

**The Effects of the Lebanese Budget Deficit Financing on
Credit Availability and Economic Growth**

1989-1998

by
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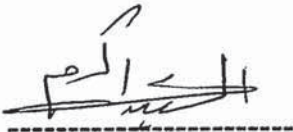
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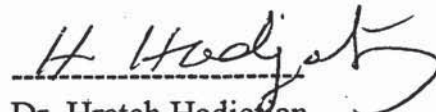
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CHAPTER ONE

INTRODUCTION

I. General Background

When the Hariri government took office in 1992, it followed a monetary and fiscal policy that aimed at stabilizing the dollar exchange rate and at rehabilitating the infrastructure of the economy in order to sustain economic growth. However, the economic cost was a dramatically growing budget deficit. In fact, Lebanon's budget deficit has grown rapidly since 1992; and the government had repeatedly indicated that budget deficit represents one of the main challenges to the success of its program for reconstruction and development of the Lebanese economy. This goal was a vital goal because budget deficit kept dramatically increasing since 1992. Even projections concerning the deficit failed to reflect the real figures. Effectively, real deficits since 1993 were exceeding projections. Actual public expenditures more than doubled between 1992 and 1994 fiscal years and then nearly doubled again between 1994 and 1997. On the contrary, revenues grew at a slower rate resulting thereby in a substantial widening of the budget deficit. If we look back at the period 1994-1997, we find out that expenditures rose from LL 5,204 billion to LL 9,162 billion, while revenues grew from LL 2,241 billion to LL 4,353 billion. The deficit accordingly rose in 1997 by 62% and constituted 52.5% of expenditures. Projections failed to reflect the truth. For example, in 1995, actual deficit exceeded projections by 14% and in 1996 by 52%, while in 1997 the deficit exceeded projections by 135%.

Moreover, the size of the budget deficit in relation to the Lebanese GDP rose to 23.5% in 1998 from an average of 18% in the previous three years.

Table 1-1 Comparative Government Budget Indicators

Country	Overall deficit or surplus as a percentage of GNP
Philippines	-1.4
Thailand	+1.9
Lebanon	-18.1
Colombia	-0.6
Singapore	+15.7
Venezuela	-4.3
Peru	+3.1
Indonesia	+0.6
Brazil	-4.0

* Source : Capel, James. *HSBC report:Country report*. Nov 3, 1997, p.28.

Faced with such a situation and in order to finance the growing deficit, government basically resorted to borrowing on the domestic market through the issuance of Treasury-Bills . Between 1992 and 1997, commercial banks constituted the main T-Bills purchasers. To illustrate, between 1993 and 1997, total bills in circulation grew from LL 6,024 billion to LL 19,379 billion. In 1993, the banks portion of the total number of subscriptions amounted to LL 4,437 billion, and in 1997 this share grew to LL 13,193 billion which means that T-Bills in circulation more than doubled during four years. This growth was not a mere nominal growth, it was an effective growth as well, because during that period the dollar exchange rate was almost stabilized ,which means that even in dollar denominated terms total bills in circulation were growing.

Not only was the share of banks' contribution to total subscriptions growing, but the share of government lending in terms of total commercial banks lending was growing as well. For instance, in 1998, TB share of total commercial banks lending was close to 30%. We can better assess this share when we examine the composition of bank loans in other economies. The comparison below shows the composition of banks loans in some of these economies. The significant feature in the composition of the lending portfolio is the low portion of public lending compared to a higher share for mortgages and enterprises lending. Undoubtedly, this comparison revealed the necessity for Lebanese banks to switch to investment lending as the tendency is, as shown below.

Table 1-2 Composition of Banks loans

Countries	Home		Consumer		Enterprises		Government	
	mortgages		credit					
Years	1983	1993	1983	1993	1983	1993	1983	1993
Hong	6.4	9.4	5.4	3.6	88.2	87.2		
Indonesia		4.1	1.0	6.9		70.7		2.2
Korea		12.7		11.7		74.5		1.1
Malaysia	11.3	13.9	1	11.2	20	30		0.5
USA	20.8	29.8	13.4	12.6	28.6	20.7	11.3	10.1
Japan	7.5	8.7	0.4	3.8	73.7	70.4	13.5	9
Germany	16.9	15.6	8.2	8.5	45.3	44.9	19.4	13.9
UK	48.8	56	8.7	8.3	25.3	21	10.8	2.8

- Source: *The transmission of Monetary Policy in Emerging Market Economies*.

Banks for International Settlement, Switzerland, 1998, p.40

Effectively, The policy of the government caused an aggressive intervention by the Central Bank through TB subscriptions (Audi, pp. 8). That intervention was reflected in the Banks' balance sheets which revealed that the ratio of banks investment in treasury bills over total deposits exceeded 75% in 1997 (Banque du Liban Report 97, p.7). This means that over half of the nation's saving was channeled for public expenditures to finance the chronic budget deficit.

It also means that resources have been directed from private sector uses to public uses. Does it indicate that Lebanon has been witnessing a crowding-out effect since 1992?

Another serious effect of TB subscriptions on the economy is that selling securities to the commercial banks is one of the most expansionary agents of the nation's money supply. To illustrate, in 1995 the nation's money supply represented 122% of nominal GDP. This ratio is estimated to be among the highest ratios if we compare it to other Arab countries (El-Bssat, p. 38). Consequently can we notice that TB subscriptions were causing money supply in Lebanon to grow at a faster rate than real GNP? Does this mean that public expenditures, partially financed by treasury bills issuance, were not efficiently contributing to GNP growth?

The aforementioned two questions of whether in the post-war period Lebanon is witnessing a crowding-out effect and whether TB subscriptions were causing money supply to swell at a faster rate than GNP are a main focus of this study.

Before we proceed further, let us have a brief review of the budget deficit in Lebanon previous to 1992.

II. Budget Deficit Evolution:

A look at the Lebanese government's debt shows that chronic budget deficit started to be visible in 1962. The first budget deficit appeared in 1962, the turning point year, and since that time the need to finance budget deficit became a principal objective of the government (Ayache, p.29). To illustrate, the table 1-3 shows the revenues and expenses of the government between 1950 and 1974. And

the results reveal that budget deficit started to be relevant since 1962 as the government experienced surpluses prior to that date .

However, the sale of Treasury bills to the banks began to appear in 1978. Before 1978 , the government used to finance the deficit by borrowing from the Central Bank. To this end decree law number 123 of June 30, 1977 stipulated the granting of “Emergency Loans” by the Central bank to the Treasury. Borrowing from the Central Bank means money creation. That is why “Emergency Loans” had a negative side because they exerted high inflationary pressures on the economy. This is one of the reasons why the government switched to borrowing from banking sector since 1978 (Saidi, p.59).

Table 1-3 Budget Deficit Percentage of Total Government Expenditures (1951-1974)

Year	Surpluses or deficits/Total spending
1951	15.3
1952	36.4
1953	44.9
1954	46.3
1955	46.5
1956	30.6
1957	17.5
1958	43.8
1959	51.9
1960	83.5
1961	44.2
1962	-55.1
1963	-17.1
1964	-27.6
1965	-41.3
1966	-23.32
1967	-70.8
1968	-29.9
1969	-29.7
1970	-25.6
1971	41.6
1972	25.1
1973	-204.9
1974	51

* Source: Ayache, Ghassan. *The Monetary crisis in Lebanon 1982-1992*. Beirut: Dar al -Nahar, 1997, p. 223.

Starting in 1978, the Central Bank began TB subscriptions on a large scale. On the whole, the period was characterized by a huge budget deficit, which grew as a consequence of massive non-productive financial needs such as large fuel and food subsidies, along the financing of some reconstruction projects (Saidi, p59). Further, in 1978, the banking system was characterized by excess liquidity which the state's authorities tried to use to finance the growing budget deficit (Saidi, p.129).

With the beginning of 1980s, the budget deficit grew dramatically. That is why the Central Bank tried to encourage banks during that period to subscribe in

TB; and the goal of the Central bank was to diminish the “emergency Loans” which were exerting the strongest inflationary pressures on the economy.

However, due to the devaluation of Lira in 1984, banks were reluctant to hold Lira denominated securities; consequently the Central bank started in 1984 a firm monetary policy. For example, in 1986, The Central bank started to require from the banking system obligatory subscriptions in Treasury-Bills (Ayache, p. 118).

For this end, in 1987 the Central Bank issued decree number 700 .The decree forced the banks to subscribe 60% of their new deposits in TB (Ayache, p.120).

III. Literature Review:

Analyzing the repercussions of budget deficit financing on economic activity has been the subject of study of many authors, namely Ghassan Ayache in The Monetary Crisis in Lebanon 1982-1992 (1992) and Raymond Mallat in Crash 86.

To illustrate, Ayache analyzes the effect of T-Bills subscriptions on the economy’s growth between 1982 and 1992. He elaborately discusses the consequences of such measure on private investment and he attempts to justify BDL intervention. The study reveals that during that period, the government resorted to banks borrowing ,being one of the alternatives the government had in hand in order to finance its deficit. Such measure was associated with high interest rates imposed on Lira T-Bills. High interest rates on Lira caused the shift of huge resources from the private sector use to the benefit of the Public sector. Moreover, high interest rates caused borrowers to switch toward USD borrowing in an attempt to escape high interest rates imposed on Lira lending. Furthermore, Treasury borrowing from commercial banks leads to an inflationary increase in money supply. In order to alleviate that inflationary money supply growth, the

Banque du Liban's objective was to limit credit extension to the private sector in Lira.

That is why BDL required banks to hold portion of their Lira deposits as T-Bills. However, the purpose of such measure was not only to alleviate inflation but also to prevent speculation. Effectively, in that period, speculation weighed heavily due to the restless fluctuations in the foreign exchange market. Further speculation caused dollarisation to increase. In fact, dollarisation is an obvious feature in Lebanon because local currency tends to suffer continual fluctuations that increase its risk and lead consumers to turn partly to more stable foreign currencies (Channel of transmission, p. 36). That increase in the dollarisation rate caused, in turn, the official reserves of the BDL to decrease dramatically.

A parallel previous analysis has been undertaken by Raymond Mallat in his published study: Crash 86 (1986). In this study, the researcher pointed out to the effect of BDL intervention in the market namely through T-Bills subscriptions between 1978 and 1986. He also exposed the evolution of some relevant economic indicators such as GNP growth, money supply growth, and inflation between 1950-1985.

In his study, Mallat noted that money stock which is present in private hands is more than sufficient to finance any type of projects; however, Lebanese commercial banks engaged in short-term T-Bills subscriptions rather than engaging in long-term domestic development projects.

He also pointed out that although the sale of Treasury bills to the banks started in 1978, and the available credit market in the pre-war period used to finance the productive sectors of the economy, yet the Lebanese economy has some peculiarities. One of these peculiarities is that its money supply grew at a significant faster rate than its real GNP.

That is why the author recommended in his study long-term domestic projects that aim at increasing real GNP.

Consequently, the TB subscriptions exerted huge impact on the general economic situation especially through the limitation of credit availability to the private sector. And that phenomenon needs close examination because in 1997 budget deficit reached 18% of the nominal GNP in Lebanon which is considered a relatively high ratio compared to other countries (Capel, p.28). This leads us to the purpose of the study.

IV. The Purpose of the Study

The aim of this study is to analyze the effect of TB subscriptions in the post-war period on the overall economic conditions, namely between 1989 and 1998. For this aim, we shall try to study the fluctuations of T-Bills market between these two dates and find out how such operations were affecting interest rates on local lending as well as borrowing in Lira and foreign currency (mainly USD).

For this reason, we shall try to establish a trend on how interest rates were fluctuating and how accordingly borrowing in Lira and USD were moving. However, since borrowing in USD is closely related and determined by the rate of dollarisation in the economy, we shall try to find out how the rate of dollarisation was fluctuating between these dates and how consequently this was affecting credit availability in USD. Findings obviously shall help us conclude whether TB subscriptions between 1992 and 1998 have been exerting pressure on overall credit availability and whether it led to any crowding –out effect in that period.

V. Research Questions

To this end the paper shall try to answer three main questions that are vital to the analysis:

- 1- The effect of banks subscription on TB between 1992 and 1998 on credit availability to the private sector; and on the structure of credit portfolio of the banks in the same period.
- 2-The effect of TB rates changes on Lira lending rates between 1992 and 1998 and on the borrowing volume in both currencies: Lira and USD.
- 3-The effect of money supply change on total output growth in the post-war period (1992-1998) in comparison with the pre-war period when banks obligatory TB subscription had not yet started on a large scale.

V. Research Methodology

To attain this end we shall try to establish a series of ratios that are beneficial and vital to answer the early mentioned questions and that reflected the crowding-out effect along total deposit growth versus GNP growth. The ratios are basically the following:

- **Dollarization ratio:** This ratio measures the portion of deposits in the banking sector that are denominated in USD currency as a percentage of total deposits. That is $(\text{USD deposits})/(\text{total banking sector deposits})$.
- **USD borrowing percentage:** this ratio measures the borrowings in USD currency as a percentage of total USD deposits.
- **Lira borrowing percentage:** This ratio measures the borrowings in local currency as a percentage of total Lira deposits.
- **Treasury –Bills percentage:** This ratio measures the portion of banks deposits which is invested in T-Bills operations.
- **Money supply growth versus GDP growth:** These two ratios shall help us measure how money supply growth moves in comparison with GDP growth. Such ratios are vital to our analysis because they help us know whether there is a crowding –out effect phenomenon. In fact, these two ratios shall help us conclude whether money supply in Lebanon is growing at a faster rate than

GDP which in turn reveals the existence of idle resources that need better allocation. For this conclusion we shall try to compare the evolution of money supply and GDP in both periods: pre-war period and post-war period.

The study of the pre-war period shall cover the years between 1960 and 1975 and that of the post-war period shall cover the years between 1992 and 1998.

For this aim this study is divided into three sections. In the first section we propose to examine the effect of TB subscriptions on banks assets portfolio and on Lira credit availability to the private sector. In the second section we shall discuss the role of dollarization in lessening the incidence of the impact of TB subscriptions on total credit availability . And finally, in the third section, we shall try to examine how the deviated resources from private sector are being spent by the public sector and whether such shift of resources is effectively contributing to the Lebanese GDP growth.

CHAPTER TWO

The Crowding-Out Effect

I. General Background

Beginning in 1978, the deficit financing on a heavy scale began in Lebanon. In barely 8 years of deficit financing, the state total accumulated debt rose from about 3 billion LBP to 60 billion LBP. To encourage subscriptions, the BDL raised the interest rate on TB and then imposed compulsory TB portfolio purchases. To illustrate, during the eighties, banks were required to keep as high as 60% of their deposits in compulsory TB portfolio (Ayache, p. 120). However, the main reason behind such aggressive policy was to control speculations undertaken by investors who aimed at deriving profit from the instability of the foreign exchange parity of the Lebanese Pound. (Ayache, p. 119). Moreover, the state policy objective was to raise the interest rate on the LBP high enough to induce people to keep their deposits in LBP or switch their dollars deposits to LBP deposits. Thus, the demand for LBP would rise in terms of the dollar; the dollar's counterpart would drop, and the dollar/LBP exchange rate will advantage the LBP. In the same time the BDL would have access to more funds through TB subscriptions that will be used to finance the budget deficit. Unfortunately, the state's objectives were not fulfilled as expected. Effectively the dollar exchange rate kept increasing. And the banks were not willing to subscribe. The outstanding feature is that Lebanon witnessed two different outcomes for the same scenario. Although compulsory subscriptions in TB flourished in the eighties, yet they did not have the same effect on the financial activities as in the nineties. The Central

Bank resorted to the same incentives namely high interest yields, yet banks in the eighties were unwilling to subscribe in TB. Banks behaviour in the eighties was due to a vital reason. The offered return rate on TB was not reflecting the real risk. Banks were more willing to invest abroad in short-term investment. The dollar interest return of 8% remains according to commercial banks far more profitable than a Lebanese Pound which is paid back with 22% yield yet deflated on 70% basis per year.

Although the policy of increasing TB rates failed to reach its objective yet the BDL hold strong to it during the eighties. However, in 1997 regulations requiring 60% investment in T-bills were eliminated (Merryllinch, pp.5). Yet, banks were unwilling to change their assets portfolio. T-bills were representing the easiest and safest way to profitability for them. For example, in 1997, T-bills composed 53% of gross interest income for the sector. Let us justify the appeal of TB subscriptions for commercial banks.

II. What makes TB Attractive To Commercial Banks?

Why were treasury bills that much attractive to the commercial banks? The answer is profitable high yields. To understand better banks behavior, let us recall the determinants of the market interest rates.

In fact, the nominal interest rate on a debt is composed of a risk-free rate of interest plus a risk premium which could reflect default as well as maturity risk premium. The Risk-free rate represents the stated interest rate on a short-term T-Bill which is free of default risk plus a premium that reflects the expected inflation. The relationship between interest rates and risk premium can be expressed as follows:

Market rate = risk-free rate + default risk premium + maturity risk premium

(Weston, p. 137).

TB Risk Analysis

Table 2-1 Comparison of Bank Lending rates and TB Rates for Various Maturities

Year	Bank lending	TB 3-month	TB 6-month	TB 12-month	TB 24-month
1988	41.48	18	20	20	
1989	39.43	18	20	20	
1990	39.39	18	20	20	
1991	31.54	14.5	15.5	16.3	16.5
1992	27.45	12.59	13.96	17.36	24.5
1993	29.29	16.51	17.9	17.41	22.7
1994	21.28	13.05	13.8	12.84	15.26
1995	28.99	15.4	15.85	15.45	22.16
1996	24.67	13.8	14.95	14.55	19.58
1997	20.28	12.68	13.06	13.20	16.73
1998	20.51	12.68	13.09	13.20	16.73

*Source: *Banque du Liban reports (1989-1998)*

The table 2-1 shows that between 1988 and 1992 lending interest rates reflected high risk premium. This premium was the result of LBP depreciation as well as default risk. Effectively, although the risk premium was high, yet it did not represent the real risk. In fact, the effective inflation rate in that period exceeded by far the inflation premium as reflected in the T-bill risk-free rate. To illustrate, between 1989 and 1992, inflation rose dramatically. In 1989 inflation was 72.2% and in 1992 it reached 120% (Capel, p. 24). The high unexpected inflation led to negative real returns on Treasury bills. The nominal rates of T-Bills were below the inflation rate. However, the situation changed after 1992. A look at how monetary situation evolved since 1993 shows that an important improvement has been achieved concerning the ability of the Central Bank to stabilize the national currency. The Central Bank has been very successful in gradually improving the parity of the Lebanese Pound. Consequently, inflation was contained to a range between 8 and 10% (Capel p.24). Therefore the

commercial banks were less in a position to take into consideration the fluctuations of the Lebanese exchange rate and reflect them in the imposed interest rates. After 1992, given that the exchange risk and the maturity risk were negligible, the difference between the banks lending rates and TB rates, especially for 24 months, was supposed to reflect mainly the default risk premium. Between 1992 and 1996, the figures reveal that the difference between a 24-month bond yield and a bank loan yield was close to 5%. Is it a realistic premium?

The answer is yes. Given negligible maturity and exchange risk premiums, the stated premium in banks lending rate was supposed to reflect the default risk. There are several methods to assess the default risk premium that is present in the Lebanese economy; One of the methods that help us assess this premium is to examine the default risk as reflected in the share of returned checks in term of total number of checks that circulate in the system. To illustrate, that ratio fluctuated between 2.5% and 4% during the period under study; therefore, the reflected 5% premium was not far from real figures. Consequently, banks found themselves attracted to invest in 24 month TB, especially, knowing that the market were not offering projects that have a similar internal rate of return (El-Safir,p.9). That is why in fact commercial banks found in TB investment an easy road to profitability.

TB Term Structure

A second feature of T-bills which makes them attractive is that T-bills do not commit banks for long risky period of time. The offered maturities vary from 3 to 24 months. However, because the yield curve on TB has historically been sharply positively sloped, banks were more attracted to invest in medium and long-term maturities than in shorter maturities. The obvious result was an increasing average maturity of the commercial banks portfolio of TB since 1992 (Merryllinch,p. 5) .

To illustrate, the table below shows the average maturity of the T-bills that circulate in the market during the period between 1988 and 1997.

Table 2-2 Average Maturity of Banks and Public TB Portfolio (in percentage)

Year	3-mth shares/ Total shares	6-mth shares/ Total shares	12-mth shares/ Total shares	24mth shares/ Total Shares	Average maturity (months)
1988	25.5	18.67	53.02	NA	8.241
1989	18.94	20.22	58.20	NA	8.76
1990	16.53	21.45	59.41	NA	8.9
1991	7.29	10.10	63.44	14.76	11.9
1992	23.63	13.23	24.76	31.7	10.95
1993	9.9	14.56	29.36	41.87	14.43
1994	2.8	8.8	31.3	54.31	17.29
1995	6.78	6.33	48.82	36.23	14.98
1996	5.31	14.55	26.11	51.80	16.35
1997	2.18	4.44	25.66	64.14	18.69
1998	2.56	4.19	24.90	65	18.92

*Source: *Banque du Liban reports 1989-1998*

As the table 2-2 reveals, the average maturity of TB increased between 1989 and 1998 from 8.2 months to 18.92 months. Obviously, the increasing share of 24-month bonds causes the average maturity to increase since 1992. For instance, in 1991, 12-month bills represented 63% of total bills in circulation, whereas, in 1998, 24-month bonds represented 65% of total bills in circulation.

Further, the Treasury tried to lessen the refunding operations and to lengthen the average maturity of the banks T-Bills portfolio. For this aim, it has tried to effect swap operations by replacing matured T-Bills with instruments bearing longer maturities. Moreover, since 1992, the commercial banks have been in a better position to accept longer terms of maturities and the reason behind this choice is low inflation. During inflationary economic situations, debt maturities tend to be of short-term because investors are less willing to commit their money in a long-run debt. The situation differs if the debt is long-term and unanticipated high rates of inflation which were not allowed for when setting the terms at which the debt was issued result. That is why, in fact, during the eighties, The Treasury was more concerned with the issuance of short-term bills, yet the banks were not willing to subscribe. Since 1992, encouraged by high interest coupled with low inflation and negligible exchange risk, commercial banks subscribe and formulate a consistent TB portfolio. At this level, government borrowing switched away resources from the private sector for the benefit of the public sector. This brings us to a potentially serious problem namely the crowding-out effect.

VI. The effect of TB Subscription on Lira Credit Availability

When government goes into the money market and borrows, it will be competing with private business borrowers for funds. Effectively, government borrowing increases the interest rate and “crowds out” private investment spending for the benefit of the public sector.

Table 2-3 T-Bills share of total banking sector assets (1989-1998)

Year	T-bills / total assets
1989	18
1990	13.7
1991	19.15
1992	21.06
1993	21.32
1994	28.44
1995	26.33
1996	30.87
1997	26.75
1998	25.77

*Source: *Banque du Liban reports* (1989-1998)

The table 2-3 showed that T-bills as a share of total assets had been dramatically increasing since 1989. For instance, in 1989, T-Bills represented 18% of total assets, while in 1996, they represented approximately the third of total assets. This implies that the third of banks' resources had been deviated for public uses and switched away from private investment.

On the other hand, in 1988 Lira lending share in terms of total Lira deposits was as high as 26% ;yet, this ratio decreased to less than 15% in 1998. In other words ,it has decreased by 50% since 1988. Between 1987 and 1997, the banks were required to hold 60% of their Lira deposits in T-Bills and 13% of their Lira deposits cash. This means that the commercial banks were left with a margin of 28% to grant as loans; however, it seems that banks were more willing to invest in T-Bills than to Lend. Evidence of such is the fact that the share of private lending that was supposed to be close to 28% was far below at 14% in 1997.

Table 2-4 Lira Lending Percentage of Total Lira Deposits (1989-1998)

Year	Lira lending/Total Lira deposits
1989	21.95
1990	25.86
1991	19.62
1992	11.72
1993	13.30
1994	12.97
1995	14.21
1996	12.15
1997	14.26
1998	14.73

*Source: *Banque du Liban reports (1989-1998)*

However, the restrictions set by the monetary authorities can not but have a partial effect on private sector lending. These restrictions, although they affect the LBP circuit of financial activities, yet they favour an alternative circuit that is the USD circuit of activities. Effectively these restrictions on LBP lending push the agents who need financing towards loans in foreign currency . Consequently the restrictions set by the monetary policy are partially offset by the presence of the rate of dollarisation in the Lebanese economy. This brings us to the purpose of the next chapter.

CHAPTER THREE

The Dollarisation Counter-Tightening Effect

I. Definition of Dollarisation

Dollarisation has been a specific feature of the Lebanese economy since 1980s. However, this same feature had played an important role, since 1989, in smoothing the tightening effect of the TB subscriptions on credit availability for the private sector.

Dollarisation represents the foreign-currency-denominated deposits and credits in terms of total deposits and liabilities. This feature is common in the countries that usually experience high inflation which results in substantial foreign currency rise. However, because of the presence of default and convertibility risk, domestic and foreign dollar are not regarded as perfect substitutes ;and evidence of such is that dollar interest rate in dollarized economies have generally exceeded international levels (BIS,p.37).

Assuming limited exchange rate fluctuations, the rate of dollarisation induces the borrowers, when confronted with high local currency interest rates, to switch to domestic dollars loans ; and in the same time this feature induces savers to shift their assets into local currency deposits. This is in fact how dollarisation acts in response to the effect of TB subscriptions. However, as we mentioned earlier , the shift of the savers to the local currency deposits is strictly conditioned by the exchange rate stability (BIS,pp. 37).

Regarding exchange rates, it is worthy to notice that between 1989 and 1998 the Lebanese pound parity has shown a relative stability, and the restless fluctuations that used to occur during the eighties slow down. In fact, this stability coupled with high interest rates on TB acted to induce savers to increase their local currency deposits. Such confidence was translated into a decrease in the rate of dollarisation since 1989.

II. Dollarisation Fluctuations between 1989 and 1998

Table 3-1 Dollarisation Evolution (1989- 1998)

Year	Dollar deposits/total deposits
1989	79.84
1990	67.58
1991	73.69
1992	68.29
1993	69.40
1994	69.97
1995	61.45
1996	62.34
1997	56.49
1998	63.87
	66.31

*Source: *Banque du Liban reports* (1989-1998).

As table 3-1 shows, dollar-denominated deposits represented 66% of total deposits in 1998. This implies that deposits denominated in foreign currency made up over half the total deposits of the whole banking sector.

Although the dollarisation rate is high, it has been dramatically decreasing since 1989. In 1988, 80% of the total deposits were denominated in USD. Between 1989 and 1998, this rate decreased to an average of 67%. The Dollarisation rate had had three turning points during the period under study. In 1991, the dollarisation rate sharply fell from 73% to 68%. In 1994, the dollarisation rate dropped from 69% to 61%, and in 1996, the rate fell from 62% to 56%. Between 1989 and 1998, the dollarisation rate fell by 30%. This decrease was the obvious result of large TB subscriptions. Profitable high interest rates on treasury bills coupled with a relatively stable dollar exchange rate have induced savers to switch to the local currency demand. Lebanese savers started to surrender their dollars and exchange them with the local currency TB. Obviously, the decrease in the dollarisation rate was one of the effects of government borrowing. As it was discussed earlier, the restrictive monetary regulations set by the state's authorities on the LBP circuit of financial activities were favouring an alternative circuit that is the USD circuit of financial activities. The dollarisation rate was lessening the tightening effect of the monetary policy on credit availability. Let us see how.

III. Dollarisation Effect on USD Credit Availability

The dollarisation rate has acted since 1989 to reduce the firms' exposure to Lira credit market conditions and to limit the impact of the monetary policy. High Lira interest rates switched 60% of total deposits away from the private sector. As a result, the borrowers shifted to dollar-denominated loans in order to counteract the restrictive conditions on Lira lending.

Table 3-2 Private Sector Lending Percentage of Total Deposits (Lira vs USD)

YEAR	Total private sector Lira lending / total Lira deposits	Total private sector USD Lending/ total USD deposits
1988	26	34.45
1989	21.95	42.31
1990	25.86	46.12
1991	19.62	43.18
1992	11.72	51.74
1993	13.30	47.62
1994	12.97	54.22
1995	14.21	60.72
1996	12.15	63.83
1997	14.26	54.65
1998	14.73	54.10

*Source: *Banque du Liban reports 1989-1998*

In contrast to Lira lending, the lending in USD in terms of total USD deposits has increased since 1988. In 1988, the commercial banks lent 34.4% of the total USD deposits to the private sector. Yet, in 1998, the extended dollar-denominated loans to the private sector represented 54% of the total USD deposits. Between 1989 and 1998, the borrowers tried to encounter high interest rates on Lira loans by switching to USD loans. This behavior was of course encouraged by the USD lending rates that are relatively low in comparison with the local currency lending rates.

Consequently, figures above have revealed that the rate of dollarisation had been playing an important role, between 1989 and 1998, in lessening the effect of

government borrowing on credit availability. It acted to limit the incidence of the monetary tightening effect and presented a convenient alternative for borrowers of the private sector.

IV. The Counter-Tightening Role of Dollarisation

We can better understand how dollarisation played a vital role in lessening the effect of the government borrowing on credit availability when we examine the evolution of the private lending in both currencies jointly .

Table 3-3 Private Lending versus Public Lending Share of Total Deposits:

Year	Private sector total lending/ Total deposits (both currencies)	Public sector total lending/ Total deposits (both currencies)
1989	40%	22.87%
1990	41%	18.3%
1991	35.7%	23.86%
1992	39.5%	25.47%
1993	37.32%	25.4%
1994	38.32%	33.94%
1995	43.08%	33.28%
1996	41.3%	40%
1997	40.06%	34.31%
1998	40.84%	33.55%

*Source: *Banque du Liban reports* (1989-1998)

The table 3-3 shows that between 1989 and 1998 private lending in terms of total deposits did not dramatically change .For instance, in 1989, the private

lending represented 41% of total deposits, and in 1998, the share of private lending was still around 41%. The smoothed evolution of the private sector lending was the result of the increase in dollar-denominated loans. The decrease in Lira-denominated loans to the private sector had been counteracted by an increase in dollar-denominated loans. The obvious result was a smooth evolution of the private sector lending. That is why, although the public sector lending increased at a fast rate yet the private sector lending had not been decreasing at a comparable rate due to the lessening effect of the dollarisation .

CHAPTER FOUR

The Net Effect of TB Subscription on Lending

Although government borrowing has grown since 1989, it was not strictly competing with the private sector. The transmission channel of the restrictive monetary policy can be expressed as follows: Government raised interest rates. The resulting high cost of LBP loans induced borrowers to switch to foreign currencies borrowing. As a consequence, LBP loans to the private sector dropped, whereas USD loans increased. The net result was a smooth evolution of the private sector lending. Yet the transmission has not ended yet. The increase in the dollar-denominated loans was at the expense of another type of investment namely foreign placements.

I. Foreign Placements

Foreign placements are investments of short-term type with a rate of return that is determined according to the international money markets. This type of investment used to take a relatively large part of the banking sector assets, however when government raised interest rates, banks gave up partly that type of investment and switched to T-Bills investment. For instance, in 1989 roughly two thirds of the total assets were made up of foreign placements. However, that ratio sharply declined in 1996 to reach 18% of total assets. This change was the obvious result of increased TB subscription. Effectively, during the eighties banks were not willing to invest in TB because of the dramatic inflation and the depreciation of the Lebanese pound. Foreign placements represented short-term profitable investments that ensured both safety and return. On the other hand, during the eighties dollarisation was very high. For example, in 1985 dollarisation rate was

85% and in 1986 it reached 92%. Therefore the structure of the commercial banks balance sheets in the eighties favoured investment abroad. During the nineties, the increase in dollar-denominated loans to the private sector competed with the foreign placements. The obvious result was a decrease in the share of the foreign placements of total assets, since 1989.

Table 4-1 Foreign Placements Share of Total Banking Sector Assets

Year	Foreign placement/ total assets of banking sector
1989	59.23
1990	46.67
1991	48.11
1992	45.03
1993	37.43
1994	25.81
1995	21.81
1996	18.06
1997	20.12
1998	20.92

*Source: *Banque du Liban reports* (1989-1998).

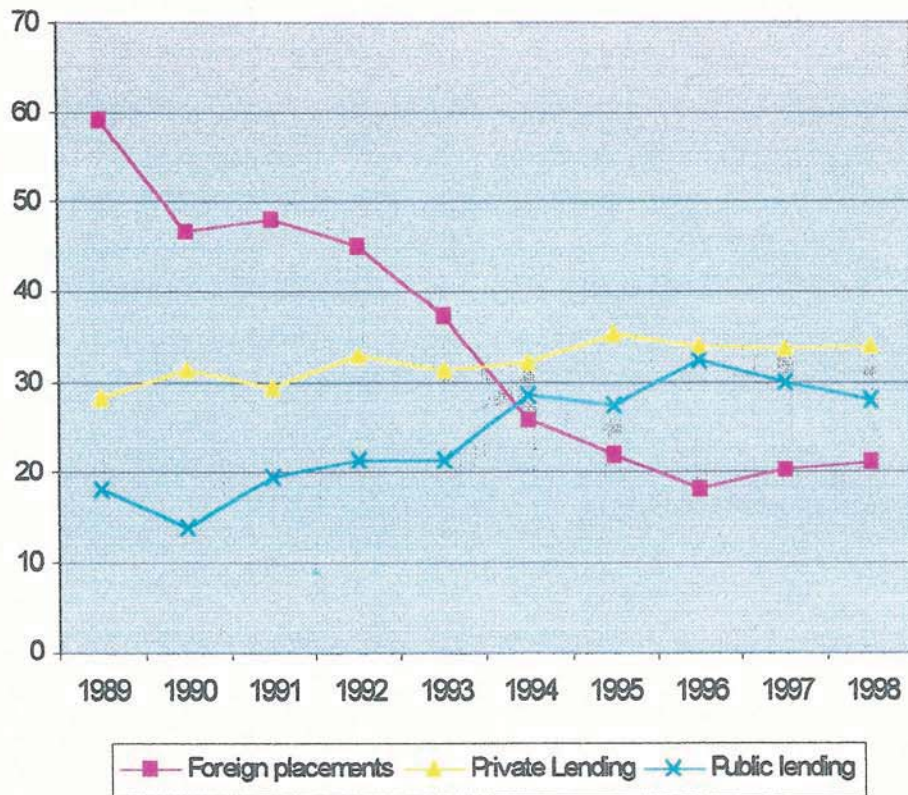
Table 4-2 Lending Distribution as a Percentage of Total Assets

Year	Foreign placement /Total assets	Private lending /Total assets	Public lending /Total assets
1989	59.23	28.10	17.87
1990	46.67	31.37	13.94
1991	48.11	29.45	19.26
1992	45.03	32.82	21.17
1993	37.43	31.35	21.33
1994	25.81	32.11	28.44
1995	21.81	35.51	27.35
1996	18.06	34.12	32.43
1997	20.12	33.86	30
1998	20.92	34.16	28.05

*Source: *Banque du Liban* reports (1989-1998)

Fig 4-1

Foreign Placements versus Public Lending versus
Private Lending Share of the Consolidated Banking Sector (in percentage)



BDL Official Reserves

This is not the end of the process. During the eighties, high inflation coupled with a dramatic depreciation of the Lebanese Pound favoured a highly dollarised system. Dollarisation reached its peak in 1986 when only 8% of total deposits of the banking sector were denominated in the national currency. By increasing interest rates, government tried to induce investors to surrender their dollars and exchange them with the national currency. That objective of the government was not fulfilled and the cost of the high rate of dollarisation was the depletion of the BDL official reserves.

With the beginning of the nineties, high interest rates were coupled with low inflation and a stable national currency. These favorable conditions induced borrowers to surrender their dollars and exchange them with the national currency. A step that could not have happened in the eighties although it was expected by the state's authorities. The national currency became dearer to the Lebanese investor, dollarisation dropped and the BDL replenished its eroded stock of Official reserves.

As the table below shows ;between 1989 and 1998, BDL official reserves in terms of total BDL assets have increased by over 300% .

To illustrate, in 1989 official reserves constituted 19% of total reserves ,yet during the previous nine years this share significantly increased to 55.8%.

Undoubtedly, this is one of the results of TB subscription that has induced Lebanese to surrender their dollars and exchange them with the national currency.

Consequently, TB subscription exerted effect on foreign assets for Both commercial banks and BDL .Although foreign placements of commercial banks decreased between 1989 and 1998, yet foreign reserves of BDL increased significantly.

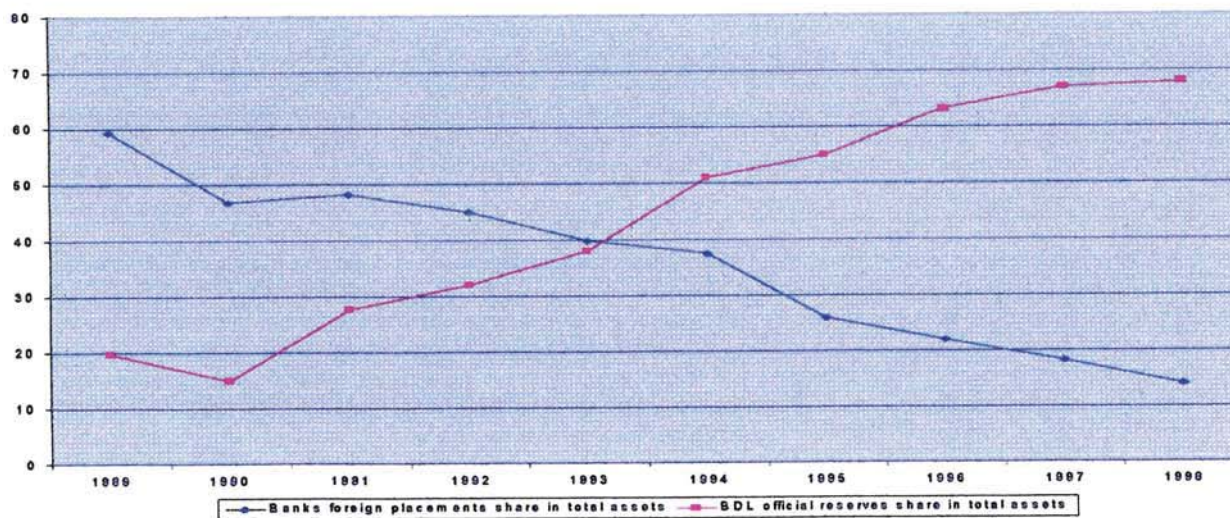
Table 4-3 BDL Official Reserves Share Total BDL Assets

Year	Foreign reserves/Total BDL assets
1989	19.68%
1990	14.92%
1991	27.5%
1992	32%
1993	34.65%
1994	50%
1995	52%
1996	58.72%
1997	61.42%
1998	55.89%

*Source: Banque du Liban reports (1989-1998).

Fig 4-2

Foreign Placements evolution vs BDL Official Reserves (in % of total assets)



CHAPTER FIVE

The Lebanese Government Expenditures

The interest-bearing bonds' main purpose is to control the money stock and the interest rates in a free enterprise market in order to revitalize the economy and increase production and employment. For example, when the economy is sluggish the state's authorities must spend their bonds in a way to encourage private businesses to invest. In the opposite case, when the economy is facing inflation the bonds money should be frozen or spent in part on extremely productive investment. On the other hand, when the economy experiences stagflation, than a portion of the bonds is to be injected in that side of the economy where the need is urgent to revitalize the economy.

In either case, the state is supposed to follow a type of spending that would revitalize the economy and enhance production. This brings us to the following two questions : What type of spending was TB effectively financing ? and was it contributing to real GDP growth? (Musgrave,p. 552).

I. Types of Government Expenditures

In fact, just as private goods may involve consumption or investment goods so it is with public goods. Each type of spending has different impact upon current and future standard of living and economic growth. For example, if the increased government goods are provided at the expense of consumer goods then the present generation bears the entire burden in form of a lower current standard of living.

The current investment level is not affected and therefore neither is the size of the national factory inherited by the future generations. However, if the increase in government goods means a reduction in production of capital goods, then the present generation's level of consumption will not be affected ;yet, the future generations will inherit a smaller stock of capital goods and will have to incur a lower future standard of living (Mcconnel, p. 407).

Let us have a look at the type of expenditures that Lebanese government tries to finance through Treasury Bills issuance.

II. Composition of The Lebanese Government Expenditures

The table below shows the share of consumption as well as of capital expenditures in terms of total expenditures between 1989 and 1998.

Table 5-1 Composition of the Lebanese Government Expenditure (1989 -1998)

Year	Wages	Internal interest rates	Investment	Others
1989	19%	30%	6.3%	44.7%
1990	27%	26%	4.2%	42.8%
1991	31%	17%	13.4%	38.6%
1992	27%	18.6%	12.8%	41.6%
1993	43%	25%	13%	19%
1994	33%	29%	24%	14%
1995	32%	30%	20%	18%
1996	35%	35%	14%	16%
1997	35%	41.9%	10.21%	13%
1998	33.87%	43.7%	9.5%	13%

*Source: *Banque du Liban reports (1989-1998)* and Iskandar Marwan: *The Lebanese economy, 1997-1998*. Beirut, 1998.

As the table 5-1 shows, between 1989 and 1998, current expenditures share of total spending exceeded on average 55%; In 1993, current expenditures represented over 75% of total expenditures, and in 1998, the unproductive current expenditures share reached 89.6% of total expenditures. On the other hand, capital expenditures in the period under study did not exceed on average 20% of total expenditures. For instance, in 1989, investment represented 19% of total spending ; between 1990 and 1992 there has been a significant increase in investment share to over 25% but this portion fell in 1996 to 14% and to as little as 9.8% in 1998.

From the previous stated, it is obvious that current expenditures represented large shares of total expenditures in comparison with capital expenditures. And the relevant indicator is the significant share of wages and internal interest rates of total government spending. This share has dramatically increased since 1992. For example in 1998 domestic debt service made up over 43% of total expenditures while in 1992 it constituted 18% of total expenditures . Undoubtedly such shows the heavy burden of T-Bills subscription and the cost incurred on it. Interest-bearing bonds are especially costly to the state as yields pile up and must be paid periodically. Consequently, although government tried to finance the deficit through borrowing yet borrowing was in return increasing the deficit. Along with the interest rates burden come wages and salaries expenditures which have significantly grown since 1989. Namely, during nine years, wages and salaries share of total expenditures raised from 19% to around 34%.

We can better understand these figures when we compare them with other economies. For instance, if we compare the share of the internal debt service of total spending in Lebanon to that in France ,the result is relevant. In 1990, the internal debt service represented 10% of total expenditures of the French government and in 1998 it represented 20% of total spending. In

comparison, the internal debt service of the Lebanese government has exceeded 30% between 1989 and 1998 (Coste, p.15). Furthermore, in 1990, capital expenditures made up over 40% of the total government expenditures in France; yet, this share did not exceed 14% in Lebanon (Coste, p.15).

These figures show that resources that were deviated from private sector have been obviously spent on large consumption type outlays such as wages and internal debt service. Consequently, does this mean that the deficit financing was forcing the economy on to a slower long-run growth path?

The budget policy and the way of spending government resources have a role in the economic stabilization. Effectively, operations related to the budget affect the level of aggregate demand and the level of aggregate demand affects in turn employment and GNP. One way through which budget operations affect GNP is by increasing government expenditures. To illustrate, an increase in government expenditures may be used to increase GNP. For example, if income is below the required level for full-employment, government expenditures may be used to move it there. However, if the economic level is already at full employment, government expenditures increase results mainly in inflation. In other words, the impact of budgetary policy upon the level of aggregate demand is usually reflected in a corresponding change in output. But this is not always the case. An increase in aggregate expenditures may come to be reflected in rising prices rather than rising output. In fact, as the economy moves from one position to another, further increase in the level of expenditures tends to be reflected more largely in rising prices especially, as we mentioned earlier, if the increase is so rapid as to outrun the economy's ability to expand output. Therefore the budget has vital repercussions on the macro behavior of the economy and affects significantly that behavior.

However, at this level, we need to highlight a peculiarity of the Lebanese economy. Effectively, an increase in government current expenditures does not necessarily mean an increase in GDP. Lebanon depends largely on imported goods. Evidence of such is that the trade deficit recorded in 1994 as high as 58% of GDP.

Moreover as we have noticed in the previous section budget policy affects the division of the total output between consumption and capital formation and thereby the rate of economic growth. For this aim, we shall try in the next section to highlight the effect of government financing on some macro variables namely money supply ,output and inflation.

CHAPTER SIX

The Effect of TB Subscription on Money Supply

I. The Government Borrowing Alternatives

When government is faced with a budget deficit, three alternatives are on hand. Each alternative has a different effect upon the money supply. The government borrowing effect varies with the selected source of financing. Three sources of financing are offered:

- 1-The public.
- 2-The commercial banks.
- 3-The Central Bank.

Let us examine how each of these alternatives affects the money supply.

Borrowing from the Public

One of the offered sources of financing is the subscriptions in T-bills by the public. This policy decreases the banks reserves and increases the Treasury deposits at the Central Bank by the same amount, yet when the government disburses back the funds, the banks reserves regained its original level. Consequently, selling securities to the public has a null effect on both demand deposits and money supply. That is why, this source of financing is the least inflationary alternative (Shapiro, p.199). Let us examine the effect of the second alternative on the money supply, that is borrowing from the commercial banks.

Borrowing from Commercial Banks

Borrowing from commercial banks is certainly more inflationary than borrowing from the public.

When the government borrows from commercial banks to finance its deficit, commercial banks lose a portion of their reserves as the treasury's deposits at the Central bank rise by that amount. Yet, disbursement of this amount by the Treasury in payment for goods and services causes the total of banks reserves to return to its original level and causes demand deposits to increase above the original level. The obvious result is an increase in the money supply of the nation. Therefore, unlike borrowing from the public, selling securities to the commercial banks has inflationary pressures (Shapiro, p.199).

This leads us to the third possibility: financing through the Central Bank.

Borrowing from the Central Bank:

In addition to the two stated means of financing the deficit, the Treasury may finance the deficit by borrowing from the Central bank. Borrowing from the Central Bank causes the deposit of the Treasury to increase. However, when the government disburses the collected funds amount in payment for goods and services, the Treasury's deposit at the Central bank decreases and banks reserves increase by the same amount as well as the demand deposits (Shapiro, p. 200). Therefore, unlike borrowing from banks, borrowing from the Central bank causes a net increase in banks reserves. This method is obviously the most expansionary method of financing.

Effectively, the advances of the Central Bank are highly inflationary, because it involves the functioning of the printing press at full power. This is equal to money creation without any counterpart real production. In 1978, the Treasury resorted to the Central bank's 'emergency loans', but later the Treasury relied on commercial banks loans because such special loans causes very inflationary pressures (Saidi, p. 129).

II. The Lebanese Deficit Financing

To have a clearer view of the effect of TB subscription on money supply since 1989, let us examine the share of public borrowing and that of commercial banks in total subscriptions during the period under study.

Table 6-1 Banks versus Public Share of Total Budget Financing:

Year	Banks share of budget	Public share of budget
1989	77%	19%
1990	74.26%	17.28%
1991	65.8%	27.85%
1992	77.85%	17.11%
1993	73.65%	15%
1994	78.7%	15.8%
1995	70.57%	24.09%
1996	73.75%	19.4%
1997	68.07%	19.25%
1998	66%	17.24%

*Source: *Banque du Liban reports (1989-1998)*.

The table above shows that between 1989 and 1998 the treasury relied mainly on selling securities to the commercial banks. For example, in 1989, the commercial banks share of total subscriptions reported 77%. Although the banks contribution dropped to 66% in 1998, yet it was still exceeding the public contribution of 17%. Obviously, among the three alternatives on hand, the Treasury could not rely strictly on the least inflationary source of financing. The result was an average commercial banks contribution of 70%, compared to an average contribution of 18% by the public. As we mentioned earlier, selling securities to the commercial banks is one of the factors that contributes to the expansion of the money supply, yet it is not the only one. Credit extension to the

private sector causes the money supply to grow as well. However, the commercial banks subscription on TB has the largest effect on the money supply. For example, in 1992, when government first introduced the 24-month T-bonds, the money supply registered a rise of 114% and 53% of the increase in it was the result of the banks subscriptions (Ayache, p.115).

Therefore, one of the effects of the commercial banks TB subscriptions is the expansion of the nation's money supply. However, the increase in money supply does not necessarily hurt the economy. For example, if the economy is below full – employment, the money supply increase may enhance the output and help the GDP to reach the full-employment level. On the other hand, if the economy is at full-employment level, then an increase in the money supply may exert inflationary pressures.

This brings us to the purpose of the next chapter namely the effect of the budget financing on GDP real growth.

Chapter Seven

The Effect of the Budget Financing on The GDP

Money supply and GNP growth are closely correlated; however the mechanism of this correlation have always raised controversies among economists. Such controversies lead to two types of empirical evidence.

1-Structural model evidence

2-Reduced form evidence.

Structural model evidence:

The Structural model evidence ,as it reveals, tries to explain the correlation between money supply and GNP by using data to build a structured model. That model describes the transmission mechanism between money supply and GNP as follows: the money supply affects interest rates which in turn affects investment spending which in turn affects aggregate output .

In other words the structural model evidence tries to explain a *specific* channel of transmission through which money supply affects GNP;and that channel of transmission is easily identified and systematically structured (Mishkin,p. 634).

The reduced form evidence:

On the other hand, the reduced form evidence model examines whether one variable has an effect on the other by simply looking directly at the relationship between the two variables regardless of a clearly defined channel of transmission.

In comparison with the structural model, the reduced form evidence model does not decide over a structured clearly defined mechanism or specific ways through

which money supply affects GNP. Instead they examine the effect of money on economic activity by simply looking at whether movements in the GNP are tightly linked to movements in money supply (Mishkin p. 634-635). However, in either case the equation of exchange holds true.

I. The equation of exchange:

The equation of exchange is a statement in a mathematical form of total transactions affected in a certain period in a given community. It is counting the same GDP in two different ways. Once by summing the purchase price of the goods and services and again by calculating the money payments made for them (Dean, Introduction).

That is why $M*V=P*Q$ is always be true because it is a tautology. And that is why in fact if one of the variables in the equation varies than a counter-balancing changes in one of the other variables must also have occurred. To illustrate, if M increased then one of four other events must also have occurred:

V fell, P rose, Q rose or some combinations of these changes occurred.

And if M decreased then counter-balancing changes in the opposite directions occurred. Such is obvious because it is impossible in any case for MV to be unequal to PQ (Dean, Introduction).

II. The Growth of The Lebanese Financial Sector

Post-War Period

We shall try, in this section, to apply this equation during the period under study to find out the effect of TB subscriptions on money supply and on GDP in turn.

Table 7-1 Velocity Evolution (1989-1996)

Year	Nominal GDP (In millions of LBP)	Money supply (In millions of LBP)	Velocity
1989	4,080,000	2,720,383	1.49
1990	4,260,000	4,340,622	0.98
1991	6,675,000	5,538,471	1.20
1992	8,325,000	11,869,389	0.701
1993	11,310,000	15,678,464	0.721
1994	13,935,000	19,651,322	0.709
1995	16,950,000	22,883,336	0.704
1996	19,860,000	29,241,017	0.679

*Source: *Banque du Liban reports* (1989-1998) and Capel james :HSBC
report:Country report.1997,p.5.

Table 7-2 GDP Growth versus Money Supply growth and Inflation (1989-1996)

Year	Money supply growth	Real GNP growth	Inflation
1989	12%	(42.2)%	72.2%
1990	60%	(13.4)%	68.8%
1991	30%	38.8%	51.5%
1992	114%	4.5%	120%
1993	33%	7%	29%
1994	25%	8%	8%
1995	16%	6.5%	11%
1996	27%	4%	10%
1997	19.34%	4%	9%
1998	19%	4%	9%

*Source: *Banque du Liban reports* (1989-1998) and Capel James :*HSBC report: Country report*.1997,p.6..

The table 7-2 reveals that the money supply in Lebanon was increasing at a rate faster than both real GDP and inflation.

To illustrate, in 1992 GDP growth rate jumped to 38%. The rise was mainly driven by the construction projects achieved in that year when the new government took office. However, after 1992, GDP growth slowed down. On the other hand, the inflation rate has registered low levels since 1994, although it reached 120% in 1992. Compared to both real GDP and inflation, the money supply exhibited higher growth rates since 1994. For example, since 1989, the money supply has been growing at an average rate of 35% , while the inflation slowed down to 9% and real GDP registered 4% growth rate.

Given the equation of exchange, when M increases than one of four events must have occurred as well: V fell, P rose, Q rose or some combinations of these

changes occurred . Between 1989 and 1998, M increased however Q and the inflation did not register comparable growth rate. This implies that the largest part of the money supply increase has been absorbed by low velocity. Figures confirmed this hypothesis. Namely, between 1989 and 1998, the velocity dramatically dropped from 1.49 to as low as 0.67.

Pre-War Period

We can better understand the situation if we compare it to the pre-war period namely between 1961 and 1975 when the sale of TB to the banks have not yet started on a large scale.

The table below shows the evolution of GDP growth, inflation, and money supply growth between 1961 and 1974.

Table 7-3 GDP growth versus Money Supply Growth and Inflation (1961-1974)

Year	Money supply	GDP growth	Inflation
1961	11.6%	11%	0.9%
1962	11%	9%	-2%
1963	1%	2%	1%
1964	24%	24%	2%
1965	19.84%	10%	1%
1966	5%	6.7%	3%
1967	0.9%	-5%	5%
1968	14.6%	12%	1%
1969	8.5%	2%	6%
1970	15.42%	7%	4%
1971	-10.9%	8%	1.6%
1972	13.27%	11%	5.5%
1973	12%	11%	6%
1974	13.28%	14%	10.63%

*Source: Mallat Raymond, *The Crash 86*.Beirut, 1986,p.85.

Lebanon has a peculiarity . Its money supply grew at a largely faster rate than its GDP. However, the significant feature of the pre-war period is that the money supply growth was to a large extent translated into GDP growth. The figures confirm the hypothesis. For instance, in 1961, when the GDP registered 11% growth, the money supply reported a rise of 11.6%. In 1964, when the money supply growth reached 27%, the GDP registered a rise of 24% as well. Further, in 1968, when the money supply grew by 14.6% the GDP grew by a comparable rate of 12%.

Consequently, in the pre-war period , the increase in the money supply was to a large extent contributing to the GDP growth more than it was causing inflationary pressures. To illustrate, between 1961 and 1970 the inflation rate registered as low as 3%. However, a look at the macroeconomic variables between 1970 and 1975 reveals that, in 1974, when the inflation rate jumped to 10.63%, the money supply growth started to exert inflationary pressures. However, the GDP was still increasing at a rate close to 11%.

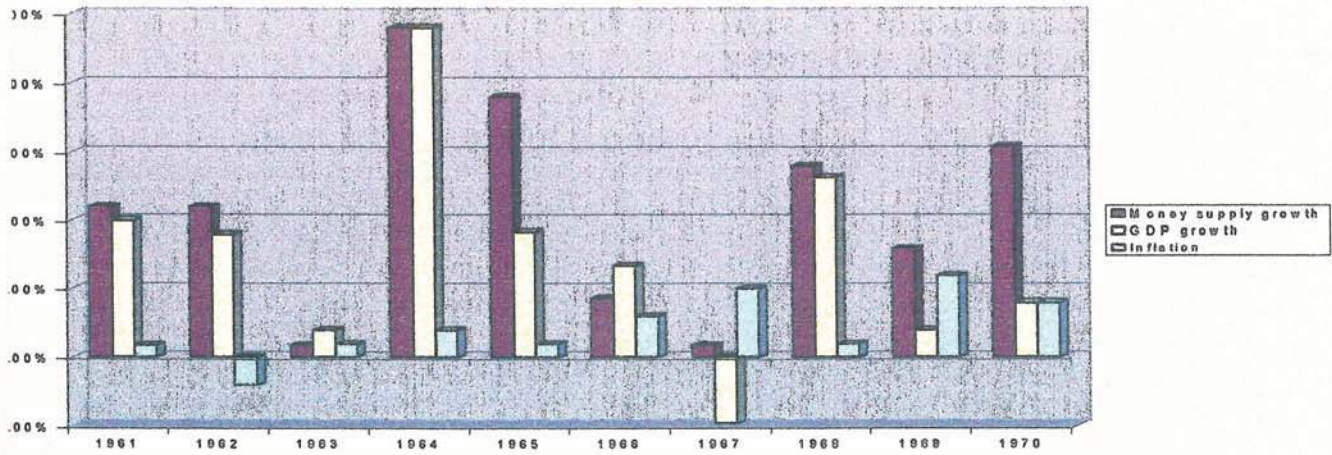
Consequently, the Lebanese economic situation exhibited a turning point in the year 1974 when the money supply increase started to exert significant inflationary pressures. On the other hand , the GDP was maintaining a growth rate close to 11%.

III. Comparison between Pre-War and Post-War Economic Conditions

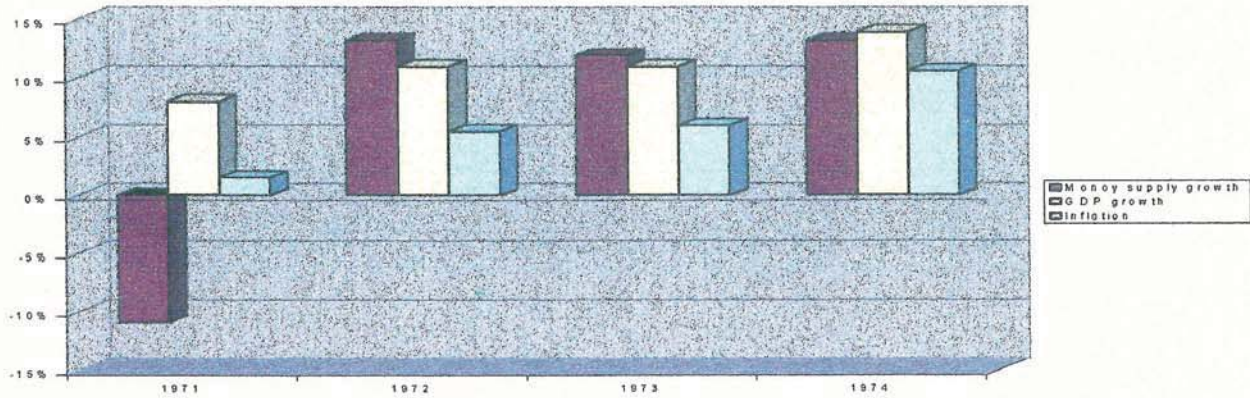
As we noticed earlier, during the period between 1989 and 1998 the study revealed that the money supply was growing at an average rate of 35%; yet, this growth did not exert large inflationary pressures neither did it contribute to a significant GNP growth. Therefore, if we recall the variables of the equation of exchange we conclude that between 1989 and 1998 the money supply growth was

to a large extent absorbed by low velocity, while in the pre-war period the money supply growth used to be accompanied with a significant real GDP growth. The comparative graphs below are significant (Fig 7-1,7-2,7-3).

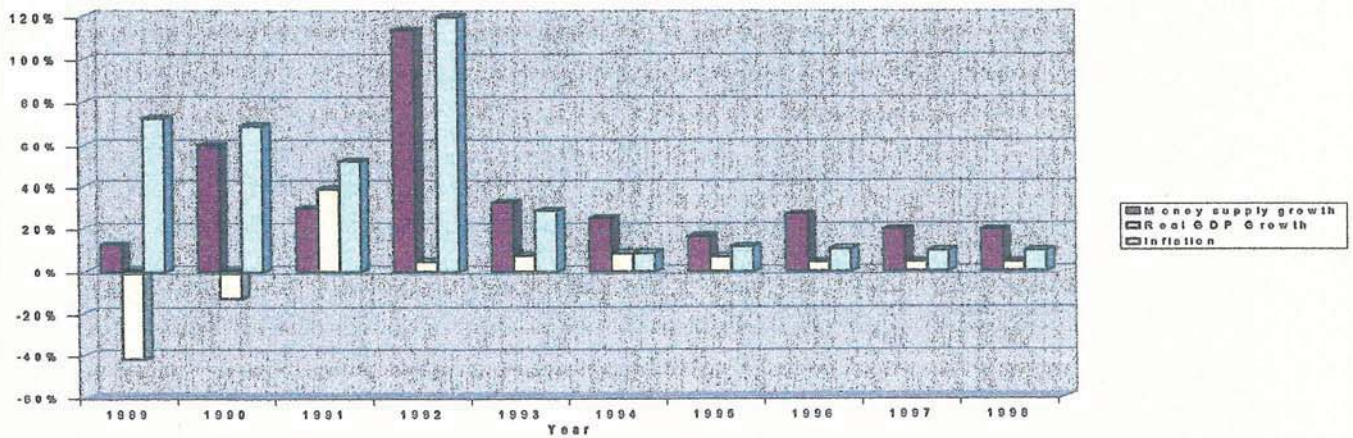
GDP Growth versus Money Supply Growth and Inflation, 1961-1970 Fig 7-1



GDP Growth versus Money Supply Growth and Inflation, 1971-197 Fig 7-2



GDP Growth versus Money Supply Growth and Inflation, 1988-1996 Fig 7-3



Conclusion and Recommendations

Lebanon is a prosperous upper-middle-income country in the mid 1970's it has been devastated by 15 years of war that destroyed much of its infrastructure and productive assets. Since the end of World War 2, Lebanon had been oriented to services and light industry sectors.

During the pre-war period, the budget was not of great concern since real GDP was growing and the budget was in surplus. That period was characterized by a minimal government intervention in economic activity. In addition, the share of the public sector of total economic activity represented by the ratio of government spending to GDP was stable around 14% yearly. Above all the local currency was stable and backed by yearly capital inflows from abroad.

An examination of Lebanon main economic indicators as we did in the previous section reveals the following features:
The Lebanese economy evolution since 1960 can be divided into 3 main phases; depending on its GDP growth versus its money supply growth and inflation. However, there is a common feature in all stages. That is the money supply in Lebanon always increases at, by far, faster rate than its real GDP. To illustrate between 1960 and 1970 money supply growth mainly contributed to GDP growth whereas inflation was as low as 1%. For example, in that period money supply grew at an average rate of 13.6% while GDP grew at a very close rate of 11.2%.

Between 1970 and 1974, the money supply growth was translated into both significant real GDP growth as well as inflation. In other words, during that period

Money supply growth started to exert inflationary pressures on the economy and such appeared in the rise of inflation to 4%.

In the post-war period the situation aggravated because the growth in money supply had had little effect on both GDP and inflation as GDP grew at a very slow rate whereas inflation was contained to a range between 8 and 10%. Effectively in this post-war period and namely after 1993 money supply growth was absorbed by low velocity. One reason behind such a situation is relatively high Lira interest rates that open-market operations aggravated since 1992 and which is hindering lot of investment opportunities.

The picture that raised in the post-war period and namely since 1993 was partly the result of heavy intervention of government in the Lebanese economy through the issuing of T-Bills.

In fact faced with a growing budget deficit that constituted over 23% in 1998 of national GDP, the government had to make a choice on the way of financing the deficit. Three main alternatives were in hand:

- 1-Borrow from the Central Bank or print money
- 2-Borrow from the commercial banks
- 3-Borrow from the public

Undoubtedly the first choice is the most expansionary although it has the least cost. Replacing debt with money would clearly be the cheapest way of handling the matter since it has no interest costs at all. Yet, it is not a satisfactory solution because monetizing the debt would increase liquidity and thus lead to high inflation. In addition, as we previously mentioned Lebanon is known for having a huge money stock whose growth exceeded by far its real GDP growth. Therefore opting for the first choice would aggravate the situation especially if such will not be accompanied by real GDP growth. Left with the other two alternatives, the commercial banks emerged as the main purchasers of T-Bills.

Namely banks subscription in T-Bills exceeded 60% of total subscribers since 1993.

However, that option had had its effect. Above all, it expands money supply in a significant way compared to borrowing from public as previously justified. In addition, such increase in money supply had effectively been visible but it did not have neither inflationary result nor did it contribute to real GDP. It was simply absorbed by low velocity. This is one of the result of open-market operations that are freezing over 60% of total lira deposits as T-Bills instruments and deviated them from private sector use for public use .Yet since these resources are being deviated for public uses why are not they contributing to real GDP growth?

The answer, as the analysis revealed, is that the deviated resources from private uses were not being spent in a productive way. In fact rather than financing capital spending, those resources were being used to pay for domestic debt service and to finance official wages and salaries. This is in fact one of the reason why the government expenditures are not effectively contributing to GDP growth.

In order to soften the debt service burden and the expansionary results of open-market operations the government resorted to two solutions:

1-Raise debt on the international market

2-Effect swap operations namely by replacing matured debt with longer maturities instruments

In fact, in order to lessen the burden of paid interest rates, which started to become a huge current expenditure; the government started issuing Eurobonds on the international market. By doing so, Treasury tried to replace maturing debt with debt bearing the least possible cost. Evidence of such is that the 5-year Eurobonds issued by the Lebanese Treasury at end March-98 had a yield of 7.51% in comparison to domestic more expensive debt whose yield varied from 19 to 22%. In the same way and in order to have a smaller volume of refunding operations as well as to absorb liquidity, Treasury tried to redistribute debt maturities through

swap operations; and the result was, as we find out in the analysis, a growing average maturity of public debt.

On the other hand the TB subscriptions are expected to deviate resources from the private sector uses for the benefit of public sector uses. This is true but to some extent and the reason behind such is the fact that the Lebanese economy is a dollarized economy. In addition, dollarisation acted in a way to lessen the incidence of the Central bank monetary policy and its effect on credit availability. Evidence of such is that although Lira private sector lending in terms of total Lira deposits has decreased from 26% in 1989 to 11% in 1998 yet the same ratio in both currencies jointly showed little variations. This showed that high interest rates on Lira lending deviated the resources away from the private sector, however, the investors tried to escape such conditions by resorting to USD borrowing. That is why the limit that the TB subscriptions imposed on Lira lending had been offset by the USD credit availability at lower interest rates. In fact, attractive interest rates on T-Bills had reformulated bank balance sheets and lending portfolio. Namely, public lending that used to constitute 17 % of total assets in 1989, raised to 33% in 1998 and such was at the expense of banks foreign placements. To illustrate, between 1989 and 1998, the foreign placements share of total assets dropped from 60% to 20%. The public lending share of assets rose from 17% to 34% and the private lending share reached 28%.

Not only have the TB subscriptions affected the commercial banks balance sheets; rather it affected the BDL balance sheet as well. In fact, the analysis revealed that high yield on T-Bills have induced savers to exchange their USD holdings with Lira in order to subscribe in the Treasury instruments of debt. That was very obvious in the figures that show how dollarisation dropped from 80% in 1988 to 66% in 1998. Undoubtedly the change in dollarisation was reflected in the increase of BDL official reserves, which have tripled during four years.

This increase in official reserves was partly a result of T-Bills subscription or in other words the investment of foreign inflows into Treasury instruments.

Such increase had had positive effects:

First, it ensured the national currency stabilization in the exchange market and evidence of such is the appreciation of the Lebanese pound parity during the four years. Second, the increase in BDL reserves provides it with a strong grip over any type of speculation against national currency. Evidence of such is the fact that BDL official reserves amounted to 65% of total Lira deposits.

Further, the analysis revealed that the budget deficit should be lower and this can happen if revenues increase or expenditures decrease. Yet if decreasing expenditures is difficult in the short-run, therefore increasing revenues is an easier alternative. For this aim, the Treasury has already started a program aimed at restructuring tax collection; because tax collection needs to function efficiently in order to help the government decrease the huge deficit whose burden is affecting the whole economic activity. Moreover, when revenues increase, the reliance on TB subscriptions decreases. In addition, when such occurs, we can expect interest rates to decrease allowing therefore for investment opportunities to contribute to the GDP growth. The Lebanese economy needs to increase its productivity. As we have seen, Lebanon is in a situation where inflation is contained and GNP growth is very slow. Undoubtedly it is partly due to the fact that over 50% of the whole banking sector resources are distributed between direct foreign placements and public lending. These two portions needs to be lower for the benefit of private sector lending. In addition, the type of lending that Lebanon needs is for the productive sectors that would contribute for the long-run growth of the national output.

Glossary

Crowding-out effect The rise in interest rates and the resulting decrease in planned net investment spending in the economy caused by increased borrowing in the money market by the Central Bank.

Dollarisation Shares of banks assets and liabilities denominated in foreign currencies

Gross Domestic Product GDP The Gross National Product minus the net payments on foreign investments.

Gross National Product GNP The total market value of all final goods and services produced in the economy during a year

Velocity The number of times per year the average dollar in the Money supply is spent for final goods.

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