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The Effect of Firm Characteristics on Capital Structure as Applied on non-Financial Firms in Egypt

A Dissertation Submitted for Fulfillment of the Requirement of Master of Science of Business Administration

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I would like to dedicate this effort and work to the soul of my late Mother and to my lovely Father and Brother, for their continuous support and encouragement. All of my success is to you and because of you.

Abstract

This research attempts to investigate the determinants of capital structure of a sample of EGX100 non-financial firms covering the period from 2009 to 2017, the sample include 61 non-financial firm and total observation is 610, this research data include 6 financial ratios for each firm, e.g. total debt ratio (total debt/total assets), long-term debt ratio (long-term debt/total assets), short-term debt ratio (short-term debt/total assets), firm growth ratio (total assets growth), firm size (log of market cap), profitability (return on assets), tenability (fixed assets/total assets), results showed positive significant relationship between firm growth and long term debt ratio and total debt ratio. Negative relationship has been found between firms' size and total debt and long term debt ratio, moreover, research found that firm profitability inversely affect total debt ratio and short-term debt ratio, the relationship between tangibility and all debt maturity is positive significant relationship; results conform with pecking order theory and similar to other results found on developed countries.

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1.1. Introduction:

Financial choice has been cognized by financial researchers who create our financial world valued syllabuses that include distinguish theories and arguments assisting managers, shareholders and bondholders to achieve optimal capital structure. Modigliani and Miller established a classical theory in their landmark paper in 1958, showing the irrelevance between firms 'capital structure decision and enterprise value. Modigliani and Miller finding taken under perfect market assumption, perfect market characterized by market with absence of tax, information asymmetry and world without transaction cost linked with increasing money or bankruptcy occurrence.

Modigliani and Miller (1963) found that the benefit of tax shield deductibility may raise shareholder wealth. Managers swapping between deducted tax shields and direct and indirect financial distress. The theory asserts that the total value of a levered firm is derived from the addition of enterprise value excluding debt and the current value of the tax saving from debt, minus the present value of financial distress which is driven by two significant: (1) the possibility of bankruptcy, (2) the scale of cost in case of fails that are different from other industries. This theory is significant in application for managers who prioritize optimal capital structure. Also, researchers like **Boquist and Moore's (1984)** found evidence that deductable tax shield and debt ratio and correlated positively.

Myer and Majulf (1984) believe that asymmetric information has critical role in explaining capital structure decision.

Insiders like firms' managers are better informed than investors therefore, financing new investment maybe underpriced through new equity, producing negative NPV in the future of old shareholders and thus not be financed. **Mayer and Majluf (1984)** found that financing new investments through securities have certain payout pattern such as internal funds then external funds (debt), especially riskless securities. These securities are less vulnerable to undervaluation so shareholders prefer internal funds as the first choice to financing new investments, external funds as a second financing way and equity as the last resort because of asymmetric information. The announcement of issuing new equity signifies that alternative financing ways are not accessible for the firm due to the firm's poor performance therefore, the announcement of new equity of a specific firm would be associated with the fall of firm's stock price **(Danthine and Donaldson, 2005).**

Existing of effective financial system has large contribution in economic development of the country since, with more financial activity growth, less economic volatility, and creates more jobs and better income. Essential development occurred in banking system since mid of 2004 due to implementation of financial sector reform program, consolidating banking sector, privatizing public banks and improve CBE supervisory capacity and effectiveness.

Financial indicator indicate that financial sector in Egypt at moderate level, the majority of savings are channeled in form of bank deposit and little of it that used to finance productive private sector which used to borrow the government; the investment in government T-Bills increased by 28% between December 2010 and 2011**(Hoda,**

2013); the deposit to GDP ratio is 100% which is more than world average and significantly larger than other developed countries. Private sector credit to GDP reached 66% in 2006, the shares of banks claims to private sector collapsed from 65% in Jun 2008 to 47% in Jun 2011 **(Hoda, 2013).**

Limited role has been observed in financing SMEs by banks; most of manufacturers depend on their equity to finance their investment except 17% of them, the average of credit in Egypt is substantially less than other developing countries in MENA area, furthermore, banking sector dose not play any role in financing start up business since 7% only of new business financed by banks while the average of new investment external finance is 13% and 18% in MENA and resets of the world respectively **(Nasser 2012).**

Although, the existence of large deposits in banking sector which is 100% of GDP, the loan to deposit ratio is 58% in Jun 2006 which is absolutely less than world average 86% that indicate that many firms is constraint to access the external finance **(Nasser 2012).**

Egyptian banks suffer from lack of FCY hedging instruments that lead banks to be over conservable FCY lending, and charge high spread between lending and deposits which reflect the needs of high provision.

The central bank in Egypt believe that the number of existing banks are large enough to create a competitive market in Egypt therefore, the Egyptian Central Bank is unwilling to issue licenses for new domestic banks that are considered as barriers for competition which thus affect lending facilities under weak competition. The liquidity problems have declined the capacity of the banks for

financial intermediation with inverse repercussions on the country's growth prospects **(El-Shazly, 2001).**

Aggrawal (1999) pointed out that a well-functioning banking division as well as a sophisticated stock market is essential to a country. **Demirguc-Kun and Maksomovic (1995)** uncover that development in the performance of a processing stock market outcome of greater leverage ratios gives forth to extra investments for banks. Stock markets and banks play different but corresponding roles, the Egyptian government began expansion of its stock market in May 2001, through the following developments: a new automated trading system was implements, the Egypt Information Dissemination Company was established to announce information to the market to increase the level of translucency, Egypt gained some international recognition when it was involved in the Morgan Stanley Capital International Emerging Markets Free Indicator, East Europe Middle East and Africa Indicator, and the All Country World indicator and more significant market reforms continued after May 2001 **(Girard & Omran, 2007).**

The United States financial crisis heavily affected the Egyptian economy as stock markets of the country shrunk by 43% registering one of the largest declines in the overall history of capital markets in the country. This fall continued and the overall decline in the stock markets almost eroded 50% of the investors' money from Egyptian Stock Exchange, restricting firm's willingness to issue any equity and alternatives financing sources **(Hatab, 2008).**

None can deny that the financial crisis affected the profitability of various sectors in Egypt. The overall inflow of tourists

from Europe and other countries greatly declined. This decline in the number of tourists therefore created a decline in the much earned tourism revenues for the country. It was forecasted that the growth in manufacturing activity will reduce to 3.8% during 2009-2010 thus registering a significant decline in the overall manufacturing activity within the country **(Radwan, 2009).**

Though the total investment in the last quarter of 2008-2009 increased, the overall net flow of investment declined during this period. Despite the fact that the banking sector was liquid, the overall credit extension to the private sector declined therefore bringing in a drop in investments, the overall flow of FDI during the years 2007-2008 was approximately 9% of the GDP, it sharply declined during 2009 by almost 60%. The staggering decline resulted in the increased level of uncertainty within the businesses to restrain them from making new investments, expand and develop to new levels that affect level of credit **(Radwan, 2009).**

Regulations also affect a huge increase in tax revenue for the government; this can be seen in the Egyptian tax authorization act of 2005. The Egyptian government used Unified tax with less tax rate that encouraged investors to penetrate Egyptian market and simultaneously existing investors are willing to expand their business under less tax rate. During 2007-8 periods, the overall tax revenues for the government increased by over 20% on an annual basis indicating the implementation of effective tax collection system as well as the necessary economic growth which helped generate the government increased tax revenue. The overall tax to GDP ratio of the country therefore increased to 15.8% mainly due to increase in

the tax revenue collected from goods and services as well as from foreign trade. One of the main impacts of the Egyptian tax authorization act is that debt tax shield are no longer attractive for firms 'managers hence, firms may dispose their debts or use it in other way to finance rather than debt **(Radwan, 2009).**

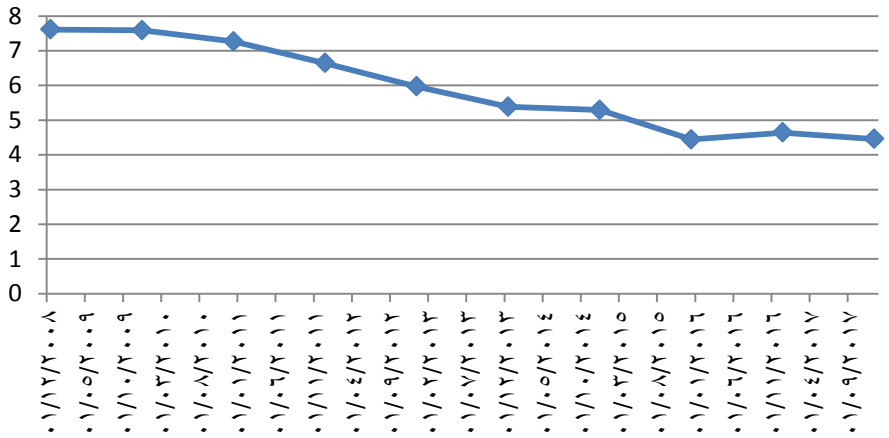
These factors combined together produce a harmful effect on the stock markets, capital structure and the market prices that dropped by 20% during the month of August 2008. With the continuous decline in the economic activity at the global level, the stock markets of the country continued to slide and dropped greater than 40% by the end of year 2008 that affected capital structure of the firms directly. The overall estimated decline in the stock market was more than 50% indicating that the Egyptian Stock market was one of the worst effected institutions in the country. This not only resulted in a decline in returns to shareholders but also created significant agency problems for the companies as managers became more cautious in terms of making good investment decisions. This resulted in a decline in credit market, bringing forth both the supply and demand side to decline and intersect at a level producing other equilibrium point of credit in Egypt **(Central Bank of Egypt, 2009).**

As result of Egyptian uprising the government absorbed the liquidity from banking sector that affect credit to private sector that lead to investment contraction, credit rating for Egypt downgraded twice to reach to CAA that indicate extreme high risk and poor standing., In 2011, Banks used the liquidity to finance government via purchasing securities and T-bills, CBE decrease reserve requirements to 10% instate of 14% to allow banks to access primary

liquidity; foreigner left Egyptian market and sell-off T-bills; CBE supported T-bills price during this period, generating insufficient condition for stabilizing the economy.

1.2. Research Problem:

The research noticed that many firms have reduced its leverage during the period 2008-2016 for example El Sewedy Electeric implemented approx. 42% debt of total assets ratio in first quarter of 2009 which decreased its debt ratio to reach to approx. 29% of total assets in 2016, as well as debt ratio of Palm hills and Oriental Weaver shrunk by 50% and 43% respectively in 2016 compared to 2009, many companies were restricted to access debt market and others avoided to increase their leverage.



Graph 1.1: Average Long term Debt of the sample of 61 Egyptian listed Non- financial companies.

Source: Bloomberg Data Base.