



Public Borrowing in Jordan: Does it Crowd-Out Bank Credit to the Private Sector?

Some Macro and Micro Analysis

February 2018



منتدى الاستراتيجيات الأردني
JORDAN STRATEGY FORUM



منتدى الاستراتيجيات الأردني JORDAN STRATEGY FORUM

The Jordan Strategy Forum (JSF) is a not-for-profit organization, which represents a group of Jordanian private sector companies that are active in corporate and social responsibility (CSR) and in promoting Jordan's economic growth. JSF's members are active private sector institutions, who demonstrate a genuine will to be part of a dialogue on economic and social issues that concern Jordanian citizens. The Jordan Strategy Forum promotes a strong Jordanian private sector that is profitable, employs Jordanians, pays taxes and supports comprehensive economic growth in Jordan.

The JSF also offers a rare opportunity and space for the private sector to have evidence-based debate with the public sector and decision-makers with the aim to increase awareness, strengthening the future of the Jordanian economy and applying best practices.

For more information about the Jordan Strategy Forum, please visit our website at www.jsf.org or contact us via email at info@jsf.org. Please visit our Facebook page at [Facebook.com/JordanStrategyForumJSF](https://www.facebook.com/JordanStrategyForumJSF) or our Twitter account [@JSFJordan](https://twitter.com/JSFJordan) for continuous updates about Jordan Strategy Forum.

#JSFJo

@JSFJordan

/JordanStrategyForumJSF

Jordan Strategy Forum

Amman, Jordan

T: +962 6 566 6476

F: +962 6 566 6376

Contents

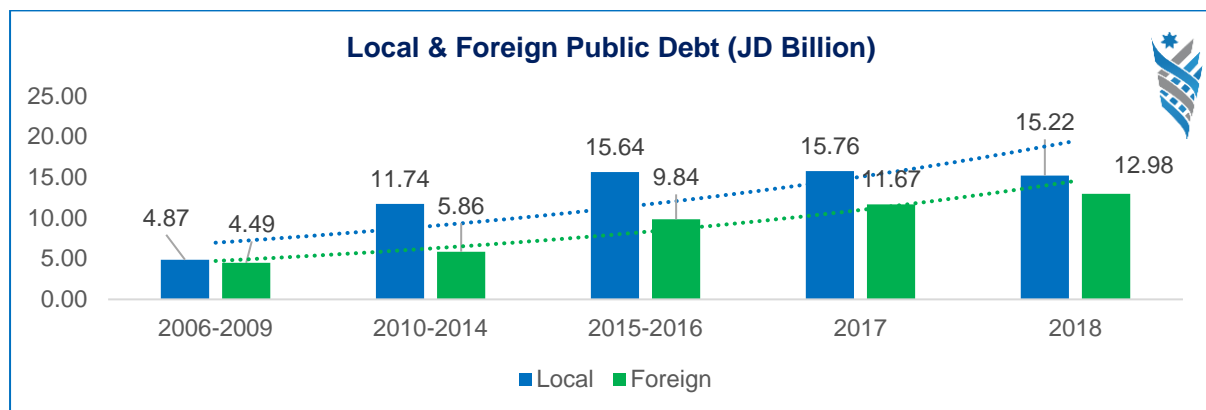
1. Executive Summary	4
2. Introduction	7
4. Public Borrowing in Jordan: The Context	8
5. The Data, Methodology, and Empirical Results	11
6. Summary and Policy Implications.....	14
7. Recommendations.....	14
Appendix A	16

I. Executive Summary

The impact of government budgetary borrowing on credit to the private sector has always been an important subject, especially in developing countries. The basis of this argument is as follows: Public borrowing can reduce the availability of loanable funds, and hence crowds out the private sector from the credit market. On the other hand, when banks' investments in government securities increase, their attitude to risk might change, and hence their desire to lend more to relatively risky avenues might increase. These arguments imply that public borrowing might substitute

or complement private sector credit. The issue is country-specific.

It is known that Jordan faces a myriad of socio-economic challenges. These include weak real economic growth, and uncomfortably high male and female unemployment rates. However, an equally serious challenge is the recent increase in total debt. By the end of 2018, local and foreign public debts are expected to reach JD 15.22 and JD 12.98 billion respectively.



Relative to the local part of public debt, it is important to examine the crowding out effect in the Jordanian context. In this policy paper, the JSF examines the impact of local public debt on bank credit to the private sector at the macro and micro levels.

At the macro level, utilizing quarterly data, the paper scrutinizes the impact of local public debt (and budget deficit) on bank credit to the private sector during the period 2004-2017.

At the micro level, utilizing annual data from the financial statements of all 13 licensed Jordanian commercial banks (2009-2016), the paper examines the impact of their investments in government securities (lending) on their credit behavior.

Based on the collected data and statistical analyses, the results are not that encouraging.

These are outlined below in the form of **“observations”**, and **“results”**.

1. During the period 2010 – 2017, the budget deficit to GDP ratio fluctuated between a minimum of 5.5% (2017) and 12.7% (2011). The 2018 General Budget Law indicates that the deficit for 2018 will be equivalent to 4.1% of GDP.
2. The compounding annual budget deficits have led to a sizeable increase in public debt. Total public debt has increased from JD 8.15 billion in 2006 to JD 17.61 billion in 2012, and to a predicted JD 28.20 billion by the end on 2018.
3. The local component of public debt is marginally higher than foreign debt. By the end of 2018, local debt is expected to be equal to 54% of total public debt.

4. Total public debt has increased from 67% of GDP in 2010 to 93.5% by the end of 2018. This indicates that public debt has been increasing at a faster rate than GDP.
5. According to the 2018 Budget Law, interest payments on local debt and on foreign debt are expected to be equivalent to about 8.74% and 3.16% of total public spending. The fact that 54% of public debt is local, these interest payments imply that local debt is more costly than foreign debt. However, foreign borrowing is paid in foreign currencies.
6. According to the 2018 Budget Law, interest payments on local debt and on foreign debt are expected to be equivalent to about 68.5% and 24.8% of public capital spending.
7. Jordanian banks hold a large proportion of their assets in the form of government securities. During the period 2009-2016, the mean ratio of banks' holdings of government securities to their total assets was equal to 22%.
8. Jordanian banks' capital to risk weighted assets is relatively high. The mean annual ratio of this measure (2014-2016) is equal to 18.8% and this is higher than in, for example, Switzerland (16.1%), Kuwait (17.7%), Saudi Arabia (16.6%), and Morocco (13.9%).
9. During the period 2009-2016, Jordanian banks, credit to the private sector was equal to 49.9% of their total assets.
10. During the period 2009-2016, a large proportion of Jordanian banks' total credit was allocated to the corporate sector (46.6% of the total).
11. During the period 2009-2016, credit to the retail sector constituted 19.2% of total credit.
12. The impact of local public debt on private sector credit is negative (-0.256). When public debt increases, bank credit to the private sector decreases. There is a crowding out effect.
13. The impact of budget deficit on private sector credit is negative (-0.169). When the deficit in the budget increases, bank credit decreases. There is a crowding-out effect.
14. Over time, local public debt increases in importance in explaining the variability in bank credit to the private sector. Thus, sustained local public borrowing has a growing negative impact on credit to the private sector over time. The same stands for the budget deficit.
15. Banks that invest a larger percentage of their assets in government securities tend to maintain a lower ratio of total credit to total assets.
16. Banks that invest a larger percentage of their assets in government securities tend to maintain a lower ratio of credit to the corporate sector to total credit.
17. The above-mentioned results clearly indicate that the crowding out effect is active. Indeed, our micro level results complement the macro level results.

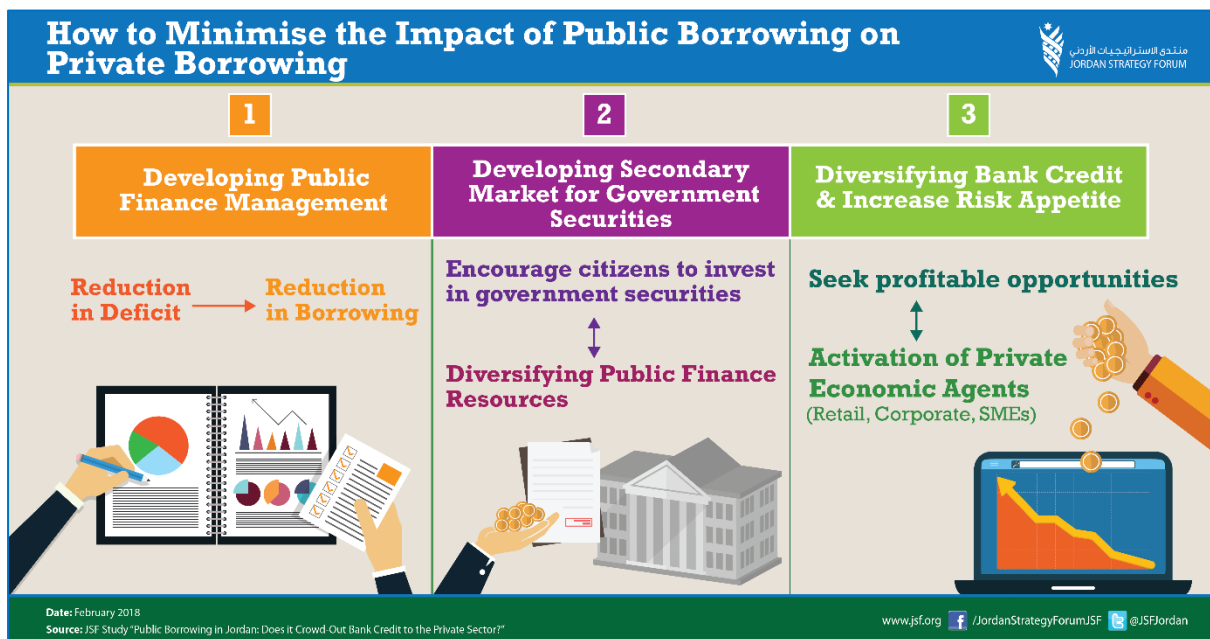
Based on the above-mentioned observations and results, the JSF recommends the followings:

First, public debt and budget deficit negatively affect the amount of bank credit to the private sector. The government must re-examine its public finances and come up with some remedial measures. Naturally, these measures must consider both the Public Spending Aspect and the Public Revenues Aspect.

Second, the government (as well as banks) must look into developing the secondary market for government securities. This would reduce the banks' holdings of these securities. Such a market would be an instrumental source of public finance from the private sector in general, and not from, mostly banks.

Third, banks with higher proportions of their assets in the form of government securities lend less (total credit), and also lend less to the corporate sector. This is probably due to one reason. Lending to the retail end of the market (19.2% of total lending), real estate market (13.9% of total credit), and the SMEs sector (9.3% of total credit) exposes banks to lower risk levels than lending to the corporate sector (46.6% of total credit). After all, as the total numbers of borrowers in these three sectors are large, they provide banks with not only diversification benefits, but also with

collateral. The corporate sector is different. They are large and less in number, and hence riskier to lend to. Also, it is easier for banks to change their lending policy towards the corporate sector. This is why, our results imply that investment in government securities encourages banks to reduce the riskier part of their lending. This probably explains the relatively high capital to risk-weighted assets. The recommendation is to encourage banks increase their “risk appetite” and seek profitable opportunities and hence lend more.



2. Introduction

The impact of public borrowing on private sector credit has always been an issue that attracts the attention of academic researchers, think tanks, international organizations, and policy-makers. This literature identifies two arguments through which public debt might affect private credit.

First, public borrowing can reduce the level of funds available for the private sector, and hence leads to an increase in interest rates and in crowding out private investments (**price channel**). In Jordan, this argument is not relevant as the JD is pegged to the Dollar, and hence interest rates in Jordan follow interest rates on the Dollar.

Second, public borrowing can lead to crowding out private sector credit due to the resultant reduced availability of the loanable funds (**quantity channel**).

When governments, especially in developing countries, borrow from local banks, policy-makers need to know whether or not this borrowing reduces credit to the private sector. **At the theoretical level**, this relationship is negative. More government borrowing means less credit to the private sector. However, and in reality, this relationship (negative) depends on the response of local banks. Banks can respond to higher public borrowing through various channels. These are outlined below.

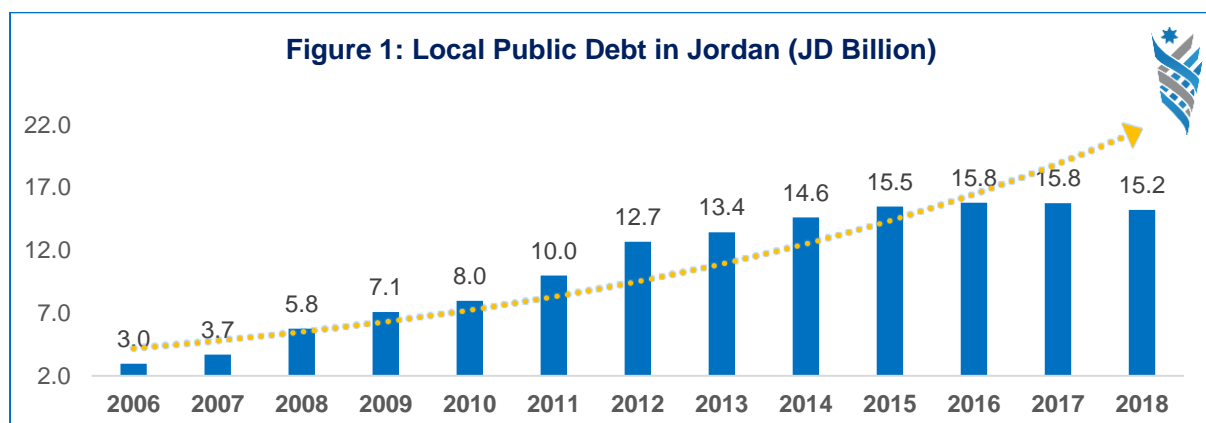
1. Lending to the government might increase the **“risk appetite”** of banks. Access to

“safe” government securities allows banks to increase their risk levels and hence increase their lending to private sector. This argument, if true, may dampen the crowding out effect of government borrowing and even result in crowding in.

2. Government borrowing allows banks to earn massive risk-free or low-risk returns. These returns might discourage banks to seek risky and profitable lending opportunities to the private sector.
3. Government borrowing may not crowd out credit to the private sector if banks have excess liquidity.

Within the context of the impact of public debt on private sector credit, it is useful to note that the international evidence is ambiguous. While some studies show that an increase in public debt limits the amount of private sector credit, others show the opposite. In the end, whether government borrowing substitutes or complements private sector credit is an empirical issue!

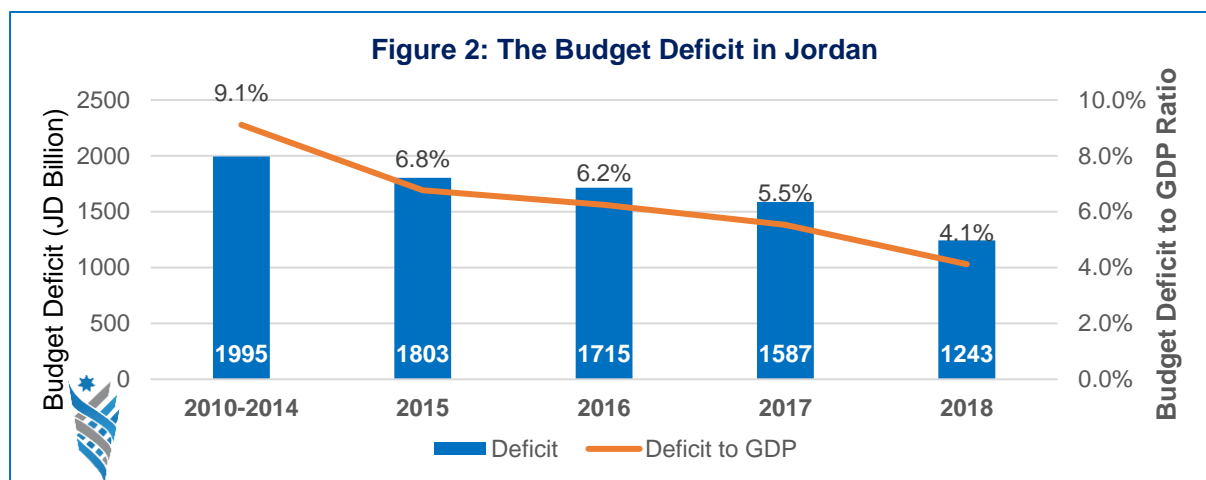
Relative to the above-mentioned arguments, it would be useful to examine the issue of the crowding out effect in the Jordanian context. Naturally, the reason for this is the recent increases in the Jordanian government’s borrowing from local banks (Figure 1).



3. Public Borrowing in Jordan: The Context

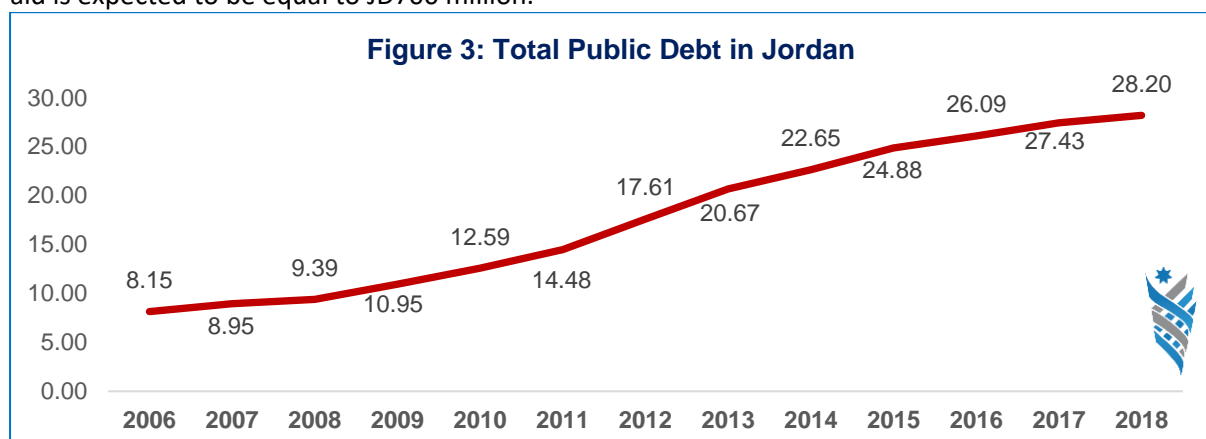
It is common knowledge that a myriad of socio-economic challenges face Jordan. At the forefront of these challenges are weak economic growth, and uncomfortably high male and female unemployment rates. Equally serious, is the fact that successive Jordanian governments have had to operate under consistent budget deficits and rising debt levels.

During the period 2010 – 2017, the budget deficit to GDP ratio fluctuated between a minimum of 5.5% (2017) and 12.7% (2011). Based on the 2018 General Budget Law, the expected deficit for 2018 is equivalent to 4.1% of GDP (Figure 2).



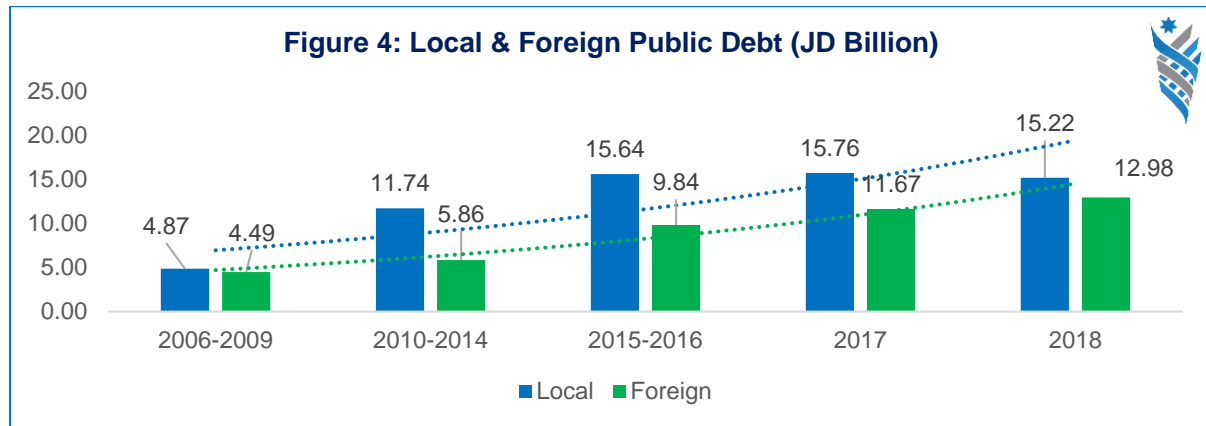
Relative to the budget deficit behavior during the last few years, it is important to note that Jordan has been receiving sizeable amounts of aid from the international community. Naturally, these cash flows have reduced the extent of the deficit. If one looks at aid as a component of public revenues, the 2018 Budget Law expects the budget deficit to be equivalent to 1.8% of GDP instead of 4.1% as aid is expected to be equal to JD700 million.

The compounding annual budget deficits have led to a sizeable increase in public debt. Total public debt has increased from JD 8.15 billion in 2006 to JD 17.61 billion in 2012, and to a predicted JD 28.20 billion by the end on 2018 (Figure 3).



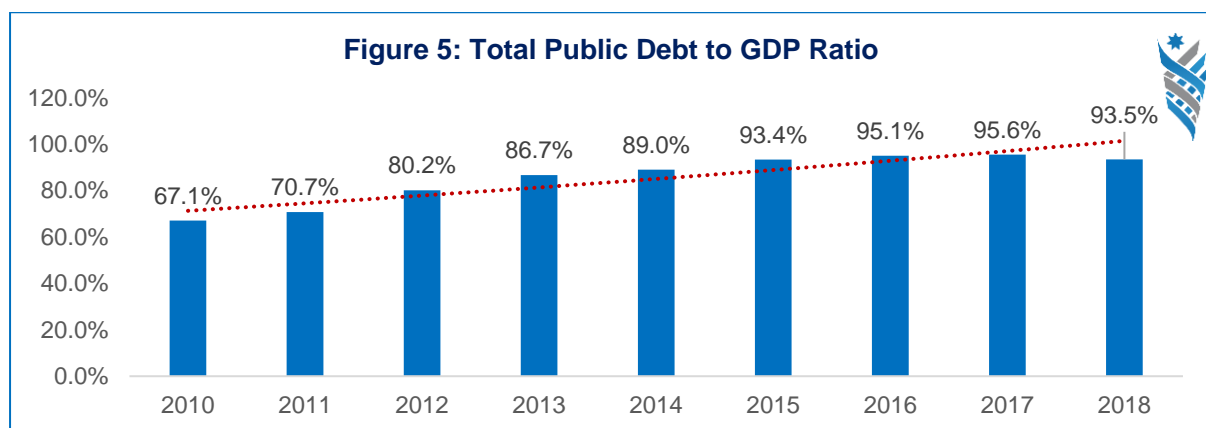
Like in many other countries, public debt in Jordan is composed of local and foreign debt. Again, a look at Figure 4 reveals the fact that while both local and foreign public borrowing

have been increasing, it is the local component which is marginally higher. **The 2018 local debt (JD 15.22 billion) account for about 54% of total public debt. The rest (46%) is foreign.**



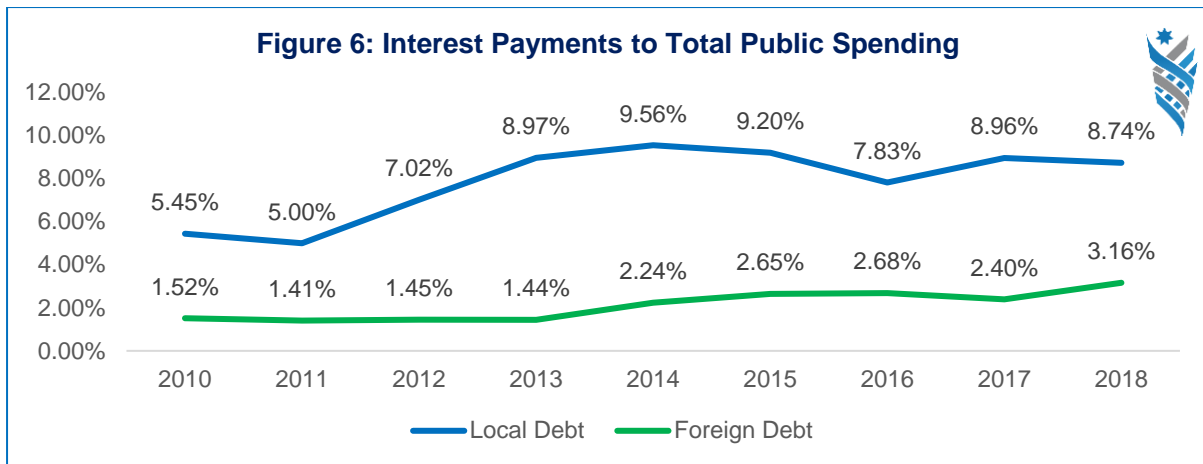
The recent behavior of total public debt is important to consider not only because of its increase in amount, but also relative to the size of the national economy (GDP).

Total public debt has increased from 67% in 2010 to 93.5% by the end of 2018 (Figure 5). This indicates that public debt has been increasing at a much faster rate than GDP.



As expected, the increase in public debt has led to significant increases in interest payments (Figure 6). According to the 2018 Budget Law, interest payments on local debt are expected to be equivalent to 8.74% of total public spending. Similarly, interest payments on foreign debt are expected to be equivalent to 3.16% of total public spending. The fact that

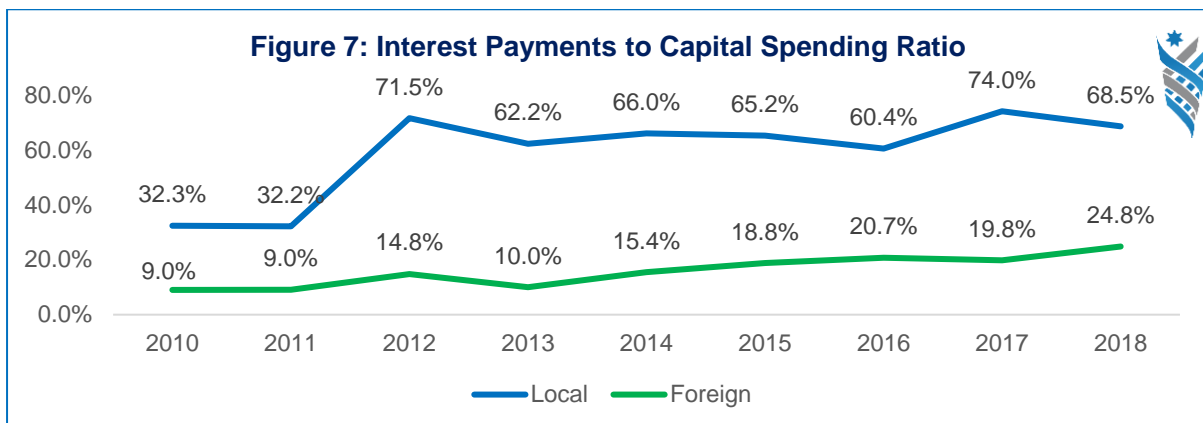
54% of public debt is local, these ratios imply that **local debt is more costly than foreign debt. However, one should note here that foreign borrowing, as opposed to local borrowing, necessitates paying back in foreign currencies, and hence higher risk (foreign exchange).**



One can argue that interest payments on total public debt is high. However, what is more disappointing is the fact that servicing local and foreign debts almost matches total capital spending (Figure 7).

government is expected to pay in interest 24.8% of what it plans to spend on capital investment projects. These ratios are high and deprive the economy from much needed capital investment (infrastructure) projects.

On local debt, the government is expected to pay in interest 68.5% of what it intends to spend on capital investment. Similarly, the



Relative to the local public debt, it is important to note that most of it is either treasury bills or treasury bonds. In addition, most of these issued government securities are bought by licensed banks in Jordan. During the period 2010-2016, the mean value of the ratio of government securities to the total assets of banks was equal to 22%. For one bank, this proportion was equal to 37%! In addition, it is

to be noted that trading in the issued government securities on the secondary market is almost zero!

Based on the above-mentioned observations, it would be most useful, as mentioned in the introduction, to investigate the crowding out issue in the Jordanian scene.

4. The Data, Methodology, and Empirical Results

To examine whether or not the crowding out effect does exist in Jordan, our analysis uses two sets of data. **The first set** utilizes quarterly data from the period 2004-2017. **The second set** uses annual bank-level data from the period 2009-2016. In other words, this second set of data uses data from the financial statements of all 13 licensed commercial banks in Jordan.

This policy paper examines the economics of public finance in terms of three issues.

1. **The impact of local public debt on local credit to the private sector.**
2. **The impact of budget deficit on local credit to the private sector.**
3. **The impact of Jordanian commercial banks' investments in government securities on their lending / credit activity.**

As far as the used methodologies and detailed results are concerned, and for the technical reader, they are outlined in **Appendix A** at the end of the paper.

As far as the results of our analyses are concerned, they are as follows:

First, the impact of local public debt on private sector credit is negative (-0.256). When local public debt increases, bank credit to the private sector decreases. There is a crowding

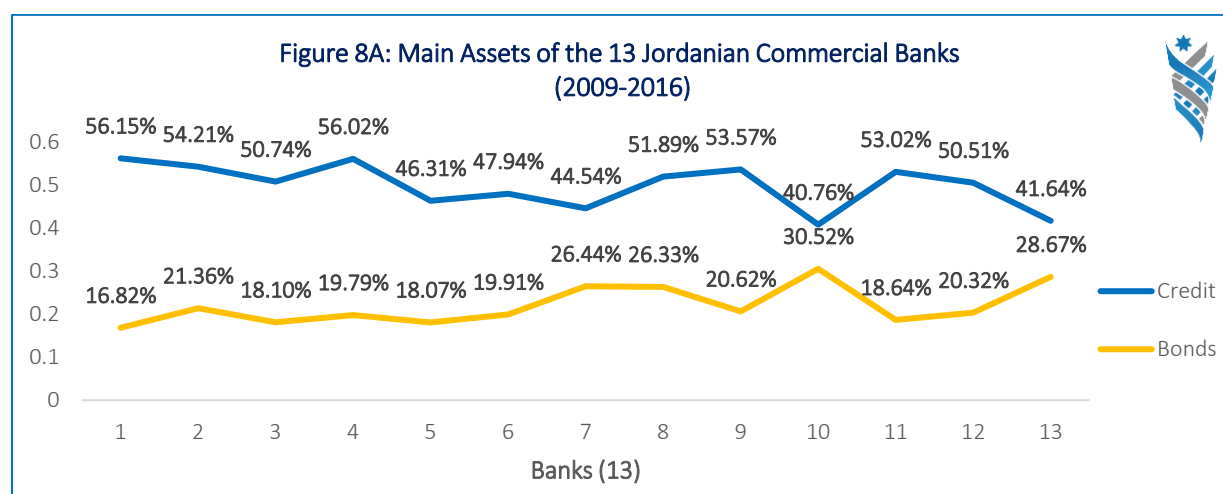
out effect. In the short run, public debt also reduces credit to the private sector.

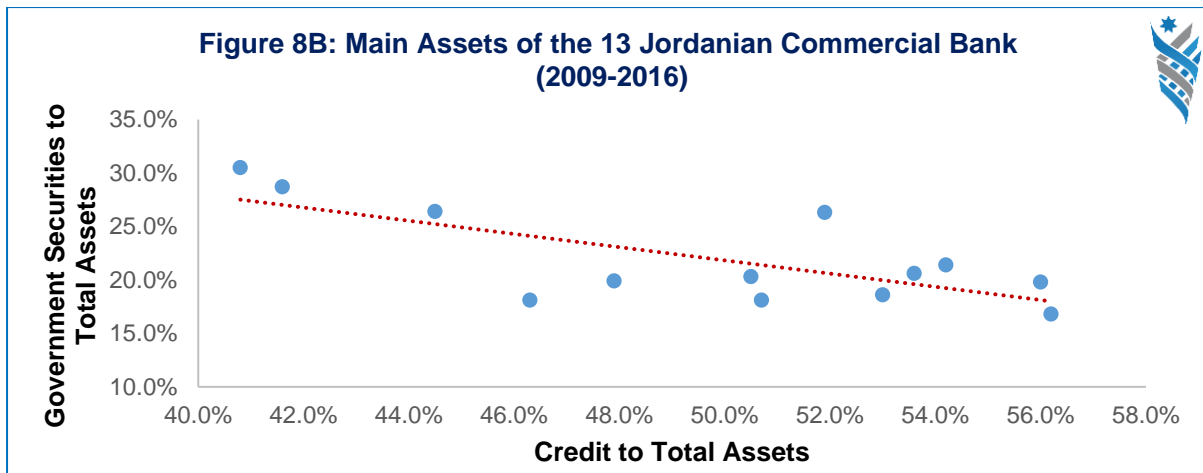
Second, the impact of the budget deficit on private sector credit is negative (-0.169). When the budget deficit increases, bank credit to the private sector decreases in both the long-run and short-run. There is a crowding-out effect. In the short run, the budget deficit also reduces credit to the private sector.

Third, there is a stable (negative) relationship between local public debt and credit to the private sector. Also, such a relationship exists between the budget deficit and credit to the private sector.

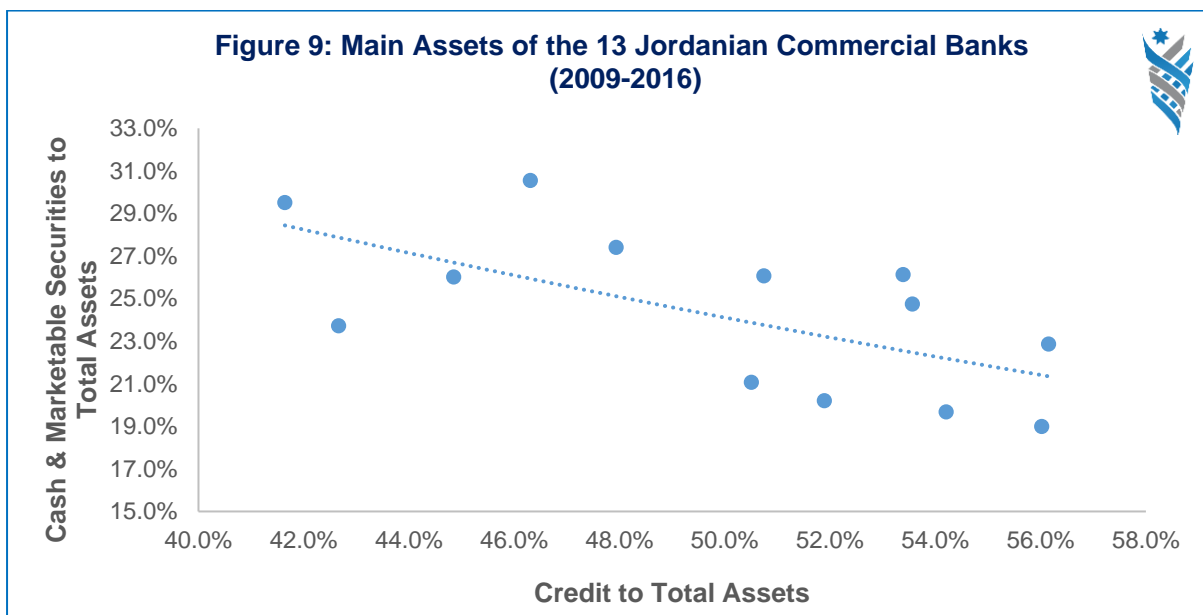
Fourth, over time, local public debt increases in importance in explaining the variability (change) in bank credit to the private sector. Sustained local public borrowing has a growing impact (negative) on credit to the private sector over time. The same stands for the budget deficit.

Fifth, banks that invest a larger percentage of their assets in government securities than others, tend to lend less to the private sector. This is clearly seen in Figure 8 where each point represents every bank's investment in government securities to total assets (during 2009-2016) and credit to total assets.





Sixth, banks that keep a larger percentage of their assets in cash and marketable securities tend to lend less to the private sector. Again, this is clearly seen in Figure 9.



The above-mentioned results clearly indicate that the crowding out effect is active. Indeed, the micro or bank-level results complement the macro level results.

The fact that banks with higher proportions of their assets in the form of government securities lend less (total credit), and also lend less to the corporate sector is due to one main reason. Lending to the retail end of the market (19.2% of total lending), real estate market (13.9% of total credit), and the SMEs sector (9.3% of total credit) exposes banks to lower risk levels than lending to the corporate sector (46.6% of total credit). After all, as the

total numbers of borrowers in these three sectors are large, they provide banks with not only diversification benefits, but also with collateral. The corporate sector is different. They are less in number, and hence easier to change bank credit policy towards them. This is why, our results imply that investment in government securities encourages banks to reduce the riskier part of their lending. Within this context, it is interesting to note that the mean annual ratio of Jordanian banks' capital to risk-weighted assets (2014-2016) are higher than that in many countries (Figures 10 and 11).

Figure 10: International Banks' Capital to Risk-Weighted Assets (2014-2016)

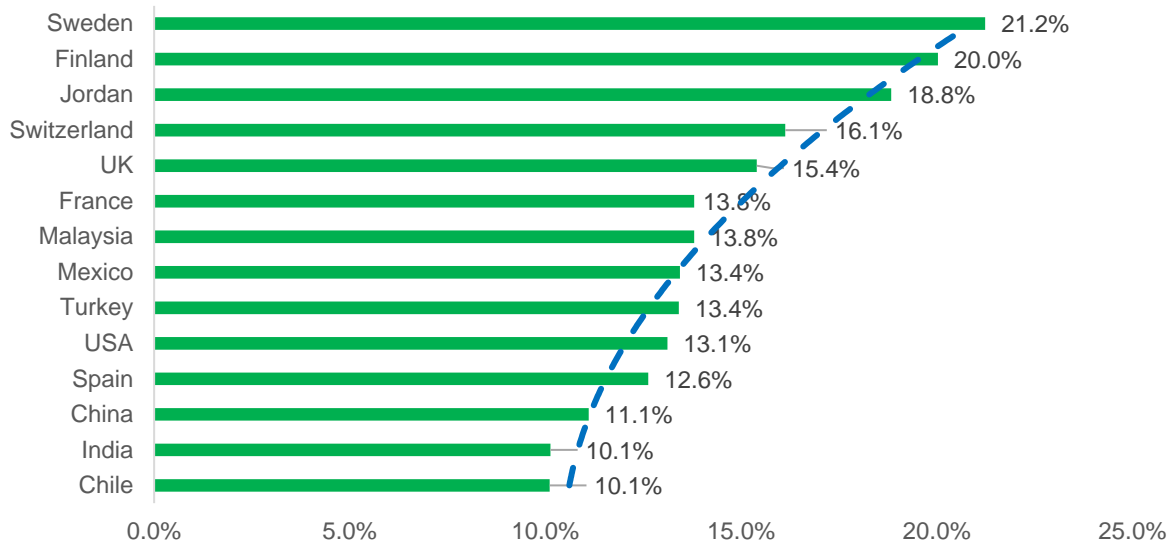
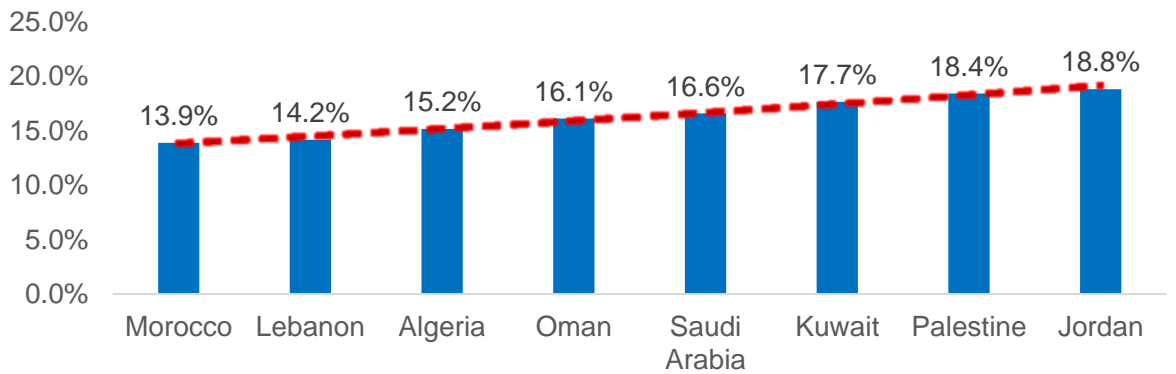


Figure 11: Arab Banks' Capital to Risk-Weighted Assets (2014-2016)



5. Summary and Policy Implications

This policy paper, issued by the JSF, scrutinized the issue of the Crowding Out Effect in Jordan.

The macro level analysis, utilized quarterly data for the period 2004-2017 to examine the impact of local public debt (and budget deficit) on bank credit to the private sector.

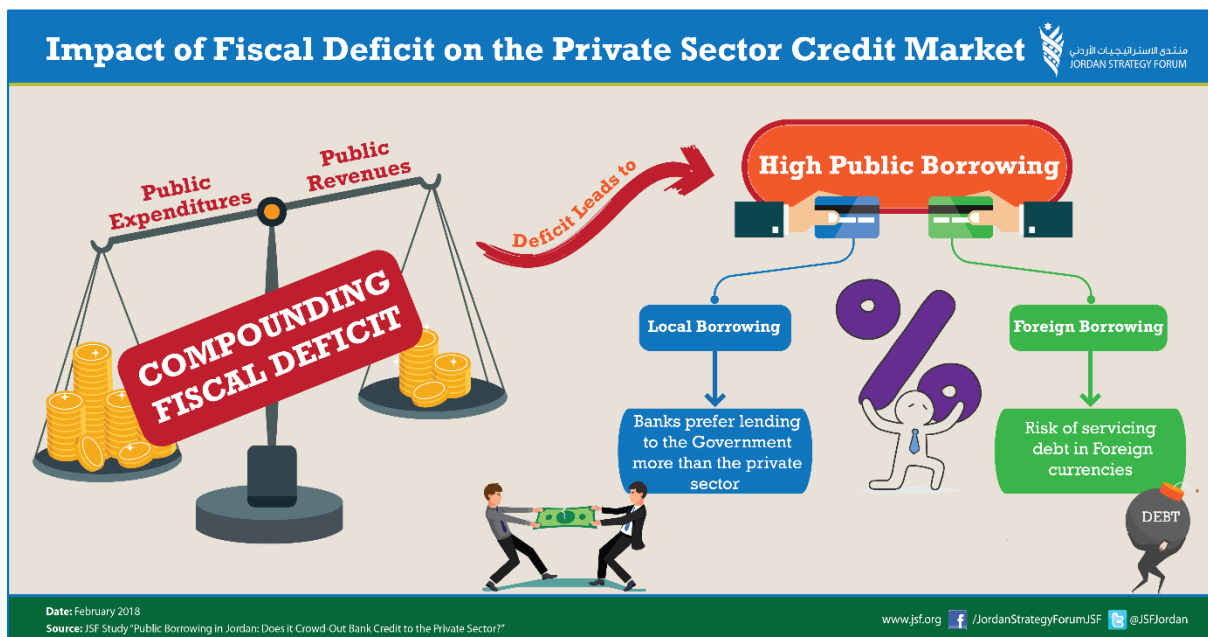
The micro level analysis, utilized annual data from the financial statements of all 13 Jordanian commercial banks for the period 2009-2016 to examine the impact of their investments in government securities (lending) on their credit behavior.

Based on our analyses, some of the main results are outlined below:

A. The compounding annual budget deficits have led to a sizeable increase in public debt (JD 28.20 billion by end of 2018). The local component of this debt (54%) is marginally higher than the foreign debt (46%).

B. Interest payments on local debt and foreign debt are equivalent to 8.74% and 3.16% of total public spending. The fact that 54% of public debt is local, these interest payments imply that local debt is more costly than foreign debt. However, foreign borrowing is paid in foreign currencies.

C. There is a crowding out effect at the macro level. Local public debt (and budget deficit) reduces credit to the private sector. Also, there is a crowding out effect at the micro level. Bank lending to the government (in the form of financial securities / bonds) reduces their total credit and their credit to the corporate sector.

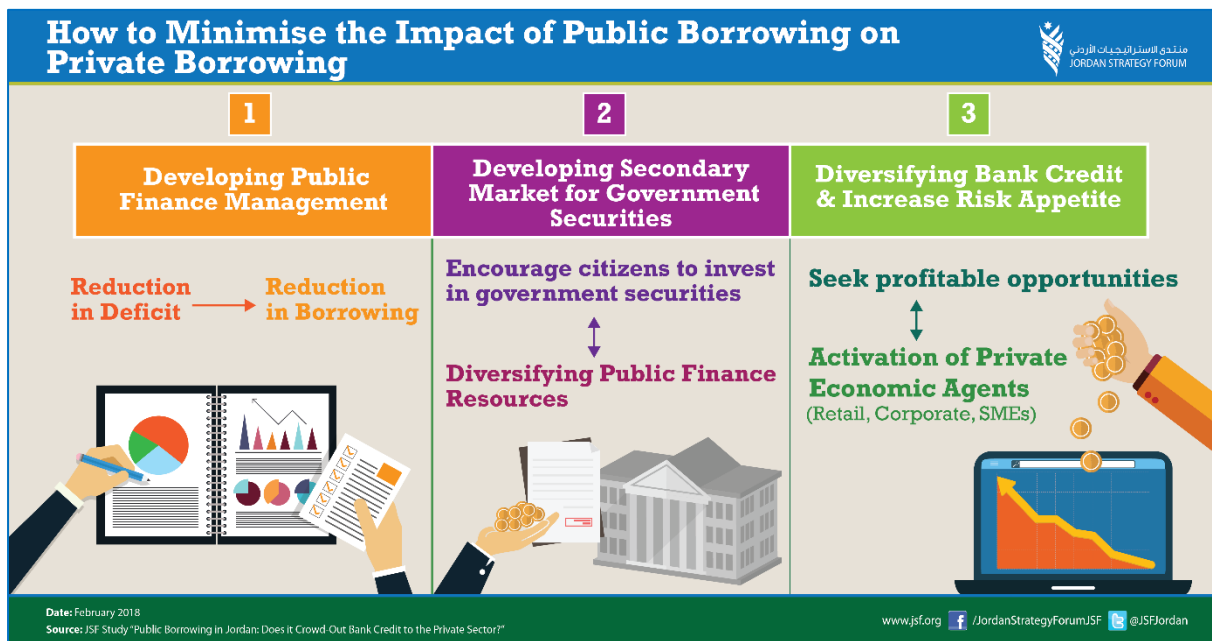


6. Recommendations

First, public debt and budget deficit negatively affect the amount of bank credit to the private sector. The government must re-examine its public finances and come up with some remedial measures. Naturally, these measures must consider both the Public Spending Aspect and the Public Revenues Aspect.

Second, the government (as well as banks) must look into developing the secondary market for government securities. This would reduce banks' holdings of these securities. Such a market would be an instrumental source of public finance from the private sector in general, and not from, mostly banks.

Third, banks with higher proportions of their assets in the form of government securities lend less (total credit), and also lend less to the corporate sector. This is why, our results imply that investment in government securities encourages banks to reduce the riskier part of their lending and that is the corporate sector. This probably explains the relatively high capital to risk-weighted assets in the Jordanian banking sector. The recommendation is to encourage banks increase their "risk appetite" and seek profitable opportunities and hence lend more.



Appendix A

The first set of data uses quarterly data during the period 2004-2017. The basic models specifying public debt and private credit are expressed as follows:

$$PCredit_t = \alpha_0 + \beta_1 LDebt_t + \varepsilon_t$$

$$PCredit_t = \alpha_0 + \beta_1 BDeficit_t + \varepsilon_t$$

where PCredit is credit to the private sector to GDP ratio, LDebt is public (local) borrowing to GDP ratio, and BDeficit is budget deficit to GDP ratio. The subscript t is for the time period and ε is the error term.

The focus of this analysis is on the parameter β . If crowding out of private sector credit is present, the term β will have a negative sign ($\beta < 0$) in both expressions. In such an exercise, the usual techniques are applied and these include, stationarity test, co-integration, long and short run relationship, and variance decomposition analysis.

The second set of data uses bank-level data during the period 2010-2016. From the financial statements of the 13 licensed Jordanian commercial banks, a number of variables are collected to estimate the following model:

$$PCredit_{i,t} = \beta_1 GovS_{i,t} + \beta_2 Size_{i,t} + \beta_3 LLP_{i,t} + \beta_4 Deposit_{i,t} + \beta_5 Cash_{i,t} + \varepsilon_{i,t}$$

where PCredit is bank credit to total assets, GovS is bank holdings of government securities to total assets, Size is the natural logarithm of bank assets, LLP is loan loss provisions to total credit, deposit is bank deposits to total assets, and cash is cash holdings to total assets. Finally, the error term is denoted by the expression ε . In such an exercise, all relevant statistical techniques are applied and these include pooled OLS estimation, panel-data analysis (Fixed-Effect), and Generalized Methods of Moment (GMM).

Table 1: Local Debt and Bank Credit to Private Sector to GDP Ratio (1st Quarter 2014 - 4th Quarter 2017)

	Local Public Debt	Budget Deficit	Credit to Private Sector
Mean	0.414	-0.048	0.709
Median	0.419	-0.044	0.690
Maximum	0.605	0.084	0.857
Minimum	0.211	-0.224	0.631
Standard Deviation	0.134	0.062	0.057

Table 2: Augmented Dickey-Fuller Unit Root Test

Variable	Level	First-Difference
Local Public Debt	1.217	-1.968*
Budget Deficit	-0.804	12.845*
Bank Credit to Private Sector	-0.202	-2.067*

* Implies significance at the 99 percent confidence level.

TABLE 3: Johansen Multivariate Co-Integration Test (Private Credit & Local Debt)

Hypothesized No. of CE(s)	Trace Statistic	Max-Eigen Statistic
None*	19.372*	17.250*
At most 1	2.122	2.122

* Implies significance at the 99 percent level.

TABLE 4: Johansen Multivariate Co-Integration Test (Private Credit & Budget Deficit)

Hypothesized No. of CE(s)	Trace Statistic	Max-Eigen Statistic
None*	34.522*	30.013*
At most 1	4.509	4.509

* Implies significance at the 99 percent level.

TABLE 5: Long Run Relationship Private Credit & Local Debt

Variable	Coefficient
Local Debt	-0.256*

TABLE 6: Long Run Relationship Private Credit & Budget Deficit

Variable	Coefficient
Budget Deficit	-0.169*

TABLE 7: Estimates of VEC Model (Private Credit & Local Debt)

Variable	Coefficient	Std. Error	t-statistic
λe_{t-1}	-0.334	0.109	-3.056*
Δ local debt(-1)	1.142	0.265	4.298*
Δ local debt(-2)	0.547	0.205	2.660*
Δ credit to private(-1)	0.185	0.168	1.096*
Δ credit to private(-2)	0.103	0.142	0.721
Adjusted R-Squared	0.790		
F-Statistic	29.937		

TABLE 8: Estimates of VEC Model (Private Credit & Budget Deficit)

Variable	Coefficient	Std. Error	t-statistic
λe_{t-1}	-0.142	0.075	-1.896*
Δ budget deficit(-1)	-0.558	0.128	-4.341*
Δ budget deficit(-2)	-0.251	0.072	-3.486*

Δ credit to private(-1)	-0.301	0.120	-2.501*
Δ credit to private(-2)	-0.283	0.129	-2.195*
Adjusted R-Squared	0.768		
F-Statistic	26.472		

TABLE 9: Variance Decomposition of Bank Credit to Private Sector

Period	Bank Credit	Local Debt
1	100.000	0.000
2	83.011	16.989
3	74.333	25.666
4	69.972	30.027
5	74.190	25.809
6	71.591	28.409
7	66.593	33.406
8	63.595	36.404
9	64.291	35.708
10	63.775	36.224

TABLE 10: Variance Decomposition of Bank Credit to Private Sector

Period	Private Credit	Budget Deficit
1	100.000	0.000
2	62.824	37.176
3	62.123	37.876
4	66.003	33.996
5	70.560	29.439
6	61.064	38.936
7	61.699	38.300
8	63.107	36.892
9	65.499	34.500
10	61.756	38.243

Table 11: Granger Causality Test: (Private Credit & Local Debt)

	F-Statistic	Probability
Local debt does not Granger cause private credit	5.284	0.009
Private credit does not Granger cause local debt	2.210	0.122

Table 12: Granger Causality Test: (Private Credit & Local Debt)

	F-Statistic	Probability
Budget deficit does not Granger cause private credit	13.655	0.000
Private credit does not Granger cause budget deficit	2.871	0.067

Table 13: Descriptive Statistics: Bank-level Data (2009-2016)

Government securities stands for bank's holdings of government securities to total assets. Corporate lending, real estate lending, SME lending, and retail lending are credit to these sectors to total credit.

Variable	Mean	Median	Maximum	Minimum	Std. Deviation
Government Securities	0.2199	0.2148	0.3662	0.0222	0.0684
Total Credit	0.4992	0.4921	0.6295	0.3201	0.0700
Corporate Lending	0.4656	0.4502	0.8325	0.1185	0.1739
Real Estate Lending	0.1385	0.1432	0.3034	0.0145	0.0580
SMEs Lending	0.0928	0.0859	0.2968	0	0.0581
Retail Banking	0.1917	0.1694	0.5428	0.0108	0.1350

Table 14: Determinants of Bank Credit / Pooled Regression (2009-2016)

Bank Size is the natural logarithm of bank assets, Government Securities is bank holdings of government securities to total assets, Deposits is bank deposits to total assets, and cash is cash holdings to total assets, Cash Balance is cash and marketable securities to total assets, and Loan Loss Provisions is loan loss provisions to total credit.

	Dependent Variable				
	Total Credit	Corporate	Real Estate	SMEs	Retail
Constant	0.9938*	1.7160	0.4068*	0.2329*	0.9476*
Bank Size	-0.0109	-0.0321*	-0.0220*	-0.0171*	-0.0430*
Government Securities	-0.7223*	-0.9932*	0.3529*	0.1241*	0.2829
Deposits	0.0953	-0.1683	0.0873*	0.2012*	0.0078
Cash Balance	-0.6862*	-1.0299*	0.2814*	0.2805*	0.4094
Loan Loss Provisions	0.0003	0.0128*	-0.0009	-0.0027*	-0.0053
R²	0.717	0.341	0.329	0.173	0.126

* Implies significance at the 99% confidence level.

Table 14: Determinants of Bank Credit / Fixed-Effect Regression (2009-2016)

	Dependent Variable				
	Total Credit	Corporate	Real Estate	SMEs	Retail
Constant	2.6281*	1.3667*	1.3137*	-1.2533*	2.8480*
Bank Size	-0.0904*	-0.0150	-0.0562*	0.0638*	-0.1247*
Government Securities	-0.6539*	-0.9857*	0.1880*	0.1173*	0.1455
Deposits	0.1949	-0.0788	-0.1052	-0.1069	-0.0878*
Cash Balance	-0.7656*	-1.3541*	0.2243*	0.1254	0.1176
Loan Loss Provisions	0.0020	0.0129*	-0.0025	0.0001	0.0009
R²	0.842	0.401	0.764	0.745	0.953

* Implies significance at the 99% confidence level.

Table 14: Determinants of Bank Credit / GMM (2009-2016)

	Dependent Variable				
	Total Credit	Corporate	Real Estate	SMEs	Retail
Lagged Bank Credit	0.265*	0.071	0.171	-0.151	0.939*
Bank Size	-0.073	-0.035	-0.026	0.117*	-0.014
Government Securities	-0.695*	-0.788*	0.109	0.174	0.181
Deposits	0.484*	0.715	0.025	-0.270	0.135
Cash Balance	-0.589*	-0.609	0.287	0.141	0.152
Loan Loss Provisions	0.002	0.002	-0.994*	-0.001	0.001
* Implies significance at the 99% confidence level.					



منتدى الاستراتيجيات الأردني
JORDAN STRATEGY FORUM

Tel: +962 6566 6476

Fax: +962 6566 6376

info@jsf.org

www.jsf.org

 /JordanStrategyForumJSF  @JSFJordan