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## THE NATIONAL DEBT CRISIS AND THE LEBANESE CASE

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### Abstract

The majority of the world countries have national debt but to varying degrees, with some of them overwhelmed by their national debt, thus leading to a crisis and damage in their financial systems. The paper will try to clarify the definition of and standards by which to assess a national debt crisis, that is to distinguish between a normal case of national debt and a crisis situation. The paper is based on theories and research studies that clearly define a national debt crisis and will try to apply, relate and compare the theories and studies to the Lebanese case to evaluate the level of danger posed by the national debt in Lebanon.

**Keywords:** National debt, Crisis, Credit rating, Restructuring, Debt to GDP, Balance of Payment.

**JEL classification:** E0, E1, E2, E3, E4, E5, E6, E7

### Introduction

Sovereign debt or public debt refers to the overall debt that a government owes externally or internally and is a very important element of a country's financial system (Moffat, 2017). Many countries hold national debt, at different levels with some saddled with overwhelming heavy debt. Other countries are, however, diligently managing their debt, at least, in the short term (Will Martin, 2017). For instance, Japan is the first country to have reached debt levels

equal to 234.7% of its GDP. A major reason for the high debt level in Japan is the government's increased spending, while productivity remains low.

This is followed by Greece with 181.6% debt to GDP ratio. This is also significantly influenced by increasing government spending after it had entered the European Union. The government at the time aimed to utilize its debts to increase economic growth in Greece through the tourism sector. At the height of the crisis, the country was unable to repay its debt until its default in 2012. The country is currently under bail-out provided by international monetary funds.

Lebanon currently has a debt to GDP ratio of 132.5% and has emerged recently as the prime candidate to face a debt crisis due to low solvency metrics. Standard debt-sustainability model rules of thumb and other countries' experience suggest that these are early signs of a debt crisis.

## **1. National Debt Crisis**

The problem is not national debt itself, but rather its origin and the government's capacity to repay and service it. The National debt crisis is one of the major economic problems that many countries throughout the world face.

### **1.1 National debt crisis definition**

National debt crisis in its broader definition refers to a situation where countries are unable to repay their debt (Dornbusch, 1989; Amadeo, 2017). However the definition in its broad meaning has opened many debates along with the word "inability". Lenient debates refer the national debt crises to the actual or near defaults on debts; other strict debates refer the national debt crises to any economic and financial signs that foreshadow a debt crisis.

### **1.2 Major determinants of a national debt crisis**

Due to debt servicing difficulties, the largest Latin American and African countries faced in the 1980s, an avenue opened for many debates and researches on the determinants of debt crises. The major definitions point out that this entails default and inability to repay debt obligations (Sachs, 1984).

#### **1.2.1 Yield spread & Credit rating**

Also, a debt crisis can be detected by studying the spread between interest rate or the bond yields charged for a specific country and comparing it to a bench mark interest rate or bond yield; the higher the spread, the more likely the possibility of a debt crisis (Edwards, 1984; Duffie and Singleton, 2003).

In addition, national debt crisis can also be detected from an estimated transition matrix of the default that measures the probability of moving from one credit state to another. This also shows the probability of transitioning from a non-defaulted category into a default category (Hu, Kiesel, and Perraudin 2001). As a result, a higher transitioning probability means debt crisis is likely to occur. Based on standard and Poors and Moody's ranking, Lebanese credit rating is deteriorating and this is also a sign of a national debt crisis.

#### **1.2.2 Macroeconomic indicators**

Sovereign debt crisis does not come out of nowhere. It is usually related directly or indirectly to other financial and economic difficulties, such as government budget deficits, current account deficits, large reversals of capital flows, and other indirect indicators such as debt to GDP ratio, debt to exports ratio and debt service ratio. Ajayi (1997) states that national debt crisis can be detected by five primary indicators:

- debt to exports ratio,
- debt to GNP ratio,
- debt service to exports ratio,
- interest to exports ratio,
- interest to GNP ratio.

Among the five indicators, the author notes that debt service to exports ratio as well as debt service to GNP (GDP) ratio are useful indices of solvency. Also, a currency crisis is a major factor (Frankel and Rose, 1996; Milesi-Ferretti and Razin, 1998; Berg and Pattillo, 1999; and Bussière and Mulder, 1999). Moreover major research studied the relation between currency crises and national debt crises, e.g. Reinhart (2002) and Sy (2004). Thus, each country's debt crisis is based on specific factors that may differ from other factors affecting other countries.

### 1.2.3 National debt restructuring

Major sources also defined a sovereign debt crisis as sovereign defaults. Moody's Investors Service (2003) and Standard & Poor's (S&P) (Chambers and Alexeeva, 2003) explained the major signs that a sovereign debt is turning into a crisis when one or more of the following conditions are met:

- A delay in payments on debt (interest and/or principal), since the service payments on a debt should be made at a specified time;
- additional treasury bonds issued as a means to offset or exchange any accrued debt obligation; this refers to rescheduling national debt service, and this strategy increases the debt in a snow ball effect and only exacerbates the problem.

The rescheduling of national debt service can take different forms such as debt-debt swaps, offsetting current obligation of national debt by new long-term debt- debt deferred to a longer maturity; or debt-equity swaps, offsetting debt by government privatization programs. Moody's and S&P consider both of these transactions as defaults because they are made on terms more costly than the original obligation.

Moreover, Detragiache and Spilimbergo (2001) identify the sovereign debt crisis also based on the same standards but in a more specific way, stating that a debt crisis can be detected when a debtor defaults on more than 5 percent of the total debt outstanding, or even reschedules or restructures its debt agreement with creditors. Thus rescheduling debt is a direct indicator of a national debt crisis. Nowadays many state policies are intended to restructure debt by additional borrowings deferred to the longest possible maturities. The more likely strategy followed is that "too much, too soon is not the dominant experience in sovereign debt default. Rather, too little, too late is far more common" (Borensztein and Panizza 2009; Levy Yeyati and Panizza 2011; IMF 2013). Also, this way of debt restructuring has a direct effect on increasing the cost of borrowing costs for government regardless of its debt position (Dooley 2000; Rogoff 2003).

### 1.2.4 Solvency indicator

In addition, Manasse, Roubini and Schimmelpfenning (2003), known as MRS, classified the national debt crisis into three different types, depending on the solvency situation.

- Outright default on domestic and external debt; this refers to total default on debt (Russia in 1998, Ecuador in 1999, Argentina in 2001, Zimbabwe in 2009, Greece in 2015)
- Semi-coercive restructuring; this refers to semi default on debt (Pakistan in 1999, Ukraine in 2000, Uruguay in 2003, Lebanon in 2014)
- Liquidity difficulties; this refers to partial default on debt, or at least facing difficulties in meeting liquidity to repay debt services (Mexico in 1995, Korea in 1998, Thailand in 1998, Brazil in 2002, Turkey in 2001, Uruguay in 2002, Lebanon 2012, Italy 2014, Spain 2015).

Moreover, MRS (2003) focused on studying the determinants of debt crisis and made the following findings:

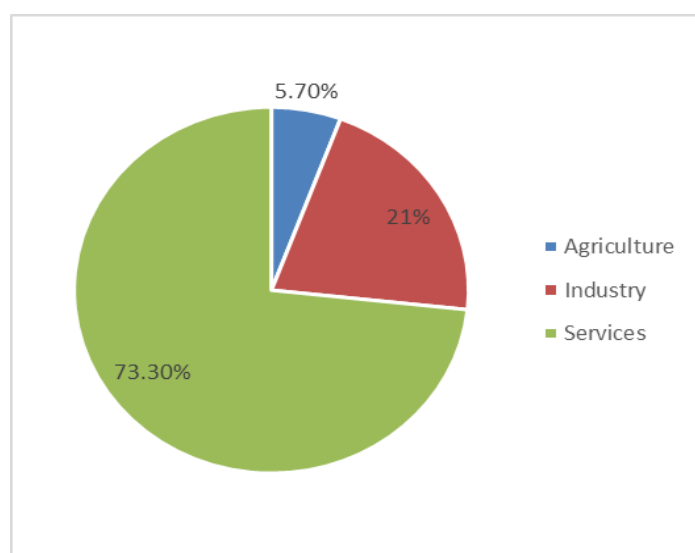
- Solvency indicator that studies the capacity to repay the debt principle and service. (Measured as Total debt over GDP)
- Liquidity indicators that study the availability of resources (reserves, revenues, exports, and tax collections) to maintain the solvency needed to repay the debt (measured as short term debt over reserves)
- Currency crisis, which may lead to a debt crisis if the debtor currency sharply depreciated against the creditor foreign currency dominated debt
- Changes in any economic policies (privatization, austerity)
- Macroeconomic changes (growth, inflation, interest rates)
- Political and institutional changes that may negatively affects the ability to repay the debt

## **2. Lebanese National debt**

### **2.1 Lebanese Economy Background**

Lebanon is an emerging economy with a private sector comprising up to 75% of aggregate demand and a large banking industry servicing this demand. With an open market regime and hard long-lasting laissez-faire commercial tradition, Lebanon imposes no limitations on foreign exchange or capital movements (Bertelsmann Stiftung, 2016, p. 2). The largest sphere of the Lebanese economy is services, with 73.3% of GDP contributed by this sector, then comes the contribution of the industrial sector by 21%, and lastly the agricultural sector with 5.7% (CIA, 2018).

Lebanese GDP structure is presented in the Figure 1.



**Fig 1.** Lebanese GDP Structure in 2017

Source: CIA (2018)

## 2.2 Lebanese national debt: background

According to the Ministry of Finance (MoF) and the Association of Banks (ABL), Lebanon's gross public debt climbed by an annual 6.19% to reach \$79.52B by the end of 2017. In fact, the recorded growth almost equated that of 2016.

In detail, local currency debt (denominated in LBP) reached a share of 61.8% of total gross debt and rose by an annual 5.03% to reach \$49.14B by Dec. 2017. Meanwhile, foreign currency debt composed the remaining 38.2% of the total and registered a yearly rise of 8.11% to \$30.38B over the same period.

As such, the composition of the debt stock by the end of the year continued to reflect a higher growth rate in foreign currency debt than in Lebanese pounds (LBP) debt, and this is partly due to the \$1.7B Eurobonds swap issuance in November 2017.

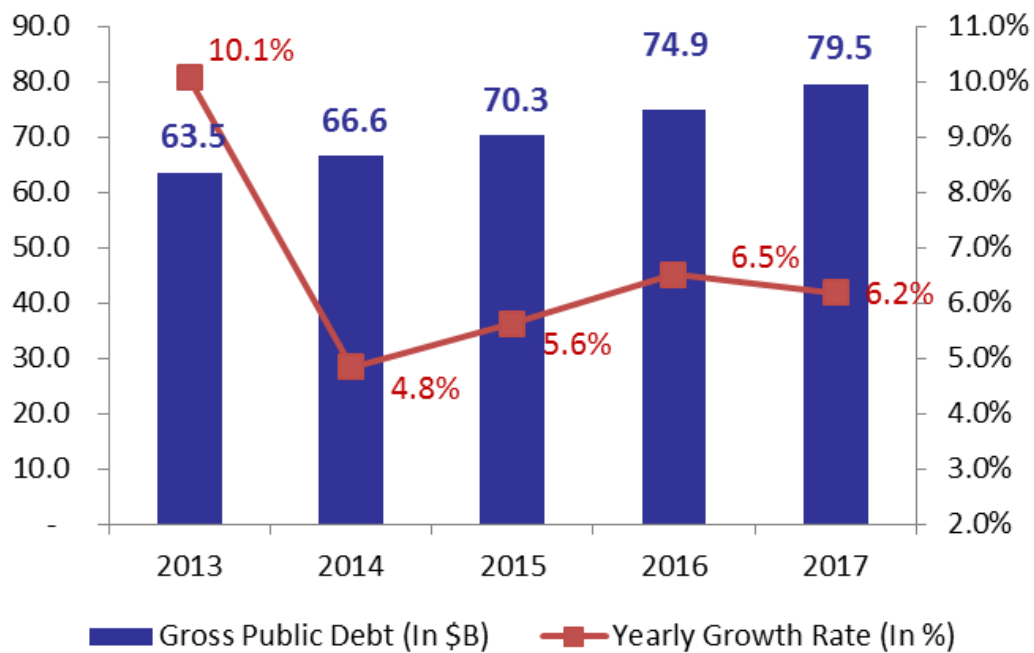
In terms of LBP debt holders, Lebanese commercial banks held 37.5% of total debt, while BDL had a stake of 48% of total debt in LBP in 2017. Meanwhile, the non-banking sector's share of gross total debt in LBP stood at 14.5% by December 2017.

As for foreign currency debt, its composition revealed that Eurobonds constituted 92.4% of the total debt in December, sliding marginally from 92.6% in December 2016. The remaining was covered by multilateral and bilateral loans.

In its turn, net public debt which excludes the public sector deposits at commercial banks and the Central Bank, rose by 5.96% year-on-year to settle at \$69.32B at the end of 2017.

It is worth mentioning that the IMF's latest mission in Feb 2018 confirmed the Lebanese authorities' "significant achievements", namely the passing of a budget in October 2017. Yet, "the overall economic situation remains fragile" with public debt estimated above 150% of GDP in 2017 and expected to rapidly rise. Therefore, the IMF reiterated the urgency of placing debt on a downward, sustainable path, especially in light of a "funding environment [that] has been affected by the political crisis of November 2017."

Lebanese Gross Public Debt & Debt Yearly Growth Rate is presented in the below Figure.



**Fig 2:** Lebanese GDP & Debt Yearly growth rates 2013-2017

Source: Ministry of Finance in Lebanon (MOF, 2017)

As explained in the first part, traditional definitions of a national debt crisis described it as a default on loans and an inability to repay debt obligations (Sachs, 1984). While the modern definitions expanded the scope to include any form of restructuring or rescheduling debt in the bond market, e.g. Moody's Investors Service (2003), Standard & Poor's (S&P) (Chambers and Alexeeva, 2003), Detragiache and Spilimbergo (2001), MRS (2003), IMF(2007). However, restructuring the national debt was one of the major strategies that was pursued by the Lebanese government in the last years as shown in the above explanation.

### 2.3 Lebanese yields on national debt

Moreover, many authors (Bulow and Rogoff 1989; Benjamin and Wright 2009; Kovrijnykh and Szentes 2007; Bi 2008; Bai and Zhang 2010; D'Erasmus 2010; Yue 2010; Pitchford and Wright 2012; Arellano and Bai 2014; Hatchondo and others 2014; and Asonuma and Trebesch 2016) described the national debt and restructuring as a game between the debtor country and creditor country in the sense that many defaulted governments finance their debt services by debt restructuring and additional borrowing on longer term or higher yield. Many studies explained the impact of past defaults on future borrowing costs (e.g., Ozler 1992 and 1993; Cantor and Packer 1996; Lidert and Morton 1989; Catao and others 2009; Cruces and Trebesch 2013; and Benczur and Ilut 2016). All of them explained that countries that experienced defaults in the past are more likely to pay higher premium on additional borrowing and this increases cost on debt and the load of debt service that should be repaid each year. And this was the case of Lebanon when restructuring debt at a longer-term higher yield.

Lebanese Government DX & FX T-Bills and T-Bonds Yield Curve

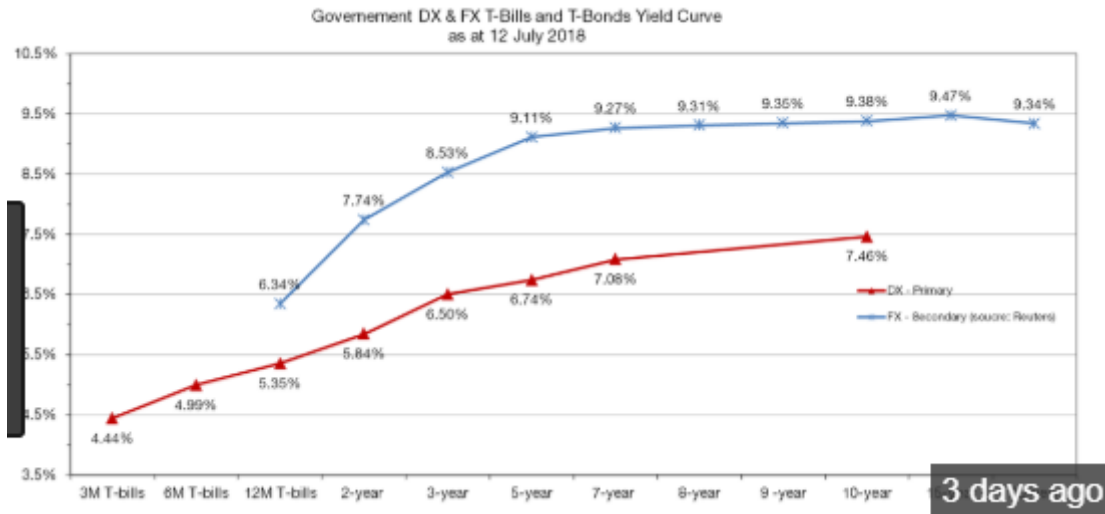


Fig 3: Lebanese Government DX & FX T-Bills and T-Bonds Yield Curve- July 2018

Source: Ministry of Finance in Lebanon (MOF, 2018)

2.4 Lebanese National Debt to GDP

The rates of national debt growth outpaced more vividly the rates of GDP growth in Lebanon, reflecting the dynamics of the debt-to-GDP ratio growth. However the increase in national debt is much greater than the recovery in GDP and GNP and this is a sign of a debt crisis in Lebanon.

Lebanese Government Debt to GDP



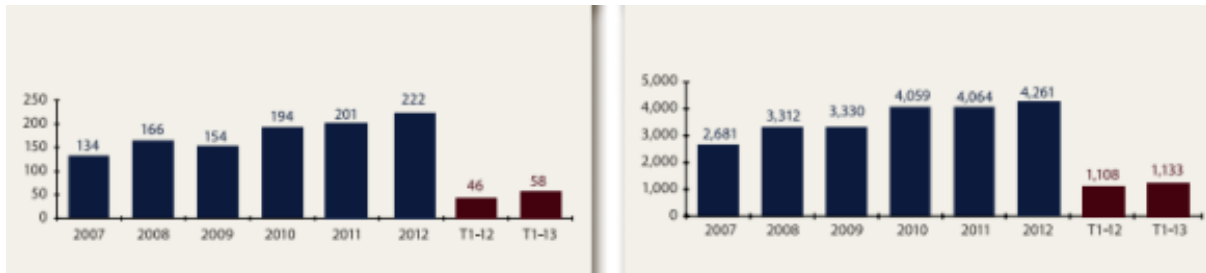
Fig 4: Lebanon Government Debt to GDP

Source: Ministry of Finance of the Republic of Lebanon (2017)

The ratio was at the level of over 1.6 in 2008 and then significantly decreased to 1.3 due to a rapid GDP growth in 2008-2011 until the Syrian crisis when national debt to GDP started to

increase at an accelerated pace due to the decrease in GDP as a result of a sharp decrease in exports because of Syrian crisis starting from 2011 when the economy slowed down significantly.

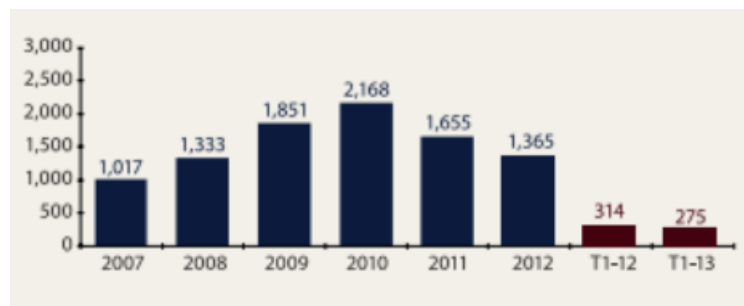
Lebanese agricultural and industrial exports 2007-2013



**Fig 5:** The evolution of agricultural exports (left) and industrial (right) in Lebanon 2007-2013  
Source: Quarterly report Banque Audi, first quarter 2013

Moreover, the Syrian conflict also affects the tourism sector in Lebanon, where Lebanon has lost a very large number of visitors from the start of the Syrian crisis.

Tourists in Lebanon 2007-2013



**Fig 6:** The evolution of the number of tourists 2007-2013

Source: Ministry of Tourism in Lebanon, 1st quarter 2013

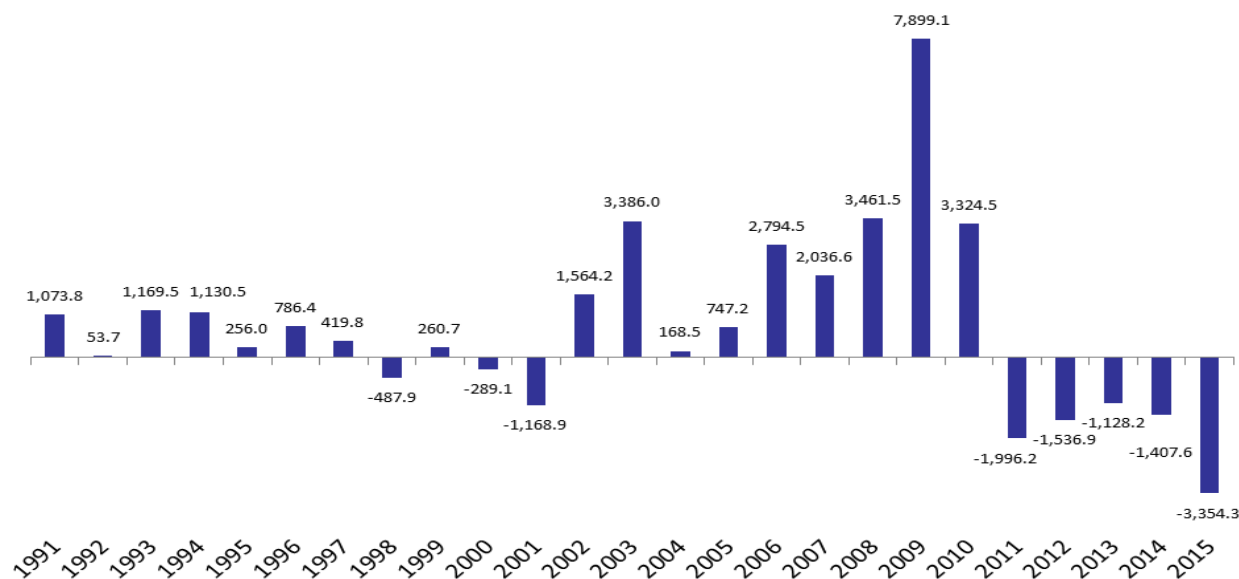
## 2.5 Lebanese balance of payment

Deterioration in exports in both agricultural and industrial products in addition to the great loss in the tourism sector have led to a deficit in the balance of payment.

The economy can be viewed as a complex chain, all macroeconomic factors are strongly related and the relationship between the types of crisis becomes closer in these days than in the past. A debt crisis is not found alone in any economy, as it has a strong relation with other economic crises, such as crisis in the balance of payment, financial crisis, currency crisis, banking crisis, growth rate crisis, etc.

Lebanese balance of payment





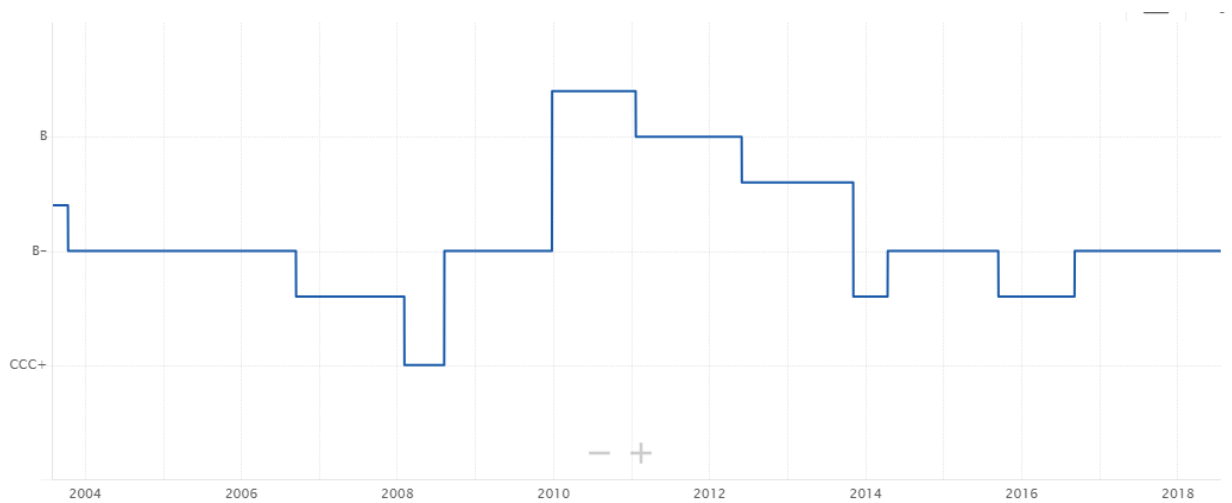
**Fig 7:** Balance of payment in Lebanon 1991-2015

Source: Central Bank of Lebanon - 2015

Stoker (1995 in Kaminsky and Reinhart (1998)) states that a deterioration in the balance of payment, such as current account deficits (Imports > Exports), and especially a decrease in reserve (Gold plus foreign reserve), will lead to a credit crunch and increase the probability of bankruptcy, financial crises and currency depreciation. Thus, the balance of payment crisis will lead to:

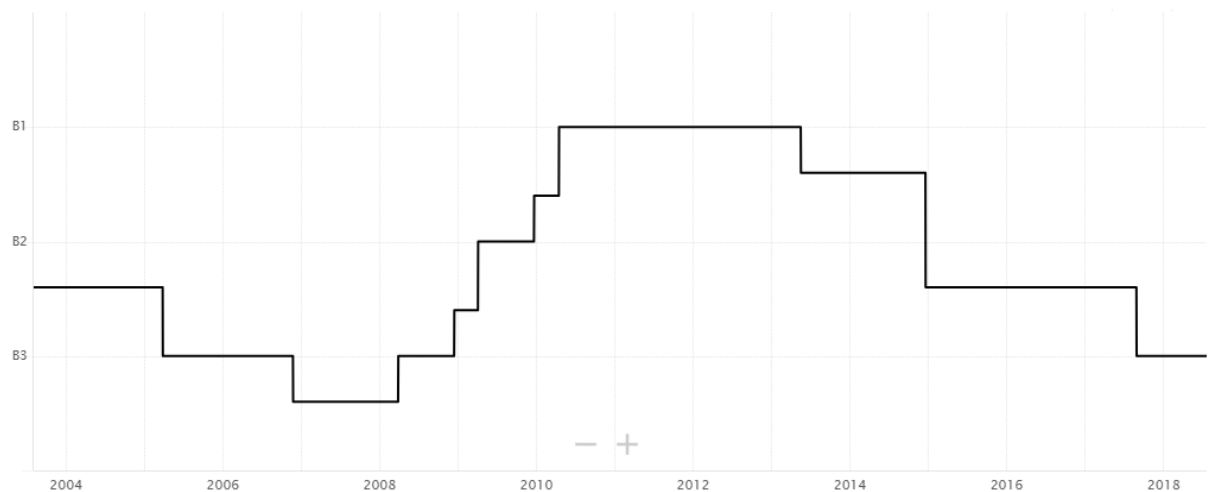
- The current account deficit reflects lower demand for currency and thus affects the value of that currency; a decrease in the value of currency affects balance sheets (Glick and Hutchison, 1999); moreover, the balance of payment comes close to crisis levels when a sharp decrease in the foreign reserve resulting from excess outflows over inflows starts to affect the expectations for future currency value (Krugman and Obstfeld, 1997).
- currency crisis (depreciation) will affect the repayment of national foreign debt denominated in foreign currency, increasing the probability of default on national foreign debt and automatically increasing also the probability of national debt crisis (Gupta, Mishra and Sahay, 2001).
- an alternative for a country facing current account deficit is to increase taxes; this will have a directly negative effect on deteriorating the domestic investments and productions, leading to a growth rate crisis and further complications in balance of payment crisis. This will be offset by capital and financial inflows such as borrowings, issuing treasury bonds, increasing thereby the national debt (Moffett et al, 2014).

### Lebanese treasury credit rating



**Fig 8:** Lebanese treasury credit rating from 2004 – 2018 based on standard & Poors

Source: Standard & Poors (2018)



**Fig 9:** Lebanese treasury credit rating from 2004 – 2018 based on Moody's.

Source: Moody's (2018)

Major signs for debt crisis may depend on credit ratings of countries from Moody's, Standard & Poor's and other international agencies that study the credit rating of countries. The lower the rating the higher the probability for a debt crisis (Kaminsky and Schumkler, 2001).

In addition, a national debt crisis can also be detected based on an estimated transition matrix of the default which measures the probability of moving from one credit state to another. It also shows the probability of transitioning from a non-defaulted category into a default category (Hu, Kiesel, and Perraudin 2001). As a result, higher transitioning probability means debt crisis is likely to occur. Based on standard & Poors and Moody's, Lebanese credit rating

is deteriorating and this is also a sign of a national debt crisis. According to the IMF, if Lebanon still face difficulty in repaying the service of its debt then Lebanon may face further credit rating deterioration.

## Conclusion

National debt is a major problem that countries face. This problem can be heavy on a country's economy and may grow to crisis proportions under some conditions, especially when countries have defaulted on their debt obligations.

The crisis can be determined in several ways, such as the increase in the yield spread of the treasuries of the debtor country and other benchmark country. This phenomenon is usually parallel to a deterioration in the credit rating of the country. Moreover there are macroeconomic indicators, such as the increase in debt to exports ratio, debt to GNP ratio, debt service to exports ratio, interest to exports ratio, interest to GNP ratio. In addition, a major indicator debt crisis is the solvency of the country which reflects the ability to repay the debt obligation.

Lebanon may be one of the hardest hit countries facing a debt crisis. Lebanon currently holds third place in the world in terms of debt to GDP ratio. Its yields and treasury is increasing at every issuance and its credit rating is deteriorating. Once it moved from B to B-, the IMF declared that Lebanon may face further credit deterioration if the country finds no solution for repaying its debt service.

Furthermore, the country suffered enough from the Syrian crisis. Since Syria borders on Lebanon from the north and west, this negatively affected the Lebanese exports since Lebanon has become unable to export to Syria, In addition, the tourism sector is affected to a large extent by regional conflicts. Moreover, due to more than one million Syrian refugees in Lebanon, the Lebanese government's expenses have increased more than before.

All these conditions have deteriorated the Lebanese balance of payment and made the national debt burden even heavier. Thus, Lebanon must take corrective action regarding the state of its national debt before a crisis explodes.

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