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How Much Can Governments Borrow? Financialization and Emerging Markets Government Borrowing Capacity

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Introduction

How much can governments borrow from private markets? This question goes to the heart of the debate regarding the impact of financial globalization on government policy (see Cohen, 1996; Ocampo and Stiglitz, 2008). Government debt ‘provides a most likely location for the operation of financial market pressures’ (Mosley, 2003 p.17; italics in original). Investors reward or punish governments for policy decisions directly through the cost and availability of financing. The more a government can borrow, the greater its immediate ability to carry out its chosen policies. Borrowing capacity has been seen as crucial to the outcome of both World War One (Frieden, 2006 p.131) and the Cold War (Ferguson, 2001 p.406). Even in less confrontational times, government debt is not only a transfer of resources between generations but potentially between successive governments. ‘Eventually the debt would have to be repaid. For a politician, however, eventually is a long time, certainly farther in the future than the next election’ (Frieden, 2006 p.381; also Allen and Gale 1994; Geddes 1994).

Despite the temptation for politicians in borrowing, the levels of government debt vary markedly. In the 31 middle income ‘emerging market’ countries in the ‘EMBI Global’, an index of emerging market bonds, the ratio of government international debt to GDP in 2006 ranges from Lebanon’s 85.7 percent to China’s 1.5 percent of GDP (IMF, 2006f p.34). For domestic debt, the 23 countries in the ‘EMLI+’ (a local currency debt index) ranges from Singapore’s 102.7 percent¹ (IMF, 2006d p.26) to Hong Kong’s 1.0 per cent (IMF, 2006e p.23). While very low levels of debt are the result only of government decisions, at higher levels, it is a question of how much lenders will finance (Frieden 1991; Reinhart et al., 2003). Private lenders (for governments, overwhelmingly bond market investors) will obviously lend only when they believe the debt will be repaid. Their concern is debt sustainability. Sustainability is, however, difficult to analyse precisely (IMF, 2002). The interest rate paid is a key component on any calculation, and debt sustainability is therefore most questioned at times of rapidly rising interest rates. For many emerging market countries, the possibility of such ‘debt crises’ – culminating in markets no longer financing governments – is a constant concern, particularly for ‘debt intolerant’ countries, with a history of default and high inflation, where crises can occur at relatively low levels of indebtedness (Reinhart et al., 2003).

The international financial institutions have well-established views on minimizing the risk of such crises: increase demand for government bonds, and maximise the stability of that demand, by attracting investors with the broadest range of opinions (IMF, 2003). This reduces yields, and, by increasing the likelihood of sellers and buyers meeting, reduces volatility. Government bond markets should therefore be as liquid as possible. Investors should be able to follow the broadest range of investment

strategies, including short selling, and be able to reverse those strategies easily. In brief, governments should increase the ability of investors to trade risk.

This article examines these views and resultant policy recommendations. Does increasing the ability of investors to trade in emerging government bond markets – defined here as increasing financialization – enhance or diminish the ability of governments to borrow? It concludes that the more (less) financialized an emerging government bond market, the lower (higher) the capacity of governments to borrow on a sustainable basis. In emerging markets, financialized markets are debt intolerant markets. The article examines two issues: the varied levels of debt-to-GDP that different emerging market governments have sustained, and the way bond markets have reacted to situations that precipitated, or could have precipitated, a ‘debt crisis’.

Financialization

Financialization, it is argued here, undermines sustainable borrowing by increasing the cost of that borrowing (on financial liberalization increasing Turkish interest rates, see Aricanli and Rodrik 1990) and making financial crises more likely and more severe. This article can therefore be seen as sharing the post-Keynesian view of financial liberalization as resulting in increased volatility (see Grabel 1995; on Brazilian liberalization of capital outflows, de Paula, 2008; Gottschalk and Sodr , 2008), and an increased likelihood of crisis. By utilizing financialization as the independent variable, however, the article moves beyond considering only liberalization.

Financialization is defined here as the ability to trade risk; both taking and trading the risk on the performance of an asset. Securities markets are designed to allow the buying and selling of various types of risk, but the ability to do so - the liquidity of individual markets (e.g., Carruthers and Stinchcombe 1990) - varies considerably. Furthermore, the ability of an individual investor to trade risk in a particular market is a function not only of the financialization of the government bond market structure (i.e., the constraints on the trading of risk in the particular market), but also of the financialization of the investor (i.e., his/her own ability to trade risk). Individuals' ability to trade risk, for example, is constrained even in the most liquid market. Furthermore, as demonstrated below, the financialization of the investors that dominate a particular market will interact with the financialization of the formal market structure to determine the ability of all investors to trade risk in that market. The ability to trade risk is low in a market that consists of a single financial product and where the majority of the outstanding securities are owned by banks and pension funds that hold those securities until they are repaid. In contrast, financialization is high in a market with a broad range of financial products and with the heavy involvement of short-term trading-orientated investors aiming to buy and sell frequently. More (less) financialized investors are likely to increase (decrease) the financialization of market structure and more financialized markets attract more financialized investors, but structure and actors can usefully be considered separately.

The importance of the ability of investors to trade risk (focused on ease of exit for international investors) has been highlighted previously (e.g., Maxfield, 1997, p.37), as has the distinction between 'patient' and 'impatient' capital (Cohen, 1996 p.284; Kahler, 1998 p.10; Sobel, 1999 p.22; Bryant 2003 p.43). Maxfield (1998) considers

the relative patience of different international investor types. This study develops Maxfield's approach: first, by focusing on differences in the actual ownership of government bonds, demonstrating both the variety in ownership patterns and the role of domestic investors, even in international bonds. Second, the study highlights differences between investors of the same type, focusing on domestic commercial banks and individual investors. Third, a focus on the ability to trade risk, rather than solely on exit, highlights the importance of short selling.

Financialization is rarely used in IPE (although see Epstein, 2005a). The financialization literature itself lacks an agreed definition. Ertürk *et al.* (2008) highlight four broad approaches (also Epstein 2005b, p.3; Krippner, 2005, p.181; French *et al.*, 2008). A wide range of topics are now discussed within this literature (see Engelen, 2008), but the focus has been almost exclusively on the developed economies. Comparative studies outside Europe and North America are especially lacking. The ability to trade risk is a narrower definition, but one that encompasses the central processes of '[t]echnological change, regulatory change, and institutional change' (Rajan, 2005, p.331)² in financial markets in both developed and emerging market countries. Such changes all concern the increasing ability of financial market actors to take and trade risk (on the U.S., see Crotty 2008). This article also highlights change amongst, and differences between, domestic banks. Aglietta and Breton (2001) recognise changes as banks add a 'new market portfolio' to their 'traditional credit portfolio' (2001 p.441; see also Ertürk and Solari, 2007; Froud *et al.*, 2007). Again, at the heart of such changes is the increasing ability to trade risk.

Case Study Countries

The article considers three case study countries: Brazil, Lebanon and Turkey. They are selected from those emerging market countries with government debt that is high enough to cause possible market debt constraints. A ‘most different’ selection approach is used. The countries are very different across a range of variables, including most importantly the independent variable in the study, the ability to trade risk in their government bond markets. A comparison of the countries is shown in Table 1.

[Insert Table 1 Here]

Brazil ranks amongst the world’s ten largest economies, has a relatively sophisticated financial system (Gleizer 1995, p.223; Carvalho and Garcia, 2006), and was, in February 2004, the largest component (i.e., has the largest volume of liquid bonds outstanding) of the EMBI Global index. Lebanon has in recent history endured a full range of misfortunes. For many international investors, a cursory look at investing in its bonds shows yields that are far too low relative to similarly creditworthy countries. ‘[R]atings lower than [Lebanon at the time of the research] are usually reserved for countries that are already in default’ (Moody’s analyst, quoted by *Daily Star*, 5 July 2007). The financialization of Turkey’s financial market structure and market actors lies between Brazil and Lebanon, as Turkey does on many variables. Turkey is the fourth largest EMBI constituent. Both Brazil and Turkey have the extensive history of default and inflation that is seen as making them able to safely sustain only a low level of external debt (Reinhart et al., 2003). Lebanon has suffered periods of high

inflation. Aside from their position as potential emerging market bond investment destinations, these are three very different countries.

We would reasonably expect that the higher a country's credit rating and the more sophisticated its financial markets, the more a government would be able to borrow. However, in the case study countries, the opposite is the case. Net public sector debt-to-GDP from 1996-2006 in the three countries is set out in Figure 1:

[Insert Figure 1 here]

There is also a marked difference in the levels of government indebtedness that have resulted in a debt crisis. Most formal analyses of government debt crisis have defined crisis as default (e.g., Reinhart and Rogoff, 2009). However, situations where governments have been unable to borrow from private market actors, and have been forced to turn to the IMF are also crises (with or without simultaneous currency and/or banking crises), and are important to understanding government borrowing capacity. In the run up to the 2002 presidential elections (the peak in Brazil's debt levels above), Brazil was considered to be in a 'death spiral' (Krugman, 2002 p.2), and the *Financial Times* (15 October 2002) concluded: 'At current market rates, even an optimist would admit Brazil is insolvent'. The economist Barry Eichengreen forecast default (Santiso 2004 p.23), which an IMF programme possibly pre-empted. Turkey's peak, in the 2001 financial crisis, also necessitated an IMF programme and an exceptional 6.5 percent of GDP primary surplus, but only after far higher government debt levels were reached. The contrast with Lebanon is even more

dramatic: ‘For years now, Lebanon has been able to sustain a government debt-to-GDP ratio which is well beyond levels deemed sustainable’ (IMF, 2006a p.28).

This higher level of sustainable debt is closely linked to relatively low and stable bond yields. Figure 2 below shows the US dollar yields of the three case study countries’ EMBI components since 1998:

[Insert Figure 2 here]

The greater volatility of Brazilian bonds and the lower volatility of Lebanese bonds are clear, as is the extended periods of higher Brazilian and lower Lebanese yields. The highest rated country, with the lowest level of government indebtedness and the most financialized markets, has seen both generally higher yields and the most dramatic spikes in borrowing costs.

Analysing Financialization

Financialization, as defined here, could be measured by the volumes of trading in government bonds, on the assumption that there will be more trading in markets where that trading is easier. The data certainly confirm the differences between the markets, both in the absolute volume of trading and in turnover relative to each market’s size. In 2007, Brazilian domestic bonds were the second most actively traded in the emerging markets (Emerging Market Trade Association [‘EMTA’] 2007³). Brazilian international bonds were the most actively traded. Turkey’s domestic bond market was the fourth most actively traded by volume in 2007. The international

bonds were the sixth most active. Total trading volumes in the survey for Lebanon were only US\$7,724 million for international bonds and US\$806 million for domestic bonds. Data for individual bonds confirm these differences. The most actively traded international bond, ‘the industry’s benchmark’ and ‘everybody’s favourite short’⁴ was a Brazilian US\$-denominated bond maturing in 2040, with a trading volume 93 times its issue size. Four Brazilian bonds appear in the top ten most actively traded. Turkey’s most traded international bond was the third most actively traded, a volume 42 times its issue size, while the most actively traded Lebanese international bond had a trading volume only just over a quarter its issue size.

Such data support the claim of differential financialization across government bond markets, but does not explain those differences. In particular, it obscures the detail of the workings of individual markets, and the processes of change. This risks an overemphasis on financial liberalization at the expense of other important reasons for change. Regulation is not the only influence on investor decision making, even in heavily regulated areas. In Brazil, for example, banks’ voluntary holdings of government bonds are three times their holdings required by regulation.⁵ Furthermore, change brought about by technological advances, financial innovation and changing business practices can be independent of regulatory change and may undermine regulation. Financial innovation undermined Brazilian capital controls (Carvalho and Garcia 2006), for example. ‘[I]mproving the technical efficiency of markets may actually be a contributory factor to the frequency of currency crises in the 1990s’ (Krugman 1997), and before 2008 ‘many problems were hidden in the “plumbing” of the financial markets’ (Reinhart and Rogoff, 2009 p.221), so a greater focus on this plumbing is needed.

Internationalization (increased foreign ownership of bond and equity markets or banks) also represents important change, but unless changes in domestic financial markets always result from the adoption of international practices, a focus on internationalization risks missing changes in domestic actors and markets. In Brazil, domestic private banks had a competitive advantage over foreign banks in treasury operations and technology (Stallings, 2006 p.245), and both Brazil and Lebanon have seen recent periods of declining foreign ownership of banks. A lack of attention on domestic markets and financial market actors is a weakness in IPE's consideration of financial markets (Sobel, 1999 p.206), and in the analysis of government debt generally (Reinhart and Rogoff, 2009). Financialization, as defined here, considers internationalization, liberalization and other changes in financial systems, and considers domestic and international markets together.

This article considers first which investors own government bonds in the three countries. There are significant limitations in the available statistics, so quantitative data are supplemented by interview data.⁶ The influences on the two central groups of investors, domestic commercial banks and individuals, are then analysed, focusing both on the investors themselves and the market structure in which they operate. A comparative event study then considers crucial periods of financial crisis, or potential crisis, to demonstrate how investor behaviour has influenced the outcome of such events. Last, the conclusion considers both the generalizability of the findings and the implications for government policy towards, and academic study of, financial markets.

Who Owns Government Bonds?

Table 1 shows ownership by investor type in the domestic government bond markets (excluding ownership by government entities, including central banks) at end-2006.

Table 2 covers the international markets. Domestic bonds are those bonds issued in the respective home countries and governed by domestic law. Most such bonds are denominated in the domestic currency. International bonds are issued outside the country of the borrower, are governed by the laws of another country than the issuer and are nearly all denominated in currencies other than the issuing country's own.

[Insert Tables 2 and 3 here]

In Lebanon, over three-quarters of domestic and international government bonds are owned by domestic commercial banks. Domestic individual investors own much of the remainder, with domestic and international institutional investors barely involved.

In Turkey, domestic banks and individuals own over half the domestic government bonds and over 40 percent of international bonds. Domestic mutual and pension funds are not yet significant investors. There are no domestic Turkish hedge funds.

International investors are significant in both domestic and international markets, owning just less than 20 and over 50 percent respectively. The Brazilian domestic market has a broad range of financial market actors. Banks and domestic institutional investors, including mutual, pension and hedge funds are all active, with domestic individuals' and international involvement low. Estimates of domestic ownership of Brazilian international bond markets ranged from 25 to 40 percent, but there was considerable uncertainty, even amongst Ministry of Finance officials.⁷

Domestic Banks and Individual Investors

Domestic banks, and to a lesser extent individual investors, are central to the ability of emerging market governments to borrow. The next section will consider the influences on these investors. Market structure will be discussed, but also the constraints on the ability to trade risk that result from the nature of investors. First, the ability to exit is considered, including both situations when exit is effectively impossible, and when constraints on exit (including exit via hedging) fall within the more conventional analysis of transaction costs. Shorting is considered next. The focus on the ability to trade risk highlights that it is not only the ability to exit, but also the ability to short, that are important to borrowing capacity. Shorting, selling securities one does not already own, is not exit, as the investor maintains an interest in the price of the security, but is also not the same as remaining invested. Finally, the question of investor capacity is considered, as investor behaviour is obviously only important if those investors have the capacity to influence markets. The question of capacity, however, is not only concerned with the size of investors, but with how their performance is measured. The way in which the investment behaviour of banks and individuals has been important in crisis and potential crisis situations is then examined by way of a comparative event study, examining the actions of domestic commercial banks and individual investors in the three countries at specific periods.

Market Structure

This analysis begins with the structure of the markets, and its influence on 'liquidity'. A complete analysis of all factors that influence the structure of markets, or of all the

risks that banks face, is beyond the scope of this article, but examples that indicate significant differences between the three countries are chosen. The Brazilian Mercantile and Futures Exchange ('BM&F') is central to the high financialization of the Brazilian market. The exchange trades futures and options, including on interest rates and currencies, and is 'ten times more liquid maybe' than the government bond market,⁸ 'so everybody that wants to take a sizeable position goes to the futures market'.⁹ This represents 'the biggest difference you have from other emerging economies'.¹⁰ Without the derivatives market, aggressive short-term trading on Brazilian interest rates could not take place in such volumes; nor could risk be efficiently hedged. One of the largest private banks completes about 90 percent of its hedging through the BM&F,¹¹ and this ability to hedge exposure allows exit without selling bonds. In Turkey, with a less developed derivatives market, its further development would, for one bank, 'fundamentally change the way I'm running my portfolio'.¹²

The BM&F is a private sector initiative. However, private sector actors can also inhibit the financialization of the market structure. Lebanese banks have a 'tacit agreement' not to lend government bonds,¹³ despite lending being in itself profitable. This agreement limits the financialization of the government securities market, by preventing short sellers from borrowing bonds (see Committee on the Global Financial System, 2007 p.54). A Lebanese banker is explicit regarding the motivation for the agreement:

'When I get calls from [an American bank], looking for a trade to short Lebanese pounds I will do everything I can, not only not to facilitate it but to

make sure he doesn't do it with anybody else as well. I'm not in it for short term profit, I'm in it for going with the grain'.¹⁴

Lebanese and Turkish banks gain little from facilitating such financialization, as it pushes down the price of the bonds they hold, and they cannot exploit it: 'it wasn't very interesting for us to create some more volatility on this market'.¹⁵

Limited bond lending not only limits overall trading activity, it also makes the development of a credit derivatives market more difficult (see below). Credit derivatives (most commonly, credit default swaps ['CDS']) are 'financial contracts that allow the transfer of credit risk from one market participant to another' (Bomfim, 2005 p.4). Effectively, a buyer of a CDS is buying tradable insurance against default. CDS increase financialization, in part by facilitating shorting.

The financialization of the market structure, important as it is, must also be combined with the financialization of investors. It is the financialization of domestic banks and individual investors that is considered next, focusing on the ability to exit.

Ability to Exit

The ability to exit is central to the analysis of a broad range of issues in political economy. In the study of financial markets, however, there is rarely any consideration of an absolute inability to exit, and even then only as the result of legislation. Here, however, in the specific case of the domestic banks, the analysis goes beyond the costs of exit, to consider the situation where 'full exit is impossible' (Hirschman

1970, p.100). This unusual situation can lead to ‘loyalty’. As will be shown below, this loyalty does not have to be ‘enforced’ by regulation (Cohen, 1998 p.132), and varies across the three countries.

Banks’ inability to exit can result from their large holdings of government securities, relative both to the size of the market and to their total assets, and from their inability to exit, short of closing completely, their domestic business generally. The size of bank holdings severely limits their ability to exit. In Turkey, the large banks cannot sell more than about US\$300 million equivalent in a day, with one concluding they could not sell their portfolio in a year.¹⁶ Similarly, Lebanese banks wanting to sell are faced with everyone also trying to sell, and maintain their holdings for fear of pushing down prices.¹⁷ A US\$20 million trade in Lebanese international bonds could move the market 1--2 percent in price. In a period of great uncertainty, such as after the assassination of former Prime Minister Hariri (see below), US\$5 million would be sufficient. In the domestic bonds, LBP20 billion (US\$13.3 million) is a large trade.¹⁸ This practical impossibility of exit goes beyond transaction costs. As far as larger banks are concerned, they cannot sell.

In addition, a high percentage of the banks’ total assets are government bonds: in Brazil 27, in Turkey 51 and in Lebanon 54 percent. The majority of Lebanese interviewees believed a default by the government would lead to the collapse of the banking system. ‘If the government defaults, we default’.¹⁹ Even if banks decide to limit their risk on the government by buying fewer bonds, their exposure to the Lebanese banking system and the economy is effectively the same risk.²⁰ This is a risk the market structure means they cannot even partially hedge. Turkish

interviewees disagreed on whether a government default would lead to the insolvency of their bank, but some consider that diversifying to private sector lending offers no protection.²¹ The size of the banks' holdings, and their exposure to the bond market and the economy more generally, has a significant (but across the three countries varied) influence on their investment decisions. Specific examples of bank behaviour are discussed below, but the attitude of the Lebanese banks is particularly noteworthy: 'at least I have to keep...what I already have with the government...and if the government...needs some money, I have to give it'.²² Brazilian banks own a smaller proportion of the market, and, as discussed above, the more financialized market structure gives more hedging and trading options. They still face the difficulty of their entire business being exposed to the economic cost of a government default, but the ability to exit is higher.

When the option to exit exists, the costs of exit have a significant impact. For emerging market investors, the costs of that exit are high. Transaction costs are particularly onerous for individuals but also for smaller institutions. Larger institutions, with greater sums to invest, can better meet these costs, many of which are fixed and substantial.²³ Banks in emerging market countries are relatively small, and the three case study countries show considerable variation (see table 1 above). The result is a varied capacity to meet the costs of trading risks other than government bonds.

The range of alternative investments has an important influence on the costs of exit. The narrower these alternatives (the lower the investor's ability to trade risk) and the lower their return, the more costly exit may prove. The usual alternative to

government bonds for banks in an emerging market is lending, other government bonds or inter-bank deposits. On US dollar deposits (allowed in both Lebanon and Turkey), banks frequently pay interest higher than either US government bonds or bank deposits with international banks. They cannot profitably expand their balance sheets on that basis. The yields on US dollar bonds issued by the Lebanese and Turkish governments, however, generally yield higher than deposit rates. For individual investors, the main alternative to government bonds is this lower interest on bank deposits. International investors, in contrast, can trade a broader range of risks, and compare an emerging market government's debt to the (possibly higher yielding) debt of other governments.

How those returns are measured also has an influence. On one level, this is the different timeframe for investment highlighted by the distinction between patient and impatient capital. In this framework, banks and individuals are usually seen as buyers of short term assets. Short maturity borrowing is seen as undermining debt sustainability, because of the need to refinance. Individuals in the three countries, however, not only expect to hold bonds until maturity²⁴ (although see Stallings, 2006 p. 126; Borensztein *et al.*, 2006 p.8 on Latin America), but are also likely to reinvest.²⁵ Lebanese and Turkish banks are in a similar position, and also buy longer dated bonds, especially in foreign currencies.

The detail of how performance is measured is also important, however. For banks, International Accounting Standard 39 (see Deloitte Touche Tohmatsu, 2006) gives three ways to account for government bond holdings: as trading, 'available for sale', or investment. In the investment book, profit is calculated on an accruals basis. A

bond bought with a yield of 10 percent p.a. will show an income of that yield until the bond is repaid, regardless of market movements (absent, of course, substantial credit deterioration). The important point here is that bonds cannot be sold from the investment book (except usually for five percent of the total investment book holding p.a.) without the entire investment book being revalued at prevailing market rates. In a weak market, this limits the ability to trade risk. Interviewees indicated they would only sell from the investment account in the most extreme circumstances. The investment book is ‘a small accounting thing but it changes everything in the way of running business and it changes incentives to buy and sell at specific times’.²⁶ Bank investors, within their investment portfolio, are long term ‘buy and hold’ investors. The international investors interviewed are generally taking views for a maximum of three to six months, with some even more short term.²⁷ In contrast, in the investment book: ‘my 30 year bonds will never come back within the next 30 years’.²⁸ Banks, generally seen as buyers of short-term government securities, are buying bonds up to 30 years in maturity on a ‘buy and hold’ basis.

Ability to Short

Consideration solely of the ability to exit is insufficient in modern financial markets. Many investors can now short. Both legislation and market structure will influence the ability to ‘go short’, but a major influence is also the investment mandates and decisions of investors. The focus here is on banks (individuals in the three countries had few possibilities to take short positions).

Banks can introduce proprietary trading operations, in addition to more traditional treasury functions. A focus on capital gains then becomes more likely. As far as Lebanese and large Turkish banks are concerned, the treasury function still dominates.²⁹ For smaller Turkish banks, and most importantly for the Brazilian banks, trading is relatively more significant. Brazilian private banks accounted for over two-thirds of their holdings of government bonds as ‘trading’ in December 2005. The equivalent Turkish figure is 13.7 percent.³⁰ International interviewees also note this Brazilian focus on trading.³¹

If Lebanese or Turkish banks tried to short securities in large size, other banks would know,³² and could exploit the situation, for example by ‘squeezing’ the price of the shorted security higher.³³ This is a result of both the large holdings of government bonds by these banks and the market structure. The situation for banks in both countries is similar, despite only Lebanese banks facing a regulatory prohibition on shorting. Thanks largely to the BM&F, Brazilian banks can short, and proprietary traders at the larger Brazilian private banks, trading solely to make profits on their own books, will do so.³⁴ These proprietary trading desks act in a very similar way to hedge funds. In contrast, at a Turkish bank with a proprietary trading desk, the limits on trading are kept low, because traders might work against the interests of the larger bank portfolio of government bonds.³⁵ As one Turkish banker observed, ‘I can’t act like a hedge fund’.³⁶

Investor Capacity

Investors are only important if they have sufficient capacity to influence markets. This capacity is also important to Hirschman's conception of loyalty, because, to remain invested when market prices are in danger of falling, loyal investors must believe that their remaining will make a difference to prices; they must be 'quality makers' (Hirschman 1970, p.99).

Capacity is partly a question of the amounts investors can invest, relative to the government's need for financing. Bank assets to GDP are far higher in Lebanon than Turkey, which is in turn higher than Brazil (see table 1). This, in itself, has a significant impact on government borrowing capacity. However, the willingness of investors to buy government bonds, especially in periods of market weakness, is also influenced by performance measurement or accounting issues, especially the ability to avoid marking to market. For individual investors, such performance measurement issues do not exist. They buy and hold government bonds as they would make a time deposit. They can therefore be significant buyers when other investors stay on the sidelines (see below), and not sell when others exit.

Banks can act similarly, because of the investment book. First, existing holdings can be moved into the investment book to avoid actual or potential losses: 'the losing position[s] generally find their way in[to] investment portfolios'.³⁷ Bonds can also be purchased during severe market weakness (see Allen and Gale, 2000 p.271). Some banks in Lebanon and Turkey bought bonds in periods of serious market stress because the investment account meant they did not face losses if prices fell further. For one bank, all the bonds in the investment account, 14 percent of the portfolio, had been purchased at such times.³⁸ The investment book is heavily used by government-

owned banks in Brazil and Turkey, but even for domestic private banks, it represented 7.2 and 16.5 percent of securities holdings at the end of 2005 respectively.³⁹

For banks, financialization also includes the ability to borrow to finance assets, so removing constraints on risk-taking from the availability of customer deposits. Financing comes mainly from inter-bank borrowing or through the repurchase ('repo') market. This short-term financing of longer-term assets results in a high vulnerability to market movements, the opposite of the situation with the investment book. In extreme situations, banks are similar to hedge funds. This vulnerability was exposed amongst the smaller Turkish banks in 2000 (Alper 2001).

Domestic Banks and Individual Investors in Crisis Situations

How then have banks and individuals behaved in practice? To consider this, the next section undertakes a comparative event study, comparing the reactions of markets in the three countries to situations where shocks could have led, or did lead, to financial crisis. The focus is on the 2005 assassination of former Prime Minister Rafiq Hariri in Lebanon, the 2001 financial crisis in Turkey, the 1998-99 crisis in Brazil, the result of contagion from a Russian default that should have had a similar impact on all three countries (if not a greater impact on geographically proximate countries), and the 2002 crisis induced by market fears about the presidential victory of the left wing Lula da Silva. All these time periods are covered in figure 2 above, and the striking weakness of Brazil in both relevant periods, and the lower yields at which Turkish, and particularly Lebanese, bonds peaked are immediately apparent. In each event, the range of possible outcomes, including an IMF programme or, in Lebanon's case,

bilateral support, are similar. All three countries are vulnerable to shocks, both internal and external, leading to financial crisis, and such shocks should have a negative impact on bond market yields. However, it would be reasonable to expect that the higher-rated and less indebted a country, the less likely it would be to face crisis, and the more diverse the investor base in a market, the less severe that crisis would be. The experiences of the three countries question those assumptions. While the diverse nature of the ‘triggers’ for actual or potential crisis present some difficulties for comparison, contagion from the Russian default should be a concern for all three countries. Furthermore, the peaceful transition to a left-wing President in Brazil should have a lesser impact than the murder of Lebanon’s most high profile politician and the resultant political crisis. Additional support is also provided by events not analysed in detail here, but discussed more briefly below.

Hariri’s Assassination

Rafik Hariri, former Prime Minister and opponent of Syria’s presence in Lebanon, was assassinated in February 2005. Reacting to enormous political uncertainty, local bank depositors switched US\$5.5 billion from Lebanese pounds to US dollars; Lebanese pound resident deposits declined by 33.2 percent by the end of March. Simultaneously, US\$2 billion left the country (IMF, 2006b p.6.); total non-resident deposits fell by 11.7 percent.⁴⁰ This threatened the main anchor of the Lebanese government’s economic policy, the effective fixing since 1993 of the pound to the US dollar.

The banks reacted in three important ways that assisted the central bank's crisis management. They did not exit, as might be expected. Regulation prevents Lebanese banks from running any significant currency mismatch. Therefore, they reacted to the changes in their deposits by selling Lebanese pound securities to Banque du Liban, and exchanged the pounds received for US dollars, again with the central bank, the only buyer supporting the Lebanese currency. This depleted the central bank's foreign currency reserves. The risk-averse strategy, of placing the US dollars outside the country, was available in a country without capital controls. However, the US dollars were instead placed on deposit with the Banque du Liban. '[I]f we had really done what theoretically... a risk averse person would have done, definitely [the currency] would have collapsed'. The decision to keep the deposits with the Banque du Liban was the result of 'persuasion'.⁴¹ Central bank foreign currency reserves, lost supporting the currency, were replenished as banks deposited their US dollars. Gross reserves fell, but were maintained at close to US\$8 billion (IMF, 2006b p.7). Meanwhile, the central bank's net foreign exchange liquidity⁴² fell close to zero. The banks also accepted swaps to lengthen the maturities of government and central bank debt (*ibid.*, p.6), when in similar situations (for example, Brazil in 2002) investors would be expected to reduce the maturities of their exposure. Overall, there was 'tight [Banque du Liban] – banks cooperation' (Bank Audi, 2005a p.2). The exposure of the banks to the government (including Banque du Liban) increased in the first quarter of 2005, and the government continued financing (Bank Audi, 2005b). The spreads of international government bonds actually fell over the same period (Bank Audi, 2005a p.10).

Second, the banks encouraged depositors to remain calm. ‘Banks’ managements were responsible for briefing branch managers so they could help avoid customer panic, which would have led to uncontrolled demand for dollars against Lebanese pounds. This proved successful’ (Standard & Poor’s, 2006).⁴³ Third, the decision not to lend securities limited short selling and CDS activity. On the day after Hariri’s death, despite the great uncertainty, one international trader (interviewed 18 February 2005, 4 days after the assassination) saw only one CDS trade taking place in the market.

Individual investors were also important. To replenish its foreign exchange reserves, the central bank in April 2005 issued a 10 year Certificate of Deposit, a tradable security similar to a bond. This borrowing was launched at a period of considerable uncertainty (although the worst appeared past), but sold in substantial volumes to individual investors. This contributed to an issue size of US\$2 billion, equal to the fall in gross reserves, and more than the central bank expected.⁴⁴ The reason was the high return compared to the alternative of bank deposits. ‘[W]e had unbelievable demand by [individual investors], because it’s paying... 10 percent coupon, yield 10½... we had demand in 50, 60, 70 million dollars, probably, if not more [US\$10-20 million would be expected]’.⁴⁵ At the time, bank deposits paid 3.5--4.5 percent.⁴⁶ Critics claim the interest rate was higher than necessary,⁴⁷ but despite Lebanon being rated a low B3/B-, and recently downgraded by Moody’s,⁴⁸ the country was able to borrow US\$2 billion at a time of economic and political uncertainty (albeit also some optimism after the Syrian withdrawal) and at an acceptable interest rate.. This was thanks to unfinancialized individual investors. Brazilian bonds yields in 2002 exceeded 25 percent, and Turkish yields in 2001 exceeded 15 percent (see figure 2 above).

Turkey's 2001 Crisis

Turkey's 2001 financial crisis saw severe weakness in currency and bond markets (Akyüz and Boratav, 2005; Altunışık and Tür, 2005). Turkish banks ordinarily lend government securities, but some stopped lending at this time,⁴⁹ in order to limit shorting. Six banks also decided to intervene directly in the foreign exchange market, forming a fund to buy Turkish lira in the market, as a central bank would in supporting the currency.⁵⁰ Their motivation came from their inability, unlike foreign investors, to fully exit: 'we...have [a] branch network and...lots of customers, meaning if Turkey gets hit more, we as banks also get hit more...whereas for the foreign banks present in Turkey it's just a trading game'.⁵¹ This cooperation between the six banks was not the result of government pressure, regulatory or otherwise.⁵² Interviewees disagreed on the success of this operation, and other banks may have been acting differently,⁵³ but a group of important banks saw it as in their interests to support the market in the face of foreign selling: 'if you are in a small community, in certain cases...we get together and say okay this is not for the bank, this is for Turkey'.⁵⁴

Individual investors were also important in Turkey in 2001, and caught even the domestic banks by surprise. There were fears regarding the government's ability to raise financing, but individual investors were attracted by the high interest rates, and ensured successful auctions.⁵⁵ Individual investors bought when even domestic banks would not. The banks, initially unwilling to finance the government, then followed their individual investors, confident of a successful auction. Individual investors

‘supported the Treasury more than the banks did’.⁵⁶ The very high real interest rates involved in attracting individuals, 50--70 percent, were unsustainable in the medium term, but the success of these auctions helped avert an even costlier crisis. As in Lebanon, unfinancialized individual investors were central to the government’s ability to borrow.

Brazil in 1998-99 and 2002.

The contrast with Brazil is marked. In 1999, after the Asian and Russian crises, the government was forced to devalue a previously pegged currency and turn to the IMF. The 2002 presidential elections saw even greater falls in bond prices (see figure 2 above). In contrast to Lebanon and Turkey, many banks chose either to hedge their risk or to place bets on further price falls, and in a financialized market were able to do so: ‘On the devaluation, 1999, every bank was very long dollars and every bank made a lot of money.’ In 2002, ‘we were short the currency, hedging some exposures’⁵⁷ The largest Brazilian banks remain ‘married to the country’,⁵⁸ and could not shield themselves entirely from the consequences of an economic collapse caused by a government debt default. In 2002, a number of the larger banks did buy when the market was weak, and profited as a result.⁵⁹ Some banks discussed trying to support the market, but the central bank, not believing this was a solution, would not change the rules on marking positions to market, which the banks believed was necessary.⁶⁰ Nevertheless, the Brazilian banks, themselves more financialized and operating in a more financialized market, could either partially insulate themselves through hedging, or actively exploit the market weakness to which their selling contributed. Brazil was forced to turn to the IMF as private markets would not

provide financing at a far lower debt to GDP ratio than Turkey reached in 2001 (see figure 1 above), and Lebanon was able to continue borrowing with even higher indebtedness.

Additional Events

Other periods in both Lebanon and Turkey further demonstrate the impact of bank and individual investors. Mauro et al. (2006) note the historical importance of war in weakening bond markets, but Lebanon's government bond market did not suffer major weakness during the Israeli invasion that started in July 2006 (Schimmelpfennig and Gardner, 2008; see also figure 2 above). In Turkey, individual investors acted in a similar fashion during serious market weakness in 1994 to the behaviour described above.⁶¹

A further example from 2003, when the Turkish parliament rejected the United States' request to use Turkey for the invasion of Iraq, is worth quoting at length:

[Foreign investors] were...saying, they're going to default in three months...They're all short...so here's this big speculative attack...But the guy on the street thinks...these are some pretty good yields...They directly bought the auctions...[I]t also helped that the government...rejected the troops and within that weekend they passed the budget...and ...you got this retail wall of money...buying T-bills, they [the international investors with short positions] had no chance. So it reversed very quickly'.⁶²

This is another example of a situation where a potential crisis did not occur.

Government policy decisions are important to these outcomes, but also of central importance are the potential investors in government debt, and their investment attitudes. The involvement of less-financialized domestic banks and individuals as investors is a positive for the government's ability to raise financing and to avoid or manage financial crisis. Crisis is, as a result, less likely and less severe.

Conclusion

This study demonstrates how the increased financialization of financial market actors and government bond market structure can undermine debt sustainability and increase debt intolerance by increasing borrowing costs and the likelihood and severity of debt crises. This reduces governments' capacity to increase expenditure. This concluding section addresses two further questions, regarding the generalizability of these conclusions and their implications, both for government policy and for the focus of academic research.

Any conclusions do not directly apply to developed world government bond markets. The 'safe haven' status of developed world government bonds increases demand at time of uncertainty and distinguishes developed from emerging markets. However, loyal investors may nevertheless increase borrowing capacity, for example in Japan. For other middle-income emerging countries, questions of generalizability must first recognize the limitations of this study, covering only three countries over a limited period and employing a methodology that depends heavily on interview data. Further

research is needed, including quantitative studies of a broader range of countries.

Nevertheless, some observations are appropriate.

Schimmelpfennig and Gardner (2008, p.28) conclude that ‘it is unlikely that many countries could, or even should try to, replicate the Lebanese experience’, but the country nevertheless shows that ‘building on special circumstances to cultivate a dedicated investor...base helps insulate to some degree financing flows from general market trends’. Broadly, this study agrees with these conclusions, but its comparative nature suggests greater generalizability. Lebanon is indeed unique, and it is difficult to envisage any country being able to follow its example fully. Such high government indebtedness also has potentially negative economic implications. Nevertheless, as the Turkish case further demonstrates, the importance of patient or loyal investors in government bonds to the avoidance of debt crises and therefore sustainable government borrowing (and avoidance of the heavy economic costs of crises) is a conclusion with policy implications across emerging markets. At a minimum, it questions the warnings against a captive market for government bonds (IMF, 2003 p.23).

The size of Lebanon’s loyal investor base is the result of ‘special circumstances’, but the IMF (2006c) shows that investors with a potentially positive impact on borrowing capacity (including pension funds and insurance companies) owned over 70 percent of the domestic debt of emerging market countries surveyed in 2005. There is also significant domestic ownership of notionally international debt, mainly by banks. The average in 2004 was 11 percent, up from 5 percent in two years. As demonstrated above, central to these investors’ loyalty is their financialization. A full understanding

of borrowing capacity, therefore, requires a focus on this financialization, in addition to the structure of financial markets.

For academic research, the main conclusion regarding understanding the impact of financial globalization concerns the focus of enquiry. As important as processes of internationalization are to IPE's consideration of change in financial markets, domestic financial actors cannot be ignored, even when considering markets, such as foreign currency bonds, generally labeled 'international'. As important as regulation and liberalization are to the study of both domestic and international financial markets, a focus only on changing regulation is too narrow to analyze processes of change in financial markets. This is arguably more significant for those concerned by the consequences of such change than for those convinced by the virtues of ever-expanding financial markets. In particular, while Maxfield's (1998) focus on different investor types expands the patient/impatient model of financial market actors, analysis needs to go further, to focus on the internal decision making of investors, the motivations for, and consequences of, these decisions, as well as the detailed structure of financial markets.

¹ Financial year 2004/05. Singapore is anomalous, as it issues domestic debt to develop the domestic market rather than for borrowing purposes, and invests the proceeds abroad.

² For Rajan, institutional change is the emergence of 'new entities...such as private equity firms and hedge funds'.

³ EMTA surveyed 66, mainly international firms. Five Brazilian institutions participated, no Turkish and one Lebanese.

⁴ Investment banker, London, interviewed 23 June 2006.

⁵ End September 2006. Source: Brazilian Treasury.

www.tesouro.fazenda.gov.br/english/hp/public_debt_report.asp, Table 7, accessed 7 January 2007.

⁶ 39 interviews were conducted in London (January 2005 – February 2006) and New York (all but one in May 2006). All are involved in the emerging bond market. In Brazil, 26 individuals were interviewed (São Paulo, Brasília and Rio de Janeiro, 29 August – 12 September 2006). 21 interviews took place in Lebanon (Beirut, 2 September - 12 September 2005, and one interview in London, 21 October 2005), and in Turkey, 25 interviews (Ankara and Istanbul, 30 November – 11 December 2005).

⁷ Official, Brazilian Ministry of Finance, interviewed 6 September 2006.

⁸ Foreign banker, Brazil, 29 August 2006; also foreign banker, Brazil, 4 September 2006; former official, Banco Central do Brazil, 29 August 2006; hedge fund manager, Brazil, 31 August 2006.

⁹ Foreign banker, Brazil, 29 August 2006.; also official, BM&F, 1 September 2006; foreign banker, Brazil, 29 August 2006.

¹⁰ Foreign banker, Brazil, 29 August 2006.

¹¹ Brazilian banker, 30 August 2006.

¹² Turkish banker, 5 December 2005.

¹³ Lebanese banker, 8 September 2005.

¹⁴ 9 September 2005.

¹⁵ Lebanese banker, 12 September 2005.

¹⁶ Turkish banker, 5 December 2005; Turkish banker, 7 December 2005, also gave the \$300 million figure; and ‘The local banks cannot sell off everything and go flat or go short’ (Turkish banker, 7 December 2005).

¹⁷ Lebanese banker, 2 September 2005; Lebanese banker, 9 September 2005; Lebanese banker, 12 September 2005.

¹⁸ Lebanese banker, 7 September 2005.

¹⁹ Lebanese banker, 3 September 2005. Also Lebanese banker, 2 September 2005); Lebanese banker, 12 September 2005..

²⁰ Lebanese banker, 7 September 2005.

²¹ Turkish banker, 6 December 2005.

²² Lebanese banker, 8 September 2005; also Lebanese banker, 3 September 2005.

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- ²³ Brazilian proprietary trader, 29 August 2006.
- ²⁴ Lebanese banker, 9 September 2005; ‘local retail clients... only look how much they receive at the end of the maturity. So they don’t trade much’ (Foreign banker, Turkey, interviewed 7 December 2005).
- ²⁵ ‘[R]etail...keep rolling their investments all the time’ (Investment banker, London, 22 June 2005; previously worked at a Turkish bank).
- ²⁶ Investment banker, London, 5 January 2005.
- ²⁷ ‘[T]his position that I’ve kept is three weeks old...that’s a long time...Nobody buys and keeps things for six months, a year...things change’ (Hedge fund manager, London, 23 June 2005).
- ²⁸ Banker, 50 percent foreign-owned Turkish bank, 8 December 2005; also investment banker, London, 23 June 2005.
- ²⁹ ‘[T]hey look at the relative spreads of the asset [to] liabilities, even though...the cost of liabilities can increase, they tend to...sit on positive spread trades’ (Investment banker, London, 22 June 2005).
- ³⁰ Banco Central do Brasil (2006 p.34), Banking Regulation and Supervision Agency (2006).
- ³¹ Investment banker, London, 18 February 2005); hedge fund manager, London, 23 June 2005); ‘they’ll go short and...long and...play other things’ (Investment banker, London, 17 February 2005).
- ³² Lebanese banker, 12 September 2005).
- ³³ Turkish banker, 8 December 2005.
- ³⁴ Brazilian banker, 29 August 2006.
- ³⁵ Turkish banker, 5 December 2005.
- ³⁶ Ibid.
- ³⁷ Investment banker, London, 22 June 2005; previously worked for a Turkish bank.
- ³⁸ Turkish banker, 5 December 2005.
- ³⁹ Source: Banco Central do Brasil (2006 p.34), Banking Regulation and Supervision Agency (2006).
- ⁴⁰ Source: Banque du Liban. www.bdl.gov.lb/edata/elements.asp?Table=t5231-10. Accessed 14 October 2009.
- ⁴¹ Lebanese banker, 8 September 2005. Also (same interviewee): ‘[Y]ou bought dollars as banks, but you have to place them...with the Central Bank.... so you cannot take them out...it’s not they enforce them, but they....encourage...really strongly by persuasion and everything, otherwise they would have collapse[d]... and it worked’.

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- ⁴² Gross international reserves minus principal and interest due within 12 months on central bank foreign currency liabilities except to the Lebanese government.
- ⁴³ Also Lebanese banker, 9 September 2005.
- ⁴⁴ Banque du Liban official, 8 September 2005.
- ⁴⁵ Lebanese banker, 9 September 2005. Also Lebanese banker, 8 September 2005; Banque du Liban official, 8 September 2005.
- ⁴⁶ Lebanese banker, 9 September 2005.
- ⁴⁷ Former Minister, Lebanon, 6 September 2005.
- ⁴⁸ On 24 March 2005 (www.moodys.com).
- ⁴⁹ Turkish banker, 8 December 2005; also Turkish banker, 5 December 2005.
- ⁵⁰ '[T]hat's the kind of unity we had, locals against foreigners. Because foreigners were talking about the devaluation, collapse and everything' (Foreign banker, Turkey, 5 December 2005. In 2001 the interviewee worked for a Turkish bank). Also Banker, foreign-owned Turkish bank, 8 December 2005. The bank was not foreign owned in 2001, and was one of the six banks; Turkish banker, 7 December 2005; Turkish banker, 8 December 2005.
- ⁵¹ Turkish banker, 8 December 2005.
- ⁵² Turkish banker, 7 December 2005.
- ⁵³ An anonymous reviewer suggests another large bank profited substantially at this time, in a way similar to the Brazilian banks.
- ⁵⁴ Banker, 50 percent foreign-owned bank, Turkey, 8 December 2005. The bank was not part foreign-owned in 2001.
- ⁵⁵ Turkish Banker, 7 December 2005.
- ⁵⁶ Ibid.
- ⁵⁷ Brazilian banker, 29 August 2006.
- ⁵⁸ Former official, Banco Central do Brasil, 11 September 2006.
- ⁵⁹ Hedge fund manager, Brazil, 12 September 2006; former official, Banco Central do Brasil, 11 September 2006.
- ⁶⁰ Former official, Banco Central do Brasil, 11 September 2006.
- ⁶¹ Turkish banker, 6 December 2005.
- ⁶² Research Analyst, London, 23 June 2005.

⁶² Fund management researcher, London, 14 February 2006.

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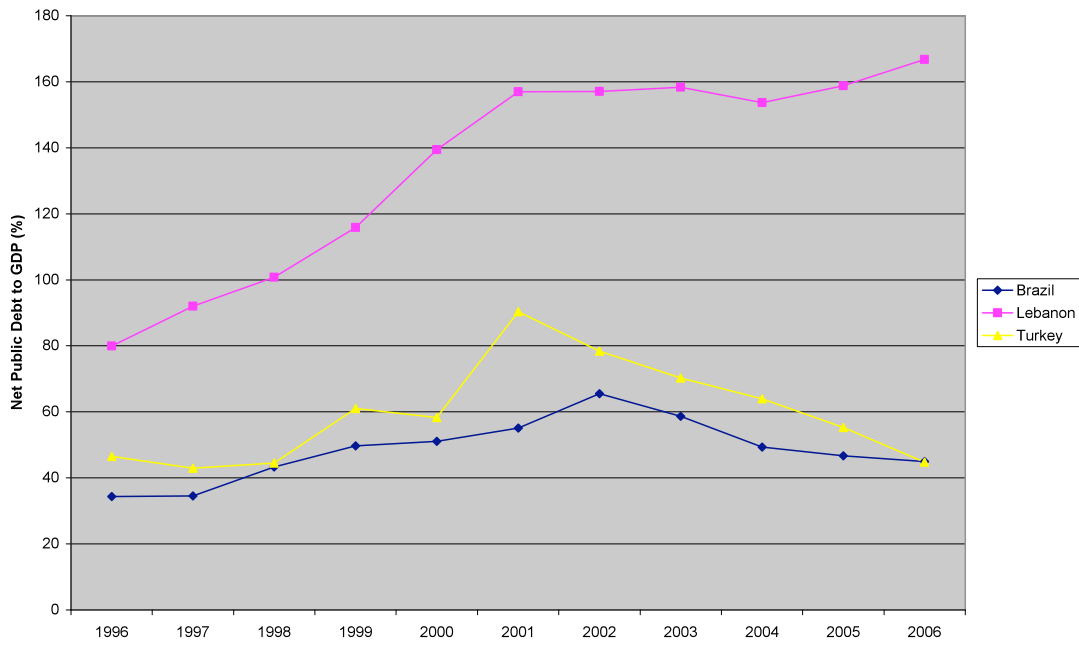
Table 1. General Comparison between the Countries (end 2006 unless stated).

	Brazil	Lebanon	Turkey
GDP (US\$ Billion)	1,067	23	402
Population (Million)	189,323	4,055	72,975
GNI per capita 2007, PPP (US\$)	9,510	10,910	12,970
Rating (S&P)	BB+	B-	BB-
Government domestic debt to GDP (%)	58.5	85.7	50.2

Government international debt to GDP (%)	8.8	88.9	17.8
EMBI Weighting 2004 (%)	19.01	1.12	6.22
Size of domestic bond market (US\$ billion eq.)	467	19	171
Average assets of 10 largest banks (US\$ Bn)	57.5 ⁶²	25.1 ⁶²	5.4 ⁶²
Bank Assets to GDP (%)	73.7	259	89.5

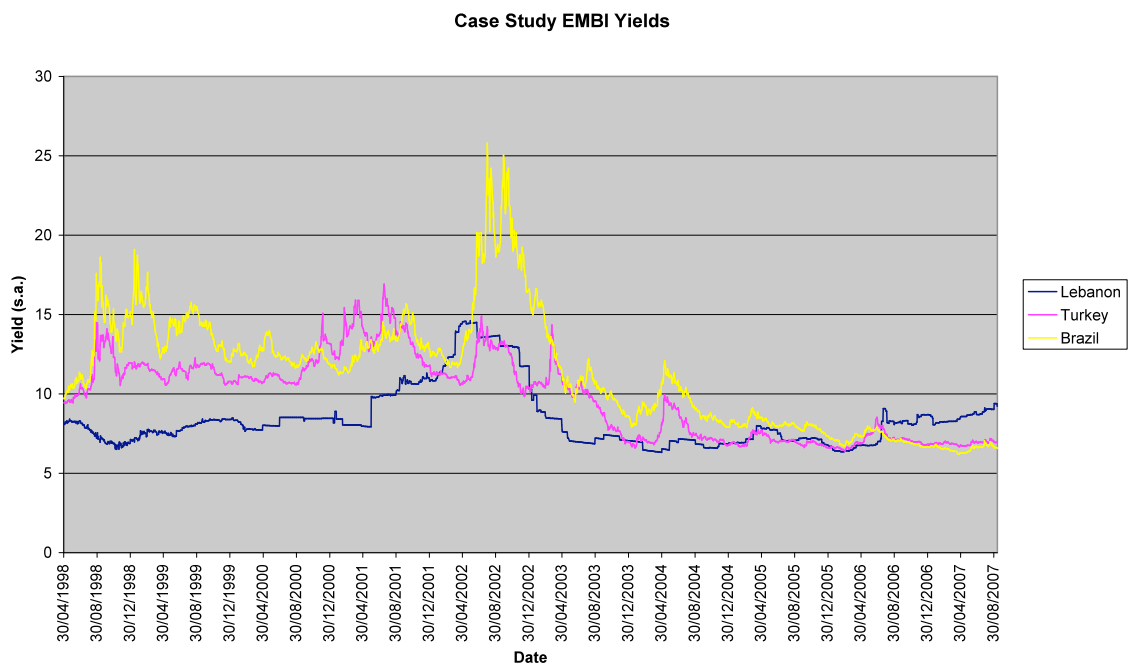
Sources: World Bank, S&P, JP Morgan, Central Banks and National Treasuries

Figure 1. Net Public Debt to GDP 1996-2006



Source: IMF reports

Figure 2. EMBI Country Components US\$ Yields 1998-2007



Source: Bloomberg

Table 2. Investor Involvement in Domestic Bond Markets

	Lebanon	Turkey	Brazil

Domestic Commercial Banks	<u>Very high involvement.</u> Own 79.4%.	<u>High involvement.</u> Own 37.3%. ⁶²	<u>High involvement.</u> Own 43.2%.
Domestic Individuals	<u>Involved.</u> Probably own 20%. ⁶²	<u>Involved.</u> Own approximately 25%. ⁶²	<u>Not involved.</u> Own 0.16%.
Domestic Mutual Funds	<u>Not involved.</u>	<u>Low involvement.</u> Mutual and pension funds own 5.7%. ⁶²	<u>High involvement.</u> Including pension and hedge funds, own 50.0%.
Domestic Pension Funds	<u>Not involved.</u>	<u>Low involvement.</u>	<u>High involvement.</u>
Domestic Hedge Funds	<u>Not involved.</u>	<u>Not involved.</u>	<u>High involvement.</u>
International Investors	<u>Not involved.</u>	<u>Involved.</u> Own 18.4%.	<u>Low involvement.</u> Own about 2%. ⁶²

Table 3. Investor Involvement in International Bond Markets

	Lebanon	Turkey	Brazil
Domestic Commercial Banks	<u>Very high involvement.</u> Own 77.2%.	<u>High involvement.</u> Own 34.4%.	<u>Involved.</u> Uncertain, but probably own less than 20%.
Domestic Individuals	<u>Involved.</u> Probably own 10--20%. ⁶²	<u>Involved.</u> Own 6.8%. ⁶²	<u>Not involved.</u>
Domestic Mutual Funds	<u>Not involved.</u>	<u>Low involvement.</u> All domestic institutional investors own 2.6%.	<u>Low involvement.</u> Some foreign currency denominated mutual funds.
Domestic Pension Funds	<u>Not involved.</u>	<u>Low involvement.</u>	<u>Not involved.</u>
Domestic Hedge Funds	<u>Not involved.</u>	<u>Not involved.</u>	<u>Low involvement.</u>
International Investors	Not involved.	High involvement. Own over 50%.	High involvement. Probably own 60--75%.
