

The Impact of Maturing Integrating Risk Management (MIRM) on the efficiency of the Financial Leverage Decisions in developing Competitive Intelligence: An Empirical Study on Companies Listed in the Egyptian Securities Market

Shereen Fadel Fahmy Bishara

Mahmoud A. Ramadan

Arab Academy for Science, Technology & Maritime Transport

Abstract

Organizations take several financial decisions, one of the most critical decisions affecting company value is financial leverage. Firms projecting a large degree of financial leverage could be beneficial and at the same time risky. This study presents a new approach known as "Maturing Integrated Risk Management" (MIRM), which maximizes the effectiveness of organizational decisions. This approach will enhance the full integration between strategic and operational standards, internally and externally across all over managerial hierarchy levels. In this study we will investigate the relationship between financial leverage and company performance by testing all companies that are listed in the Egyptian Securities Exchange market index (EGX 100) from the year from 2006 to 2012. The results indicate that financial leverage is negatively affecting Return on Sales (ROS), positively affecting Return on Earnings (ROE) and having no significant effect on Return on assets (ROA) and Earnings per Share (EPS).

Keywords:Maturing Integrated Risk Management-Business Transformation –Accounting Growth-Leverage-Financial Leverage –Optimization –Competitive Advantage- Maturity Risk Profile –Risk Management –Integrated Risk Management

1. Introduction

There are many issues affecting decisions in managing risk, among these issues are unstable markets, a web of new regulations and compliance demands, rapidly changing client needs, and increased scrutiny from auditors and investors, to name just a few. Moreover, these issues are often interconnected, thereby increasing their complexity and potential impact on a company's ability to achieve its objectives,(KMPG,2013) .

According to MetricStream (2014) changing trends and shifts in the functioning of risk management indicate that executive decision makers and risk managers within banks and financial institutions have to grapple with some basic issues. How much is the bank or financial institution prepared to lose from all sources of risk over a given horizon (often a reporting period, but also over shorter horizons) to achieve its overall long-term financial objectives? More importantly is what about the more strategic risk areas, such as those related to emerging market entries or acquisition growth strategies? What about the risks that could affect financial performance (or even the very survival) of the enterprise—risks like brand degradation or product relevance? This is where executives are far less confident, (Herrinton, 2012) .

Therefore, Organizations need to go further than simply addressing the danger that is inherent to an individual business shift. As a result, such aggregation provides only limited guidance to those seeking to understand and manage the complex interdependency that surround strategic risks. Such risks have been a breakthrough in representing some of the largest threats to successful business shifts. Consequently, effectively managing strategic risks supports successful business transformation (Gollenia et al., 2015).

The financial decision of any organization is the how the firm is to raise funds in order to invest in the desired project(s). Companies raise funds through two different sources, either debt or equity (C). Debt is a cheaper source of finance than equity since the cost of debt (interest) is tax exempt, in other words the firm does not pay taxes on debt. The cost of equity on the other hand is the distribution of company profits or net income to shareholders after the payment of taxes, that is, the firm pays taxes on equity. Even though debt as a source of finance is cheaper than equity, debt is more risky when compared to equity. Debt is more risky because it entails the compulsory payment of fixed installments unlike equity, where the company could either distribute profits among shareholders or not, based on the requirement of funds for investment in new projects. As a result, there is a tradeoff between the costs and benefits of either source of finance.

Financial leverage is the term given to the use of fixed costs in a company's capital structure, in other words the extent to which the company is using borrowed money. The capital structure decision reflects judgment and the assessment of a highly uncertain future management degree of risk aversion and may affect the firm's financial policy. Thus, the change in capital structure that is caused by an increase or decrease in the ratio of debt to equity is referred to as financial leverage (Ojo, 2012). According to researchers financial leverage as a risk management technique is beneficial to the company. Any increase in earnings before interest & taxes is magnified in the firm's earnings per share (Haim & Marshall, 1988). According to these researchers, debt (bonds) is a low risk security and the cost of these securities (interest) is tax exempt, therefore the cost of using debt in the capital structure is substantially lower than the cost of equity. This is based on the fact that the bondholder's claim on the firm is limited to a fixed interest, unlike shareholders' claim on the firm which require a certain percentage of company profits.

Even though financial leverage is beneficial to the firm, it is at the same time risky since it entails the payment of fixed costs that are obligatory for the company. The increased use of financial leverage in the firm's capital structure could possibly lead to bankruptcy, since it puts pressure on the firm to pay fixed installments to creditors that are obligatory (Horne, 2002).

The more debt a firm has (as a percentage of assets), the greater is its degree of financial leverage. Debt acts as a lever in the sense that using it can greatly magnify both gains and losses. Hence, financial leverage increases the potential reward to shareholders, but it also increases the potential for financial distress and business failures (Ross, Westerfield and Jordan 1998). As a result the use of a correct combination of borrowed funds (debt) to investors' funds (equity) in the firm's capital structure is crucial for a firm to increase its value and to gain and maintain a competitive advantage in the market. As the ratio of debt to equity in the firm's capital structure increases, the firm is projecting higher degrees of financial leverage. As a result more earnings per share are expected, and consequently more risk in achieving higher earnings is also expected. As a result, there is a tradeoff between increasing earnings and the financial risk entailed in doing so.

Therefore, efficient risk management is especially important as it flags the way for development, management and value maximization. This will lead to sustainable competitive advantage and increased profitability of all structural and other intellectual capital Jaeger (2005)

(Herrinton, 2012) points out that without the right tone from top management and the commitment to change the culture of the business, business transformation is not efficient. Senior executives will need to change the way they incorporate risk considerations while making key business decisions. They will need to communicate openly with all stakeholders about what that change looks like and what it will mean. And most importantly, they need to be consistent and hold the organization accountable for risk management in all they do.

2.Literature review:

When the management of risks or opportunities is effective, it often remains unnoticed. When it fails, the consequences for clients and staff may be significant. Having good risk management practice ensures that the department can undertake activities with the knowledge that measures are in place to maximize the benefits and minimize the negative effect of uncertainties on organizational objectives (DCSI, 2013).

2.1. The perspectives in managing Risks:

2.1.1. From managerial perspective: Risks can be classified as strategic or operational. Effectively managing strategic and operational risks require that the differences between the two categories be clearly understood. Examples for each of these two risk categories are provided in Table (1) by (Gollenia et al., 2015)

Table (1)Examples of different strategic and operational risks :

Strategic risks	Operational risks
<ul style="list-style-type: none"> • Market risk drivers • Technology risk drivers • Regulatory and compliance risk drivers • Macro economic risk drivers • Social risk drivers • Environmental risk drivers • Geopolitical risk drivers 	<ul style="list-style-type: none"> • Financial risks related to the financial returns that a project ultimately delivers • Technology risks related to the specific technologies being implemented • Security risks related to unauthorized system access and use • Information risks related to such things as the accuracy and availability of the information provided by a system • People risks related to the people charged with implementing and using a system • Business process risks related to the processes that a system must support

2.1.2. Risk DecisionsFrom Financial perspective :

Pioneer researchers in the field of the appropriate combination of debt & equity in a firm's capital structure (Miller & Modigliani, 1958) determined that in a perfect market the firm's capital structure is irrelevant to it value and hence its performance. According to these researcher the only factor that will add value to the firm is the choice of project(s) for investment.

In reality, however, the choice of capital structure affects companies due to the tax deductibility of interest on debt and the agency cost theory proposed by researchers (Jensen & Meckling 1976). According to these researchers, the use of more debt in a firm's capital structure (higher degrees of financial

leverage) improves the performance of the company and hence firm value. According to the researchers this is due to the fact that more financial leverage will decrease agency costs. Agency costs are the costs that arises from the conflict of interest between the manager and outside equity participant (shareholder). Managers generally prefer to invest in more risky projects with the concept of acquiring higher future profits. On the other hand, shareholders prefer investment in safe projects that will entail a definite share of profit for distribution. These translate into higher agency costs which increase with higher outside equity participation (shareholders). Hence, higher leverage has the potential to reduce costs and enhance performance.

Contradicting these findings, (Myers, 1977) proposed that the use of higher leverage could have a negative effect on company performance and as a result firm value. According to Myers, since more leverage requires that part of the firm's profits should be distributed to debt holders, valuable investment opportunities may be rejected by a highly leveraged firm. This is attributed to the fact that the company will always try to avoid the option of default risk (the risk of not paying interest on debt). This could lead to a decrease in company performance and hence firm value.

Likewise (Titman, 1984) and (Maksimovic & Titman 1991) propose that a highly leveraged firm affects the likelihood of its expected liquidation and they state that since debt holders are inclined to place more restrictions on the firm, customers, may perceive the product quality of a highly leveraged firm to be compromised making them reluctant to transact with it. And in the process of liquidation customers will only be willing to trade with firms if its' prices are low. According to these researchers financial leverage has adverse effects on firm value.

Following these theories, research recorded mixed effects between financial leverage and firm value. Fosu, 2013 investigated the relationship between capital structure and firm performance in South Africa, the results indicate that financial leverage has a positive and significant effect on firm performance. Ojo, 2012 studied the effect of financial leverage on the corporate performance of Nigerian firms, during the period of the study financial leverage was found to both positively and negatively affect firm performance.

Financial leverage is risky but expected to be profitable, however this is not always the case. Rehman (2013) studied the effect of financial leverage on the financial performance of sugar companies listed in the Pakistani Securities market. The results indicate a positive relationship between financial leverage and return on assets of these companies. Likewise, the study indicates a positive relationship between financial leverage and growth in sales. The study however, indicated a negative relationship between financial leverage and other measures of financial performance including earnings per share, profit margin and return on assets. The researcher explained this negative relationship due to the fact that as debt increases, firms will be required to pay more interest from its earnings and as a result the amount of earnings available for distribution among shareholders decreases. Similarly Raza (2013) found no relationship between financial leverage and the financial performance of companies listed in the Pakistani securities market. According to the researchers these companies were following the pecking order theory of capital structure which maintains that a firm seeks internal sources of finance, such as retained earnings, before seeking for external sources of finance which include either debt or equity.

2.2.1 Risk decisions from Risk management perspective

According to KMPG (2013) when risk-management can be transformed into a strategic as well as a tactical capability, this is a drive value to the organization. Companies are seeking both top-down and bottom-up

ways to make this happen, such as redesigning risk and capital-management approaches, further embedding risk-management capabilities in the business and making better use of risk information in the strategy setting, business planning process, as well as day-to-day decisions.

DCSI ,2013 also states that the success of risk management will depend on the effectiveness of the risk management framework providing the foundations and arrangements that will embed it throughout the organization at all levels. The framework;

- *Assists in managing the risks effectively through the application of the risk management process;*
- *Ensures that the information about risks derived from the risk management process is accurately reported; and*
- *The information is used as a basis for decision making and accountability at all relevant organizational levels.*

2.2.2. Risk decisions from business perspective:

Gollenia et al.(2015), explain that effective risk management is needed to minimize the unpredictability associated with the transformation of related initiatives. Moreover, successful business transformation requires that sufficient attention be directed towards managing different categories of risks at both the strategic and operational levels.

Table (2) the impact of risks on the business transformation

Strategic risks:	Operational risks:
Impact, either negatively or positively, the ability of a company to achieve strategic objectives.	Impede the extent to which a specific business transformation achieves its stated objectives.
→ This category of risk concerns business risks and business decisions.	→ This category of risk addresses risks of a specific business transformation.

They add that the difference between strategic and operational risk relates to an eminence that is widely made between the organization and its operations. While strategic risks are primarily related to business risk, on the other hand risks on the operational level relate to risks for specific business transformations, especially during Financial Leverage Analysis. These financial leverage decisions will be compared to the market, Srivastava et al., (2011) to come up with an effective leverage decision that will be more effective and will increase the firm’s capability in managing its debt in the long run.

2.3. The dimensions of MIRM:

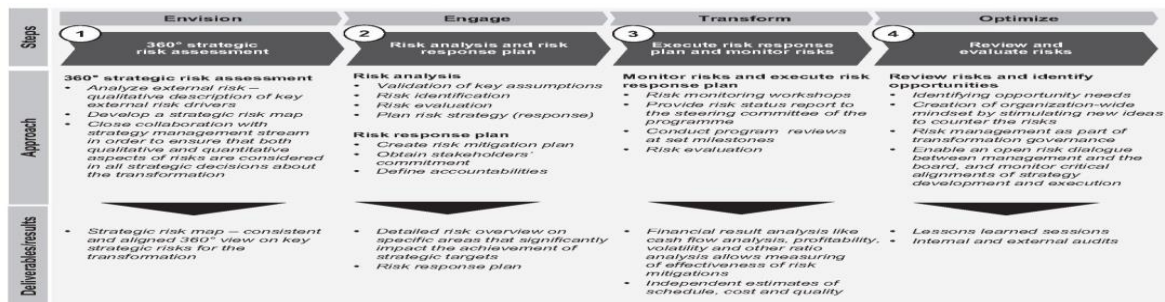
The MIRM have two dimensions which are the IRM and Cs Model. As the RM, IRM process **fully engaged and overlapped with** the collaboration model to catch the most maturity level of the RM which we call “**Maturing Integrated risk Management**”

2.3.1 The First dimension (the Advanced RM steps)

According to Gollenia et al.,(2015) Risk management within involves the following steps:

1. Envision: 360° strategic risk assessment addresses the identification and assessment of strategic risks. Risks can be identified using such tools as scenario planning. The outcome of this step is a strategic risk map with a consistent and aligned 360° view on key strategic risks for the business transformation.
2. Engage: Risk analysis and Risk response plan involves the assessment of underlying business cases of proposed transformations in light of potential risks. Generally speaking, the impact of risks is assessed based on cost, schedule and deliverables.
3. Transform: Execute risk response plan and monitor risks refer to the monitoring of the emergence of risk events or execution of planned responses. During this step a status report of risks is provided to the steering committee of the transformation program and program reviews are conducted at set milestones.
4. Optimize: Review and evaluate risks encompasses inspection and improvement of risks and opportunity identification. This step is most likely to be successful if an open risk dialogue is created between management and the board and critical alignments of strategy development and execution are monitored

Figure1. Phases of Risk Management

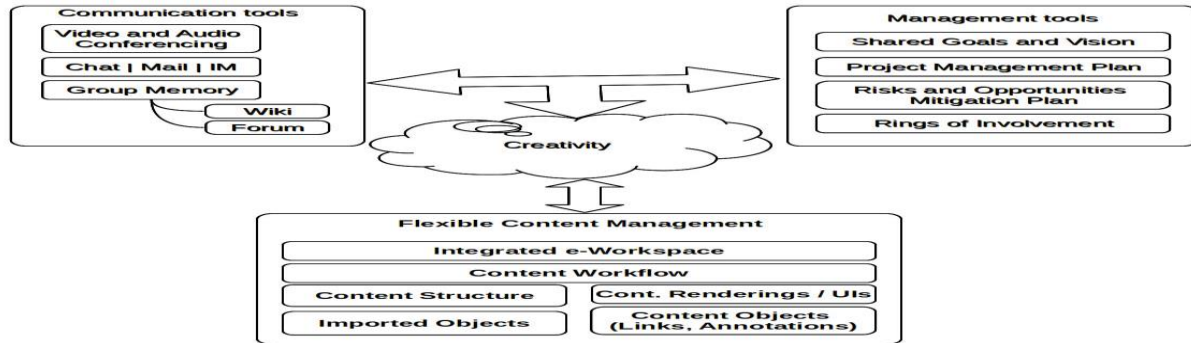


2.3.2. The second dimension is The advanced Collaboration Model:

Osher (2002) identifies collaboration as being the most sophisticated level of relationship because it requires efforts to unite people and organizations in order to achieve common goals that could not be achieved by any single individual or organization. Acting alone, the backbone of collaboration is not the process of relationship but the strict following of a specific result (Denise 1999) and Rusu et al., 2011 agreed with that as mentioned in fig (1) below. They consider that an extra element must be added to the 3C model collaboration, namely “Creativity” to be 4 Cs In order to support creativity in collaborative systems we consider that:

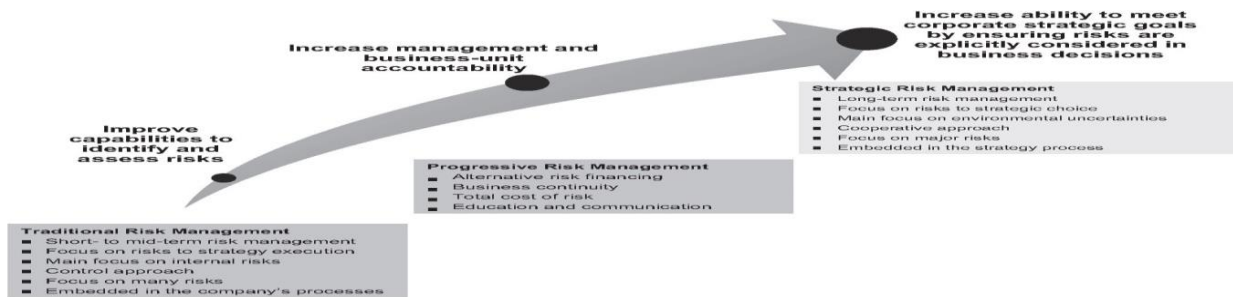
- a) Integration between light-weight projects and risk management, and
- b) Flexible content management tools have to be implemented

Figure4. The 4C Collaboration model



Financial institutions must have appropriate mechanisms in place for communicating risks across the organization and for reporting risk developments to the board and senior management, (BGM,2013). Also the 4Cs should be applied on all types of risk, strategic as well as the operational one with the same transparency and transformation process. Gollenia et al.,(2015) agree with this theory, since they report that despite the somewhat narrower perspective associated with operational level, it should be clear that strategic and operational risks are closely linked and, as a result, share many of the same processes. In particular, there has been a shift away from an operationally-oriented focus (representing traditional risk management) toward an understanding that more fully integrates operational and strategic perspectives (see fig. 2) ,

Figure2. Maturation of Risk Management.



2.3.3 The new advanced approach in managing risks “Maturing integrated risk Management ” MIRM :

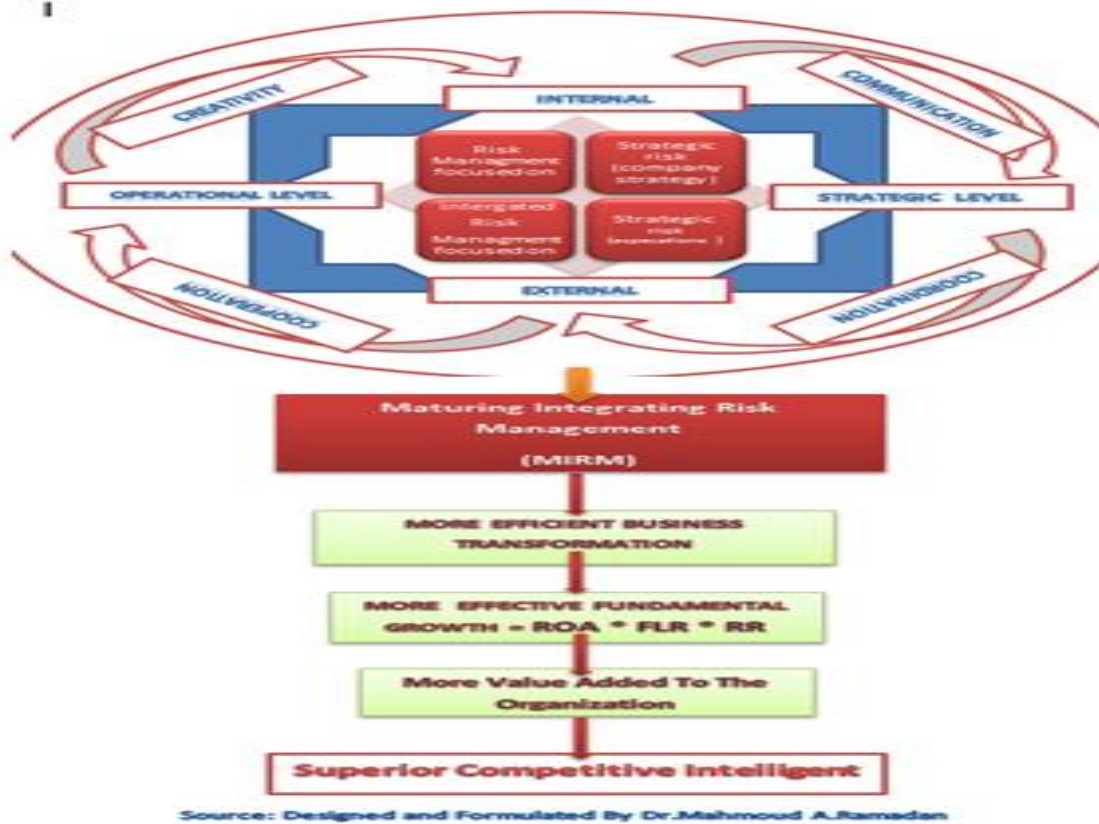
We innovate an advanced approach for managing risks called “Maturing integrated risk Management” (MIRM). We define this approach as the powerful ongoing systematic process that lay out the scoping of the organization’s culture in managing their risks profile as a value drive by greater transparency, wide integration and collaborative techniques from the initial formulation of a business transformation to the day to day operations for every individual management discipline to both internally and externally strategic and operationally level . This will lead to maximizing the efficiency of strategic and operational process decisions, and their business value, thereby creating superior competitive intelligence”

2.3.4.1. The mechanism of the MIRM:

Risk management process is mainly focused more on the operational level than the strategic level. The Integrated Risk Management process is focused on the operational level and in one way or another on

the strategic level. However, the MIRM is a systematic process focused on strategic level internally and externally and operation level internally and externally equally by merging the 4 Cs collaboration model as mentioned below in Fig .(2)

Fig .(2) : the mechanism of the MIRM



2.4. The importance of the MIRM in managing the financial leverage decisions effectively and adding value to the business :

According to Herrinton (2012) that, Top-performing companies (from a risk maturity perspective) implemented on average twice as many of the key risk capabilities as those in the lowest-performing group and Financial performance is highly connected to the level of integration and coordination across risk, control, and compliance functions. And effectively harnessing technology to support risk management is the greatest weakness or opportunity for most organizations.

According to MetricStream (2014) each year, banks and financial services organizations spend a substantial part of their time and money in mitigating risk and complying with a growing set of regulatory and operational compliance requirements. The correct of financial leverage to apply in the organization’s capital structure is a very important financial decision affecting company performance. By implementing the MIRM innovative approach created in this study with the 4 Cs model, we expect that the output of the MIRM which is a maturity risk profile will support the financial decisions to become easier, more effective and even more profitable for the company. This is expected to occur since all levels of management will become aware of financial leverage decisions, in other words these decisions will not only be restricted to top management in the finance department. Likewise there will be co-ordination

between strategic risk decisions and operational risk decisions, internally and externally, thereby bringing about competitive intelligence.

3. Challenges of the MIRM for creating a maturity risk profile :

Major shifts in the role of financial services that organizations try to adapt over the last few years and they have brought about a new way to regard risk. Many, if not most new risks over the last two decades can be attributed to globalization, expanding of new businesses, growth in technology and gains in efficiency. These changes have not only brought about tremendous economic growth but also a growing multitude of risk causing a fundamental change in the approach to risk management, (MetricStream, 2014)

Thus Herrinton (2012) states that to achieve the results of top-performing companies, senior executives, board members, and the audit committee need to be more clear about the company's risk strategy and governance. And according to Gollenia et al.,(2015) that creating an organization-wide mindset is the biggest challenge and BGM(2013)explain that the board and management of subsidiary financial institutions will be held responsible for effective risk management processes at the subsidiary level and must have appropriate influence in the design and implementation of risk management in the subsidiary.

This the core challenge to MIRM as Herrinton (2012) suggest they need to provide adequate oversight and be accountable for the company's risk management practices. Elevating the risk discussion to the highest levels of the organization improves visibility, accountability transparency, and strategic decision-making.

(KMPG, 2013) is agreed with that by state, Boards of directors are under increasing accountability for risk management oversight; to be more informed about the impact of risk on the organization, and how risk can be managed to help achieve strategic and financial objectives. Additionally, new regulatory directives are requiring boards to play a more active oversight role to help ensure their company has an adequate understanding of the impact of risk on capital and performance. Besides that the operational level while business transformation managers will need to maintain a much broader focus on risks that encompasses strategic and operational risk.

4. Benefits of fulfilling MIRM on the business transformation and business value:

1-Organizations get the value of building controls and processes that focus on risk. But few have discovered the secret to balancing risk with cost. (Herrinton, 2012). This easily can be done by applying RIRM which will enhance the overall business transformation and reduce the cost of control through developing an integrated KPI (key performance indicators) internally and externally to monitor and control effectively.

2- Organizations can effectively align their risk profile and integrate it more closely with its strategy. In addition, this will supporting management clarified the company's risk appetite, defined its risk universe, determined how to measure risk, and identified which technologies could best help the company manage its risks (Herrinton, 2012).

3- Mature risk management improve its financial performance, strengthen stakeholder communication, and build greater trust in the market and internally by:

- a. Develop two-way of effective communications about risk with external stakeholders.

- b. Provide stakeholders with the relevant and real time information that support the decisions and values of the organization.
- c. Adopt and implement a common risk framework across the organization

4- MIRM will provide fundamental guidance to the planning, development and effective execution of a business transformation and to manage those risks that relate to the process of transforming an organization towards a desired future state and those risks that relate more to the possibility that this desired state becomes either obsolete or sub-optimal, (Gollenia et al.,2015). By forceful the board or management committee play a leading role in defining risk management objectives.

5- MIRM will optimize risk functions by expending the risk profile to be related into individual performance and Standardize risk response plan monitoring and reporting tools across the organization value chain ,Integrate the risk activities to minimize its overlap or duplication and Identify and address overlap and duplication of risk activities

6- Gollenia et al.(2015) also mention that , given the narrower focus of operational risk of exposure , it becomes clear why efforts to manage such risk tend to focus more on minimizing unwanted upshot over identifying and pursuing chance as the operational managers will.

5. Research Methodology

The researchers collected secondary data from Compass Egypt concerning the companies listed in the Egyptian stock market index (EGX100). The period of the study covered seven years from the year 2009 to the year 2012. Over this seven year period 39 companies were common in the Egyptian stock market index (EGX100), making a total of 261 entries over the seven year period.

Egypt is a developing country, many of the previous researchers who studied the effect of financial leverage on company performance in developing countries found conflicting results. Shehia et al, 2012 found a positive relationship between financial leverage and firm performance, while Rehman, 2013 and Ojo, 2012 found conflicting results of leverage on performance. Raza, 2013 however found no relationship between leverage and firm value. This study will prove whether the effect of leverage on firm performance and firm value in Egypt is consistent with literature or not.

In this study, the researchers will expand the research and take all the companies listed in the Egyptian stock market. This will result in expanding the sector of study instead of just focusing on one sector, the data collected will cover 9 sectors or industries. The sample data will cover 9 sectors or industries: namely the Food & Beverage industry, the Personal Goods industry, the Chemicals industry, the industrial goods industry, the Buildings & Construction industry, the Real Estate industry, the Tourism & Travel industry, the Utilities industry and the Tourism industry. This will ensure correct information that will be applicable over almost all firms either in the stock market or that will enter the stock market accordingly.

The dependent variable of the study will be the variables that improve company performance or firm value. The researchers will use four variables that measure firm performance; Return on assets (ROA), Return on Equity (ROE), net profit margin/ Return on Sales (ROS) and Earnings per Share (EPS). ROA measures the return achieved by the firm from assets, while the ROS measures the return achieved by the company from sales achieved from the (working) of the firm's total assets. On the other hand ROE measures return achieved by the firm from equity, while EPS measures the distribution of the firm's profits among equity holders or shareholders. In other words both ROA and ROS variables are related to firms' assets, while both ROE and EPS are related to firms' equity.

The independent variable of the study will be the debt ratio of the firm, which measures the percentage of the firm's total assets that is financed by debt. Of course, the firm's assets are financed by either debt or equity (Brigham et al., 2005). As a company's debt ratio increases this is an indication that the firm is using a high degree of financial leverage and the opposite is the case.

We will use the statistical package Minitab version 17 to perform descriptive statistics to describe and summarize the data collected into meaningful information. A Correlation analysis will be performed to determine the relationship between company performance and financial leverage.

5.1. Data Analysis

This section entails the statistical analysis performance to test the null hypothesis of the study. We started by performing a descriptive statistical analysis on all the variables of the study and the results are presented in table 3 below:

Table 3: Descriptive Statistics: Debt Ratio, ROA, ROE, ROS, EPS

Variable	Mean	SE Mean	StDev	Variance	Minimum	Maximum	Range
Debt Ratio	15.46	1.11	16.87	284.46	0.00	70.61	70.61
ROA	7.283	0.640	9.796	95.957	-19.750	69.690	89.440
ROE	13.85	1.30	19.86	394.56	-103.39	103.90	207.29
ROS	27.39	5.39	82.27	6768.21	-271.69	962.37	1234.06
EPS	49.4	25.9	394.4	155534.4	-59.4	4487.0	4546.4

As can be seen above financial leverage measured by the debt ratio has a mean value of 15.46%, indicating that on average the companies listed in EGX (100) over the period of the study financed 15% of their total assets using debt. It has a standard deviation of 16.8% and a maximum value of 70% and a minimum value of 0%, indicating that some firm do not use debt in their capital structure. These firms are namely Egyptian Housing & Development & Reconstruction (EHDR) in year 2008, Mansourah Poultry during the years 2009 to 2012 and Samad Misr (EGYFERT) in the years 2009 and 2010.

The dependent variable ROA projects an average of 7%, a standard deviation of almost 10% and a range of 89.4%. During the period of the study some of the firms being tested projected negative values for ROA.

The dependent variable ROE has a mean of 13% and projects a maximum value of 103% and a minimum value of -103%, making a range of 207% and a value for standard deviation of almost 20%.

Likewise, ROS projects an average of 27%, a standard deviation of 82% and a range of 1234%. These large differences in value is attributed to the different sizes of the companies in the study, since the study involves firms from 9 different industries it is adamant that differences in the firm's size of total assets to exist.

Finally the independent variable EPS indicates an average of L.E. 49.4 and a maximum value of L.E. 4,487 and a minimum value of L.E.-59.4. These large differences in value is indicative of large differences between the profits and the number of shareholders of the firms present in the study. After performing the descriptive statistical tests on the variables of the study, we performed a correlation test to determine the effect of financial leverage on company performance, the results are shown in table 4 below:

Table 4: Correlation: Debt Ratio, ROA, ROE, ROS, EPS

	Debt Ratio	ROA	ROE	ROS
ROA	-0.085 0.202			
ROE	0.146 0.027	0.773 0.000		
ROS	-0.113 0.088	0.339 0.000	0.239 0.000	
EPS	0.094 0.156	0.079 0.233	0.099 0.131	0.031 0.634

Correlation results indicate that Financial leverage has no significant value on either ROA or EPS (p-values > 1). However, financial leverage was found to positively affect ROE and negatively affect ROS.

6. Conclusion

Financial leverage was determined to negatively affect ROS, this supports the fact that more leverage requires part of the firm's profits to be distributed among debt holders and as a result valuable investment opportunities may be rejected by highly leveraged firms. Consequently, more debt indicates that interest payments will increase, as a result the income available for distribution among shareholders will also decrease. On the other hand, financial leverage was found to positively affect ROE. This is due to the fact that as debt increases equity (number of shares issued) decreases, therefore the profits available for distribution will be distributed among a smaller number of shareholders. Hence the positive effect of debt on EPS.

Financial leverage was found to have no significant effect on either EPS or ROA. We could explain that debt has no significant effect on EPS due to the fact that the range of observations was too large indicating the presence of outliers in the sample of the study, biasing information. We could also attribute the effect of debt on ROA to the fact that only 9 out of the 261 entries presented values for debt ratios more than 50%, all the remaining entries presented debt ratios of less than 50%, predicting that these same values of debt will not have a significant effect on the returns from total assets but they are likely to have an effect on the returns from total equity. Nevertheless for future research in the Egyptian Securities market, researchers could consider covering more years than the years taken over the period of the study.

Organizations have a critical challenge in managing risks more effectively. By implementing the MIRM with fully activating the 4Cs collaboration model strategically (internal and external) and operationally (internal and external), firms will be able to determine the appropriate degree of financial leverage to apply in their capital structures. Consequently the real time Risk information flow network will be more transparent and credible both inside and outside of the organization. This will be highly effective and lead directly to a superior competitive intelligence.

List of Abbreviations

MIRM: Maturing Integrated Risk Management
RM: Risk Management
IRM: Integrated Risk Management
ROS: Return on sales
ROE: Return on Equity
ROA: Return on Assets
EPS: Earnings per Share
EGX 100: Egyptian Stock Market Index

Reference

- Al-Tally, A. Hassan, 2014, "An Investigation of the Effect of Financial Leverage on Firm Financial Performance in Saudi Arabia's Public Listed Companies", Victoria University, Melbourne, Australia, PHD Thesis, 2014.
- Appuhami, BAR 2008, 'The impact of firms' capital expenditure on working capital management: an empirical study across industries in Thailand', *International Management Review*, vol. 4, no. 1, pp. 8-21
- Axel Uhl and Lars Alexander Gollenia, 2015. "Business Transformation Management Methodology" ISBN 978-1-4094-4980-5
- Bank NEGARA MALAYSIA (BGM),2013. "Risk Governance"
- Bediako , Tony 2014."Enterprise Risk Management — Integrated Framework". ISACA'S IT Audit, Information Security & Risk Insights Africa 2014, Alisa Hotel
- Brigham ,F.Eugene and Ehrhardt,C.Michael, financial management: theory and practice middle east and Africa 12h edition 2005,EMEA
- Cr van zyl, 2005."Structural capital management creates Sustainable competitiveness and prolonged firstmoverAdvantage intellectual capital management" series -
- Deloof, M 2003, 'Does working capital management affect profita
- Delphion industry insights. 2002. Greater value through intellectual asset management online] available from: http://grace.wharton.upenn.edu/~sok/papers/d/iam-value_wp.pdf[downloaded: 2003-05-18].
- Denise, L. [1999]. Collaboration vs. C-Three (Cooperation, Coordination, and Communication), *Innovating* 7(3). Last Accessed: October 2010. URL:<http://www.zsr.org/results-framework-resource-2/collaborationvstheothercwords.pdf> Gagne ml. 2001. Intellectual capital and ethics [online] available from: <Http://panopticon.csustan.edu/cpa99/html/gagne.html> [downloaded: 2003-05-18]. Gill, A 2011, 'Factors that influence working capital requirements in Canada', *Economics and Finance Review*, vol. 1, no. 3, pp. 30-40 Gobert K.2001."Capital Structure and Risk Management"
- Fosu, Samuel, "Capital structure, Product Market Competition and Firm Performance: Evidence from South Africa", University of Leicester, working paper, No. 13/11, 2013.
- H. Jamal Zubairi ,2003." IMPACT OF WORKING CAPITAL MANAGEMENT AND CAPITAL STRUCTURE ON PROFITABILITY OF AUTOMOBILE FIRMS IN PAKISTAN " Institute of Business Management (IoBM), Karachi, Pakistan, Electronic copy available at: <http://ssrn.com/abstract=1663354> International journal of business and management vol. li (4), 2014
- Haim L. and Marshall S.(1988). Principle of Financial ManagementHall Ltd, India
- Horne J.C.V (2002). Financial Management and Policy. Pretence
- Jaeger,Lars(2005)." Risk Management for Hedge Fund Portfolios Presentation at ETHZ"

- Jensen, M., & Meckling, W. (1976), "Theory of the firm: Managerial behaviour, agency costs and ownership structure", *Journal of Financial Economics*, 3, 305– 360
- John O'Brien PhD (University of Minnesota) and Sanjay Srivastava PhD (MIT), 2011. "financial statement analysis and valuation." Copyright © 2011 OS Financial Trading System
- Kim, YH & Srinivasan, V 1991, *Advances in working capital management: a research annual*, vol. 2, EUA: Jai Press, Greenwich.
- KMPG ,2013. "INSURANCE RISK MANAGEMENT ADVISORY SOLUTIONS : Transforming risk management into a competitive advantage ". © 2013 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International")
- Lamberson, M 1995, 'Changes in working capital of small firms in relation to changes in economic activity', *American Journal of Business*, vol. 10, no. 2, pp.45-50.
- Maksimovic, V., & Titman, S. (1991), "Financial policy and reputation for product quality", *The review of Financial Studies*, vol.4, pp.175–200
- MetricStream 2014. "Integrated Risk and Compliance Management for Banks and Financial Services Organizations: Benefits of a Holistic Approach" www.metricstream.com info@metricstream.com ,Copyright © 2014 MetricStream, Inc. All rights reserved
- Michael Herrinton, 2012 . "How Mature is Your Risk Management?" *Harvard Business review*
- Modigliani, F., & Miller, M. (1963), "Corporate income taxes and the cost of capital", *American Economic Review*, vol. 53 (3), pp. 433-443, 53, 433–443
- Myers, S. C. (1977), "The determinants of corporate borrowing", *Journal of Financial Economics*, 5, 147–175
- Nastansky I. 2000. Performance measurement from an intellectual capital perspective [online] available from: [Http://216.239.53.100/seatch?q=cache:dcuumtkktmcc:pfb5www.unipad.ernborn.de/www/wi/w2/wi2_lit.nsf/663247270b635985c1256bc900519bef/c4adb1c40db1226e412569f00041aa6b/%24File/abgabeword.doc+%22structural+capital+management%22&hl=en&ie=utf-8](http://216.239.53.100/seatch?q=cache:dcuumtkktmcc:pfb5www.unipad.ernborn.de/www/wi/w2/wi2_lit.nsf/663247270b635985c1256bc900519bef/c4adb1c40db1226e412569f00041aa6b/%24File/abgabeword.doc+%22structural+capital+management%22&hl=en&ie=utf-8)[downloaded: 2003-05-15].
- Nazir, MS & Afza, T 2008, 'On the factors determining working capital requirements', *Proceedings of ASBBS*, vol. 15, no. 1, pp. 293-301.
- Ojo, S. Akinmulegun, "The Effect of Financial Leverage on Corporate Performance of Some Selected Companies in Nigeria", *Journal of Canadian Social Science*, vol 8, no.1, pp85-91, 2012
- Osher, D. M. [2002]. *Creating Comprehensive and Collaborative Systems*, *Journal of Child & Family Studies* 11(1): 91–99 Podesan, M. I., Benta, D. & Rusu, L. [2011]. About Creativity in Collaborative Systems. Why it matters and how it can be achieved, in D. Marca, B. Shishkov & M. van Sinderen (eds), ICE-B 2011 - Proceedings of the International Conference on e-Business, Seville, Spain, July 18-21, INSTICC Press, pp. 151–154.

- PricewaterhouseCoopers' Global Pharmaceutical and Life Sciences Industry Group (PWC) ,2009 ." Leveraging IT risk management to boost competitive advantage". Achieving integrated information technology, governance, risk, and compliance. (www.pwc.com/pharma)
- Rafuse, ME 1996, 'Working Capital Management: An Urgent Need to Refocus', Journal of Management Decision, vol. 34, no. 2, pp. 59-63.
- Raza, W. Muhammed, "Affect of Financial leverage on firm Performance: Empirical evidence from Krachi Stock Exchange", Munich Personal RePEc Archive, MPRA Paper, no. 50383, posted 8, 2013
- Rehman U. F. S. Syed, "Relationship between Financial Leverage and Financial Performance: Empirical Evidence of Listed Sugar Companies of Pakistan", Global Journal of Management & Business Research Finance, vol. 13, issue 8, 2013.
- Rubenstein d. 1998. Patent profits [online] available from: [Http://www.findarticles.com/cf_0/m1121.1998_nov_2/53165958/p3/article.jhtml?term=%22patemangement%22](http://www.findarticles.com/cf_0/m1121.1998_nov_2/53165958/p3/article.jhtml?term=%22patemangement%22) [downloaded: 2003-05-18].
- Samah Souleh ,2014 .the impact of human capital management on the innovativeness of research center: The case of scientific research centers in Algeria
- Shehia, Akhtar; Benish, Javed; Atiya, Maryam and Haleema, Sadia, 2012, "Relationship between Financial Leverage and financial Performance: Evidence from Fuel & Energy Sector of Pakistan", European Journal of Business and Management, vol. 4, no. 11
- the Department for Communities and Social Inclusion (DCSI) 2013. "Risk Management Framework
- Titman, S. (1984), "The effect of capital structure on a firm's liquidation decision", Journal of Financial Economics, 13, 137–151.....