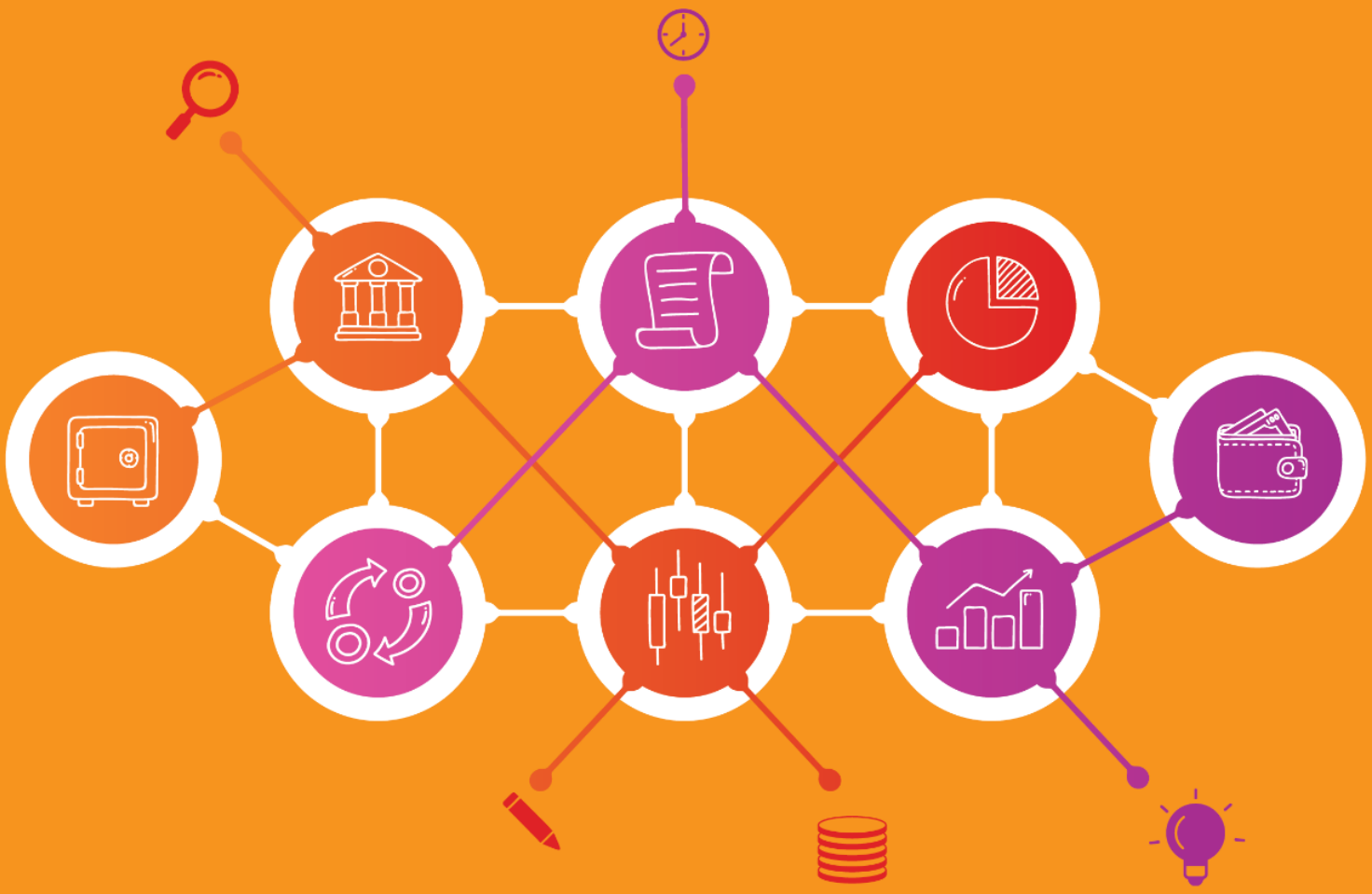

Licensed Banks in Jordan & The Private Sector

Nature of The Relationship & its Importance

September 2018

منتدى الاستراتيجيات الأردني
JORDAN STRATEGY FORUM

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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 or our Twitter account @JSFJordan for continuous updates aboutJordan Strategy Forum.

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1.Executive Summary

The economic importance of financial systems must not be underestimated. "Robust banking systems and capital markets efficiently flow funds toward their most productive uses, help governments raise investment capital, maintain financial safety nets and speed payments securely across borders" (World Bank). This is why, not only banks have been established all over the world, but also stock markets already exist in more than 165 countries.

In Jordan, the Amman Securities Exchange (ASE) was established back in 1978. In common with all markets, one of the implicit objectives of the ASE is to encourage listed companies raise additional funds through the issuance of financial securities and invest them in real assets. This process is critical in the creation of employment opportunities, and in promoting real economic growth.

Within the context of the economic importance of capital markets, two issues that still attract the interest of various stakeholders are **(1)** the capital structure of listed companies and **(2)** their investment behavior in fixed assets. This interest is due to the fact that the way companies are financed, affect not only their cost of capital, but also their investment behavior. In addition, more employment and higher real economic growth are the result of, among others, corporate investments in fixed assets.

In this policy paper, the JSF provides answers to three questions:

First, what is the capital structure **(amount of debt and equity employed by a firm to fund its operations and finance its assets)** of listed Jordanian service and industrial (non-financial) companies? Also, what explains these companies' capital structure?

Second, what is the investment behavior of listed Jordanian non-financial companies?

Third, what is the effect of bank borrowing (debt) on corporate investment patterns in Jordan?

Based on the analysis, some of the main conclusions are recommendations are outlined below.

Findings:

First, the overall mean ratio of total liabilities to total assets is equal to 34.5%. This ratio is low. It is lower than the 56% in China, 58% in Turkey, 53% in the UK, 49% in Cyprus, 61% in Austria 61% in Germany, and the 58% in 24 emerging economies (IMF, 2016).

Second, the overall mean ratio of total bank debt to total assets in Jordan is equal to 16.6%. This ratio is lower than the 61.7% ratio that exists in a group of eight European countries (OECD, 2017). In five European countries (Italy, Spain, Greece, Portugal, and Slovenia), the overall mean value of this ratio is equal to 67.4% (European Central Bank, 2017).

Third, the overall mean ratio of long-term bank debt to total assets in Jordan is equal to 4.9%. Again, this ratio is much lower than, for example, the 12.8% that exists in a group of eight European countries (OECD, 2017). In five European countries (Italy, Spain, Greece, Portugal, and Slovenia), the overall mean value of this ratio is equal to 22.8% (European Central Bank, 2017). Also, notwithstanding the fact that Jordanian companies have relatively low long-term debt to total assets, many of them have zero long-term debt!

Fourth, during the period 2007-2017, the median of the annual change in net fixed assets is equal to -2.2%. In addition, the mean value of this measure was consistently

negative in 2015 (-0.1%), 2016 (-1.1%), and in 2017 (-2.7%).

Fifth, the most significant factor that affects the capital structure of companies is return on assets. When profitability increases, total liabilities to total assets and total bank debt to total assets decrease.

Sixth, capital structure (bank loans to total assets) affects company investment. When bank debt to total assets increase, company investment increases. The elasticity of this relationship is equal to 0.64. This indicates that a 10% increase in bank debt to total assets results in a 6.4% increase in investment (fixed assets).

Policy Implications:

First, the issue of the capital structure of the Jordanian private sector, represented by the listed companies, and it implications to investment must remain a priority for all stakeholders.

Second, surveys of banks, and the companies themselves must be carried-out. The objective of such surveys is to know why leverage is relatively low. Is it due to the listed companies themselves not investing enough and not seeking banks debt (demand-led) or the management of banks being conservative in their lending policy (supply-led)?

Third, it is encouraging to report that companies with higher levels of banks debt invest more than others. This mutually beneficial relationship between listed companies (borrowers) and banks (lenders) must be enhanced.

Fourth, it is unfortunate to note that companies with higher-priced stocks (relative to book value) do not invest more than others. This indicates that these companies either do not have seek investment opportunities, or do not appreciate the importance of the market price of their stocks. After all, a company with much higher stock price than others would need to issue less shares to finance any capital investment project. Again, this issue needs investigating in terms of surveying Chief Financial Officers (CFOs) about their attitude towards this issue.

Finally, the absence of corporate bonds market in its primary and secondary aspects must be examined, and if possible, the necessary steps must be taken to establish it. After all, such a market would diversify the sources of finance, at least to the companies that need financing, and hence reduce their overall cost of capital.

2. Introduction

Stock markets (and banks) have always attracted the attention of academic researchers, think tanks, as well as international organizations. The reason behind this interest is the economic importance of having well-developed and efficient stock markets for economic growth and development. The following quotations could not be more expressive.

"Robust banking systems and capital markets efficiently flow funds toward their most productive uses, help governments raise investment capital, maintain financial safety nets and speed payments securely across borders" (World Bank).

"Capital markets are becoming essential to financing infrastructure such as roads, power plants, schools, hospitals and houses and to help manage unforeseeable risk" (World Bank).

"Resilient, transparent and smooth-functioning financial systems and capital markets contribute to financial stability, job growth and poverty alleviation" (World Bank).

Given the socio-economic implications of financial systems in general, and stock markets in particular, one should not be surprised to learn that since 1975, the total number of economies with at least one stock exchange has increased from 53 to 165 (de Sousa et al., 2016). This increase might be due to many reasons. However, one should not forget what companies enjoy from being listed on a stock exchange.

A. Being listed, a company gains exposure and this can help in marketing goods and services. Increased credibility and prestige may mean increased customers and revenues.
B. Being listed, a company is able to raise additional funds through the issuance of more stocks.
C. Listed companies can have additional leverage when they need loans from financial institutions (banks).

"The main reason companies decide to get listed, however, is to raise money - a lot of money - and spread the risk of ownership among a large group of shareholders".

Within the context of the economic importance of capital markets, two issues that still attract the attention of academia, think-tanks, private sector, stock exchanges, as well as international organizations are **(1)** the capital structure of listed companies and **(2)** their investment behavior in fixed assets.

Definition of Capital Structure:

Capital Structure refers to the amount of debt and equity employed by a firm to fund its operations and finance its assets. The structure is typically measured by either total liabilities to total assets or total debt to total assets.

Importance of Capital Structure:

1. Minimization of cost of capital

A sound capital structure reduces the overall cost of capital of any business enterprise. On average, cost of debt capital is lower than the cost of equity capital as the interest on debt is tax deductible.

2. Firm investment

Minimizing the cost of capital promotes businesses to invest.

3. Increase in value of the firm

A sound capital structure of a company helps to increase the market price of shares.

4. Maximization of return

A sound capital structure enables management to increase the profits of a company in the form of higher return to the equity shareholders (increase in earnings per share).

The ASE lists some of the major companies in the country. In addition to the 15 licensed banks, 20 insurance companies, 29 diversified and financial services companies, and 33 real estate companies, the ASE boasts a total of 48 service companies, and 50 industrial companies. These companies include some of the largest in the country in terms of assets, sales, and employment.

This policy paper examines the capital structure and investment behavior of listed Jordanian service and industrial companies during the period 2007-2017. The paper provides answers to three questions:

First, what is the capital structure of listed Jordanian service and industrial companies? Also, what explains these companies' capital structure?

Second, what is the investment behavior of listed Jordanian non-financial companies?

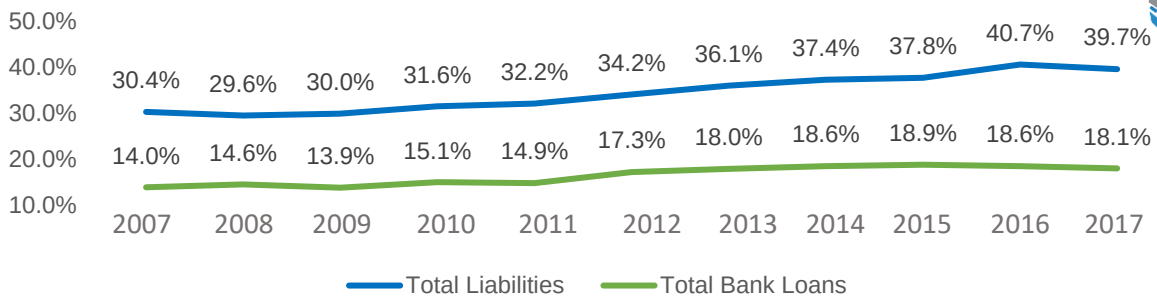
Third, what is the effect of bank borrowing on corporate investment patterns in Jordan?

Naturally, based on our analysis, a number of recommendations are expected to follow.

3. The Data, Methodology, & Empirical Results

The statistical analysis is based on a total of 76 listed service and industrial companies. The time period used is 2007-2017. The fact that the total number of these companies is 98, we can argue that our set of data represents the ASE well. In addition, our sample of companies are those, which have all the needed data for analysis.
For the technical reader, we outline the methodology in Appendix A.

Figure 1: Mean Annual Leverage Ratios



Below, we report and discuss our main findings.

1. The overall mean ratio of total liabilities to total assets is equal to 34.5%. This ratio is low. It is lower than the 56% in China, 58% in Turkey, 53% in the UK, 49% in Cyprus, 61% in Austria 61% in Germany, and the 58% in 24 emerging economies (IMF, 2016).

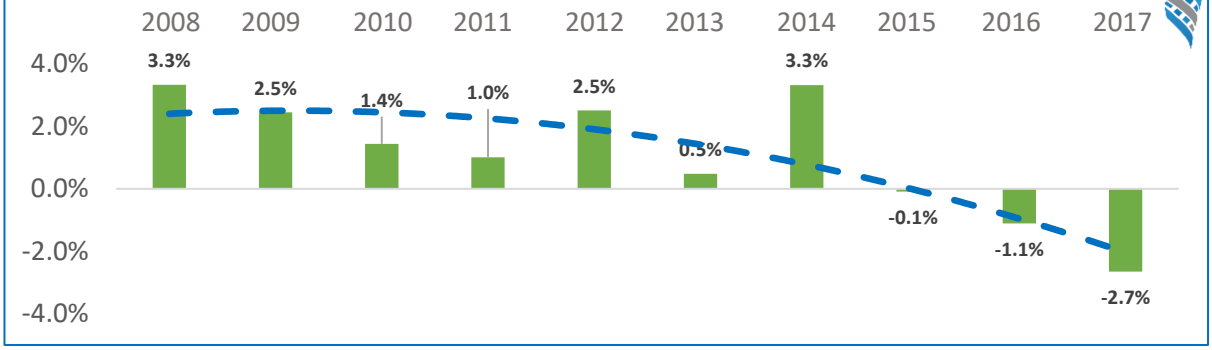
2. The overall mean ratio of total bank debt to total assets in Jordan is equal to 16.6%. This ratio is lower than the 61.7% ratio that exists in a group of eight European countries (OECD, 2017). In five European countries (Italy, Spain, Greece, Portugal, and Slovenia), the overall mean value of this ratio is equal to 67.4% (European Central Bank, 2017).

3. The overall mean ratio of long-term bank debt to total assets in Jordan is equal to 4.9%. Again, this ratio is much lower than, for example, the 12.8% that exists in a group of eight European countries (OECD, 2017). In five European countries (Italy, Spain, Greece, Portugal, and Slovenia), the overall mean value of this ratio is equal to 22.8% (European Central Bank, 2017). Also, notwithstanding the fact that Jordanian companies have relatively low long-term debt to total assets, many of them have zero long-term debt!

4. During the period 2007-2017, the median of the annual change in net fixed assets is equal to -2.2%. In addition, the mean value of this measure was consistently negative in 2015 (-0.1%), 2016 (-1.1%), and in 2017 (-2.7%).

5. During the period 2007-2017, total liabilities to total assets and total bank loans to total assets increased from around 30% to 40% and from around 14% to 18% (Figure 2).

Figure 2: Mean Annual Change in Net Fixed Assets



6. The most significant factor that affects the capital structure of our sample of companies is return on assets. When profitability increases, total liabilities to total assets and total bank loans to total assets decrease.

7. Company size positively affects capital structure. Larger companies in terms of total assets have higher proportions of total liabilities to total assets and higher proportions of total bank loans to total assets.

8. The asset structure of companies has no impact of their debt levels. When the ratio of fixed assets to total assets increases, debt levels do not change. This implies that Jordanian companies do not use their fixed assets as collateral in obtaining more debt.

9. Company age has no impact on total liabilities to total assets or on total bank loans to total assets. When the age of companies increases, their debt levels do not change.

10. Capital structure (total liabilities to total assets) does not affect company investment.

11. Capital structure (bank loans to total assets) affects company investment. When bank loans to total assets increase, company investment increases. Bank loans provide companies with funds to finance their investments in fixed assets.

12. The market prices of companies' stocks relative to their book value have no impact on their investment behavior. Companies with higher-priced stocks do no invest more than companies with low-priced stocks.

4. Summary and Policy Implications

This policy paper, issued by the JSF, has examined the capital structure of listed Jordanian service and industrial companies, and their investment behavior during the period 2007-2017.

Based on our analysis, some of the main results are outlined below.

A. Relative to their total assets, Jordanian companies rely on relatively low total liabilities or total bank debt.

B. Jordanian companies have very low long-term bank debt on their books.

C. Jordanian companies' accounting performance negatively affects their debt levels. Profitable companies prefer to use their profits and consequently have lower debt levels.

D. Jordanian companies' fixed assets to total assets have no impact on their debt levels. Higher collateral value of fixed assets does not result in higher debt levels.

E. The recent performance of our sample of firms' investment behavior has been disappointing. During the years 2007-2017, the median of the annual change in net fixed assets was negative.

F. It is encouraging to note that bank debt positively affect companies' investments. The elasticity of this relationship is equal to 0.64. This indicates that a 10% increase in bank loans to total assets results in a 6.4% increase in investment (fixed assets).

In a Nutshell, listed Jordanian service and industrial companies maintain relatively low bank debt levels. However, this financing source is found to positively impact these companies' investments in fixed assets. Relevant stakeholders must seek greater levels of bank financing. However, the issue is this: Do companies have profitable investment opportunities and do not seek bank financing in the first place? Or, do companies do not have sufficient and profitable investment opportunities and this is why do not seek bank financing? Or, are banks too conservative in their lending policy to the corporate sector?

The Policy Implications are Clear……

First, the issue of the capital structure of the Jordanian private sector, represented by the listed companies, and it implications to investment must remain a priority for all stakeholders.

Second, regular surveys of banks, and the companies themselves must be carried-out. The objective of such surveys is to know why leverage is relatively low. Is it due to the listed companies themselves not seeking banks loans (demand-led) or the management of banks being conservative in their lending policy (supply-led)?

"We assess the impact of credit constraints on investment, inventories and other working capital and firm growth with a large panel of small and medium-sized enterprises from 12 European countries for the period 2014-2016…. Our findings suggest that credit constraints, both in bank financing and other financing (e.g. trade credit), have strong negative effects on investment in fixed assets" (European Central Bank, 2018).

"We examine the link between corporate financing and investment decisions of European firms by using a novel firm-level survey of the European Investment Bank (EIBIS). The survey provides rich quantitative information of a wide range of financing

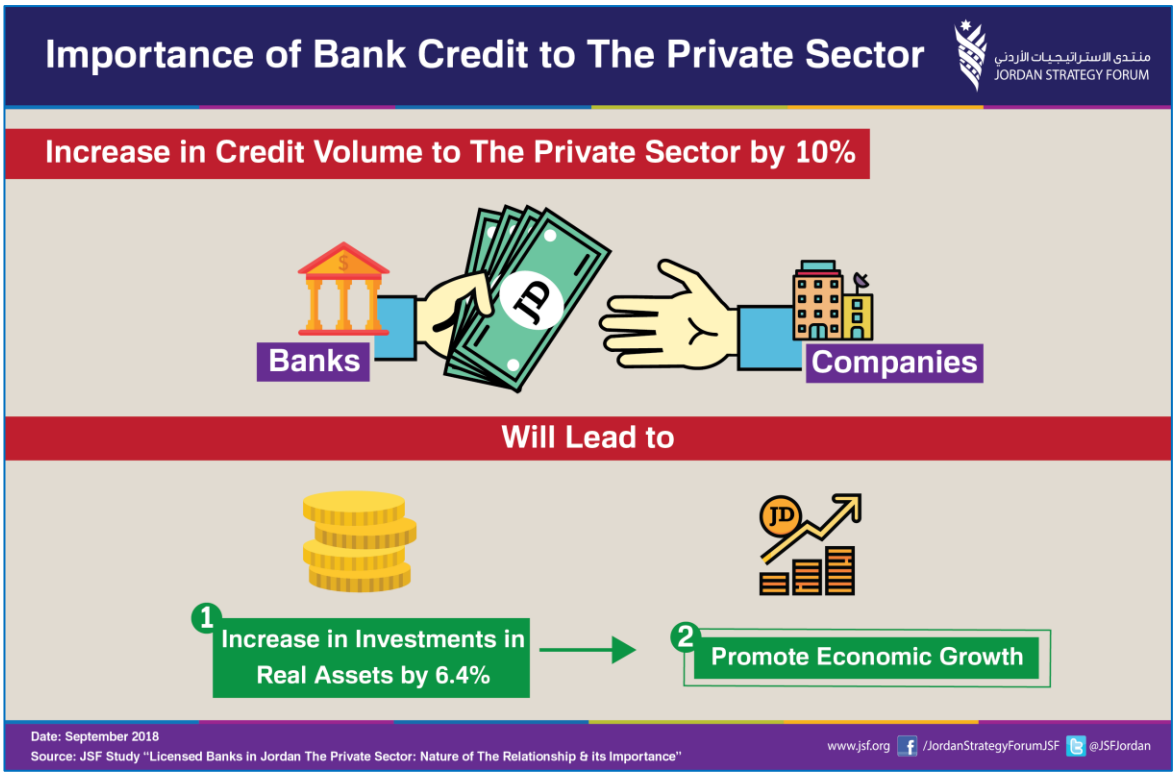
sources and tangible and intangible investment types for a representative sample of EU28 firms in 2016" (European Investment Bank, 2018).

Third, it is encouraging to report that companies with higher levels of banks loans invest more than others. This mutually beneficial relationship between listed companies (borrowers) and banks (lenders) must be enhanced.

Fourth, it is unfortunate to note that companies with higher-priced stocks (relative to book value) do not invest more than others. This indicates that these companies either do not have seek investment opportunities, or do not appreciate the importance of the market price of their stocks. After all, a company with much higher stock price than others would need to issue less shares to finance any capital investment project. Again, this issue needs investigating in terms of surveying Chief Financial Officers (CFOs) about their attitude towards this issue.

Finally, the absence of corporate bonds market in its primary and secondary aspects must be examined, and if possible, the necessary steps must be taken to establish it. After all, such a market would diversify the sources of finance, at least to the companies that need financing, and hence reduce their overall cost of capital.

"The experience of many countries around the world clearly shows that while financial sector development can spur economic growth, financial fragility and instability can seriously harm growth. Following the financial crises of the late 1990s, there has been increasing interest in the systematic assessment of the strengths and weaknesses of financial systems, with the ultimate goal of formulating appropriate policies to foster financial stability, and stimulate financial sector development" (World Bank).



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APPENDIX A

To analyze the capital structure of our sample of companies, the JSF relies on two measures:

1. Total Liabilities to Total Assets Ratio (LIABILITIES)
2. Bank Debt to Total Assets Ratio (DEBT)

To analyze the factors that affect the capital structure of our sample of companies, the JSF estimates the following models:

$$LIABILITIES_{i,t} = \alpha_0 + \beta_1 AGE_{i,t} + \beta_2 ROA_{i,t} + \beta_3 SIZE_{i,}t + \beta_4 TANG_{i,t} + \varepsilon_{i,t}$$

$$DEBT_{i,t} = \alpha_0 + \beta_1 AGE_{i,t} + \beta_2 ROA_{i,t} + \beta_3 SIZE_{i,}t + \beta_4 TANG_{i,t} + \varepsilon_{i,t}$$

where age is the natural logarithm of the company's age, ROA is net income to total assets, SIZE is the natural logarithm of total assets, and TANG is the ratio of fixed assets to total assets. Finally, i and t stand for companies i (1-76) and time period (2007-2017), and ε is the error term.

To analyze the behavior of our sample of companies' investment, the JSF relies on one measure:

Net Fixed Investment= I/FA where I is the change in net fixed assets in a given year to total fixed assets at the beginning of the year.

To analyze the factors that affect the behavior of our sample of companies' investment, the JSF estimates the following models:

$$INVESTMENT_{i,t} = \alpha_0 + \beta_1 LIABILITIES_{i,t} + + \beta_2 AGE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 SIZE_{i,}t + \beta_5 TOBIN_{i,t} + \varepsilon_{i,t}$$

$$INVESTMENT_{i,t} = \alpha_0 + \beta_1 DEBT_{i,t} + + \beta_2 AGE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 SIZE_{i,}t + \beta_5 TOBIN_{i,t} + \varepsilon_{i,t}$$

where INVESTMENT is the annual change in net fixed assets divided by the beginning-of-year fixed assets, LIABILITIES is total liabilities to total assets, DEBT is total bank debt to total assets, Age is the natural logarithm of the company's age, ROA is net income to total assets, SIZE is the natural logarithm of total assets, TOBIN is the market value of subscribed shares to the book value, and ε is the error term. Finally, i and t stand for companies i (1-76) and time period (2007-2017).

Table 1: Descriptive Statistics (Capital Structure Analysis)

Variable	Mean	Standard Deviation
Total Liabilities to Total Assets	0.345	0.212
Total Debt to Total Assets	0.165	0.154
Long-Term Debt to Total Assets	0.049	0.0853
Company Age (Natural Logarithm)	3.061	0.640
Return on Assets	0.015	0.120
Market Capitalization to Book Value (Tobin's Q)	1.371	0.706
Company Size (Natural Logarithm of Assets)	16.850	1.446
Fixed Assets to Total Assets	0.395	0.232

Table 2A: Determinants of Capital Structure (Total Liabilities)
Seemingly-Unrelated Regression

Variable	Coefficient	t-Statistics
Company Age	0.020	1.317
Return on Assets	-0.322	-5.989*
Company Size	0.017	5.670*
Fixed Assets to Total Assets	-0.012	-0.345
Adjusted R^2	0.189	
F-Statistic	65.554*	
Durbin-Watson Statistic	1.849	
* Implies significance at the 99% confidence level.		

Table 2B: Determinants of Capital Structure (Total Banks Loans)
Seemingly-Unrelated Regression

Variable	Coefficient	t-Statistics
Company Age	-0.031	-1.759
Return on Assets	-0.222	-6.866*
Company Size	0.015	7.156*
Fixed Assets to Total Assets	-0.002	-0.076
Adjusted R^2	0.183	
F-Statistic	63.219*	
Durbin-Watson Statistic	1.889	
* Implies significance at the 99% confidence level.		

Table 3: Descriptive Statistics (Corporate Investment Analysis)

Variable	Mean	Standard Deviation
Corporate Investment	0.040	0.717
Total Liabilities to Total Assets	0.349	0.211
Total Debt to Total Assets	0.168	0.157
Company Age (Natural Logarithm)	3.092	0.605
Return on Assets	0.010	0.121
Market Capitalization to Book Value (Tobin's Q)	1.347	0.693
Company Size (Natural Logarithm of Assets)	16.868	1.462
Fixed Assets to Total Assets		

Table 4A: Determinants of Corporate Investment
Seemingly-Unrelated Regression

Variable	Coefficient	t-Statistics
Company Age	-0.016	-0.996
Return on Assets	0.449	5.991*
Company Size	0.002	0.600
Total Liabilities to Total Assets	0.067	1.354
Adjusted R^2	39.199	
F-Statistic	17.700*	
Durbin-Watson Statistic	2.021	
* Implies significance at the 99% confidence level.		

Table 4B: Determinants of Corporate Investment
Seemingly-Unrelated Regression

Variable	Coefficient	t-Statistics
Company Age	-0.011	-0.695
Return on Assets	0.496	6.619*
Company Size	-0.001	-0.094
Total Bank Loans to Total Assets	0.228	3.162*
Adjusted R^2	47.252	
F-Statistic	10.406*	
Durbin-Watson Statistic	2.019	
* Implies significance at the 99% confidence level.		

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