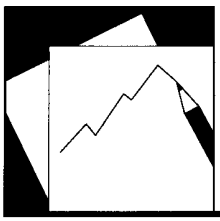
WP/08/17



IMF Working Paper

Lebanon—Weathering the Perfect Storms

Axel Schimmelpfennig and Edward H. Gardner

INTERNATIONAL MONETARY FUND

 WP/08/17

IMF Working Paper

Middle East and Central Asia Department

Lebanon—Weathering the Perfect Storms*

Prepared by Axel Schimmelpfennig and Edward H. Gardner**

Authorized for distribution by Edward H. Gardner

January 2008

Abstract

This paper reviews Lebanon's ability to manage financial pressures following severe shocks despite its large public debt overhang and significant external vulnerabilities. Based on interviews with market participants in Beirut and London, the paper concludes that Lebanon's ability to weather what appear to be "perfect storms" derives from three characteristics: a perceived implicit guarantee from donors; Lebanon's track record of having never defaulted on external debt or deposits; and the unique market structure for Lebanese debt which is dominated by local banks and "dedicated" investors and depositors.

JEL Classification Numbers: F34, G15, H63, N25

Keywords: Lebanon, public debt, debt crisis, debt sustainability

Authors' E-Mail Addresses: aschimmelpfennig@imf.org; egardner@imf.org

---

* We thank interview participants at financial institutions in Beirut and London for their time and valuable insights that have been a key input to this paper. We also thank Susanne Winkler for her outstanding research assistance, Sean Craig for his assistance in London, and Taimur Baig, Eric Le Borgne, Juan Carlos Di Tata, Frank Engels, Harald Finger, Nassib Ghobril, Mohsin S. Khan, Amine Mati, Carlo Sdralevich, Nikolaus Siegfried, and Sebastian Sosa, for helpful comments on an earlier draft.

** Corresponding author.

Contents Page

Tables

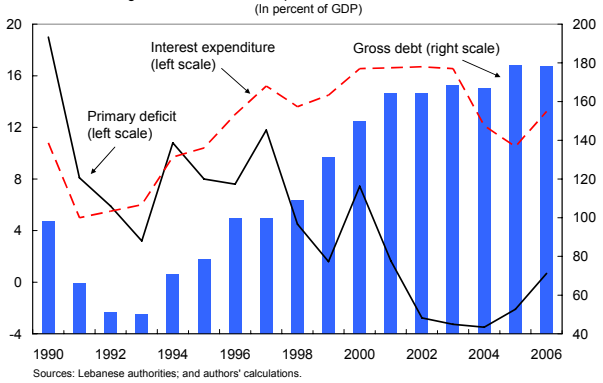
Figures

I. INTRODUCTION

Facts and realities that do not fit theoretical models are always a source of puzzlement for economists, and few cases come close to Lebanon in challenging model's of financial crises and debt sustainability. Based on standard models, experience from other countries, and derived rules of thumb, many observes may argue that Lebanon should have undergone a debt crisis a long time ago. Government debt is one of the highest in the world, and the country has been faced with two episodes of severe financial pressures in 2005 and 2006 that were both triggered by exogenous shocks. All things considered, each episode had the ingredients of a perfect storm, yet, Lebanon weathered them, seemingly without much lasting damage. In this paper we attempt to identify the factors that possibly helped Lebanon withstand these shocks.

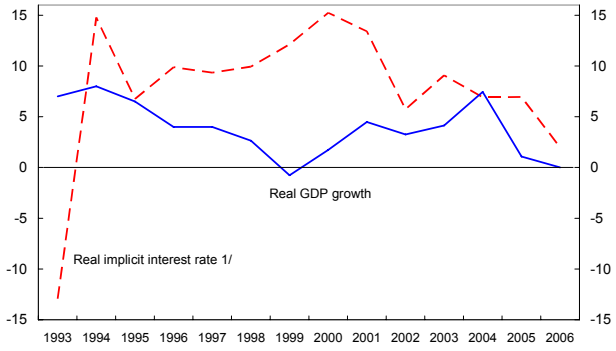
Lebanon's debt overhang has been built up since the end of the civil war in 1991, initially reflecting the need for reconstruction spending (Figures 1 and 2).[1] Rising expenditures (mostly on reconstruction and the integration of militias into the military) that were unmatched by revenue efforts or foreign assistance produced high primary deficits in the early 1990s. The primary adjustment that followed in the second half of the 1990s was insufficient to offset the adverse effects of rising interest expenditure and declining real GDP growth on debt dynamics. By 2001, government debt had risen to 164 percent of GDP, about one third of which was in foreign currency. The mounting fiscal imbalances and attempts at fiscal consolidation contributed to a slowdown in investment and growth, while the government faced severe rollover problems. A program of fiscal adjustment was undertaken in late 2002 (as part of the Paris II reform agenda), and the authorities were able to contain the primary deficit in 2003 and 2004, which, combined with temporary interest relief, brought about an improvement in the overall deficit, stabilizing the debt at just below 170 percent of GDP at end-2004.

Figure 1. Lebanon: Build-Up of Government Debt, 1990–2006
(In percent of GDP)



Sources: Lebanese authorities; and authors' calculations.

Figure 2. Lebanon: Real Implicit Interest Rate and Real Growth, 1993–2006
(In percent)



Sources: Lebanese authorities; and authors' calculations.
1/ Interest expenditure in t over debt stock in t-1, less the change in the GDP deflator.

[1] A detailed account of the reconstruction period is given in Eken and others (1995) and Eken and Helbling (1999).

In 2005 Lebanon was hit by the first of two severe exogenous shocks. The assassination of former Prime Minister Hariri on February 14, 2005 rattled confidence, raising fundamental questions about Lebanon's political future. Eurobond spreads increased by about 90 basis points to over 400 basis points, and an estimated $2 billion in deposits left the country (3.5 percent of deposits), while bank deposit dollarization increased from 69 percent to over 78 percent. The central bank lost about $1½ billion in reserves, defending the peg.[2] Confidence started to strengthen again with the appointment of Prime Minister Mikati on April 15 which was perceived as a signal that there would be political agreement and elections without foreign interference. Deposit outflows were recouped, reserves rebuilt, and spreads declined to 246 basis points by year-end.[3] Still, debt ratcheted up further to 179 percent of GDP, in part reflecting the slowdown in growth.

The second serious exogenous shock resulted from the unexpected eruption of the conflict between Hezbollah and Israel in July 2006. After a strong growth recovery in the first half of the year, the July–August conflict led to renewed financial market pressures, a near-standstill in economic activity, and fiscal pressures. Spreads jumped by close to 200 basis points to over 400 basis points. Deposit outflows amounted to over $3 billion (5.4 percent of deposits), and deposit dollarization jumped from 72 percent to 75 percent in August. However, central bank gross reserve losses were limited by the deposits from Saudi Arabia and Kuwait with the central bank of $1 billion and $500 million respectively.[4] As in 2005, confidence returned eventually and deposit outflows were more than recouped by year-end, although the domestic political situation remained unsettled.[5] While the direct fiscal costs of the conflict were roughly matched by donor support in 2006, the phasing out of Paris II interest relief and rising transfer to the power utility resulted in an increased overall deficit. Still, because of relatively high inflation (and thus higher nominal GDP growth), the government debt ratio stabilized at 178 percent of GDP.

---

[2] Lebanon has a de facto peg against the U.S. dollar. The central bank intervenes to keep the Lebanese pound within a narrow trading band.

[3] The successful resolution of financial pressures and the quick recovery both in 2005 and 2006 are likely to have also benefited from a very favorable global environment and the so-called "search for yield." These factors are not discussed further, but need to be kept in mind when assessing Lebanon's resilience going forward.

[4] The impact was both direct and indirect via a confidence effect.

[5] In the wake of the conflict with Israel, the Shia parties (Hezbollah and Amal) left the government coalition and demanded the formation of a national unity government. The stalemate continued into 2007 over the election of a new president.

This paper draws on interviews with market participants in Beirut and London carried out in July 2007. Early warning systems of debt crises would assign to Lebanon a high probability of undergoing a crisis, but no crisis has occurred so far even as the debt burden has continued to grow. To shed some light (and confirm or disprove some of the conventional wisdom about Lebanon's uniqueness), we turned to market participants and inquired about their views of the Lebanese situation and their reasons for investing in Lebanese paper, exploring the factors that have enabled Lebanon to manage the 2005 and 2006 financial tensions. We conducted interviews with six leading banks in Beirut and seven investment banks and hedge funds in London.[6] Commonalities in the answers provided during these interviews reinforced the view that indeed there are identifiable factors that have contributed to relative financial stability in Lebanon.

We find that Lebanon, at present, benefits first and foremost from a perceived implicit guarantee from donors, but also from its reputation in credit markets and a unique investor base. Investors and depositors alike take comfort from the perception that donors have signaled an implicit guarantee not to let Lebanon fall into a financial crisis. They are further comforted by the fact that Lebanon has never defaulted on its external debt obligations in the past. Moreover, investors and depositors tend to be "dedicated," basing their investment decisions largely on bottom-up research and often having personal ties to the country, as in the case of Lebanon's sizable Diaspora. Local banks, which hold the majority of government paper, are an important pillar of stability, since their large exposure to the sovereign creates strong incentives to stay the course, even during times of financial pressures.

The remainder of the paper is organized as follows. Section II outlines Lebanon's core vulnerabilities, while Section III characterizes the main groups of investors in Lebanese paper. Sections IV identifies factors that contribute to stability in the market for Lebanese debt, and Section V seeks to explain the stability of the Lebanese depositor base. Section VI concludes.

[6] The interview design is described in Appendix I, the full list of interviewees is given in Appendix II, and the questionnaire used for the interviews is shown in Appendix 3.

II. LEBANON'S MAIN VULNERABILITIES

The literature on debt and financial crises focuses on willingness and ability to pay. Willingness to pay reflects the relative costs and benefits of default, while ability to pay relates to solvency and liquidity. Empirical studies have identified a range of indicators that proxy willingness, solvency, and liquidity (e.g., International Monetary Fund 2003, and Manasse, Roubini, and Schimmelpfennig 2003). Some typical indicators of willingness and solvency are the debt to GDP ratio or the debt to revenue ratio. Liquidity is often measured by rollover or gross financing needs. Such indicators can be used to predict the probability of a debt crisis occurring in the near future, or simply to characterize vulnerabilities. For example, Manasse and Roubini (2005) find that countries with government debt of more than 50 percent of GDP are prone to debt crises. Similarly, the IMF's World Economic Outlook of 2003 shows that the median public debt stood at around 50 percent of GDP in countries that underwent a debt crisis and that sustainable debt to GDP ratios may be as low as 25 percent.[7] Despite exceeding such thresholds (and exceeding debt levels observed in similarly rated countries) by wide margins, Lebanon is considered attractive by investors in the class of similarly rated countries. In terms of fundamentals other than fiscal, Lebanon is indeed broadly comparable to these peers (Table 1).[8, 9]

[7] More generally, debt crises have occurred at a wide range of debt-to-GDP ratios, illustrating that factors other than solvency are also important (e.g., Finger and Mecagni, 2007). An alternative approach to debt sustainability is a forward-looking assessment of whether a country can be expected to stay current on its debt service obligations while also pursuing policy priorities, and whether fiscal policy can respond to shocks. With respect to the latter, applications of Bohn's (1998 and 2005) model-based sustainability approach can be found in Mendoza and Ostry (2007), and Abiad and Ostry (2005). In addition, probabilistic approaches can be used to assess debt sustainability. Celasun, Debrun, and Ostry (2006) develop a fan-chart approach for a large number of countries. Di Giovanni and Gardner (forthcoming) apply a simplified version to Lebanon.

[8] The group of peers in this paper is defined as countries with broadly similar ratings by Standard and Poor's, Moody's, and Fitch, and feedback from market participants. Depending on data availability, not all peers are included in every figure or table.

[9] Of course, investors' assessments are largely forward-looking, and may not necessarily reflect historical data if significant policy or other changes are expected.

Table 1. Lebanon's Attractiveness Relative to Peers 1/

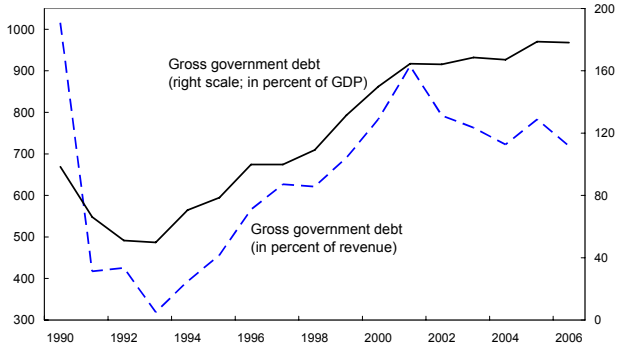
Survey			
	Financial Institutions in		
	All	Lebanon	London
Lebanon's relative attractiveness rated by market participants (Percentile among 23 peers) 2/	73.9	43.5	91.3

Economic Fundamentals (average 2001–06)					
	Distribution			Lebanon	
	Min	Mean	Max	Value	Percentile 3/
Growth (in percent)	-0.5	4.2	7.7	3.4	34.7
Inflation (annual average, in percent)	1.5	9.5	27.2	1.5	0.0
Current account balance (in percent of GDP)	-25.3	-4.1	11.7	-13.7	17.3
Real effective exchange rate appreciation (in percent)	-8.6	0.1	10.8	-3.3	18.1
Gross international reserves (in billions of U.S. dollars)	0.1	8.2	37.9	10.3	69.5
in percent of next year's imports of GNFS	0.9	4.2	8.2	8.2	100.0
in percent of short-term external debt	33.0	383.6	2,065.8	33.4	4.3
Real broad money growth (annual average, in percent)	0.7	10.1	33.6	6.9	43.4
Rating (latest available)					
Standard and Poor's	CCC	B+	B+	B-	10.0
Moody's	Caa2	B2	Ba1	B3	17.6
Fitch	DDD	B	B+	B-	14.2
Eurobond spread (2006 annual average)	199.3	261.8	540.1	267.5	83.3

Sources: Survey of market participants; IMF databases; and J.P. Morgan.
1/ The included peers are Argentina, Bolivia, Bosnia and Herzegovina, Dominican Republic, Ecuador, Georgia, Grenada, Honduras, Indonesia, Jamaica, Jordan, Nicaragua, Nigeria, Pakistan, Paraguay, Philippines, Serbia, Seychelles, Sri Lanka, Turkey, Ukraine, Uruguay, and Venezuela.
2/ Based on a sample of 13 market participants, of which 6 are Lebanon based and 7 are London based.
3/ Lebanon's ranking among peers. 0 is the lowest value or ranking among the peers, 100 the highest.

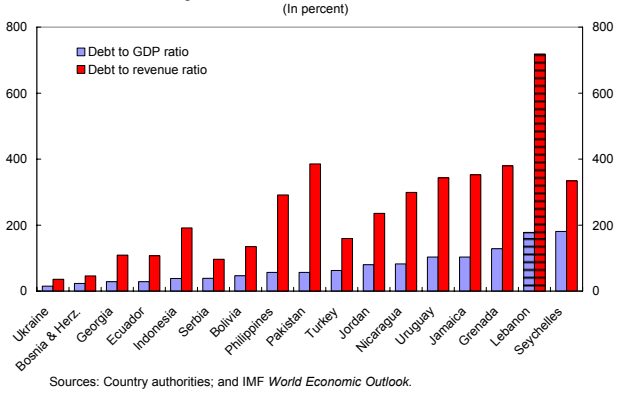
Lebanon's main public debt vulnerabilities arise both from solvency as well as liquidity concerns. Lebanon's debt burden is among the highest in the world in terms of debt to GDP and debt to revenue ratio (Figures 3 and 4). Debt service took up 52 percent of revenues in 2006 or 13 percent of GDP (Figures 5 and 6). About half of government debt is denominated in foreign currency. However, only a quarter of government debt at the end of 2006 is estimated to be held by non-residents—a much lower share than in most peers (Figures 7 and 8).

Figure 3. Lebanon: Government Debt, 1990–2006



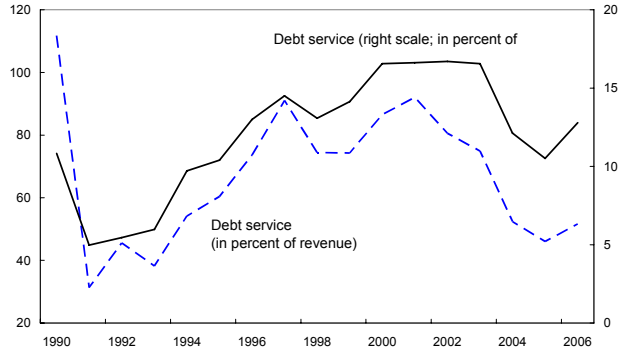
Sources: Lebanese authorities; and authors' calculations.

Figure 4. Gross Government Debt, 2006
(In percent)



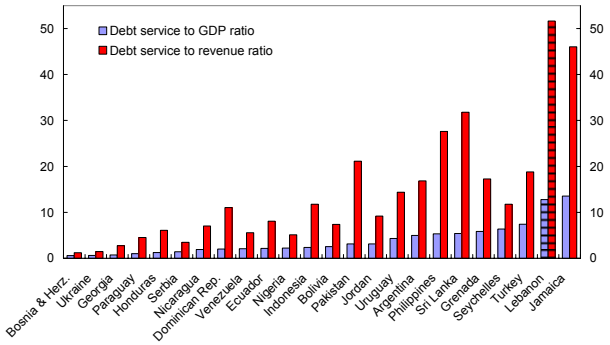
Sources: Country authorities; and IMF *World Economic Outlook*.

Figure 5. Lebanon: Government Debt Service, 1990–2006



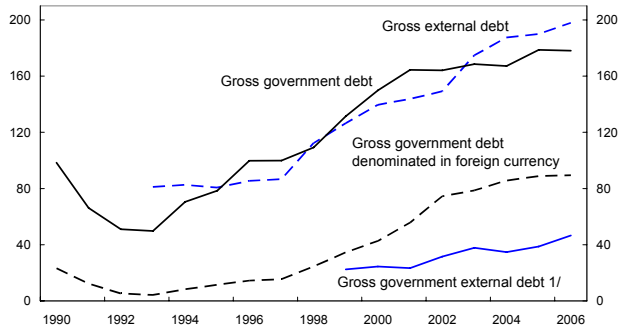
Sources: Lebanese authorities; and authors' calculations.

Figure 6. Debt Service, 2006
(In percent)



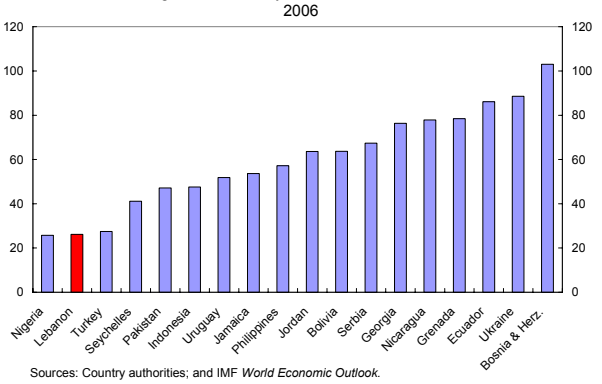
Sources: Country authorities; and IMF *World Economic Outlook*.

Figure 7. Lebanon: Government Debt by Currency and Residency, 1990–2006
(In percent of GDP)



Sources: Lebanese authorities; and authors' calculations.
1/ Fund staff estimate.

Figure 8. Externally-Held Government Debt, 2006

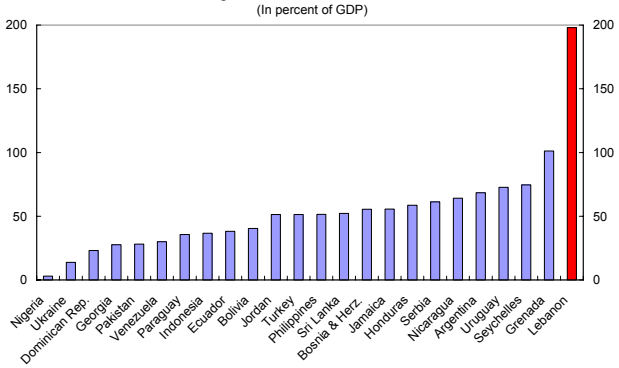


Sources: Country authorities; and IMF *World Economic Outlook*.

While public debt is mostly held domestically, the country as a whole has a high external debt to GDP ratio (Figure 9). Domestic banks hold the majority of government paper, playing a larger role than in most peer countries (Figure 10). Banks fund their positions from deposits, which reached 267 percent of GDP in 2006, a large part of which held by non-residents.[10] This is reflected in the relatively low government debt to broad money ratio (Figures 11 and 12). Individual deposits tend to be highly concentrated (Figure 13), suggesting that high net-worth individuals make up the bulk of deposits. Moreover, deposits have a very short average maturity (Figure 14), and deposit dollarization is very high (Figure 15). With the average maturity of deposits (less than one month) being much shorter than that of government paper (just over one year for Treasury bills (t-bills) and around six years for Eurobonds as of August 2007), the banking system—and therefore the country—is exposed to a very significant rollover risk. In addition, the high degree of dollarization introduces exchange rate risk borne by the state and private debtors (and transferred to creditors in the form of credit risk).

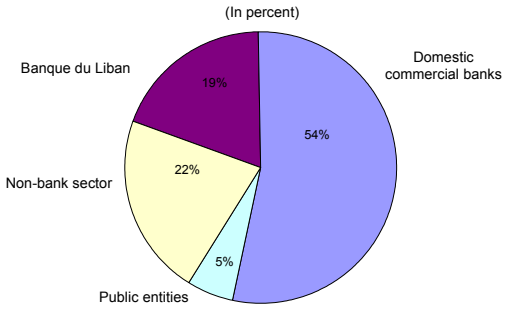
[10] Officially, non-resident deposits account for about 15 percent of total deposits, but are in fact much higher than that when including non-resident Lebanese passport holders and others who have an address in Lebanon.

Figure 9. External Debt, 2006
(In percent of GDP)



Sources: Country authorities; and IMF *World Economic Outlook*.

Figure 10. Lebanon: Decomposition of Government Debt by Holders, December 2006

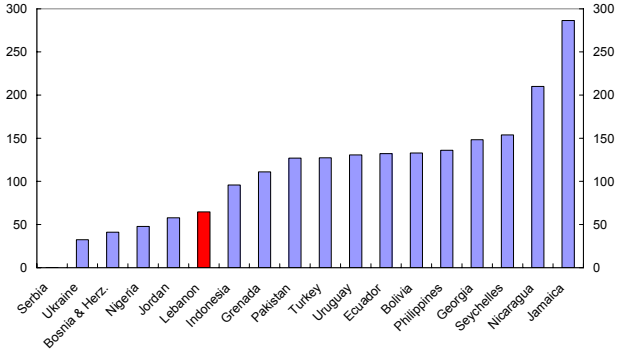


Sources: Lebanese authorities; and authors' calculations.

Figure 11. Lebanon: Government Debt, 1990–2006
(In percent of broad money)

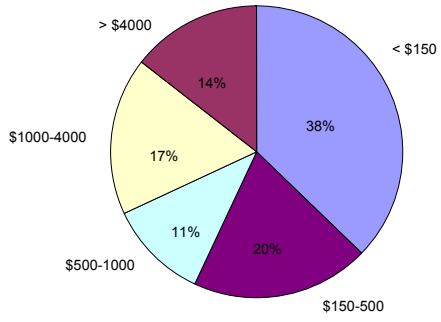
Sources: Lebanese authorities; and IMF *World Economic Outlook*.

Figure 12. Government Debt, 2006
(In percent of broad money)



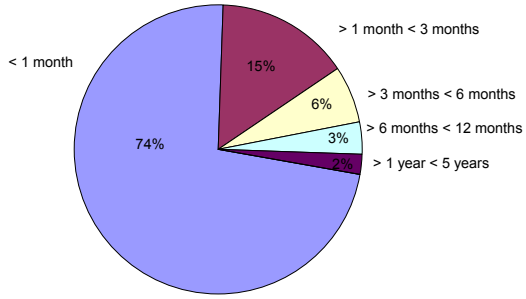
Sources: Country authorities; and IMF *World Economic Outlook*.

Figure 13. Lebanon: Size of Deposits, February 2007
(In thousands of U.S. dollars; as percent of total



Sources: Lebanese authorities; and authors' calculations.

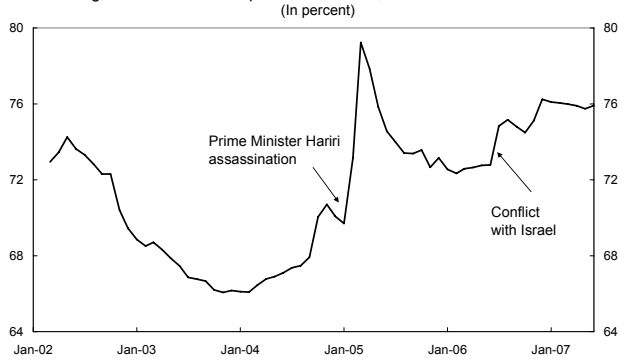
Figure 14. Lebanon: Distribution of Deposits by Maturity, February 2007
(In percent of total deposits)



Sources: Lebanese authorities; and authors' calculations.

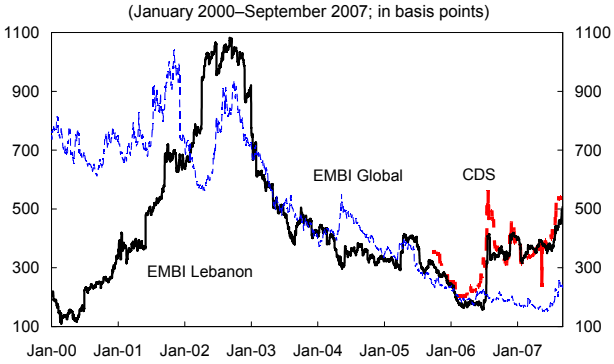
Lebanon's vulnerabilities were tested in the 2005 and 2006 episodes of financial market pressures, but in both instances a full-fledged crisis was avoided. In both episodes, an exogenous shock affected confidence and triggered significant deposit outflows and pressures on reserves. However, pressures were managed, and confidence was restored fairly quickly. Indeed, in late 2005, Eurobond spreads had fallen to historic lows, being even tighter than the EMBI Global (Figure 16).

Figure 15. Lebanon: Deposit Dollarization, March 2002–June 2007
(In percent)



Source: Lebanese authorities.

Figure 16. Lebanon: Eurobond and Credit Default Swaps (CDS) Spreads
(January 2000–September 2007; in basis points)



Sources: J.P. Morgan; and Bloomberg.

III. Investors and Investment Strategies

Unsurprisingly, domestic and foreign investors in Lebanese paper have very different investment strategies (Table 2). Domestic investors do not have many investment alternatives to the sovereign, in particular in domestic currency. For foreign investors, Lebanon is just one of many credits that can be included in a portfolio. However, in their monitoring and assessment of Lebanon, domestic and foreign investors are much alike, with the political situation and gross international reserves being the key factors that are being watched (Table 3). Most market participants thought that a turn-around in Lebanon's debt dynamics (soft landing) was still feasible, and in particularly foreign investors viewed this as somewhat of a fundamental premise underlying their decision to hold Lebanese paper.

Local banks are often described as captive investors because they have little alternative opportunities. Given very tight net open position regulations, banks look at their Lebanese pound portfolio and their foreign currency portfolio as de facto two separate balance sheets. There is very little demand for private sector credit in Lebanese pounds because of relatively high interest rates, so that almost all deposits are invested in T-bills (Figure 17). One banker compared deposits to shares in a mutual fund which is investing almost exclusively in T-bills. In foreign currency, domestic banks have other investment opportunities, although the demand for private sector credit is lackluster.[11] More recently, major domestic banks have focused on regional expansion to diversify their foreign currency portfolio.

[11] Outstanding private sector credit at 76.5 percent of GDP at end-2006 is high among peers. Reportedly, up to 40 percent of this is in trade credits, and very little is for working capital or investment projects, but there is insufficient data available to confirm these assertions. However, as an attempt to diversify from government paper, banks have announced that they would put increasing focus on private sector credit, including consumer lending.

Table 2. Background Information 1/
(In percent)

	All Institutions				Lebanon Institutions				London Institutions			
Reasons for investing in Lebanon	Diversi-fication	Yield	Both		Diversi-fication	Yield	Both		Diversi-fication	Yield	Both	
	42	50	8		33	67	0		50	33	17	
Investment horizon (month)	< 1	1 - 6	> 6	All Maturities	< 1	1 - 6	> 6	All Maturities	< 1	1 - 6	> 6	All Maturities
	9	27	27	36	17	0	17	67	0	60	40	0
Frequency of assessing position relative to other investments	More	Same	Less		More	Same	Less		More	Same	Less	
	67	33	0		80	20	0		50	50	0	
Share of investment by issuer	Govern-ment	Central bank	Corpo-rates		Govern-ment	Central bank	Corpo-rates		Govern-ment	Central bank	Corpo-rates	
	87	11	2		71	24	4		100	0	0	
Share of investment by currency	LL	USD			LL	USD			LL	USD		
	31	69			49	52			20	80		
Reason for currency choice	Yield	Peg	Yield and peg	Currency composition of liabilities	Yield	Peg	Yield and peg	Currency composition of liabilities	Yield	Peg	Yield and peg	Currency composition of liabilities
	36	0	27	36	33	0	0	67	40	0	60	0
Assessment of market liquidity	Very liquid	Some-what	Very illiquid	Dries up	Very liquid	Some-what	Very illiquid	Dries up	Very liquid	Some-what	Very illiquid	Dries up
	0	27	27	45	0	33	17	50	0	20	40	40
Alternative investment opportunities 2/	Yes	Not LL	Not USD	No	Yes	Not LL	Not USD	No	Yes	Not LL	Not USD	No
	54	38	0	8	0	83	0	17	100	0	0	0

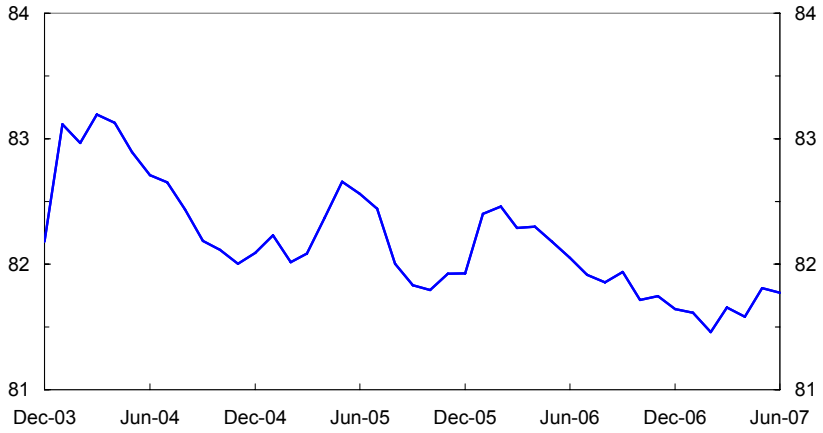
Source: Survey of market participants.
1/ Based on a sample of 13 market participants, of which 6 are Lebanon based and 7 are London based.
2/ Which alternative investment opportunities do respondents have for their funds given regulatory or other constraints.

Table 3. Monitoring of Lebanese Risk 1/
(Average rank, 1 = most important, 5 = least important)

	Institutions		
	All	Lebanon	London
Data sources 2/			
Official publications	2.7	3.5	2.0
Market research domestic banks	3.8	4.0	3.6
Market research international banks	3.8	2.5	4.5
Rating agencies	3.4	2.7	4.0
Own research	2.5	1.8	3.3
IMF, IIF, World Bank	2.7	3.3	2.2
Key variables being monitored			
Gross international reserves	1.4	1.5	1.3
Government debt, fiscal balance	1.8	1.5	2.0
Banking sector indicators, including deposits	2.0	1.8	2.3
Political situation	1.3	1.2	1.3
Other	2.0	2.0	2.0

Source: Survey of market participants.
1/ Based on a sample of 13 market participants, of which 6 are Lebanon based and 7 are London based.
2/ Some respondents ranked different data sources equally.

Figure 17. Lebanon: Dollarization of Credit to the Private Sector, December 2003–June 2007
(In percent)

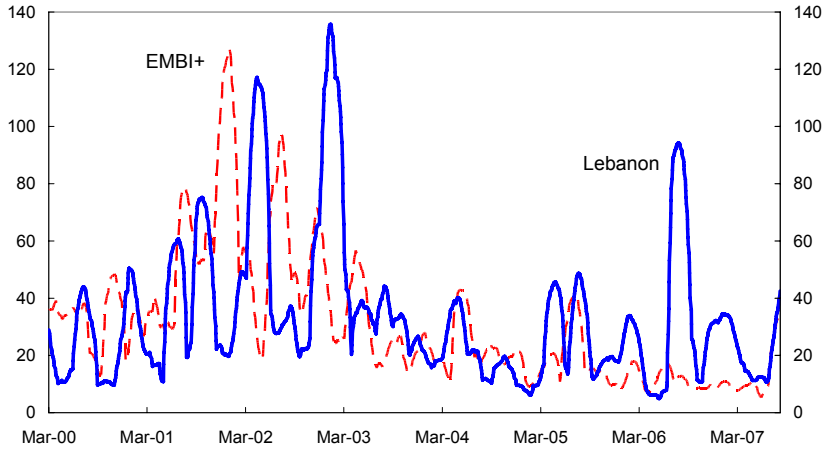


Source: Lebanese authorities.

Foreign investors can be grouped broadly into three categories. First, investors who follow a benchmark include Lebanon almost automatically in their portfolio in line with that benchmark composition (e.g., the Emerging Market Bond Index, EMBI). Second, some investors consider Lebanon as an attractive credit over the long-term based on thorough bottom-up research and continuous monitoring—for many investors, however, the resource costs of researching Lebanon is considered high relative to the potential return from the portfolio. Third, there are investors who temporarily include Lebanon in their portfolio based on specific trading ideas (e.g., front running expected developments).

For international investors, diversification is one motivation for holding Lebanese papers. In recent years, the correlation between different assets has increased substantially, and Lebanon offers diversification opportunities. With the price of Lebanese paper being largely driven by local idiosyncratic events in the short-run (predominantly political), but still following broadly the market over the medium-term, the correlation of the return on Lebanese paper with other assets is relatively low while the overall volatility of Lebanese spreads is close to that of the market (Figure 18 and Table 4).

Figure 18. Standard Deviation of Eurobond Spreads, March 2000–August 2007
(3-month moving average)



Sources: J.P. Morgan; and authors' calculations.

Table 4. Correlation of Eurobond Yields Among Selected Emerging Markets, January 2000–August 2007

	Composite	Argentina	Dominican Rep.	Ecuador	Egypt	Indonesia	**Lebanon**	Morocco	Nigeria	Pakistan	Philippines	Serbia	Tunisia	Turkey	Ukraine	Uruguay	Venezuela
Composite	1.00	0.59	0.20	0.50	0.25	0.42	**0.03**	0.05	0.07	0.01	0.54	0.43	0.30	0.55	0.41	0.29	0.62
Argentina	0.59	1.00	0.09	0.22	0.11	0.29	**-0.03**	0.04	0.02	0.01	0.25	0.27	0.06	0.21	0.17	0.09	0.30
Dominican Republic	0.20	0.09	1.00	0.10	0.06	0.12	**0.02**	0.01	0.01	0.01	0.19	0.18	0.06	0.15	0.10	0.08	0.09
Ecuador	0.50	0.22	0.10	1.00	0.12	0.18	**0.03**	0.09	0.04	0.00	0.22	0.08	0.07	0.28	0.22	0.22	0.35
Egypt	0.25	0.11	0.06	0.12	1.00	0.15	**0.11**	0.03	0.03	0.02	0.19	0.13	0.21	0.18	0.12	0.03	0.09
Indonesia	0.42	0.29	0.12	0.18	0.15	1.00	**0.00**	0.03	0.00	0.21	0.50	0.28	0.21	0.41	0.33	0.35	0.30
Lebanon	0.03	-0.03	0.02	0.03	0.11	0.00	**1.00**	0.01	0.01	0.02	0.01	0.05	-0.04	0.01	-0.02	0.04	0.01
Morocco	0.05	0.04	0.01	0.09	0.03	0.03	**0.01**	1.00	0.03	0.00	0.05	-0.09	-0.02	0.03	0.04	0.01	0.04
Nigeria	0.07	0.02	0.01	0.04	0.03	0.00	**0.01**	0.03	1.00	0.00	0.05	0.01	0.03	0.04	0.05	0.03	0.03
Pakistan	0.01	0.01	0.01	0.00	0.02	0.21	**0.02**	0.00	0.00	1.00	0.03	0.13	-0.05	0.01	-0.01	0.13	0.00
Philippines	0.54	0.25	0.19	0.22	0.19	0.50	**0.01**	0.05	0.05	0.03	1.00	0.33	0.22	0.35	0.30	0.20	0.30
Serbia	0.43	0.27	0.18	0.08	0.13	0.28	**0.05**	-0.09	0.01	0.13	0.33	1.00	0.21	0.38	0.37	0.37	0.31
Tunisia	0.30	0.06	0.06	0.07	0.21	0.21	**-0.04**	-0.02	0.03	-0.05	0.22	0.21	1.00	0.24	0.24	0.13	0.17
Turkey	0.55	0.21	0.15	0.28	0.18	0.41	**0.01**	0.03	0.04	0.01	0.35	0.38	0.24	1.00	0.31	0.19	0.33
Ukraine	0.41	0.17	0.10	0.22	0.12	0.33	**-0.02**	0.04	0.05	-0.01	0.30	0.37	0.24	0.31	1.00	0.17	0.22
Uruguay	0.29	0.09	0.08	0.22	0.03	0.35	**0.04**	0.01	0.03	0.13	0.20	0.37	0.13	0.19	0.17	1.00	0.19
Venezuela	0.62	0.30	0.09	0.35	0.09	0.30	**0.01**	0.04	0.03	0.00	0.30	0.31	0.17	0.33	0.22	0.19	1.00
Average	0.33	0.19	0.14	0.20	0.16	0.27	**0.08**	0.08	0.09	0.09	0.26	0.25	0.17	0.26	0.23	0.20	0.23

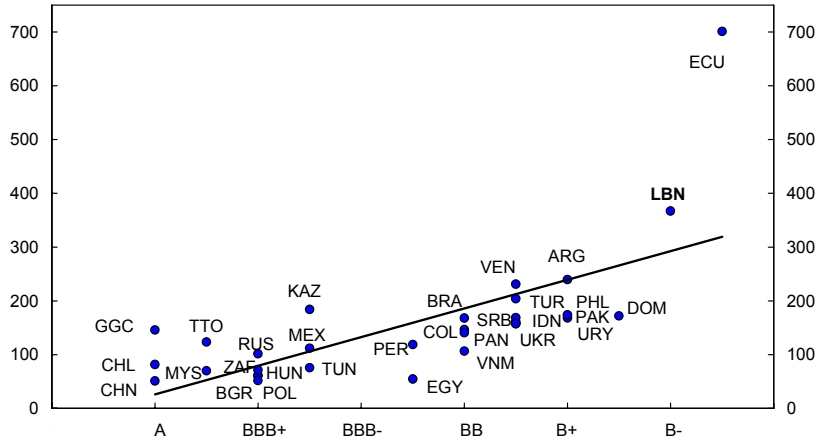
Sources: J.P. Morgan; and authors' calculations.

There were mixed views on the attractiveness of Lebanese paper in terms of yield. Some participants thought that the yield on Lebanese debt was in line with the market given Lebanon's rating, if not somewhat higher (Figures 19 and 20). Others thought that spreads were not fully reflective of Lebanon's underlying risks, pointing to the lack of activity on the secondary market and the possibility of a scarcity premium as an explanation.[12] For foreign

[12] By implication, if spreads are not reflective of Lebanon's underlying risk, the linear relationship between rating and spreads in Figure 19 would not hold.

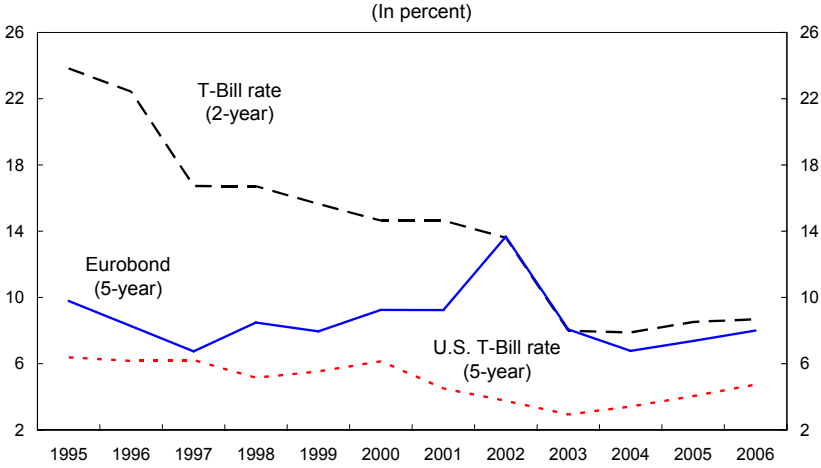
investors, the yield on t-bills denominated in Lebanese pounds was not sufficiently higher than the yield on Eurobonds to justify the exchange rate risk—even if that was considered to be very low—and the resource costs of some technical requirements to invest in the local markets.

Figure 19. Sovereign Rating and Eurobond Spreads
(Eurobond spreads in basis points over US Treasuries; average 2007H1)



Sources: J.P. Morgan; and Standard & Poor's.

Figure 20. Lebanon: Yield on Government Securities, 1995–2006
(In percent)



Sources: Lebanese authorities; and authors' calculations.

IV. Self-Reinforcing Stability in the Market for Lebanese Debt

Two main factors help explain the relative stability of demand for Lebanese sovereign paper. First, despite Lebanon's B– rating, investors view the probability of default as very low, as, e.g., reflected in Lebanon's very narrow Eurobond spreads prior to the 2006 conflict. This is motivated by Lebanon never having defaulted on its obligations, and a perception that international donors are providing an implicit guarantee. Second, because a large share of

sovereign debt is held domestically, a default would be very costly in Lebanon which, in turn, creates added incentives for both the government and the main holders of government debt (i.e., the banks) to avoid such an outcome.

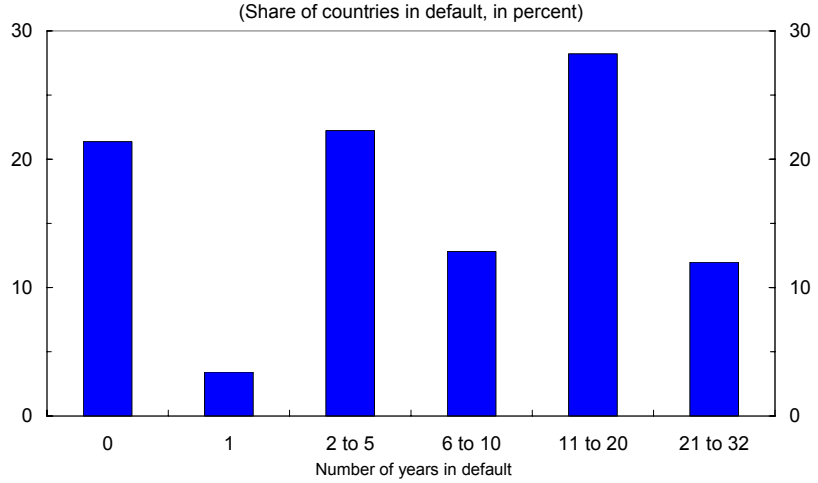
Relatively low probability of default

Lebanon has maintained a perfect record of meeting its debt obligations, even during very difficult times. Reinhart, Rogoff, and Savastano (2003) show that a country's history of default impacts the market's risk perception today. As a result, countries who have defaulted in the past have lower debt levels than countries who have a history of never defaulting. The authors call this "debt intolerance," and, using this labeling, Lebanon then seems to exhibit "debt tolerance." There have been no defaults, not even during the civil war, nor during the times of financial pressures in 2005 and 2006.[13] As one market participant noted, in Lebanon, there is not even talk of a default from within the government or the opposition. With a large share of government debt being held domestically, and ultimately by depositors, the costs of default in Lebanon would be very high, thus making the option of defaulting to address the large public debt overhang very unattractive.[14] This "no default" record sets Lebanon apart from many of its peers who have taken recourse to defaulting on several occasions. According to data compiled by Standard and Poor's, countries were, on average, in default on at least one external debt obligation in nine years out of the last 32 years, i.e., in any given year, there is a 28 percent chance that a country might default (Figure 21 and Table 5).

[13] The fact that Lebanon did not default on external debt obligations during the civil war may also reflect the low level of external debt at that time. A default would have yielded little benefit in terms of reduced debt service burden, while carrying potentially large reputational costs.

[14] Defaulting is often considered attractive because it allows a country to shift the cost of debt restructuring to non-residents and thus protect residents. Since residents (and the Diaspora) make up the bulk of creditors in Lebanon (either directly or indirectly as depositors), these considerations are not particularly relevant for Lebanon.

Figure 21. Frequency of Sovereign Default, 1975–2006
(Share of countries in default, in percent)



Sources: Standard & Poor's; and authors' calculations.

In the view of many market participants, the risk of a credit event is further mitigated by what they perceive to be an implicit guarantee from international donors. In analyzing Lebanon as an investment opportunity, market participants singled out the implicit guarantee from donors and international financial institutions (IFIs) as the most important factor (Table 6), with some referring to Lebanon as a "moral hazard trade."[15] Events in 2006 provide an illustration. On July 25, 11 days after the conflict erupted, Saudi Arabia and Kuwait announced that they would deposit $1 billion and $500 million respectively with the Lebanese central bank, and provide an additional $500 million and $300 million in aid. The impact on confidence was prompt, with CDS spreads narrowing immediately, and Eurobond spreads starting to narrow about one week after the announcement (Figure 22). In the minds of market participants, confidence appears to have been further boosted by the August 31 donors' conference in Stockholm that generated pledges of around $900 million.[16] Of course, this implicit guarantee reflects in part geopolitical considerations, which may change in the future.

[15] In the international finance literature, moral hazard is often studied in the context of IMF lending (e.g., Kamin, 2004). The promise of a bail-out can lead to debtor moral hazard, i.e., cases where the borrowing governments have reduced incentives to pursue policies consistent with debt sustainability, or creditor moral hazard, i.e., cases where lenders do not fully reflect country-specific risk in the spreads charged. The empirical evidence on the existence of moral hazard is mixed. See also Dell'Ariccia, Schnabel, and Zettelmeyer (2002).

[16] In addition, donors pledged some $7.6 billion in January 2007 at the Paris III conference in support of Lebanon, of which around $2 billion is expected to directly go to the budget.

Table 5. Sovereign Defaults in Comparison
(Years classified as being in default between 1975 and 2006)

	Episodes	Number of Years	Percent
Argentina	1982–93, 2001–05	18	56.3
Bolivia	1980–84,86–97	17	53.1
Bosnia and Herzegovina	1992–97	6	18.8
Burkina Faso	1983–96	14	43.8
Burundi	...	0	0.0
Cameroon	1985–2004	20	62.5
Dominican Republic	1975–2001,05	28	87.5
Ecuador	1982–95, 1999–2000	16	50.0
Egypt	1984	1	3.1
Grenada	2004–05	2	6.3
Honduras	1981–2005	25	78.1
Indonesia	1998–00, 02	4	12.5
Jamaica	1978–79,81–85,87–93	14	43.8
Jordan	1989–93	5	15.6
Kenya	1994–98, 2000	6	18.8
Lebanon	**...**	**0**	**0.0**
Madagascar	1981–2002	22	68.8
Mali	...	0	0.0
Mongolia	1997–2000	4	12.5
Morocco	1983,86–90	6	18.8
Mozambique	1980,1983–92	11	34.4
Nicaragua	1979–2006	28	87.5
Nigeria	1982–92, 2001,04–05	14	43.8
Pakistan	1998–99	2	6.3
Papua New Guinea	...	0	0.0
Paraguay	1986–92, 2003–04	9	28.1
Philippines	1983–92	10	31.3
Senegal	1981–85,90,92–96	11	34.4
Serbia	1992–2004	13	40.6
Seychelles	2000–02	3	9.4
Sierra Leone	1983–84,86–95, 97–98	14	43.8
Sri Lanka	1996	1	3.1
Suriname	2001–02	2	6.3
Turkey	1978–79,82	3	9.4
Ukraine	1998–2000	3	9.4
Uruguay	1983–85,87,90–91, 2003	7	21.9
Venezuela	1983–88,90, 1995–98, 2004–05	1	3.1
Average of countries listed above		9	28.7
Average all countries classified by Standard & Poor's		9	28.3

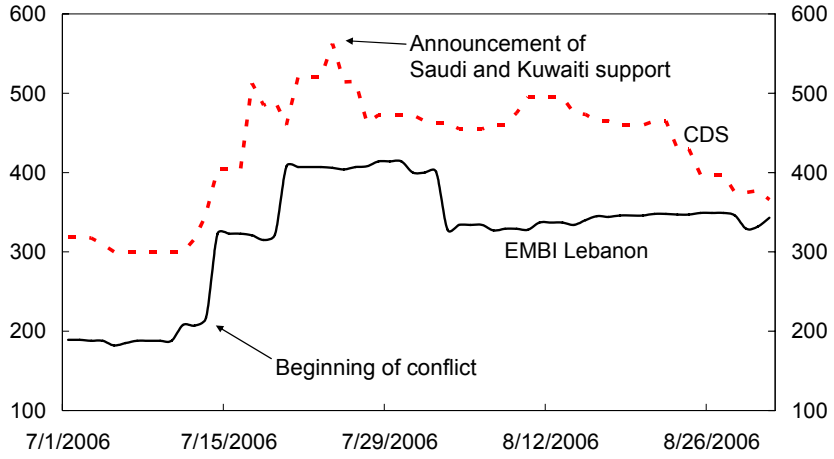
Sources: Standard & Poor's; and authors' calculations.

Table 6. Factors in Analyzing Lebanon as an Investment Opportunity 1/
(Importance, 1 = High, 2 = Medium, 3 = Low)

	All Institution		Lebanon Institutions		London Institutions	
	Lebanon	All countries	Lebanon	All countries	Lebanon	All countries
Economic fundamentals	1.9	1.0	2.0	1.0	1.9	1.0
Rating	2.4	1.6	2.3	1.0	2.7	2.5
Market depth	2.3	1.5	2.3	1.3	2.3	1.7
Liquidity	1.9	1.3	2.0	1.3	1.8	1.3
Macroeconomic management	2.0	1.4	1.8	1.7	2.3	1.0
Data quality and availability	2.2	1.8	2.3	1.3	2.0	2.5
Implicit guarantee from donors/IFIs	1.6	1.6	1.5	1.7	1.6	1.5

Source: Survey of market participants.
1/ Based on a sample of 13 market participants, of which 6 are Lebanon based and 7 are London based.

Figure 22. Lebanon: Eurobond and Credit Default Swaps (CDS) Spreads
(July 1–August 31, 2007; in basis points)



Sources: J.P. Morgan; and Bloomberg.

Market structure

The domestic banking system (including the central bank) holds around three quarters of government debt and can be considered "captive," having little interest in opting out and triggering a crisis. Local banks hold about 50 percent of outstanding government paper, with equal shares of t-bills in Lebanese pounds and Eurobonds. In addition, the central bank holds another 25 percent of government debt, 80 percent of which in t-bills. Given local banks' large exposure to the sovereign (more than 50 percent of their assets are made up of government and central bank paper), a sovereign debt crisis would immediately turn into a banking crisis. The relatively high concentration in the banking sector also means that this systemic risk is internalized by banks—none of the important banks can afford to abruptly exit the government paper market without consequences for itself. Hence, local banks have strong incentives to continue financing the government as long as they have the necessary

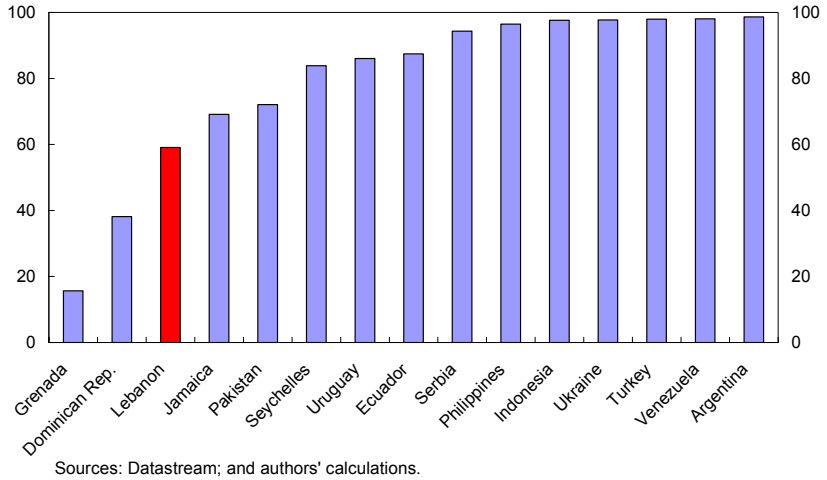
liquidity.[17] As a result, trading of Lebanese paper is rather thin, limiting price changes during periods of stress. Moreover, the central bank acts as a lender of last resort to the government, including in foreign currency, when there is insufficient demand in primary auctions.

International investors hold only a small fraction of total Lebanese debt, but also contribute to market stability. Only 26 percent of total government debt is estimated to have been external debt at end-2006 (though around 50 percent of total government debt is denominated in foreign currency), and just a small number of investors hold Lebanese paper in their portfolio given the high cost of doing research relative to the low volume available for trading (Figure 23). Absolute return investors which include Lebanon in their portfolio base this decision typically on in-depth research, taking a long-term view (see Table 2 above), and accepting that the market can dry up completely during episodes of stress. Therefore, these investors are less startled by short-term news, and are willing to take time finding a buyer rather than attempting a fire sale in a one-way market, which would lead to huge price volatility and excessive losses.[18] Relative return investors hold Lebanese paper because it is part of the benchmark they are tracking, i.e., they hold Lebanon for technical reasons. Not having Lebanon in their portfolio puts them at risk of underperforming the benchmark index in times when most of the index is trading sideways or down, and Lebanon for its own reasons generates a significant gain. These investors will provide stable demand for Lebanese paper as long as Lebanon is part of their benchmark portfolio. For both investor groups, the fact that Lebanese debt is fairly uncorrelated with the market provides welcome diversification in their portfolio (see above). Of course, the low correlation reflects also the relatively low weight of international investors in this market and the stabilizing role of the domestic banks. Correlation would possibly increase if international investors took on a larger share of the market. The limited availability of Lebanese paper could also result in a scarcity premium, driving down the yield.

[17] At the same time, the larger local banks have adopted a strategy of regional expansion to slowly diversify away from the sovereign. However, such a portfolio reallocation will have to proceed very cautiously to avoid a crisis and will have to be matched either by debt reduction or the tapping of alternative sources of financing by the government.

[18] Market participants reported that it can take up to a month to find a buyer for a specific paper. If no direct buyer can be found, market makers attempt to design a domino trade that involves several in-between trades.

Figure 23. Trading Activity in Sovereign Paper 1/
(In percent)



Sources: Datastream; and authors' calculations.
1/ Share of days on which a country's Eurobonds were traded since January 1, 2000.

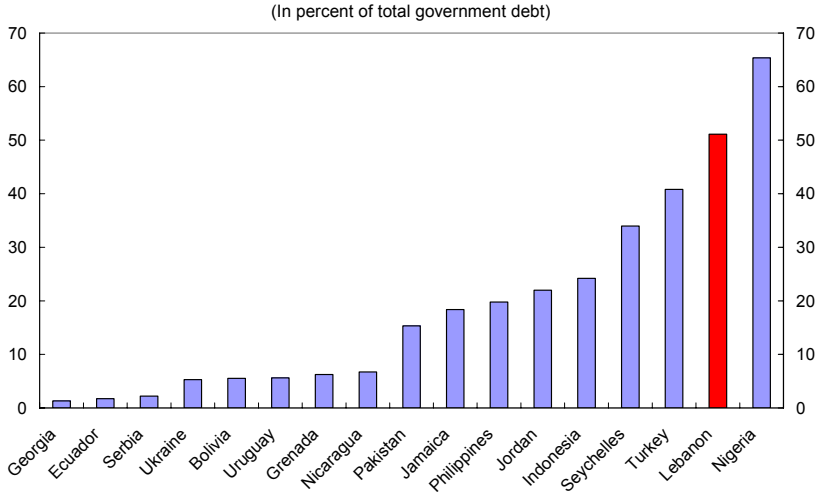
A virtuous circle

In the view of one market participant, the particular investor groups holding Lebanese paper seem willing or feel constrained to stay with Lebanon, even during times of stress, which creates a virtuous circle.[19] Domestic banks have little other choice, relative return investors maintain positions for technical reasons, and dedicated absolute return investors, at a minimum, have patience.[20] All three groups perceive a low probability of default given the implicit guarantee from donors and Lebanon's past performance. Moreover, they stay engaged given the relatively attractive yield on Lebanese paper. And as long as not too many players deviate from the holding strategy, the good equilibrium is preserved. What sets Lebanon apart from other countries the most, is the role of local banks (Figure 24). However, ultimately, local banks merely play an intermediation role, and the question then becomes why depositors continue to provide financing to the country.

[19] This is, of course, a generalization. Since 2005, a number of foreign investors have pulled out of Lebanon, and there are also some local banks who are trying to gradually reduce their exposure to the sovereign.

[20] There is also some evidence that domestic investors start a capital flight and that international investors follow (e.g., Baig and Goldfain, 2001). For Lebanon, this would imply that international investors will stay as long as domestic investors remain engaged.

Figure 24. Commercial Bank Claims on the Government, 2006
(In percent of total government debt)



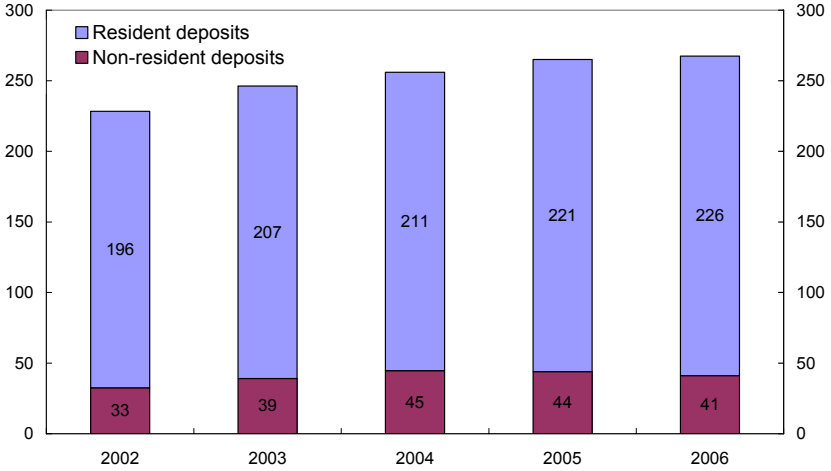
Sources: Country authorities; and IMF IFS database.

V. THE ROLE OF DEPOSITS

The main sources of deposits are the large and wealthy Lebanese Diaspora, Arab investors in the region, and Lebanese residents.[21] The classification of resident and non-resident deposits is essentially based on whether the holder of the deposit lists a Lebanese address. In this classification, residents account for the lion's share of deposits (Figure 25). However, anecdotal evidence from local banks suggests that the Lebanese Diaspora (most of whom have a Lebanese address) is the largest group of depositors. This Diaspora includes a significant share of high net worth individuals, many doing business in countries with underdeveloped banking systems. Depositors from other Arab countries reportedly hail mostly from Syria, West Bank and Gaza, Iraq, Jordan, Saudi Arabia, Kuwait, and UAE. Some banks have indicated that they are seeking to focus more on Lebanese depositors (resident and Diaspora) who are considered to be less volatile in times of crisis. Banks estimate that large depositors hold up to 20 percent of their wealth in Lebanon, including in deposits.

[21] Lebanon's population is 4 million; the Diaspora is estimated to be at least 5 million and could be as large as 16 million.

Figure 25. Lebanon: Private Sector Deposits, 2002–06
(In percent of GDP)



Sources: Lebanese authorities; and authors' calculations.

Lebanese banks view depositor confidence as being driven by similar factors as investor confidence. Despite Lebanon's vulnerabilities, the risk of a default appears to be judged as relatively low in light of the perceived implicit guarantee by donors, Lebanon's track record of no depositor losses, the maintenance of full (internal and external) convertibility during times of stress, and the banking system's high dollar liquidity. Lebanese banks have been successful in selling these advantages, combined with Lebanon's provisions for bank secrecy, to their regional and Lebanese Diaspora client base. Moreover, Lebanon's track record of successfully overcoming critical periods in the past has given depositors added comfort and may have lowered their risk perception.

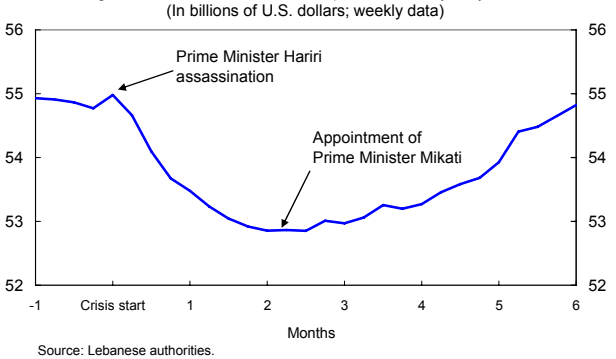
According to local bankers, depositor sophistication varies considerably even among high net worth individuals. In general, depositors are perceived to react mainly to one-off events rather than to steady changes in fundamentals. In this way, they appear similar to the dedicated absolute return investors described above, who take a long-term position based on in-depth research. Depositors follow political events closely and seem particularly focused on the stability of the exchange rate peg, the absence of exchange controls, the level of gross international reserves, and the implicit blanket guarantee from donors which is often viewed as the lynchpin of depositor confidence.

As the 2005 and 2006 episodes show, only a relatively small fraction of depositors reacted to the crisis situation. These depositors either converted their funds to U.S. dollars or withdrew them altogether—in part, deposit outflows were directed to foreign branches of Lebanese banks. Deposit dollarization is already high (see Figure 15 above), and has ratcheted up after each spell of financial pressures. The conversion to U.S. dollars is not only the first step to moving deposits outside the country, it is also protection against the specter of a forced exit from the exchange rate peg and a repeat of high inflation experienced during and immediately after the Civil War. In 2005 and 2006, deposit outflows amounted to around 3–5

percent of total deposits.[22] Banks were able to meet outflows from their large liquid foreign asset holdings, and outflows were recouped within half a year.

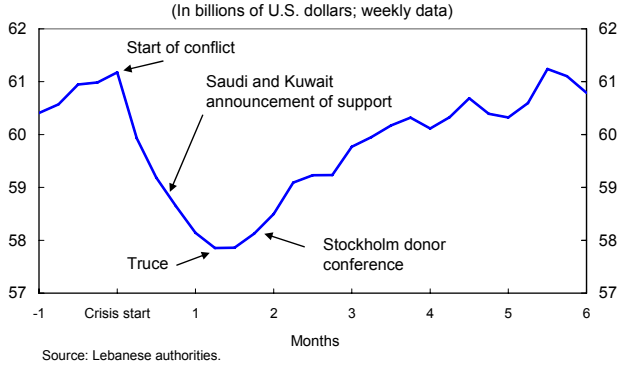
The role played by the perceived implicit guarantee from donors is reflected in differences between the developments in 2005 and 2006. In 2005, there was no Western support nor was there a swift financial response from Gulf countries such as the announcements of Saudi Arabia and Kuwait early during the 2006 conflict. Instead, in 2005 the central bank imposed a five day bank holiday immediately after Mr. Hariri's assassination to fend off the possibility of a bank run, while no bank holiday was imposed in 2006. Moreover, the 2005 crisis was largely political, raising questions about Lebanon's political future. Taken together, these factors may explain why financial market pressures lasted longer in 2005 than in 2006 and the recovery was slower. Indeed, in 2005, deposits started to recover only slowly after the appointment of Prime Minister Mikati two month after the assassination, but the pace became more pronounced after the June parliamentary elections (Figure 26). In 2006, the Stockholm conference on August 31 (1½ month after the start of the conflict and a few days after its end) appears to have heralded a much more pronounced turn-around in deposits (Figure 27).

Figure 26. Hariri Assassination: Deposits, February–July 2005
(In billions of U.S. dollars; weekly data)



Source: Lebanese authorities.

Figure 27. 2006 Conflict: Deposits, July–December 2006
(In billions of U.S. dollars; weekly data)



Source: Lebanese authorities.

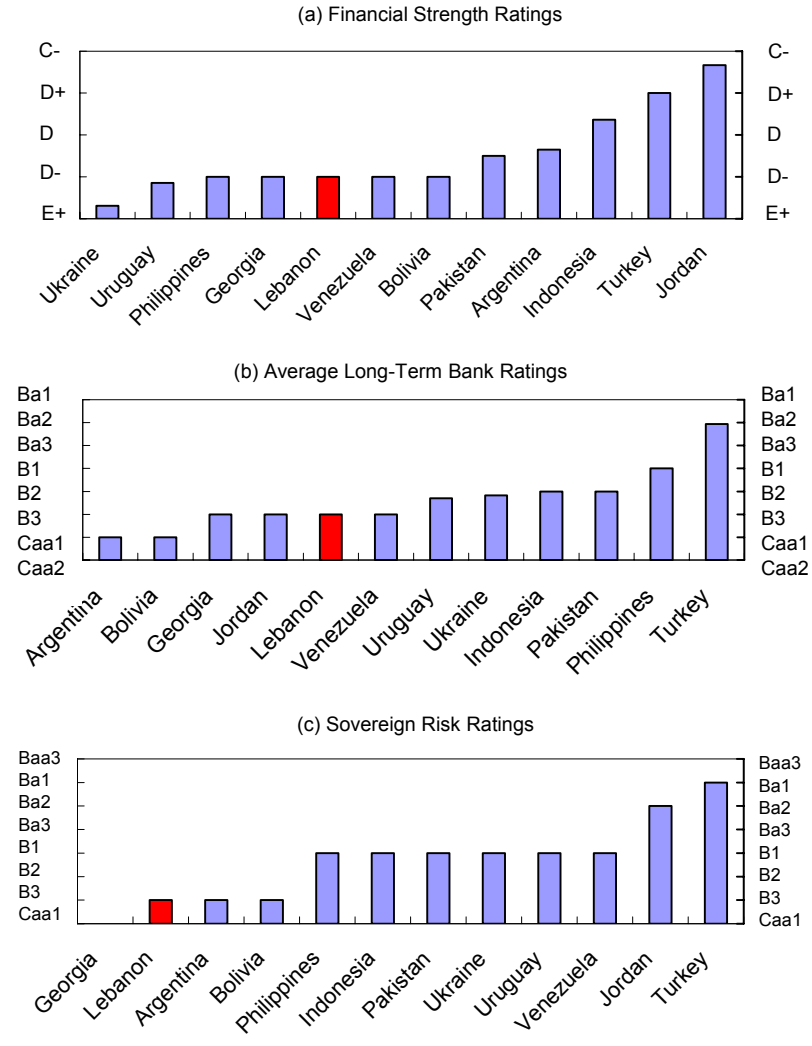
Lebanon's banking system is an attractive destination for deposits. The banking system is well-regulated (c.f. Moody's, 2007), exhibits good financial sector soundness indicators, and good ratings relative to peers (Figure 28 and Table 7).[23] Moreover, the Lebanese banking system offers bank secrecy, and depositors have never lost money from bank failures, as the central bank has chosen to deal with troubled institutions largely through mergers. Moody's (2007) sees the main weakness of the Lebanese banking system in its high exposure to the sovereign in light of the fragile political environment, although risks are mitigated by banks'

[22] There is some anecdotal evidence that banks actively convinced clients not to move their deposits out of Lebanon.

[23] As in other cases, the rating is seen as being constrained by the sovereign rating because of the system's large exposure.

high core liquidity levels (22 percent of total assets and 36 percent of foreign currency deposits at end-2006, excluding Eurobonds and placements with the central bank, Figure 29). This liquidity buffer is viewed by Moody's as enabling banks to withstand a confidence crisis that may result in a run on U.S. dollar deposits or other capital outflows from the banking sector, and thus provides assurances to depositors.[24] In a similar fashion, Fitch (2007) classified Lebanon's banking sector as having a "low level of potential vulnerability," despite being in the "low strength" category.

Figure 28. Bank Ratings in Comparison, June 2007



Source: Moody's.

[24] Maintaining large liquid assets abroad is also one explanation for the relatively low profitability of Lebanese banks. Given differences in national regulations, in particular with respect to non-performing assets, cross-country comparisons of financial soundness indicators have to be interpreted with caution.

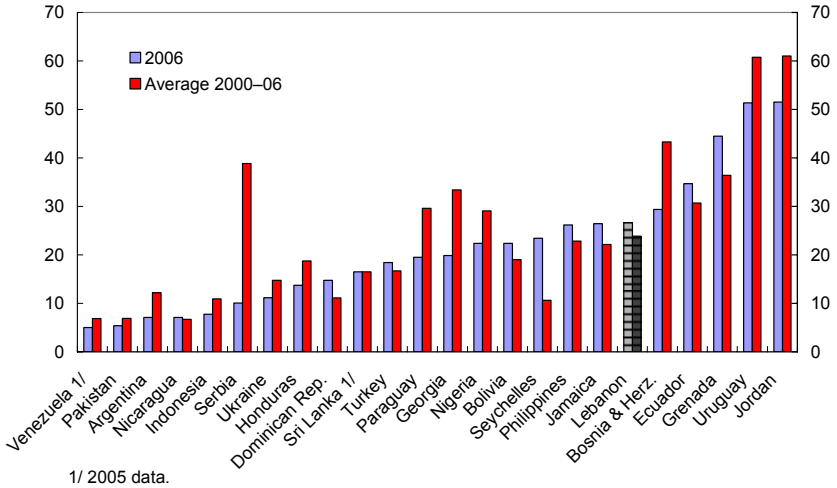
Table 7. Financial Soundness Indicators, 2006

	Capital Adequacy Ratio		Non-Performing Loans		Return on Equity		Return on Assets	
	In percent	Ranking	In percent	Ranking	In percent	Ranking	In percent	Ranking
Argentina	...	…	3.4	8	15.0	13	2.0	9
Bolivia	13.3	18	8.7	15	13.3	15	1.3	15
Bosnia and Herzegovina	17.7	10	4.0	9	8.5	20	0.9	19
Dominican Republic	12.4	20	4.5	11	19.7	9	1.9	10
Ecuador	14.8	13	3.3	7	23.1	7	2.0	8
Georgia	20.6	7	2.5	3	15.2	12	2.5	6
Honduras 1/	14.6	14	6.6	12	...	…	1.6	13
Indonesia	21.3	5	13.1	17	33.2	2	2.6	4
Jamaica 2/	19.9	9	2.6	4	28.4	6	0.9	19
Jordan	21.4	4	4.3	10	15.9	11	1.7	11
Lebanon	**24.7**	**2**	**13.5**	**18**	**10.6**	**17**	**0.9**	**21**
Nicaragua	14.6	14	8.0	14	29.5	5	2.6	4
Nigeria 3/	25.8	1	21.9	22	1.9	21	0.3	22
Pakistan	12.7	19	7.7	13	38.2	1	3.1	1
Paraguay	20.1	8	3.3	6	31.7	3	3.0	2
Philippines 4/	17.6	11	18.6	20	10.6	18	1.3	15
Serbia and Montenegro	24.7	2	21.4	21	10.0	19	1.7	11
Sri Lanka 1/	9.8	21	9.6	16	16.4	10	1.3	15
Turkey	21.1	6	3.2	5	21.5	8	2.4	7
Ukraine	14.2	17	17.8	19	13.5	14	1.6	13
Uruguay	16.9	12	1.9	2	12.7	16	1.2	18
Venezuela	14.3	16	1.1	1	31.6	4	3.0	3
Average	17.7	...	8.2	...	19.1	...	1.8	...

Sources: Country authorities; and Fund staff calculations.

1/ 2005 data.
2/ 2005 return on equity data.
3/ 2005 non-performing loans data.
4/ 2005 capital adequacy ratio.

Figure 29. Foreign Assets
(In percent of total deposits)

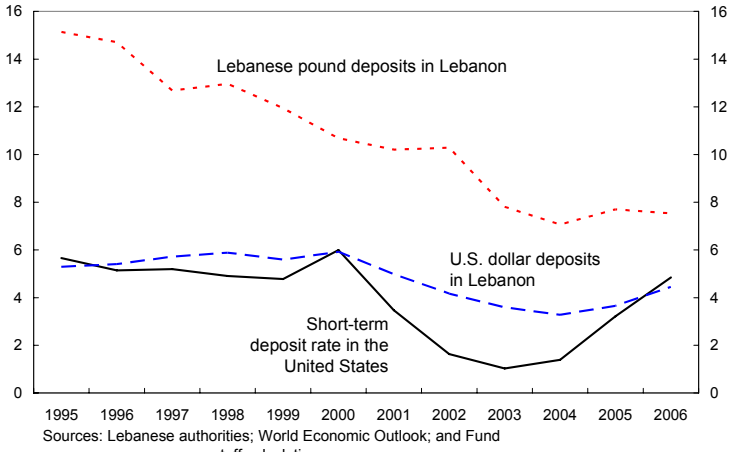


1/ 2005 data.
Sources: Country authorities; and IMF IFS database.

Lebanese banks are known for offering high quality financial services in the region, which banks themselves characterize as “private banking with a regional rapport.” Since the civil war, the system was strengthened through consolidation, liquidation of bad banks, and investment in human capital and IT. Capital increases came from outside investors which

strengthened the governance structure and business model of family owned banks. Last, but not least, deposits in Lebanon earn an attractive yield at short maturities, in particular for very large local currency deposits (Figure 30), though the margin over international rates has narrowed in recent years. Capital account convertibility combined with the peg to the U.S. dollar plays an important role in giving assurances to depositors. However, other regional banking centers (most notably Dubai) have emerged in recent years and will provide strong competition for Lebanon in the future.

Figure 30. Deposit Rates in Lebanon and the United States, 1995–2006
(In percent)



Sources: Lebanese authorities; World Economic Outlook; and Fund

Finally, there are some specific reasons why Lebanon is attractive to different groups of depositors (Table 8). For the Diaspora, the decision to hold deposits in Lebanon is often supported by family, real estate and investment ties to the country and the prospects of an eventual return. In some cases, market participants thought this may be complemented by a "patriotic bid" (akin to a "home bias"), by which deposits are intended to support Lebanon. Deposits from non-Lebanese often complement or precede investments in Lebanon, both in real estate and productive capacity; Lebanon remains an attractive destination for (real estate) investment from other Arab countries because of its mix of liberal attitudes and cultural affinity to the region. Moreover, some bankers thought that Lebanon was an attractive destination that offers diversification for high net-worth individuals.

Table 8. Depositors 1/

Reasons to have deposits in Lebanon (Rank 1 - 5, equal ranking possible)	Home-bias	Yield	Diversi-fication	Financial Services	Banking Secrecy
	1.0	1.3	...	2.5	2.0
For deposits >$5 million: Share of depositor's wealth invested in Lebanon (in percent)		20			

Source: Survey of market participants.
1/ Based on a sample of 13 market participants, of which 6 are Lebanon based and 7 are London based.

VI. Summary and Conclusions

Lebanon's ability to navigate rough waters is not fortuitous. Despite the large debt overhang and external vulnerabilities, investors and depositors, at present, are comforted first and foremost by the perception of an implicit guarantee from donors, but also by Lebanon's track record of zero default, and the country's large liquidity cushion. Moreover, a benign global environment may have also helped Lebanon manage financial pressures in 2005 and 2006. And while the policy challenges are very daunting, there is a belief that a soft landing is still possible and that Lebanon can, over time, grow out of its financial problems. All of this keeps investors interested. Local banks play a key role in maintaining stability. On the one side, they hold the bulk of government paper and have no incentive to liquidate their position abruptly even during severe crisis as this would be self-defeating. On the other side, they mobilize strong and continuous deposit inflows from a dedicated client base that provides the necessary net financing for the government and the balance of payments.

Notwithstanding these favorable factors, the current good equilibrium is likely to be only one of many. Underlying Lebanon's resilience to financial shocks is a growing tension between worsening solvency indicators and ample short-term liquidity. This good equilibrium will remain stable as long as a sufficiently large share of investors and depositors believe that the equilibrium's key pillars, including the perceived guarantee by donors, remain intact. Accordingly, the failure of one or more of these pillars could throw the economy off this "good" equilibrium.

While Lebanon is certainly unique in many aspects, it holds interesting lessons for other countries. First and foremost, Lebanon's experience could be interpreted as validating the notion that markets recognize good behavior and are willing to give countries more leeway if they have never defaulted in the past. Second, a strong local banking system that intermediates inflows can be a contributor to market stability in as much as it creates a more stable investor base—this said, stability is ultimately only as good as the stability of deposits. Third, building on special circumstances to cultivate a dedicated investor and depositor base helps insulate to some degree financing flows from general market trends. Having said that, it is unlikely that many countries could, or even should try to, replicate the Lebanese experience. In this sense, the paper points to the limitations of standard models of debt sustainability and financial crises and the need to complement such models with country specific financial and institutional factors to determine resilience to shocks and risks of financial crises.

Appendix I. Design of Survey

We interviewed representatives of six financial institutions in Lebanon and seven financial institutions in London who trade in Lebanese paper and/or research Lebanon currently or have done so in the past. With respect to institutions in Lebanon, we tried to achieve a mix of large banks, smaller banks, and one foreign bank. Participants received the questionnaire a few weeks in advance of the actual interview. Many participants kindly provided us with written responses either prior to or during the interview. The questionnaire then served as a broad outline for the individual interviews. The interviews in Lebanon took place July 19–24, 2007, and the interviews in London took place July 26–27, 2007, at the time when the global re-assessment of risk that took place during the summer of 2007 began.

Appendix II. List of Market Participants Interviewed

Al-Ahli International Bank

Fadi T. Zablit
Assistant General Manager
Support & Organization Division

Bank Audi

Marwan Barakat
Head of Research Department

Zeina Abla
Head of Economic Research Unit

Micky G. Chebli
Senior Trader, Treasury & Capital Markets Department

Haytham Jaber
Head of Market Risk Unit, Risk Management Department

Emile Shalala
Head of USD Liquidity & Foreign Exchange, Treasury & Capital Markets Department

BankMed

Fouad M. Saad
Deputy General Manager, Head of Treasury

Mazen M. Soueid
Chief Economist, Head of Economic and Market Analysis

Barclays Capital

Saad Achkar

Bilal Khan
Associate Director

Blominvest Bank

Fadi T. Osseiran
General Manager

Nicolas Photiades
Head of Research & Investment Banking

Byblos Bank

Alain F. Wanna, CFA
Assistant General Manager, Head of Administration & Finance Division

Nassib Ghobril
Head of Economic Research & Analysis Department

Credit Agricole Asset Management

Thomas Delabre
Emerging Markets Strategist

Credit Suisse

Rupesh Hindocha
Director Fixed Income, Emerging Markets

Exotix

Stuart Culverhouse
Chief Economist

Franklin Templeton Investments

William Ledward
Vice President, Portfolio Manager

Merrill Lynch

Turker Hamzaoglu
Strategist, Emerging Markets Research
Global Securities Research & Economics

Thames River Capital

Frank Engels
Chief Economist

Nikolaus Siegfried
Economist

Rodney Thomas
Investment Analyst

UBS

Oussama Himani
Managing Director, Head of Emerging Market Equity Strategy
UBS Investment Research

Appendix III. Questionnaire

BACKGROUND

What are the main reasons for investing in Lebanese paper? How do you view the market for Lebanese paper? Who are the major participants?

1. Can you please describe your investment and trading strategy for Lebanese paper? How does this fit into your overall investment strategy?

2. Why have you invested in Lebanese paper?
   - Portfolio diversification.
   - Absolute yield.

3. What was/is your investment horizon for holding Lebanese paper?
   - Short term (up to 1 month)
   - Medium term (up to 6 month)
   - Long term (more than 6 month)

4. How often do you re-assess your position relative to other investments?
   - More often
   - About the same
   - Less often

5. Have you invested in sovereign paper only, or also in CDS, corporate bonds or equity?
   - Share of government paper
   - Share of central bank paper
   - Share of corporate bonds/equity

6. Have you bought paper denominated in LL or USD or both?
   - Share of paper denominated in LL
   - Share of paper denominated in USD

7. What influenced your currency choice?
   - Higher yield
   - Expectation that exchange rate would remain stable

8. What is your impression of market liquidity?
   - The market is very liquid, we can sell our holdings at any time.
   - The market is somewhat liquid, it takes about a week to find a buyer.
   - The market is very illiquid, it takes more than a week to find a buyer.

- Liquidity is drying up at times of mounting political or security tensions.

9. Do you have sufficient alternative investment opportunities?[25]
   - Yes.
   - No, not in LL.
   - No, not in USD.
   - No, not in LL or USD.

ASSESSMENT OF LEBANESE RISK

What are the main risks associated with Lebanese paper? How do you analyze and assess specific risk factors? What differentiates Lebanon from other similarly rated countries?

10. Which data sources do you rely upon when analyzing Lebanon? Please rank in order of importance.
    - Official publications.
    - Market research from domestic banks.
    - Market research from international banks and analysts.
    - Rating agencies.
    - Own research.
    - IMF, IIF, World Bank.

11. Please rank the following factors (High, Medium, Low) in terms of their importance for your analysis of Lebanon as an investment opportunity. How does this ranking differ for your analysis of other countries.

	Lebanon	All Countries
Fundamentals (growth, inflation, current account, exchange rate, ...)	H / M / L	H / M / L
Rating	H / M / L	H / M / L
Market depth	H / M / L	H / M / L
Liquidity	H / M / L	H / M / L
Macroeconomic management	H / M / L	H / M / L
Data quality and availability	H / M / L	H / M / L
Implicit guarantees from donors/IFIs	H / M / L	H / M / L

12. What are the key variables you monitor to assess the risk associated with holding Lebanese paper?
    - Gross international reserves as reported by the central bank?

[25] Question only for Lebanese banks.

- Government debt, fiscal balance?
- Banking sector indicators?
- Political situation?
- Other, please list.

13. How do you balance liquidity and solvency concerns in your assessment?

14. Looking at a group of countries with similar sovereign ratings, how do you rank the attractiveness of these countries relative to Lebanon?

	S&P	Moody's	Attractiveness
Argentina	B+	B3	Higher / Lower
Bolivia	B-	B3	Higher / Lower
Bosnia and Herzegovina	...	B2	Higher / Lower
Dominican Republic	B	B2	Higher / Lower
Ecuador	CCC	Caa2	Higher / Lower
Georgia	B+	...	Higher / Lower
Grenada	CCC+	...	Higher / Lower
Honduras	...	B2	Higher / Lower
Indonesia	BB-	B1	Higher / Lower
Jamaica	B	B1	Higher / Lower
Jordan	BB	Ba2	Higher / Lower
Lebanon	**B-**	**B3**	
Nicaragua	...	Caa1	Higher / Lower
Nigeria	BB-	...	Higher / Lower
Pakistan	B+	B1	Higher / Lower
Paraguay	B-	Caa1	Higher / Lower
Philippines	BB-	B1	Higher / Lower
Serbia	BB-	...	Higher / Lower
Seychelles	B	...	Higher / Lower
Sri Lanka	B+	...	Higher / Lower
Turkey	BB-	Ba1	Higher / Lower
Ukraine	BB-	B1	Higher / Lower
Uruguay	B+	B1	Higher / Lower
Venezuela	BB-	B2	Higher / Lower

Sources: Standard&Poor's; Moody's Investor Service; and Fund staff compilation.
1/ Sovereign long-term foreign currency rating as of June 8, 2007.

15. In light of these answers, what are the key aspects in which Lebanon is similar or different to these other countries? In particular, how do you view Lebanon's so-called "dedicated depositor base" and its impact of financial stability, and what role to you assign to support from the international community?

16. How do you view the dominance of domestic banks in attracting external financing and channeling it to the state?

17. How do you factor the banking sector's high foreign exchange liquidity into your assessment?

18. What is the role of the exchange rate peg to the U.S. dollar?

19. What is the role of dollarization of the domestic economy and the financial sector in your appreciation of risk?

BEHAVIOR DURING THE 2005 AND 2006 CRISES

How did you view market developments in the aftermath of the Hariri assassination in 2005 and the July 2006 conflict with Israel? What was your reaction to these events?

20. How would you characterize the market in 2005 in the aftermath of the Hariri assassination and in 2006 during and after the conflict with Israel?
    - Near-crisis?
    - Correction of positions?
    - Opportunities to buy?

21. How did you assess the authorities' response to the financial pressures as they emerged?
    - Central Bank
    - Ministry of Finance

22. How did you react immediately after the event and ½ year after the event?
    - Sell/hold/buy?
    - Hedging, e.g., through CDS?
    - Increased monitoring?

23. Please rank (in order of importance) the factors that motivated your reaction.
    - Liquidity of the central bank (level of gross international reserves).
    - Liquidity of commercial banks.
    - Trust in the authorities' ability to manage markets and expectations.
    - Implicit blanket guarantee from friendly countries.
    - Other

BEHAVIOR OF DEPOSITORS DURING THE 2005 AND 2006 CRISES[26]

How did depositors react to the events of 2005 and 2006? How does this reaction relate to their motivation for investing in Lebanon?

24. What are the main reasons for depositors to come to Lebanon?
    - Home-bias.
    - Yield.
    - Diversification.
    - Range of products available. Financial services.
    - Banking secrecy.

25. For depositors of more then $5 million, what share of the depositors' overall wealth is invested in Lebanon?

26. What share of depositors are residents, Lebanese expatriates, and non-Lebanese non-residents?

27. How did depositors respond to the 2005 and 2006 events?

[26] Questions posed only to banks in Beirut.

REFERENCES

Abiad, Abdul, and Jonathan D. Ostry, 2005, "Primary Surpluses and Sustainable Debt Levels in Emerging Market Countries," IMF Policy Discussion Paper 05/6 (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/pdp/2005/pdp06.pdf.

Baig, Taimur, and Ilan Goldfajn, 2000, "The Russian Default and the Contagion to Brazil," IMF Working Paper 00/160 (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/wp/2000/wp00160.pdf.

Celasun, Oya, Xavier Debrun, and Jonathan D. Ostry, 2006, "Primary Surplus Behavior and Risks to Fiscal Sustainability in Emerging Market Countries: A 'Fan-Chart' Approach," IMF Working Paper 06/67 (Washington: International Monetary Fund). Available via the Internet at http://www.imf.org/external/pubs/ft/wp/2006/wp0667.pdf.

Dell'Ariccia, Giovanni, Isabel Schnabel, and Jeromin Zettelmeyer, 2002, "Moral Hazard and International Crisis Lending: A Test," IMF Working Paper 02/181 (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/wp/2002/wp02181.pdf.

Di Giovanni, Julian, and Edward Gardner, 2007, "A Simple Stochastic Approach to Debt Sustainability Applied to Lebanon," forthcoming as IMF Working Paper.

Eken, Sena, and Thomas Helbling, 1999, *Back to the Future: Postwar Reconstruction and Stabilization in Lebanon*, IMF Occasional Paper No. 176 (Washington: International Monetary Fund).

Eken, Sena, and others, 1995, *Economic Dislocation and Recovery in Lebanon*, IMF Occasional Paper No. 120 (Washington: International Monetary Fund).

Finger, Harald, and Mauro Mecagni, 2007, *Sovereign Debt Restructuring and Debt Sustainability: An Analysis of Recent Cross-Country Experience*, IMF Occasional Paper No. 255 (Washington: International Monetary Fund).

Fitch, 2007, *Risk Assessment of Banking Systems*.

International Monetary Fund, 2003, *World Economic Outlook, September 2003: A Survey by the Staff of the International Monetary Fund,* World Economic and Financial Surveys (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/weo/2003/02/index.htm.

Kamin, Steven B., 2004, "Identifying the Role of Moral Hazard in International Financial Markets," *International Finance*, Vol. 7, No. 1, pp. 25–59.

Manasse, Paolo, and Nouriel Roubini, 2005, "'Rules of Thumb' for Sovereign Debt Crises," IMF Working Paper 05/42 (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/wp/2005/wp0542.pdf.

Manasse, Paolo, Nouriel Roubini, and Axel Schimmelpfennig, 2003, "Predicting Sovereign Debt Crises," IMF Working Paper 03/221 (Washington: International Monetary Fund). Available via the Internet: http://www.imf.org/external/pubs/ft/wp/2003/wp03221.pdf.

Mendoza, Enrique G., and Jonathan D. Ostry, 2007, "International Evidence on Fiscal Solvency: Is Fiscal Policy 'Responsible'?" IMF Working Paper 07/56. Available via the Internet: http://www.imf.org/external/pubs/ft/wp/2007/wp0756.pdf.

Moody's Investors Service, 2007, "*Banking System Outlook: Moody's Global Banking—Lebanon*" (September).

Reinhart, Carmen M., Kenneth S. Rogoff, and Miguel A. Savastano, 2003, "Debt Intolerance," NBER Working Paper No. 9908 (Cambridge, Massachusetts: National Bureau of Economic Research). Available via the Internet at http://www.nber.org/papers/w9908.