumulated financial wealth, does not have a medium-term sustainability problem, whereas the built-up of contingent liabilities during the boom years has made Dubai more vulnerable.

67. **The U.A.E. is estimated to have a nonhydrocarbon primary deficit more than the equilibrium level.** The fiscal sustainability analysis based on permanent income hypothesis suggests that government spending at the consolidated level should be reduced over the medium term to ensure long-term sustainability and intergenerational equity (Figure III.6). Assuming constant real per capita government spending that delivers a constant per capita annuity after the depletion of hydrocarbon resources, the nonhydrocarbon primary deficit is estimated to be 4 percentage points higher than its equilibrium value in 2011, with the gap staying virtually unchanged at 3.9 percentage points by end-2016.

Figure III 6. The U.A.E.: Fiscal Sustainability Analysis, 2010–16
(Percent of non-hydrocarbon GDP)



Source: Author's calculations.

68. **Alternative assumptions yield more favorable assessment of fiscal sustainability, but the results still indicate a need for fiscal prudence.** Excluding development spending that may yield a return on investment equal to the discount rate used in the annuity calculation, the nonhydrocarbon primary deficit is estimated to be 2.9 percentage points below its equilibrium value in 2011 and remaining at 2.8 percentage points below the estimated

equilibrium threshold by 2016. While the results are sensitive to the parameter assumptions, they indicate a need for fiscal prudence from an intergenerational perspective.[18]

69. **Contingent liabilities stemming from underperforming GREs have raised Dubai's total public sector debt ratio.** While the U.A.E. as a whole does not appear to have a sustainability problem over the medium term, the built-up of contingent liabilities leaves Dubai's fiscal performance at risk. Gross government debt, including government guarantees but excluding domestic bank loans to the government, increased from 1.6 percent of Dubai and northern emirates GDP in 2007 to 10.3 percent in 2008 and 34 percent as of end-2010. This was mainly due to the bailout of GREs, which was financed through sovereign borrowing. Government debt figures, however, still underestimate Dubai's total public sector debt by omitting quasi-sovereign liabilities. While variable financial conditions suggest that not all across GREs should be considered as a source of fiscal risk, most entities operating in the real estate sector appear to fall in this category. Accordingly, we assume that the debt issued by real estate GREs or their subsidiaries, together with that of those entities currently reporting financial losses, represent a contingent liability to the sovereign balance sheet. On this basis, at least US$11 billion of contingent risk can be foreseen for the Dubai government by end-2016, with more than 70 percent of that debt coming due in 2011–12.[19] That would raise the total debt-to-GDP ratio to 47.4 percent in 2012, compared to 34.6 percent for the government alone (Figure III.7). Furthermore, by accounting for all maturing GRE debt as a contingent liability, Dubai's total public sector debt would grow to 62.5 percent of Dubai and northern emirates GDP as of end–2012.

70. **Dubai's debt-to-GDP ratio remains on an increasing path over the medium term.** Despite gradual fiscal consolidation projected in the baseline scenario, Dubai's government debt is estimated to increase to 41 percent of GDP by the end of 2016. In the absence of fiscal consolidation (i.e., without policy change compared to 2005–09), however, it is projected to reach 53 percent by 2016. Furthermore, including the potential contingent liabilities as

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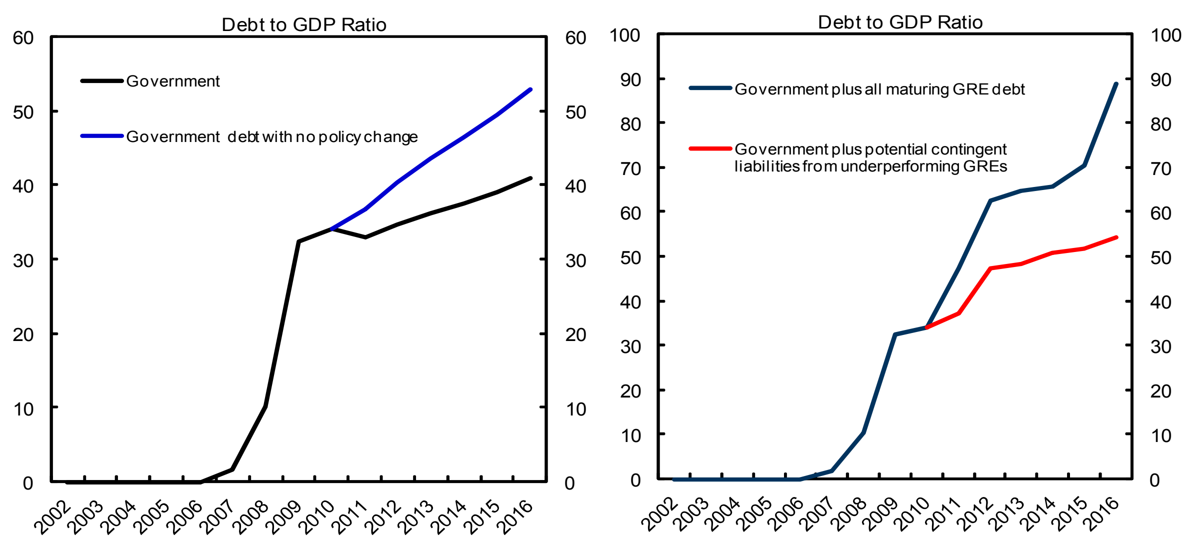
[18] The calculations assume long-term values of the real rate of assets, inflation, and population growth of U.A.E. nationals of 4 percent, 2 percent, and 1.5 percent, respectively. Hydrocarbon reserves are assumed to be depleted by 2082, and the price of oil is projected to be $106 per barrel in 2016 and remain constant in real terms thereafter. A limitation of this analysis is the use of proven hydrocarbon reserves to derive the estimates of long-term fiscal sustainability. This does not account for the possibility that the resource base could be extended and broadened through technological developments and the exploitation of "probable" reserves.

[19] This amount should be regarded as a minimum level of contingent risk. First, the performance of profitable companies operating outside the real estate sector may also be subject to deterioration over the coming years, ultimately triggering sovereign support. Second, other companies, primarily non-listed entities, which do not disclose financial statements, may also be registering losses. Third, for several GREs, the liabilities requiring sovereign support may exceed significantly the level of publicly held debt. Finally, sovereign support may well go beyond guaranteeing the stock of outstanding liabilities and require capital injection. While all these factors should be taken into account when assessing the perimeter of contingent risk, on a more positive note, the net impact of GREs on the sovereign balance sheet might be somewhat lower when assets are accounted for.

estimated above and with the baseline profile for fiscal adjustment, the total debt-to-GDP ratio would increase to 54.3 percent—and 62.5 percent without fiscal consolidation—by the end of 2016. As an extension, including all maturing quasi-sovereign debt would raise Dubai's total public sector debt to 88.6 percent of GDP by 2016. These estimates imply large fiscal costs in case the government needs to support GREs and make fiscal sustainability a serious challenge for Dubai (for detailed projections, see Appendix III.1).

Figure III.7. Dubai: Public Sector Debt Sustainability Analysis, 2002–16



Source: Author's calculations.

E. Policy Issues

71. **The expansionary and procyclical fiscal stance aggravated the severity of the crisis.** The findings of this paper indicate that the fiscal policy stance has been expansionary and procyclical at the consolidated and sub-national levels prior to the crisis and in 2010. However, the fiscal policy response to the economic downturn triggered by the global financial crisis was countercyclical in 2009 and has differed substantially from the past and between the emirates, with greater fiscal space for countercyclical measures in the resource-rich emirate of Abu Dhabi. Furthermore, even though the sustainability of public debt is not an immediate issue for the U.A.E. as a whole, there are considerable differences at the sub-national level, especially in view of the build-up of contingent liabilities during the boom years.

72. **Diverging sub-national fiscal performance calls for closer fiscal policy coordination among the emirates.** A medium-term fiscal framework should guide Abu Dhabi's fiscal policy with a view to ensuring long-term sustainability and delinking it from fluctuations in hydrocarbon prices, while the imperative for Dubai should be implement fiscal consolidation to achieve a comfortable debt level over the medium term. These frameworks would need to be complemented at the federal level through a coordination mechanism to avoid procyclicality and reduce fiscal risks. Such coordination requires timely and adequately reliable

information, particularly on emirates' medium-term fiscal frameworks, annual budgets and their execution, as well as consolidated fiscal accounts to inform policy making.

73. **Broader coverage of the public sector is important to contain the fiscal risks of quasi-sovereign entities.** The recent GRE bailouts underscore that entities outside the general government can undermine the credibility of fiscal policy if they entail large contingent liabilities. Accordingly, coverage should extend to the broader public sector, along with timely reporting based on a harmonized classification system. To this end, the debt management offices should have dedicated units collecting data on the outstanding GRE liabilities, their maturity profile, and income and cash-flow statements. The authorities should also consider including, as a part of the annual budget documents, a statement of fiscal risks, a discussion on the materialization of risks and forward-looking estimates of risks posed by problematic GREs, and a presentation of policies to mitigate and manage risks.[20]

[20] For an overview of best practices in disclosing fiscal risks, see Everaert, Fouad, Martin, and Velloso (2009).

Appendix III.1 Dubai: Public Sector Debt Sustainability Framework, 2007-2016

(Percent of Dubai GDP, unless otherwise indicated)

	Actual			Projections						
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Baseline: Public sector debt 1/	1.6	10.3	32.4	**34.0**	**32.9**	**34.6**	**36.1**	**37.4**	**39.0**	**41.0**
o/w foreign-currency denominated	1.6	10.3	32.4	34.0	32.9	34.6	36.1	37.4	39.0	41.0
Change in public sector debt	1.6	8.6	22.2	1.6	-1.2	1.7	1.5	1.3	1.6	2.0
Identified debt-creating flows (4+7+12)	0.2	1.0	15.3	2.4	-4.4	2.0	2.3	1.9	2.0	2.3
Primary deficit	0.2	1.2	12.9	2.9	-0.9	1.2	1.4	1.4	1.5	1.6
Revenue and grants	6.6	7.5	10.6	10.8	10.7	8.2	7.8	7.5	7.1	6.8
Primary (noninterest) expenditure	6.8	8.7	23.5	13.7	9.8	9.4	9.2	8.9	8.7	8.4
Automatic debt dynamics 2/	0.0	-0.2	2.4	-0.5	-3.5	0.8	0.9	0.5	0.5	0.6
Contribution from interest rate/growth differential 3/	0.0	-0.2	2.4	-0.5	-3.5	0.8	0.9	0.5	0.5	0.6
Of which contribution from real interest rate	0.0	-0.2	2.1	-0.4	-2.7	1.9	2.3	1.9	2.0	2.2
Of which contribution from real GDP growth	0.0	0.0	0.3	-0.2	-0.8	-1.1	-1.3	-1.4	-1.5	-1.6
Contribution from exchange rate depreciation 4/	0.0	0.0	0.0	...	...	...	...	...	...	...
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual, including asset changes (2-3) 5/	1.4	7.6	6.8	-0.7	3.2	-0.3	-0.8	-0.6	-0.4	-0.3
Public sector debt-to-revenue ratio 1/	24.9	137.1	306.6	315.5	307.7	421.0	462.7	500.4	547.6	601.1
Gross financing need 6/	0.5	2.6	20.2	21.2	18.2	19.1	20.8	25.5	21.7	23.1
in billions of U.S. dollars	0.6	3.1	21.1	22.4	20.9	23.3	27.2	35.8	32.8	37.5
Key Macroeconomic and Fiscal Assumptions Underlying Baseline										
Real GDP growth (in percent)	18.1	3.2	-2.4	0.5	2.8	3.4	4.1	4.2	4.4	4.4
Average nominal interest rate on public debt (in percent) 8/	6.4	4.3	6.5	6.9	7.7	7.9	7.7	7.1	7.7	8.3
Average real interest rate (nominal rate minus change in GDP deflator, in percent)	-2.7	-11.5	17.8	-1.3	-9.0	6.1	7.0	5.7	5.7	6.2
Nominal appreciation (increase in US dollar value of local currency, in percent)	0.0	0.0	0.0	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	9.1	15.8	-11.3	8.2	16.7	1.8	0.7	1.4	2.0	2.1
Growth of real primary spending (deflated by GDP deflator, in percent)	40.2	23.8	167.8	-45.4	-33.6	0.3	3.7	3.2	2.3	2.6
Primary deficit	0.2	1.2	12.9	2.9	-0.9	1.2	1.4	1.4	1.5	1.6
A. Alternative Scenarios										
A1. No policy change (constant primary balance) in 2005-09				**34.0**	**36.7**	**40.3**	**43.5**	**46.4**	**49.5**	**52.9**
A2. Government plus potential contingent liabilities				**34.0**	**37.0**	**47.4**	**48.2**	**50.7**	**51.7**	**54.3**
A3. Government plus 100 percent of maturing GRE debt				**34.0**	**47.4**	**62.5**	**64.6**	**65.7**	**70.4**	**88.6**
B. Bound Tests										
B1. Real interest rate is at historical average plus one standard deviation				**34.0**	**34.2**	**37.5**	**40.8**	**44.0**	**47.6**	**51.8**
B2. Real GDP growth is at historical average minus one standard deviation				**34.0**	**33.3**	**36.2**	**39.6**	**43.3**	**48.0**	**53.6**
B3. Primary balance is at historical average minus one standard deviation				**34.0**	**35.0**	**38.9**	**42.7**	**46.2**	**50.0**	**54.3**
B4. Combination of B1-B3 using 1/2 standard deviation shocks				**34.0**	**34.9**	**39.3**	**43.7**	**47.9**	**52.7**	**58.1**
B5. One time 30 percent real depreciation in 2006 10/				**34.0**	**59.6**	**62.0**	**64.3**	**66.0**	**67.9**	**70.4**
B6. 10 percent of GDP increase in other debt-creating flows in 2006				**34.0**	**42.9**	**44.8**	**46.7**	**48.1**	**49.8**	**52.0**

1/ Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.

2/ Derived as $[(r - \pi(1+g) - g + \alpha\varepsilon(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; α = share of foreign-currency denominated debt; and ε = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

3/ The real interest rate contribution is derived from the denominator in footnote 2/ as $r - \pi (1+g)$ and the real growth contribution as -g.

4/ The exchange rate contribution is derived from the numerator in footnote 2/ as $\alpha\varepsilon(1+r)$.

5/ For projections, this line includes exchange rate changes.

6/ Defined as public sector deficit, plus amortization of medium and long-term public sector debt, plus short-term debt at end of previous period.

7/ The key variables include real GDP growth; real interest rate; and primary balance in percent of GDP.

8/ Derived as nominal interest expenditure divided by previous period debt stock.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

References

Abdih, Y., P. Lopez-Murphy, A. Roitman, and R. Sahay, 2010, "The Cyclicality of Fiscal Policy in the Middle East and Central Asia: Is the Current Crisis Different?," *IMF Working Paper*, No. WP/10/68.

Baskaran, T., and L. Feld, 2009, "Fiscal Decentralization and Economic Growth in OECD Countries: Is There a Relationship?," *CESIFO Working Paper*, No. 2721.

Baxter, M., and R. King, 1999, "Measuring Business Cycles: Approximate Band-Pass Filters for Economic Time Series," *Review of Economics and Statistics*, Vol. 81, pp. 573–593.

Crivelli, E., and K. Staal, 2006, "Size and Soft Budget Constraints," *CESIFO Working Paper*, No. 1858.

Davoodi, H., and H. Zou, 1998, "Fiscal Decentralization and Economic Growth: A Cross-Country Study," *Journal of Urban Economics*, Vol. 43, pp. 244–257.

Everaert, G., M. Fouad, E. Martin, and R. Velloso, 2009, "Disclosing Fiscal Risks in the Post-Crisis World," *IMF Staff Position Note*, SPN/09/18.

Filc, G., and C. Scartascini, 2007, "Budgetary Institutions," in *The State of State Reform in Latin America*, edited by E. Lora, Washington, DC: Inter-American Development Bank.

Gramlich, E., 1977, "Intergovernmental Grants: A Review of the Empirical Literature," in *The Political Economy of Fiscal Federalism,* edited by W. Oates, Lexington, Mass.: Lexington Press.

Hodrick, R., and E. Prescott, 1997, "Post-war Business Cycles: An Empirical Investigation," *Journal of Money, Credit, and Banking*, Vol. 29, pp. 1–16.

Horton, M., M. Kumar, and P. Mauro, 2009, "The State of Public Finances: A Cross Country Fiscal Monitor," *IMF Staff Position Note*, No. 09/21.

Hunter, J., 1974, "Vertical Intergovernmental Financial Imbalance: A Framework for Evaluation," *Finanzarchiv*, No. 2, pp. 481–492.

Musgrave, R., 1959, *The Theory of Public Finance*, New York: McGraw Hill.

Oates, W., 1972, *Fiscal Federalism*, New York: Harcourt Brace Jovanovich.

Ravn, M., and H. Uhlig, 2002, "On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations," *Review of Economics and Statistics*, Vol. 85, pp. 235–243.

Rodriguez-Pose, A., and A. Bwire, 2004, "The Economic (In) efficiency of Devolution," *Environment and Planning*, Vol. 36, pp. 1907–1928.

Rubinfield, D., 1987, "The Economics of the Local Public Sector," in *Handbook of Public Economics,* edited by A. Auerbach and M. Feldstein, Amsterdam: North-Holland.

Ter-Minassian, T., 2006, "Fiscal Rules for Subnational Governments: Can They Promote Fiscal Discipline," *OECD Journal on Budgeting,* Vol. 6, No. 3, pp. 111–121.

Tiebout, C., 1956, "A Pure Theory of Local Expenditures," *Journal of Political Economy,* Vol. 64, No. 5, pp. 416–424.

Wildasin, D., 1997, "Externalities and Bailouts: Hard and Soft Budget Constraints in Intergovernmental Fiscal Relations," *World Bank Policy Research Working Paper*, No. 1843.

Wilde, J., 1971, "Grants-in-Aid: The Analytics of Designs and Response," *National Tax Journal*, Vol. 24, pp. 143–155.

Woller, G., and K. Phillips 1998, "Fiscal Decentralization and Economic Growth: An Empirical Investigation," *Journal of Development Studies*, Vol. 34, pp. 139–148.

Table 1. United Arab Emirates: Sectoral Origin of GDP at Current Prices, 2002–10 [1]

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Gross domestic product	403,300	456,662	542,885	663,316	815,684	948,056	1,156,267	992,805	1093114
Crude oil production (including natural gas)	93,705	114,781	158,087	227,231	304,762	320,349	427,666	287,206	343,932
Other production (sum)	321,524	355,334	400,384	458,194	535,541	662,275	773,879	752,321	797,325
Agriculture	8,886	8,803	9,041	9,256	8,926	9,251	9,585	9,581	9,590
Industry (sum)	98,047	109,536	122,467	141,862	167,568	199,096	243,903	242,811	263,015
Quarrying	701	747	825	974	1,289	1,496	1,439	1,377	1,436
Manufacturing [2]	52,685	55,998	62,499	70,365	78,774	85,490	99,641	100,345	106,263
Electricity, gas and water	6,917	8,703	10,129	12,611	15,096	17,396	20,581	23,818	27,983
Construction	37,744	44,088	49,014	57,912	72,408	94,714	122,242	117,270	127,333
Services (sum)	214,591	236,995	268,876	307,075	359,047	453,928	520,392	499,929	524,720
Trade	83,684	90,040	95,647	103,466	123,093	150,105	168,946	154,258	163,075
Wholesale and retail trade	73,215	78,797	83,738	90,108	107,262	132,166	147,590	133,555	139,959
Restaurants and hotels	10,469	11,243	11,908	13,358	15,831	17,939	21,356	20,702	23,116
Transportation, storage, and communication	34,235	37,731	46,344	52,196	61,989	76,088	88,815	92,482	98,978
Finance and insurance	22,041	24,929	29,791	42,195	51,090	67,872	73,185	71,842	74,320
Real estate & business services	45,549	52,422	62,802	71,171	81,495	111,180	125,697	106,685	108,413
Government	18,410	19,917	20,881	23,131	24,478	28,434	38,733	47,809	49,865
Other services (sum)	10,671	11,956	13,412	14,916	16,903	20,248	25,016	26,853	30,069
Social and personal services	8,646	9,781	11,163	12,147	13,736	16,666	20,859	22,587	25,936
Domestic household services	2,025	2,175	2,249	2,769	3,166	3,582	4,158	4,266	4,133
Less: imputed bank charges	11,930	13,453	15,586	22,109	24,619	34,567	45,277	46,722	48,143

Source: National Bureau of Statistics.

[1] GDP at Market prices

[2] Includes natural gas and petrolemum processing industries.

Table 2. United Arab Emirates: Use of Resources at Current Prices, 2002–10

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total consumption	291,513	315,172	380,986	432,086	522,122	647,294	789,219	701,402	716,547
Public	35,388	38,661	42,286	45,544	50,961	56,190	66,570	89,301	90,141
Private	256,125	276,511	338,700	386,542	471,161	591,104	722,649	612,101	626,406
Total fixed investment	84,981	94,947	101,433	121,911	141,822	217,835	244,967	221,252	260,230
Public	36,019	40,649	43,602	46,551	54,690	64,189	85,073	89,857	94,401
Private	48,962	54,298	57,831	75,360	87,132	153,646	159,894	131,395	165,829
Change in inventories	2,870	2,950	3,392	5,724	6,663	7,435	15,235	15,728	16,023
Gross capital formation	87,851	97,897	104,825	127,635	148,485	225,270	260,202	236,980	276,253
Domestic expenditure	379,364	413,069	485,811	559,721	670,607	872,564	1,049,421	938,382	992,800
Net exports of goods & services	23,936	43,594	57,073	103,595	145,076	75,492	106,847	54,423	100,314
Exports	199,647	255,380	345,100	448,305	559,813	685,620	913,748	741,694	851,939
Goods	190,142	245,160	334,013	430,737	534,666	656,020	878,508	704,394	811,339
Hydrocarbons	83,755	107,175	142,496	202,277	257,442	271,128	374,915	249,273	307,400
Other goods exports	106,387	137,985	191,517	228,460	277,224	384,892	503,593	455,121	503,939
Services	9,505	10,220	11,087	17,568	25,147	29,600	35,240	37,300	40,600
Imports	175,711	211,786	288,027	344,710	414,737	610,128	806,901	687,271	751,625
Goods	156,641	191,241	264,361	310,890	367,459	551,328	735,701	624,771	673,625
Services	19,070	20,545	23,666	33,820	47,278	58,800	71,200	62,500	78,000
GDP at market prices	403,300	456,662	542,885	663,316	815,684	948,056	1,156,267	992,805	1,093,114

Source: National Bureau of Statistics.

Table 3. United Arab Emirates: Oil and Gas Production, Exports, and Prices, 2002–10

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	(In million barrels per day)								
Oil production									
Crude oil, incld condensates	2.26	2.59	2.66	2.68	2.89	2.80	2.84	2.61	2.75
Crude oil	1.93	2.26	2.33	2.38	2.60	2.53	2.57	2.32	2.39
Abu Dhabi	1.77	2.10	2.17	2.24	2.46	2.42	2.49	2.24	2.31
Dubai, Sharjah, and Ras Al Khaimah	0.16	0.16	0.16	0.14	0.14	0.11	0.08	0.08	0.08
Condensates	0.33	0.33	0.33	0.30	0.29	0.27	0.27	0.29	0.36
Refinery output	0.56	0.56	0.56	0.54	0.59	0.57	0.56	0.57	0.57
Oil and product exports	2.18	2.48	2.47	2.46	2.65	2.53	2.58	2.19	2.25
Crude oil & condensates	1.85	2.16	2.19	2.21	2.43	2.36	2.42	2.09	2.15
Abu Dhabi	1.61	1.92	2.01	2.05	2.27	2.23	2.33	2.00	2.06
Dubai, Sharjah, and Ras Al Khaimah	0.16	0.16	0.16	0.14	0.14	0.11	0.08	0.08	0.08
Condensates	0.08	0.08	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Refined products	0.33	0.32	0.28	0.25	0.22	0.17	0.16	0.10	0.10
	(In billion cubic meters)								
Natural gas production	43.40	44.40	46.30	47.80	49.00	50.40	50.20	51.70	54.29
LNG exports	7.11	7.40	7.41	7.50	7.77	7.72	7.57	7.69	7.98
NGL exports	11.92	13.10	12.86	13.24	13.57	12.50	12.41	12.79	13.43
Domestic gas consumption	36.40	37.50	40.20	42.10	43.40	49.30	58.10	62.75	69.02
	(In U.S. dollar million)								
Oil and product exports	19,556	25,322	34,027	49,307	62,935	65,682	91,446	59,571	66,769
Crude oil & condensates	16,050	21,592	29,875	43,867	57,230	60,819	85,428	54,125	60,089
Abu Dhabi	13,969	19,272	27,602	40,845	53,574	57,679	82,210	51,819	57,344
Dubai and others	1,341	1,539	2,046	2,619	3,191	2,727	2,736	2,032	2,493
Condensates	740	781	227	403	465	413	482	274	252
Refined products	3,506	3,730	4,152	5,440	5,705	4,863	6,018	5,446	6,680
	(In U.S. dollar million)								
LNG and NGL exports	3,250	3,861	4,773	5,771	7,165	8,145	11,546	8,577	10,744
LNG exports	1,221	1,182	1,506	1,601	2,047	2,511	4,567	3,395	4,605
NGL exports	2,029	2,679	3,267	4,170	5,118	5,634	6,979	5,182	6,139
Total hydrocarbon exports	22,806	29,183	38,800	55,078	70,100	73,827	102,992	68,148	77,512
	(In U.S. dollar per barrel)								
Memorandum item:									
Average UAE oil export prices	24.64	28.24	35.87	52.32	63.54	71.08	96.70	62.79	77.02
Avg Abu Dhabi crude oil export price	24.64	27.96	36.11	52.52	63.67	71.34	96.66	62.79	77.01

Sources: ADNOC; Fund staff estimates.

Table 4. United Arab Emirates: Population by Emirate, 2002–09

(In thousands)

	2002	2003	2004	2005	2006	2007	2008	2009
Abu Dhabi	1,204	1,257	1,312	1,399	1,430	1,493	1,559	1,628
Dubai	1,020	1,098	1182	1321	1,372	1,478	1,596	1,722
Sharjah	623	667	715	794	821	882	946	1,017
Ajman	171	182	190	207	212	224	237	250
Umm al Qaiwan	43	46	48	49	50	52	53	56
Ras al Khaimah	184	191	198	210	214	222	231	241
Fujaira	104	110	116	126	130	137	143	152
Total	3,349	3,551	3,761	4,106	4,229	4,488	4,765	5,066

Source: National Bureau of Statistics.

Table 5. United Arab Emirates: Sectoral Distribution of Civilian Employment, 2002–08[1]

(In thousands)

	2002	2003	2004	2005	2006	2007	2008
Civilian employment	2,176	2,334	2,461	2,623	2,844	3,096	3,397
Oil sector	27	28	30	33	33	39	40
Other sectors	2,149	2,306	2,431	2,590	2,811	3,057	3,357
Agriculture	163	166	169	191	193	225	233
Industry	728	806	852	901	1,049	1,064	1,234
Mining and quarrying	5	5	6	5	6	6	7
Manufacturing [2]	276	299	319	333	362	393	431
Electricity, gas, and water	27	28	29	34	34	40	39
Construction	420	474	498	529	647	624	757
Services	1,258	1,334	1,410	1,498	1,569	1,768	1,891
Trade	511	549	589	612	643	723	789
Wholesale and retail trade	416	450	479	497	519	587	643
Restaraunts and hotels	95	99	110	115	124	136	146
Transport and communications	131	143	148	161	174	190	204
Finance and insurance	26	26	27	31	37	41	42
Real estate	64	67	74	77	84	90	97
Government services	237	250	265	283	284	329	353
Social and personal services	91	99	107	114	121	134	142
Domestic households sevices	198	200	200	220	226	260	264

Source: Ministry of Planning.

[1] Excludes defence personnel and visitors to the U.A.E.

[2] Includes natural gas and petroleum processing industries.

Table 6. United Arab Emirates: Consumer Price Index by Major Components, 2009–10

(Index 2007=100)

2009

	Weights	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All Items	100.0	114.7	114.3	113.4	113.2	113.0	113.1	113.5	114.0	114.7	114.6	115.1	114.4
Food & beverages	13.9	117.8	117.2	114.7	114.3	115.1	115.9	116.7	118.3	118.3	118.8	119.6	119.7
Alcohol & beverages	0.2	111.4	112.9	112.9	115.5	115.5	115.6	115.5	115.6	115.6	115.6	115.6	115.6
Clothing & footwear	7.6	117.4	116.6	115.1	115.9	114.8	113.8	113.6	112.2	113.8	111.6	112.3	111.6
Housing	39.3	115.4	115.2	113.6	113.3	112.1	112.1	112.9	114.3	114.8	114.9	114.9	113.5
Furniture and other items	4.2	112.0	108.8	110.0	110.4	113.3	113.7	115.9	114.4	114.3	113.7	119.2	117.2
Medical care & health services	1.1	108.4	108.4	106.9	106.5	106.1	105.9	104.8	105.8	105.0	105.9	106.1	104.4
Transportation	9.9	111.4	111.4	111.8	111.5	111.8	111.8	111.3	110.7	109.9	109.4	109.2	109.5
Communication	6.9	104.2	104.2	104.2	104.1	104.1	104.1	104.1	104.1	104.2	104.2	104.2	104.2
Recreation & cultural services	3.1	103.2	102.7	103.7	102.6	104.7	104.8	105.0	104.8	104.7	105.0	105.7	106.0
Education	4.0	115.2	115.2	115.2	115.2	115.2	115.2	115.2	115.2	127.3	127.3	127.3	127.3
Hotels & restaurants	4.4	128.7	128.7	129.7	129.0	130.1	130.1	129.8	129.9	130.1	130.3	130.3	129.8
Other goods & services	5.3	115.9	115.9	115.3	115.6	116.1	116.4	115.7	115.4	114.8	114.6	116.0	116.5

2010

	Weights	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All Items	100.0	114.2	114.0	114.1	114.1	114.0	114.1	114.5	115.1	116.1	116.7	116.8	116.4
Food & beverages	13.9	119.8	118.9	118.0	119.5	120.9	121.0	121.0	123.3	126.7	127.2	127.4	125.4
Alcohol & beverages	0.2	115.9	116.1	116.1	116.1	116.1	116.1	116.1	116.5	116.5	116.5	116.5	116.5
Clothing & footwear	7.6	111.5	110.4	110.3	109.3	109.4	109.2	107.9	107.0	107.1	106.6	106.8	105.4
Housing	39.3	114.0	113.6	114.2	113.4	112.8	113.1	112.8	112.8	113.0	114.4	114.4	114.3
Furniture and other items	4.2	118.2	118.0	118.0	118.4	118.2	117.6	118.5	119.8	119.3	120.1	120.2	120.2
Medical care & health services	1.1	104.9	105.1	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3	105.3
Transportation	9.9	109.4	110.3	110.3	111.5	112.0	112.4	116.3	117.0	118.9	118.8	118.7	119.0
Communication	6.9	98.0	98.4	98.4	97.8	97.6	97.6	97.6	98.4	98.4	98.5	98.4	98.2
Recreation & cultural services	3.1	106.3	106.7	106.9	106.3	106.3	106.3	106.6	111.3	113.7	114.0	113.8	113.8
Education	4.0	127.3	127.3	127.3	127.3	127.6	127.4	127.4	127.4	131.9	131.9	131.9	131.9
Hotels & restaurants	4.4	129.5	130.2	130.2	130.2	131.1	131.3	131.2	131.3	131.3	131.3	131.3	131.3
Other goods & services	5.3	116.5	116.5	116.6	117.7	115.2	115.6	117.0	117.4	117.9	118.7	119.0	119.6

Source: National Bureau of Statistics.

Table 7. United Arab Emirates: Consolidated Government Finances, 2002–10

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total revenue	77,509	99,490	125,978	196,740	275,047	313,387	446,795	250,914	315,048
Hydrocarbon [1]	54,631	75,162	98,584	150,664	216,559	233,626	361,515	174,091	239,271
Nonhydrocarbon	22,878	24,328	27,395	46,076	58,488	79,761	85,280	76,822	75,778
Customs	1,663	2,449	3,040	3,852	4,687	8,101	8,686	8,186	8,588
Profit transfers	3,357	2,935	3,322	4,624	5,660	12,701	5,228	4,033	3,974
Income tax [2]	235	301	320	420	1,093	842	1,190	1,340	1,387
Fees and charges	6,429	9,479	7,044	14,998	13,566	9,719	24,051	24,340	25,376
Investment income [3]	6,587	4,054	5,965	13,549	23,107	30,797	23,167	16,596	13,106
Other	4,607	5,110	7,703	8,634	10,374	17,600	22,958	22,326	23,346
Total expenditure and grants	85,898	91,614	96,131	104,431	127,476	167,755	259,612	381,458	338,454
Current expenditure	71,710	74,306	80,984	84,256	106,545	127,439	172,724	216,447	248,666
Wages and salaries [4]	15,120	15,764	15,990	15,915	18,138	21,003	29,001	32,711	33,377
Goods and services	23,744	27,029	28,326	25,453	25,330	36,455	49,179	67,738	84,953
Abu Dhabi "federal services" [5]	17,045	19,251	23,760	22,784	25,349	31,285	45,552	55,924	72,365
Subsidies and transfers [6]	15,406	11,370	12,335	19,353	37,035	36,425	41,154	45,479	37,943
Interest payments	0	0	0	0	1	413	3,047	5,880	9,473
Other	395	892	573	751	692	1,858	4,790	8,716	10,556
Development expenditure	12,468	16,028	15,064	14,042	11,606	17,271	31,485	45,083	38,746
Loans and equity (net) [7]	760	16	-514	5,118	8,953	20,793	51,844	116,641	49,874
Foreign grants [8]	960	1,264	597	1,015	372	2,252	3,559	3,287	1,168
Abu Dhabi	784	1,136	597	1,015	372	2,129	3,485	3,096	1,158
Federal	176	128	0	0	0	123	74	191	10
Overall balance (consolidated) [9]	-8,389	7,876	29,848	92,309	147,572	146,045	190,230	-124,665	-13,932
(In percent of GDP)	-2.1	1.7	5.5	13.9	18.1	15.4	16.5	-12.6	-1.3
Nonhydrocarbon balance	-63,020	-67,286	-68,736	-58,355	-68,987	-87,582	-171,285	-298,756	-253,203
(In percent of nonhydrocarbon GDP)	-20.4	-19.7	-17.9	-13.4	-13.5	-14.0	-23.5	-42.3	-34.7
Nonhydrocarbon balance (excluding investment income	-69,607	-71,340	-74,701	-71,904	-92,094	-118,379	-194,452	-315,352	-266,309
(In percent of nonhydrocarbon GDP)	-22.5	-20.9	-19.4	-16.5	-18.0	-18.9	-26.7	-44.7	-36.5
Financing	8,389	-7,876	-29,848	-92,309	-147,572	-146,045	-190,230	124,665	13,932
Bank financing, net [10]	-8,482	-2,269	-1,776	-16,039	-4,550	-9,498	-23,652	95,051	19,335
Loans to government	4,292	5,613	10,509	13,369	11,477	13,682	70,604	78,830	9,279
Government deposits	12,774	7,882	12,285	29,408	16,027	23,180	94,256	-16,221	-10,056
Of which: Privatization receipts [11]	0	3,004	2	6,207	0	0	0	0	0
Nonbank financing	16,871	-5,607	-28,072	-76,270	-143,022	-136,547	-166,578	29,614	-5,403
Memorandum items:									
Hydrocarbon share of revenue	70.5	75.5	78.3	76.6	78.7	74.5	80.9	69.4	75.9

Sources: Federal government; Emirate finance departments; and Fund staff estimates.

[1] Includes Fund estimates of revenues from other government entities operating in the oil and gas sector.

[2] Taxes on profit of foreign banks. Income taxes on gas companies are included under hydrocarbon revenues.

[3] Fund staff estimates.

[4] Excludes military wages and salaries.

[5] Largely military and internal security expenditures paid by Abu Dhabi but not in the federal accounts.

[6] Includes government's contribution to the pension fund in 2005 of AED 6,207 million.

[7] Includes government's share in the 2005 privatization of the telecom company, Etisalat.

[8] Intragovernmental grants are netted out in the consolidated fiscal accounts.

[9] Consolidated accounts of the federal government, Abu Dhabi, Dubai and Sharjah.

[10] From the monetary statistics.

[11] Abu Dhabi receipts from the sale of water and power assets.

Table 8. United Arab Emirates: Federal Government Financial Operations, 2002–10

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total revenue and grants	21,687	21,310	22,016	24,939	30,387	34,541	42,802	42,280	39,799
Revenues	8,508	8,253	9,018	11,426	16,286	20,146	26,610	26,780	27,728
Enterprise profits[1]	2,120	1,817	2,011	2,687	2,853	11,231	3,409	3,263	3,204
Other fees and charges	6,388	6,436	7,007	8,740	13,433	8,915	23,201	23,517	24,524
Grants from Emirates	13,179	13,057	12,998	13,512	14,101	14,395	16,192	15,500	12,071
Abu Dhabi	11,979	11,857	11,798	12,312	12,901	13,195	14,992	14,300	11,471
Cash contributions	5,600	5,610	5,619	6,171	6,779	7,119	9,857	9,743	7,398
Federal services [2]	6,242	6,119	6,179	6,141	6,122	6,076	5,135	4,557	4,073
Foreign grants on federal account [2]	137	128	0	0	0	0	0	0	0
Dubai	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600
Total expenditure and grants	21,579	22,147	22,533	23,289	28,551	27,800	39,781	41,338	39,592
Current expenditures	20,743	21,357	21,693	22,082	25,605	25,461	36,572	38,563	37,178
Wages and salaries [3]	7,829	7,841	7,998	8,158	8,997	9,387	13,854	15,253	13,187
Goods and services (by ministries)	9,216	9,789	9,902	9,997	9,184	9,448	11,730	11,722	14,530
Subsidies and transfers	3,698	3,727	3,793	3,928	7,424	6,626	10,988	11,587	9,460
Development expenditures	507	614	715	533	466	920	1,041	1,139	1,159
Equity positions	153	176	125	674	2,480	1,296	2,094	1,446	1,245
Domestic	153	176	125	674	2,480	1,296	2,094	1,446	945
Foreign grants	176	128	0	0	0	123	74	191	10
Overall balance	108	-837	-516	1,649	1,836	6,740	3,021	943	207
Memorandum items:									
Abu Dhabi federal services [4]	17,045	19,251	23,760	22,784	25,349	31,285	45,552	55,924	72,365

Sources: Ministry of Finance; Abu Dhabi Department of Finance.

[1] Dividends and payouts by Etisalat and other enterprises, including the Central Bank.

[2] Amount budgeted by federal government, but outlays are made by Abu Dhabi.

[3] Beginning 2002, military pension payments of Interior Ministry are classified as wages and salaries.

[4] Mainly military and internal security expenditures not included in the federal accounts.

Table 9. United Arab Emirates: Federal Subsidies and Transfers, 2002–10

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Subsidies	1,871	2,003	2,104	2,253	4,032	1,976	2,376	2,430	2,431
Sheikh Zayed University	210	209	179	220	235	228	255	252	252
U.A.E. University	685	747	689	780	794	833	1,220	1,283	1,251
Higher College of Technology	545	551	443	562	538	632	708	721	781
Emirates Media, Inc.	180	180	150	180	180	282	192	174	147
Other	251	316	643	511	2,285	0	0	0	0
Transfers	1,827	1,739	1,641	1,675	2,246	2,587	5,001	5,009	4,944
Pension Fund	462	600	600	400	400	1,646	4,101	3,709	3,649
Marriage Fund	216	216	180	216	216	262	221	221	215
Zayed Housing Program	548	500	450	640	640	680	680	1,080	1,080
General Pension and Social Security Authority [1]	601	423	411	419	990	0	0	0	0
Other subsidies and transfers	0	0	48	0	1,146	1,042	1,761	2,246	2,483
Total	3,698	3,742	3,793	3,928	7,424	5,605	9,138	9,685	9,857

Source: Ministry of Finance.

[1] Transfers to fund pension payments for federal workers retiring in current year, military pensions are included starting 2006.

Table 10. United Arab Emirates: Abu Dhabi Fiscal Operations, 2002–10

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total revenue	44,419	60,967	77,653	126,709	183,732	204,804	300,414	143,983	188,456
Hydrocarbon revenue	36,045	51,830	67,978	104,279	157,125	168,274	269,586	121,775	169,128
Crude oil royalties and taxes	33,692	48,618	64,345	99,699	151,118	162,557	259,227	116,817	162,089
Income taxes [1]	2,353	3,212	3,633	4,580	6,007	5,717	10,359	4,958	7,038
Nonhydrocarbon	8,374	9,137	9,675	22,430	26,607	36,530	30,828	22,208	19,328
Customs	294	552	710	635	748	1,427	1,817	1,954	2,200
Investment income [2]	6,587	4,054	5,965	13,549	23,107	30,797	23,167	16,596	13,106
Other	1,492	1,531	3,000	2,039	2,752	4,306	5,844	3,658	4,022
Total expenditure and grants	66,327	69,865	74,015	79,828	92,310	121,737	187,363	261,442	245,527
Current expenditures	43,864	45,287	50,659	52,503	65,243	81,581	105,431	138,996	165,391
Wages and salaries	3,374	3,454	3,169	3,169	3,236	4,813	5,861	6,006	6,717
Goods and services	10,590	12,286	12,822	12,396	13,591	22,387	32,027	48,929	63,264
Federal services [3]	17,045	19,251	23,760	22,784	25,349	31,285	45,552	55,924	72,365
Water and electricity	2,077	3,706	3,636	318	0	0	0	0	0
Subsidies and transfers	10,778	6,590	7,272	13,836	23,066	23,096	21,784	27,597	22,168
Interest payments	0	0	0	0	1	0	207	540	877
Development expenditures	9,203	11,816	11,898	9,792	7,321	5,041	13,211	27,635	23,643
Water and electricity	1,748	2,766	2,147	3,002	2,428	1,902	2,300	4,154	4,154
Other	7,455	9,050	9,751	6,790	4,893	3,139	10,911	23,481	23,481
Loans and equity (net)	497	-178	-937	4,206	6,473	19,497	49,750	77,415	43,863
Domestic	329	-1,004	3,025	4,813	8,798	19,218	50,460	78,324	44,243
Building and housing loans	-1,191	-1,345	1,527	1,607	2,759	10,377	38,070	26,473	6,919
Transfer to Dubai	0	0	0	0	0	0	0	12,129	11,000
Equity	1,520	341	1,498	3,206	6,039	8,841	12,390	39,722	26,325
Foreign loans	168	826	-3,962	-607	-2,325	279	-710	-909	-380
Grants	12,763	12,940	12,395	13,327	13,273	15,618	18,971	17,396	12,629
Cash contributions to federal government	5,600	5,610	5,619	6,171	6,779	7,119	9,857	9,743	7,398
Federal services [4]	6,242	6,119	6,179	6,141	6,122	6,076	5,135	4,557	4,073
Foreign grants on federal account[4]	137	75	0	0	0	294	494	0	0
Foreign grants [5]	784	1,136	597	1,015	372	2,129	3,485	3,096	1,158
Overall balance	-21,908	-8,898	3,638	46,881	91,422	83,067	113,051	-117,459	-57,071

Source: Abu Dhabi Department of Finance.

[1] Income taxes are entirely from ADGAS and GASCO.

[2] Fund staff estimates; not included in finance department accounts.

[3] Mainly defense and security outlays; not included in the federal accounts.

[4] Outlays made by Abu Dhabi, but included in the federal accounts.

[5] Foreign grants on Abu Dhabi account.

Table 11. United Arab Emirates: Abu Dhabi Development Expenditures, 2002–09[1]

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009
Agriculture	681	736	1,095	943	331	289	430	506
Electricity and water [2]	1,748	2,766	2,147	3,002	2,428	1,902	2,300	4,154
Industry & commerce	525	1,287	1,579	916	288	239	280	333
Transport and communications	2,570	1,993	2,340	2,357	2,715	1,310	6,708	14,371
Housing & community centers	690	1,933	2,066	1,189	414	216	1,571	1,465
Urban development (reclamation and dredging)	1,082	865	320	56	48	126	370	2,341
Health [3]			11	7	55	163	136	563
Sewerage/sanitation	832	869	656	773	541	333	542	1,155
Sports and recreation	868	1,227	1,470	393	395	233	394	1,084
General administration and contingency fund	207	140	214	156	106	194	241	933
Education [4]	0	0	0	0	0	36	205	655
Religious affairs	0	0	0	0	0	0	30	23
Police and civil defence	0	0	0	0	0	0	4	36
Others (including unallocated reserves)	0	0	0	0	0	0	0	16
Total	9,203	11,816	11,909	9,792	7,321	5,041	13,211	27,635

Source: Abu Dhabi Department of Finance.

[1] Certain expenditures were reclassified as from 1999.
[2] 2002 budget likely to be exceeded owing to unresolved issues with ADWEA.
[3] Since 2004, health services in Abu Dhabi, previously managed by the federal government, are managed by Abu Dhabi Health Authority.
[4] Since 2007, education services in Abu Dhabi, previously managed by the federal government, are managed by Abu Dhabi Education Council.

Table 12. United Arab Emirates: Abu Dhabi Government Transfers and Subsidies, 2002–09[1]

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009
Compensation for land	2	120	6	26	45	2,032	184	47
Compensation for crop damage [1]	4,277	2,450	2,411	2,092	2,098	2,246	2,468	3,195
Grants to sports clubs	141	158	143	178	205	288	632	600
Grants to low cost house owners	24	45	21	47	15	7	25	11
Other subsidies	493	548	663	905	610	1,195	1,347	1,471
Domestic aid [2]	5,824	2,865	2,776	3,626	16,033	10,334	9,360	12,608
Extra-ordinary expenses	17	404	12	6,464	9	51	41	9
Subsidies to ADWEA [3]	0	0	1,261	545	4,088	6,950	7,752	9,667
Total [4]	10,778	6,590	7,293	13,883	23,103	23,103	21,809	27,608

Source: Abu Dhabi Department of Finance.

[1] Reflecting the cost of disposition.

[2] Transfers to other emirates besides Dubai and Sharjah.

[3] Abu Dhabi Water and Electricity Authority (ADWEA).

[4] For 2005 it includes AED 6.2 billion that the government of Abu Dhabi contributed to its pension fund.

Table 13. United Arab Emirates: Dubai Government Operations, 2002–10[1]

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total revenue	9,103	10,047	11,978	16,900	19,831	25,605	32,618	40,554	41,931
Tax revenue	1,413	1,997	2,415	3,317	4,630	6,838	7,604	7,132	7,319
Customs [1]	1,178	1,696	2,095	2,897	3,537	5,996	6,414	5,792	5,932
Income tax [2]	235	301	320	420	1,093	842	1,190	1,340	1,387
Nontax revenue	7,690	8,050	9,563	13,583	15,201	18,767	25,014	33,422	34,612
Oil and gas	3,735	3,766	4,213	5,902	6,259	6,770	8,495	4,703	6,466
Enterprise profits [3]	1,237	1,118	1,311	1,937	2,807	1,470	1,819	770	770
Transfers from Abu Dhabi	0	0	0	0	0	0	0	12,129	11,000
Other	2,718	3,166	4,039	5,744	6,135	10,527	14,700	15,820	16,376
Total expenditure	9,497	10,778	10,543	12,426	17,324	26,913	40,838	95,559	61,892
Current	6,149	6,664	7,538	8,272	14,024	16,796	25,307	30,949	34,492
Wages and salaries	2,928	3,044	3,390	3,933	5,137	5,906	8,168	10,369	12,352
Goods and services [4]	1,970	1,755	2,413	2,178	1,926	3,983	5,073	6,748	6,809
Subsidies and transfers [5]	888	1,008	1,207	1,469	6,411	5,168	7,582	5,753	5,753
Interest payments	0	0	0	0	0	412	2,841	5,340	8,596
Other	363	857	528	692	550	1,327	1,643	2,739	982
Development	2,038	2,896	1,507	2,716	2,100	8,917	14,331	13,499	11,035
Loans and equity (net)	110	18	298	238	0	0	0	49,910	15,766
Grants									
Contribution to federal government	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	600
Overall balance	-394	-731	1,435	4,474	2,507	-1,308	-8,220	-55,004	-19,961

Source: Dubai Department of Finance.

[1] All revenues associated with trade and port operations; more than customs duties.
[2] Taxes on foreign banks.
[3] Includes DUBAL, DUGAS, Emirates Airlines, Jebel Ali, and other public enterprises.
[4] Includes interest and amortization on some bank loans.
[5] Excludes Water and Electricity, which is settled in an off-budget account.

Table 14. United Arab Emirates: Monetary Survey, 2002–10[1]

(Millions of U.A.E. dirhams)

End of Period Stock	2002	2003	2004	2005	2006	2007	2008	2009	2010
Net foreign assets	128,654	131,847	145,313	166,820	155,658	160,498	33,098	46,949	78,624
Foreign assets	166,960	167,255	194,654	253,177	334,614	482,821	316,852	298,706	350,947
Central bank	56,229	55,518	68,546	78,149	102,676	285,924	113,466	90,549	117434
Commercial banks[2]	110,731	111,737	126,108	175,028	231,938	196,897	203,386	208,157	233513
Foreign liabilities	38,306	35,408	49,341	86,357	178,956	322,322	283,757	251,757	272,323
Central bank	284	349	548	1,142	1,268	1,352	1,158	671	624
Commercial banks[2]	38,022	35,059	48,793	85,215	177,688	320,970	282,599	251,086	271699
Domestic assets	40,590	64,703	96,929	157,244	243,636	405,206	641,212	693,669	707,764
Claims on government (net)	-27,248	-29,517	-31,293	-47,332	-51,882	-61,380	-85,029	9,997	28,939
Claims	14,497	20,110	30,619	43,988	55,465	69,147	139,754	218,581	227860
Deposits	41,745	49,627	61,912	91,320	107,347	130,527	224,783	208,584	198921
Claims on public sector enterprises	7,122	12,990	13,884	24,797	33,002	45,385	56,064	77,259	87581
Claims on private nonbanks	149,352	169,469	211,407	305,546	418,151	585,998	875,130	878,006	883254
Capital and reserves	-42,583	-46,063	-54,023	-79,692	-105,649	-132,442	-167,069	-245,531	-274538
Other items (net)	-46,053	-42,176	-43,046	-46,075	-49,986	-32,355	-37,884	-26,062	-17,472
Central bank	-31,245	-28,416	-38,951	-47,798	-64,701	-240,957	-107,603	-132,948	-157827
Commercial banks	-14,808	-13,760	-4,095	1,723	14,715	208,602	69,719	106,886	140355
Domestic liquidity	169,244	196,550	242,242	324,064	399,294	565,703	674,310	740,618	786,388
Money	47,054	58,262	80,818	104,449	120,020	181,665	208,138	223,482	232,961
Currency outside banks	11,938	13,785	15,778	17,522	21,837	25,942	36,967	37,217	38560
Dirham demand deposits	35,116	44,477	65,040	86,927	98,183	155,723	171,171	186,265	194401
Quasi-money	122,190	138,288	161,424	219,615	279,274	384,038	466,172	517,136	553,427
Foreign currency deposits	39,605	47,980	62,496	73,804	96,307	91,007	120,210	123,001	130264
Dirham time and savings deposits	82,585	90,308	98,928	145,811	182,967	293,031	345,962	394,135	423163
Memorandum items:									
Dirham-denominated liquidity	117,701	134,785	163,968	232,738	281,150	448,754	517,133	580,400	617564
Change in percent	14.5	14.5	21.7	41.9	20.8	59.6	15.2	12.2	6.4

Source: Central Bank of the United Arab Emirates.

[1] Compiled in accordance with the residence principle.

[2] Including the restricted license bank, Banca Commercial Italiana which ended its operations in May 2003.

Table 15. United Arab Emirates: Factors Affecting Domestic Liquidity, 2002–10

(Annual changes in millions of U.A.E. dirhams)

End of Period	2002	2003	2004	2005	2006	2007	2008	2009	2010
Net foreign assets	29,475	3,193	13,466	21,507	-11,162	4,841	-127,404	13,854	31675
Foreign assets	16,969	295	27,399	58,523	81,437	148,207	-165,969	-18,146	52241
Central bank	3,758	-711	13,028	9,603	24,527	183,248	-172,458	-22,917	26885
Commercial banks	13,211	1,006	14,371	48,920	56,910	-35,041	6,489	4,771	25356
Foreign liabilities	-12,506	-2,898	13,933	37,016	92,599	143,366	-38,565	-32,000	20566
Central bank	-232	65	199	594	126	84	-194	-487	-47
Commercial banks [1]	-12,274	-2,963	13,734	36,422	92,473	143,282	-38,371	-31,513	20613
Domestic assets	-6,596	24,113	32,226	60,315	86,392	161,570	236,006	52,457	14095
Claims on government (net)	-8,483	-2,269	-1,776	-16,039	-4,550	-9,498	-23,649	95,026	18942
Claims	4,292	5,613	10,509	13,369	11,477	13,682	70,607	78,827	9279
Deposits	12,775	7,882	12,285	29,408	16,027	23,180	94,256	-16,199	-9663
Claims on public sector enterprises	1,864	5,868	894	10,913	8,205	12,383	10,679	21,195	10322
Claims on private nonbanks	15,220	20,117	41,938	94,139	112,605	167,847	289,132	2,876	5248
Capital and reserves	-4,206	-3,480	-7,960	-25,669	-25,957	-26,793	-34,627	-78,462	-29007
Other items (net)	-10,991	3,877	-870	-3,029	-3,911	17,631	-5,529	11,822	8590
Central bank	-3,251	2,829	-10,535	-8,847	-16,903	-176,256	133,354	-25,345	-24879
Commercial banks	-7,740	1,048	9,665	5,818	12,992	193,887	-138,883	37,167	33469
Domestic liquidity	22,875	27,306	45,692	81,822	75,230	166,409	108,607	66,308	45770
Money	7,590	11,208	22,556	23,631	15,571	61,645	26,473	15,344	9479
Currency outside banks	1,401	1,847	1,993	1,744	4,315	4,105	11,025	250	1343
Dirham demand deposits	6,189	9,361	20,563	21,887	11,256	57,540	15,448	15,094	8136
Quasi-money	15,285	16,098	23,136	58,191	59,659	104,764	82,134	50,964	36291
Foreign currency deposits	6,527	8,375	14,516	11,308	22,503	-5,300	29,203	2,791	7263
Dirham time and savings deposits	8,758	7,723	8,620	46,883	37,156	110,064	52,931	48,173	29028

Source: Central Bank of the United Arab Emirates.

[1] Including the restricted license bank, Banca Commercial Italiana, which ended its operations in May 2003.

Table 16. United Arab Emirates: Summary Accounts of the Central Bank, 2002–10

(Millions of U.A.E. dirhams)

End of Period	2002	2003	2004	2005	2006	2007	2008	2009	2010
Foreign assets	56,229	55,518	68,546	78,149	102,676	285,924	113,466	90,549	117,435
Claims on banks	49,195	42,746	37,309	39,727	57,739	184,368	83,307	89,768	48169
Loans and investments	5,509	11,348	29,564	36,909	43,299	98,857	29,576	37	68418
Other [1]	372	127	516	1,021	1,295	2,467	156	70	115
IMF reserve position	1,153	1,297	1,157	492	343	232	427	674	733
Net claims on government	-1,153	-1,297	-1,157	1,933	282	-232	54,573	106,051	105,992
Claims	0	0	0	2,425	625	0	55,000	106,725	106725
Less: IMF reserve position	1,153	1,297	1,157	492	343	232	427	674	733
Claims on private nonbanks [2]	62	75	68	64	59	53	49	56	46
Claims on commercial banks	50	0	0	0	0	0	23,794	6,725	1421
Unclassified assets	85	156	182	190	216	204	1,865	556	4043
Total assets/liabilities	55,273	54,452	67,639	80,336	103,233	285,949	193,747	203,937	228,937
Foreign liabilities	284	349	548	1,142	1,268	1,352	1,158	671	625
Reserve money	25,160	30,539	38,789	44,314	54,177	92,077	121,728	113,795	112,360
Currency outside banks	11,938	13,785	15,778	17,522	21,837	25,942	36,967	37,217	38560
Cash held by banks	1,861	2,184	2,714	3,511	4,995	5,730	8,360	8,363	9215
Banks' deposits	11,361	14,570	20,297	23,281	27,345	60,405	76,401	68,215	64585
Certificates of deposit	12,489	11,762	15,977	21,033	32,322	173,577	47,183	71,453	94002
Government deposits [3]	10,111	10,186	10,620	12,124	13,651	15,932	20,863	15,935	15331
Capital and reserves	1,560	1,560	1,560	1,560	1,560	1,560	1,500	1,500	1500
Unclassified liabilities[4]	5,669	56	145	163	255	1,449	1,318	583	5119

Source: Central Bank of the United Arab Emirates.

[1] Mainly gold, valued at cost.
[2] Staff loans.
[3] Mainly foreign currency deposits.
[4] Includes undistributed profits in 2002.

Table 17. United Arab Emirates: Balance Sheets of Commercial Banks, 2002–10[1]

(Millions of U.A.E. dirhams)

End of Period	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reserves	13,222	16,753	23,011	26,791	32,340	66,135	84,761	76,578	73,800
Cash	1,861	2,184	2,714	3,511	4,995	5,730	8,360	8,363	9215
Deposits with central bank	11,361	14,569	20,297	23,280	27,345	60,405	76,401	68,215	64585
Foreign assets	110,675	111,727	126,108	175,028	231,938	196,897	203,386	208,157	233513
Claims on government	15,650	21,407	31,776	42,055	55,183	69,379	85,181	112,530	121868
Claims on public sector enterprises [2]	7,122	12,990	13,884	24,797	33,002	45,385	56,064	77,259	87581
Claims on private nonbanks	145,592	165,143	204,727	290,239	385,730	530,737	777,141	786,495	792030
Claims on nonbank financial institutions	3,692	4,251	6,612	15,243	32,362	55,208	97,940	94,350	99708
Central bank certificates of deposit	12,489	11,762	15,977	21,033	32,322	173,577	47,183	71,453	94002
Unclassified assets[3]	6,938	7,390	10,451	13,317	21,677	40,080	44,293	67,475	76646
Total assets/liabilities	315,380	351,423	432,546	608,503	824,554	1,177,398	1,395,949	1,494,297	1,579,148
Monetary deposits	35,116	44,477	65,040	86,927	98,183	155,723	171,171	186,265	194401
Quasi-monetary deposits	122,190	138,288	161,424	219,615	279,274	384,038	466,172	517,136	553,427
Foreign currency	39,598	47,980	62,496	73,804	96,307	91,007	120,210	123,001	130264
Local currency	82,585	90,308	98,928	145,811	182,967	293,031	345,962	394,135	423163
Foreign liabilities [4]	37,972	35,059	48,793	85,215	177,688	320,970	282,599	251,086	271699
Government deposits	31,606	39,418	51,274	79,179	93,680	114,579	198,298	192,614	183162
Government lending funds	28	23	18	17	16	16	5,622	13	13
Credit from central bank	61	101	25	26	8	2	25,260	6,776	4314
Capital and reserves	40,975	44,455	52,463	78,132	104,089	130,882	165,569	244,031	273038
Provision	32,246	31,983	29,768	30,964	33,183	20,788	25,269	41,454	53121
Unclassified liabilities	15,193	17,619	23,741	28,428	38,433	50,400	55,989	96,376	99094

Source: Central Bank of the United Arab Emirates.

[1] Excluding accounts of the restricted license bank.

[2] Commercial enterprises with significant government ownership, including Dubai Aluminum Company, Dubai Gas Company, Abu Dhabi National Oil Company, other oil and gas companies owned by Abu Dhabi, and cement companies established by several Emirate governments.

[3] Includes net lending to restricted license bank, Banca Commercial Italiana, which ended its operations in May 2003.

[4] Includes commercial prepayments.

Table 18. United Arab Emirates: Banking System Structure, 2003–10

	2003	2004	2005	2006	2007	2008	2009	2010
Number of:								
Banks[1]	46	46	46	46	48	52	52	53
Private[1]	31	31	31	31	33	35	36	37
Local	6	6	6	6	7	7	7	7
Foreign	25	25	25	25	26	28	29	30
State-owned	15	15	15	15	15	17	16	16
Foreign-owned subsidiaries								
Banks[2]								
Islamic	2	4	4	4	6	8	8	8
Non-Islamic	44	42	42	42	42	44	44	45
Branches of foreign banks	111	111	111	111	111	117	125	133
Concentration								
Banks[3]	12	13	11	11	11	11	10	10
Assets share				(Percent)				
Banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private commercial	35.9	36.1	35.8	36.4	38.2	36.8	35.5	34.6
Local	11.8	12.6	14.1	14.5	15.6	16.3	16.6	15.9
Foreign	24.1	23.5	21.8	21.9	22.6	20.6	18.9	18.6
State-owned	64.1	63.9	64.2	63.6	61.8	63.2	64.5	65.4
Banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Islamic	9.0	9.9	11.9	14.0	14.2	15.7	16.0	16.8
Non-Islamic	91.0	90.1	88.1	86.0	85.8	84.3	84.0	83.2
Deposits share				(Percent)				
Banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private commercial	39.7	38.8	38.5	40.1	39.9	37.7	37.2	35.0
Local	13.6	13.8	14.9	15.6	16.7	16.6	17.2	16.2
Foreign	26.1	25.0	23.7	24.5	23.2	21.1	20.0	18.7
State-owned	60.3	61.2	61.5	59.9	60.1	62.3	62.8	65.0
Banks	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Islamic	11.2	13.3	13.8	16.0	17.1	18.1	18.7	18.8
Non-Islamic	88.8	86.7	86.2	84.0	82.9	81.9	81.3	81.2

Source: Central Bank of the United Arab Emirates.

[1] Dubai Bank PJSC was established in 2002.

[2] In 2003, Grindlays merged with Standard Chartered Bank.

[3] Number of institutions with 75 percent of total assets.

Table 19. United Arab Emirates: Sectoral Loan Concentration, 2003–10[1]

(Percent of total credit)

	2003	2004	2005	2006	2007	2008	2008	2009	2010
Agriculture	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1
Mining and quarrying	1.1	1.2	1.1	1.2	1.2	1.1	1.3	0.7	0.7
Manufacturing	5.6	5.5	5.0	5.1	5.4	5.1	4.9	4.6	4.7
Electricity, gas, and water	5.6	3.7	3.0	2.3	1.9	2	2.2	2.6	2.5
Construction (excluding mortgages)	8.3	8.5	6.9	4.8	3.4	3.9	6.8	6.6	6.1
Trade	29.0	28.1	24.1	19.6	16.4	15.6	13.4	10.5	10.0
Transportation, storage, and communication	3.2	2.8	3.0	4.1	3.4	2.5	2.7	2.9	2.7
Financial institutions (excluding banks)[2]	1.2	1.4	2.1	3.9	5.7	6.3	7.9	9.0	8.5
Government	10.0	11.8	11.1	10.1	9	8.6	7.8	9.6	9.8
Services	6.4	7.3	9.0	11.8	14.4	14.6	15.9	14.2	14.1
Real estate mortgage loans	5.3	4.4	5.0	6.6	7.1	6.6	6.1	6.5	6.6
Personal loans						0			0.0
Business	12.2	14.8	19.9	18.6	17	18.2	17.3	17.9	18.8
Consumption	10.9	9.3	7.7	6.6	6.7	6.7	7.3	6.9	6.8
Others	0.8	1.0	1.8	5.0	8.1	8.5	6.1	7.9	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of the United Arab Emirates.

[1] Excludes overseas branches.

[2] Includes Abu Dhabi Investment Council (ADIC) and Abu Dhabi Investment Authority (ADIA).

Table 20. United Arab Emirates: Financial Sector Indicators, 2003–10

(Percent, unless otherwise indicated)

	2003	2004	2005	2006	2007	2008	2009	2010
Core indicators								
Deposit-taking institutions								
Total regulatory capital to risk-weighted assets[1]	18.6	16.9	17.4	16.6	14.0	13.3	19.2	20.8
Regulatory Tier I capital to risk-weighted assets	18.2	16.3	16.9	15.0	12.4	12.3	15.4	16.1
Nonperforming loans net of provisions to capital	7.7	3.5	1.8	0.6	0.0	0.0	3.1	4.2
Nonperforming loans to total gross loans	14.3	12.5	8.3	6.3	2.9	2.5	4.8	6.3
Return on assets	2.3	2.1	2.7	2.3	2.0	1.8	1.3	1.4
Return on equity	16.4	18.6	22.5	18.0	19.3	15.6	7.9	8.4
Interest margin to gross income	59.5	64.6	49.3	29.3	32.4	40.2	43.8	47.3
Noninterest expenses to gross income	43.6	40.3	26.9	20.9	21.4	26.3	25.0	26.8
Liquid assets to total assets	22.7	23.2	26.9	16.4	13.2	6.3	13.2	17.2
Encouraged indicators								
Deposit-taking institutions								
Capital to assets	11.4	11.1	11.9	12.6	10.5	11.8	16.0	16.7
Personnel expenses to noninterest expenses	29.5	38.6	41.8	54.6	55.1	54.4	53.3	54.4
Customer deposits to total (non-interbank) loans	125.0	113.6	112.4	96.5	99.7	90.6	92.6	96.5
Households								
Household debt to GDP	6.6	6.1	6.9	5.2	6.0	7.4	7.6	-
Real estate loans to total loans	5.4	4.7	5.0	5.9	8.3	13.1	14.4	16.4
Other indicators								
Loan loss reserves/nonperforming loans	88.5	94.6	95.7	98.2	100.0	100.8	85.0	83.3
Deposits as percent of M2	118.4	119.9	126.4	130.0	127.3	136.9	132.7	133.5
Commercial banks loans to private sector as percent of total deposits	70.9	70.5	70.8	60.4	61.5	71.3	66.7	63.0
Number of commercial banks (end-of-period)	46	46	46	46	49	52	52	53
Number of banks with C.A.R. above 10 percent	46	46	46	46	49	52	52	53
Foreign currency deposits as percent of M2	40.3	39.6	44.5	47.0	34.3	37.4	33.7	32.2
Foreign currency denominated lending/total lending	23.9	20.7	19.7	22.8	20.8		14.8	14.2
Earning per employee (in millions of AED)	0.4	0.5	0.7	0.7	0.8	0.7	0.5	0.6

Source: Central Bank of the United Arab Emirates.

[1] Tier 2 plus tier 2 capital items (net of deductions).

Table 21. United Arab Emirates: Banking System Income Statement and Profitability, 2003–10[1]

	2003	2004	2005	2006	2007	2008	2009	2010
				(Percent of total assets)				
Total income	**5.3**	**5.2**	**6.4**	**7.1**	**6.7**	**6.2**	**6.3**	**5.8**
Interest income	3.1	3.4	4.2	5.2	5.2	4.8	4.9	4.5
Fees	0.7	0.7	0.9	0.8	0.6	0.7	0.8	0.7
Foreign exchange income	0.2	0.3	0.3	0.4	0.3	0.3	0.2	0.2
Other income	1.2	0.9	1.0	0.7	0.6	0.3	0.4	0.3
Securities								
Real estate								
Total expenses	**3.3**	**3.2**	**3.7**	**4.8**	**4.7**	**4.3**	**5.0**	**4.4**
Interest expense	1.0	1.1	2.0	3.1	3.0	2.3	2.1	1.8
Provisions	0.5	0.5	0.4	0.3	0.4	0.6	1.4	1.1
Wages	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.8
Other expenses	1.1	0.8	0.6	0.6	0.6	0.7	0.7	0.7
Gross income								
Net profit/loss	**1.9**	**2.1**	**2.7**	**2.3**	**2.0**	**1.8**	**1.3**	**1.4**

Source: Central Bank of the United Arab Emirates.

[1] Includes overseas branches.

Table 22. United Arab Emirates: Balance of Payments, 2002–10

	2002	2003	2004	2005	2006	2007	2008	2009	2010
				(Billions of U.S. dollars)					
Current account balance	2.7	6.5	8.3	20.9	33.9	15.4	23.3	8.2	23.3
(In percent of GDP)	2.5	5.2	5.6	11.6	15.3	6.0	7.4	3.0	7.7
Trade balance	14.2	20.9	27.6	42.8	57.5	46.5	63.8	42.5	63.5
Exports	51.8	66.8	90.9	117.3	145.6	178.6	240.1	192.2	221.9
Oil and products	19.6	25.3	34.0	49.3	62.9	65.7	91.4	59.6	66.8
Gas	3.3	3.9	4.8	5.8	7.2	8.1	11.5	8.6	10.7
Nonhydrocarbon	10.6	14.1	18.3	22.4	28.5	34.2	43.0	44.0	53.5
Re-exports, of which: [1]	18.3	23.4	33.9	39.8	47.0	70.6	94.2	80.1	90.8
Imports	-37.5	-45.8	-63.3	-74.5	-88.1	-132.1	-176.3	-149.7	-158.3
Income, net	0.6	-0.7	-1.6	-0.6	2.6	4.2	3.9	3.3	0.1
Services, net	-7.7	-9.1	-12.1	-14.6	-18.0	-26.0	-33.8	-27.4	-28.1
Credits	2.6	2.8	3.0	4.8	6.8	8.1	9.6	10.2	11.8
Debits	-10.3	-11.8	-15.1	-19.4	-24.9	-34.0	-43.4	-37.6	-39.9
Transfers, net	-4.4	-4.7	-5.7	-6.7	-8.2	-9.3	-10.6	-10.2	-11.4
Private	-4.1	-4.4	-5.3	-6.2	-7.6	-8.7	-10.0	-9.5	-10.6
Official	-0.3	-0.3	-0.4	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7
Financial account balance	-6.1	-1.5	4.2	0.1	0.7	27.9	-19.9	9.3	2.0
Private capital	-1.9	3.9	12.5	15.0	22.5	58.4	9.6	-4.4	6.2
Direct investment, net	3.1	3.3	7.8	7.2	1.9	-0.4	-2.1	1.3	2.0
Portfolio securities, net	0.2	0.0	2.0	6.1	1.2	1.4	2.2	2.5	1.0
Commercial banks	-6.9	-1.1	-0.2	-3.4	9.7	48.6	-12.2	-9.9	-1.3
Private nonbanks and other	1.7	1.8	2.9	5.1	9.7	8.8	21.7	1.8	4.6
Official capital [2]	-4.2	-5.5	-8.3	-14.9	-21.8	-30.5	-29.5	13.6	-4.3
Errors and omissions	4.5	-5.1	-9.0	-18.5	-27.9	6.5	-50.2	-23.5	-17.9
(As percent of GDP)	4.1	-4.1	-6.1	-10.3	-12.6	2.5	-16.0	-8.7	-5.9
Overall balance	1.1	-0.2	3.5	2.5	6.6	49.9	-46.8	-6.0	7.3
Change in Central Bank net foreign assets[3]	-1.1	0.2	-3.5	-2.5	-6.6	-49.9	46.9	6.1	-7.3
Memorandum items:									
Overall balance (as percent of GDP)	1.0	-0.2	2.4	1.4	3.0	19.3	-14.9	-2.2	2.4
Gross reserves of Central Bank	15.3	15.1	18.7	21.3	28.0	77.9	30.9	24.7	32.0
(In months of imports) [4]	3.2	2.3	2.4	2.3	2.0	4.3	2.0	1.5	1.7

Sources: Central Bank of the United Arab Emirates; and Fund staff estimates.

[1] Not formally compiled; estimated at 40 to 70 percent of emirates imports.

[2] Includes changes in government external assets.

[3] Minus equals increase.

[4] Imports of goods and services in the next 12 months.

Table 23. United Arab Emirates: Merchandise Imports by Harmonized System Sections, 2002–09 [1]

(Millions of U.A.E. dirhams)

	2002	2003	2004	2005	2006	2007	2008	2009
Live animals, animal products	3,049	3,254	3,719	3,689	5,033	6,224	8,775	8,319
Vegetable products	5,523	5,768	6,663	7,908	9,045	12,036	18,464	18,684
Fats, oil and waxes	362	419	700	915	1,150	1,437	2,891	1,624
Foodstuffs, beverages, spirits, and tobacco	3,481	4,942	6,230	8,044	8,187	8,764	9,406	8,868
Mineral products	1,324	2,136	6,775	3,902	6,199	7,860	11,473	9,383
Chemicals and related materials	7,180	8,928	11,333	13,566	15,930	21,717	26,630	24,063
Plastics and rubber	4,693	5,574	7,493	9,126	10,715	14,303	17,842	13,720
Raw hides, leather, and articles thereof	1,431	585	893	1,153	1,383	1,673	1,922	1,802
Wood, cork, and articles thereof	1,124	1,332	1,931	2,493	2,949	4,244	4,798	3,066
Wood pulp, paper, and paperboard	1,574	1,880	2,230	2,706	3,220	3,883	4,968	4,048
Textiles and textile articles	10,573	11,262	13,298	13,515	14,823	17,491	20,068	17,495
Footwear and other accessories	1,049	1,153	1,478	1,694	1,913	2,313	2,724	2,594
Stone, plaster, cement, ceramic, and glassware	2,522	3,180	3,994	4,342	5,813	6,824	9,079	7,841
Pearls, precious stones, and precious metals [2]	17,358	21,181	38,059	50,711	52,503	76,894	121,689	101,498
Base metals and related products	9,888	13,305	18,341	23,504	33,348	45,507	82,724	41,206
Machinery and electrical equipment	29,805	34,073	45,904	59,191	68,561	89,129	120,436	108,134
Vehicles and other transport equipment	14,867	21,538	24,598	30,561	36,983	51,307	80,777	57,205
Optical and medical equipment	3,283	3,524	4,520	5,002	5,935	7,466	8,745	8,376
Arms and ammunition	17	38	285	394	1,152	1,031	1,234	252
Miscellaneous manufactured goods	3,355	3,582	4,414	5,130	6,148	8,124	10,635	8,702
Works of art and antiques	125	123	37	46	61	129	441	513
Total imports, c.i.f.	**122,582**	**147,776**	**202,896**	**247,590**	**291,049**	**388,357**	**565,720**	**447,394**

Source: Central Bank of the United Arab Emirates.

[1] Imports of the Emirates of Abu Dhabi, Dubai, and Sharjah.

[2] As from 2002 imports of nonmonetary gold included by Dubai authorities.

Table 24. United Arab Emirates: Merchandise Exports by Harmonized System Sections, 2002–09[1]

(Millions of U.A.E. dirhams)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Live animals, animal products	102	58	129	140	425	274	376	253	290	773
Vegetable products	112	237	214	226	2,330	512	299	241	345	301
Fats, oil and waxes	137	106	158	205	475	372	476	465	746	303
Foodstuffs, beverages, spirits, and tobacco	343	320	469	1,081	1,610	2,411	2,635	3,024	3,596	4,265
Mineral products	349	536	1,291	1,258	807	1,279	5,047	4,350	4,994	3,713
Chemicals and related materials	293	359	423	441	501	931	1,007	1,142	1,426	1,693
Plastics and rubber	160	215	691	1,094	492	2,760	2,861	3,763	5,535	5,211
Raw hides, leather, and articles thereof	7	11	25	18	18	22	30	42	24	20
Wood, cork, and articles thereof	3	8	4	4	9	53	44	57	25	30
Wood pulp, paper, and paperboard	113	178	220	260	205	604	582	885	1,139	1,424
Textiles and textile articles	1,005	908	822	719	689	831	993	1,184	1,366	1,005
Footwear and other accessories	3	13	6	4	9	23	35	34	86	106
Stone, plaster, cement, ceramic, and glassware	162	394	490	923	1,523	969	1,230	2,057	9,652	1,904
Pearls, precious stones, and precious metals	276	62	120	32	1,665	578	5,092	11,389	23,943	32,896
Base metals and related products	3,052	3,476	3,288	3,221	3,092	3,616	4,533	5,230	5,215	8,019
Machinery and electrical equipment	246	272	155	196	210	615	1,059	924	1,008	1,387
Vehicles and other transport equipment	135	247	41	582	416	326	1,889	635	406	1,718
Optical and medical equipment	2	10	8	18	0	14	20	54	84	80
Arms and ammunition	...	...	0	1	...	3	2	27	18	8
Miscellaneous manufactured goods	41	119	91	85	130	231	386	409	458	414
Works of art and antiques	20	5	4	81	9	39	636	98	3	9
Total exports [2]	**6,561**	**7,536**	**8,649**	**10,589**	**14,615**	**16,463**	**29,232**	**36,262**	**60,359**	**65,279**

Source: Central Bank of the United Arab Emirates.

[1] Exports of the Emirates of Abu Dhabi, Dubai, and Sharjah.

[2] Data exclude free zone exports and "re-exports."