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A STRATEGIC FRAMEWORK FOR VALUE ENHANCING ENTERPRISE RISK MANAGEMENT

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ABSTRACT

Enterprise risk management (ERM) is a new management concept fast ascending the corporate agenda globally. Its relevancy and popularity as a management technique are abetted by the changing business practices and burgeoning regulatory requirements on risk management. The shift in paradigm in heightened risk awareness in the wake of several high profile and deep impact corporate governance scandal and financial mismanagement cases as well as increased terrorist threat on the physical assets of firms has compelled firms to be more pro-active in addressing risk issues.

ERM is defined as the process of identifying and analyzing risk from an integrated, company-wide perspective. It is a structured and disciplined approach in aligning strategy, processes, people, technology and knowledge with a purpose of evaluating and managing the uncertainties the enterprise faces as it creates value. It focuses risk management function from primarily defensive to increasingly offensive and strategic in nature.

However, the neo-classical finance theory (NCFT) postulates that firm-specific risk is irrelevant and that only the covariance of the firm's asset returns to the market portfolio which is measured by the beta in the capital asset pricing model (CAPM) matters. This suggests that implementation of ERM will not enhance the firm's value. This notion is in stark contrast to the phenomena of increased acceptance of ERM by industry practitioners.

As such, we propose a ERM framework to theorize a model capturing the causal relationships of the risk that strategically associated with firms' business performance and cost of capital. We highlight the notion of managing firms' unsystematic (specific) risk via an enterprise risk management framework that leads to the enhancement of shareholders' value. The mechanism through which firms' value enhancement takes place is by developing a strategic conceptualization of risk premium.

Keywords: Enterprise Risk Management, Value Proposition, Strategic Risk Premium.

1.0 INTRODUCTION

Until recently, risk management in its many forms is not regarded by managers as a management discipline (Thompson, 2003). The meaning and application of risk management are often misunderstood at many levels of management. What has inclined to transpire is that the paradigm and execution of risk management initiatives by risk managers are strongly influenced by the biasness of the managers' individual expertise and perspectives.

This biasness comes in the areas of financial markets, occupational health and safety, insurance, project management, technology, and political risk management. There is nothing wrong with these approaches of risk management. But the weakness lies with the fact that their focus is limited and lacks an integrated framework.

Hence, establishing a common framework for all types of operational risks will tremendously enhance the acceptance of risk management as an effective management tool throughout organizations (Thompson, 2003). One such framework is known as enterprise risk management (ERM).

ERM is defined as the process of identifying and analyzing risk from an integrated, company-wide perspective. It is a structured and disciplined approach in aligning strategy, processes, people, technology and knowledge with a purpose of evaluating and managing the uncertainties the enterprise faces as it creates value. It focuses risk management function from primarily defensive to increasingly offensive and strategic in nature. However, the neo-classical finance theory (NCFT) postulates that firm-specific risk is irrelevant and that only the covariance of the firm's asset returns to the market portfolio, such as that measured by the beta in the capital asset pricing model (CAPM), matters. This suggests that implementation of ERM is of no value to firms. Nonetheless, this notion is in stark contrast to the phenomena of increased acceptance of ERM by industry practitioners.

This paper provides a theoretical appraisal of a value maximization enterprise risk management (ERM) implementation framework. The theoretical underpinning is based on the theoretical determinants argument of corporate risk management to maximize firms' value. The proposed ERM implementation framework highlights the importance of managing the various firm-specific risks besides the systematic risk.

2.0 LITERATURE REVIEW

2.1 Determinants of Traditional Risk Management

Due to a lack of academic literature regarding the determinants of enterprise risk management (ERM), Liebenberg and Hoyt (2003) looked to the literature that deals with determinants of traditional risk management activities such as hedging and corporate insurance demand.

According to Liebenberg and Hoyt (2003), corporate insurance demand by firms with well-diversified shareholders is not driven by risk aversion. Since these shareholders are able to costlessly diversify idiosyncratic risk, insurance purchases at actuarially unfair rates reduce stockholder wealth.

However, when viewed as part of the firm's financing policy, corporate insurance may increase firm value through its effect on reducing (i) agency cost, (ii) expected bankruptcy costs, (iii) the firm's tax liabilities, and (iv) the costs of regulatory scrutiny.

Corporate hedging, on the other hand, reduces expected bankruptcy costs by reducing the probability of financial distress. Hedging literature also suggest that this form of risk management potentially mitigates incentive conflicts, reduces expected taxes, and improves the firm's ability to take advantage of attractive investment opportunities (Smith and Stulz, 1985).

However, according to Liebenberg and Hoyt (2003), the traditional risk management approach has been characterized as highly disaggregated method of managing firm risk in which various categories of risk are managed in separate units within the firm.

2.2   Value Maximization Theories of Corporate Risk Management

Justification for corporate risk management can easily be accepted with the intuition that shareholders are risk-averse and their interests are well served if firms manage risk on their behalf. The efficacy of this application of risk management in corporate environment is also backed by finance literature. For instance, studies in the 1980s and 1990s by Smith & Stulz (1985), Mayers & Smith (1982), Amit & Wernerfelt (1990), Froot, Scharfstein & Stein (1993), Tufano (1996), Cummins et al. (1998), saw an emerging paradigm on the role of risk in determining corporate value.

Literature on corporate risk management link the rationale for such initiatives in ensuring business performance to the following hypotheses: (i) profit maximization (Andrews, 1980; Porter, 1980) (ii) financial distress cost (Wall & Pringle, 1989; Bettis, 1983), (iii) lowering tax burden (Nance, Smith, and Smithson, 1993), (iv) costly external financing (Nance, Smith, and Smithson, 1993; Ahmed, Beatty, and Takeda, 1997), (v) informational asymmetries (Froot, Scharfstin, and Stein, 1993; Healy & Palepu, 1995), (vi) agency cost (Tufano, 1998; Cummins 1998).

2.3   Managing risk individually vis-à-vis integrated approach

Meagher and O'Neil (2000) pointed out that the current risk management approaches are fragmented, treating risks as disparate and easily compartmentalized. Bierc (2003) supported this argument by saying that risk is typically viewed as something to be avoided or mitigated – and to be separated, categorized and addressed in silo. Bierc (2003) continued to argue that risk management has often been practiced to merely comply with the many new rules and regulations, which has failed to add any sustainable value. To meet the needs of future business, Meagher and O'Neil (2000) advocated that risk management process should be one that improves the linkage of risk and opportunity and positions it as a source of competitive advantage. The process should seek a wider concept and understanding of risks that present themselves within the setting of an organization. The undertaking of these risks then should be lined up with corporate strategies, objectives, and goals (IAAS, 2008).

In addition, the risk management approach should be positive and proactive, value-based and broadly focused, embedded in processes, integrated in strategy and total operations, and continuous. Miller (1992) cautioned that corporate risk management is not limited to the assessment of exposure to losses and application of appropriate financial risk management practices. He pointed out that financial and

strategic responses are interrelated in such a way that decision making in either area to the exclusion of the other would be suboptimal.

2.4   Operational Definition of Enterprise Risk Management (ERM)

Chapman (2003) defined ERM as the process of identifying and analyzing risk from an integrated, company-wide perspective.

Meagher and O'Neil (2000) on the other hand, described enterprise-wide risk management (EWRM) as a structured and disciplined approach in aligning strategy, processes, people, technology and knowledge with a purpose of evaluating and managing the uncertainties the enterprise faces as it creates value.

Stoke (2004) viewed enterprise-wide risk management (ERM) to become an essential element of modern business as the focus for corporate risk management is shifting from operational hazards and pure financial risks to a much more strategic view of threats to business success and an appetite for upside risk. Stoke added that by combining this with a more holistic, top-down approach to risk strategy and appetite, companies can focus their attention on most significant threats to business objectives and achieve even greater value from risk management.

Liebenberg and Hoyt (2003) concurred that unlike the traditional "silo-based" approach to corporate risk management, ERM enables firms to benefit from an integrated approach in managing risk that shifts the focus of risk management function from primarily defensive to increasingly offensive and strategic.

In a nutshell, the concept of ERM entails a paradigm shift which dictates that the focus of risk management has to be shifted from the conventional operational hazards and pure financial risks to a much more strategic view of threats to business success. A robust and dynamic risk management framework should also promote an appetite for upside risk.

2.5   The Process of Enterprise Risk Management

The framework for business risk management process traditionally will not run away from the following basic steps: evaluating, identifying, measuring, treating, and monitoring risk. The Committee of Sponsoring Organizations of the Treadway Commission's (COSO) ERM's model consists of 8 components: internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring (COSO, 2004; Chapman, 2003). In comparison, the Arthur Andersen Business Risk Management Process (BRMP) develops a risk management framework that comprises 7 elements: (i) establish the business risk management process, (ii) assess business risks, (iii) develop business risk management strategies, (iv) design/implement risk management capabilities, (v) monitor risk management performance, (vi) continuously improve risk management capabilities, (vii) information for decision making (Meagher and O'Neil, 2000).

To ensure successful enterprise-wide risk management process implementation, Meagher and O'Neil (2000) emphasized the following 4 dimensions: (i) moving away from fragmented approach, towards an integrated and systematic framework that gives credibility to the risk management role within the business; (ii) identifying risk management goals and linking them to enterprise's strategies; (iii) delegating responsibility for risks and making managers accountable to the board for continuously

improving the management of those risks; (iv) do not only managing individual risks, but being able to systematically pool them and assess risk as a portfolio for the enterprise as a whole.

In comparison to the old silo-approach of risk management, ERM proponents argue that an integrated approach of risk management increases firm value by reducing inefficiencies inherent in the traditional approach, improving capital efficiency, stabilizing earnings, and reducing the expected costs of external capital and regulatory scrutiny (Liebenberg and Hoyt 2003). Bierc (2003) introduced the concept of strategy risk management (SRM). According to Bierc, SRM should be developed and pursued with substantial regard to the key drivers that would impact success and value of a corporation. It should keep an organization focused on the things that drive success, providing tools that effectively measure "execution".

2.6   The Concept of ERM

Based on the argument taken from the value maximization theory of corporate risk management, we posit that implementation of ERM program by firms can create value for shareholders.

The conceptual framework is such that ERM implementation will lead to some tangible and intangible benefits to the firm. These benefits include outcomes like optimizing risk/return profile of the company, reducing earning volatility (Lam, 2003), strengthening management's confidence in business operations and risk monitoring, creating smooth governance procedures, enriching corporate reputation, improving clarity of organization-wide decision making and chain of command, encouraging corporate entrepreneurship, and boosting enterprise's profitability (Crouhy et al.,2006; Bailey et al., 2004; Belmont, 2004; Lam, 2003; Bettis, 1983). These benefits derived from ERM implementation, in turn, will define the distinctive competitiveness of the firm.

This causal relationship is depicted by the arrow A in the path diagram in Figure 1.

Figure 1: Path Diagram of Conceptual Framework
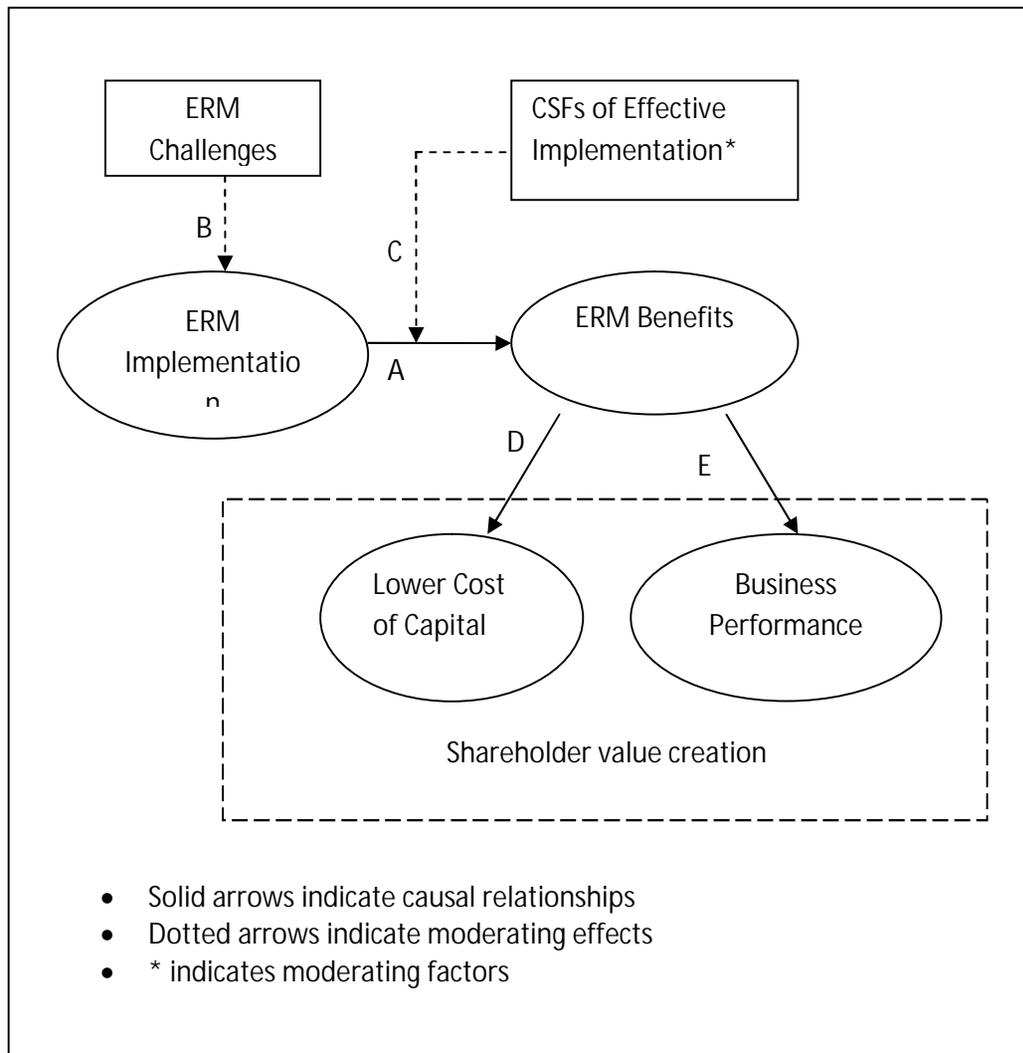
However, our ERM framework reckons that any potential challenges that may be faced by the firm either before or during the implementation process will affect its commitment and intensity level for its planned ERM program. These challenges can be in the areas of finance, people, information, infrastructure, structure, and priorities. These challenges become a moderating factor to the intensity and commitment levels of ERM practices by the firm. The influence of this moderating factor is represented by the dotted arrow B in Figure 2 above.

Similarly, the outcome and efficacy of such an ERM program will depend on the effective implementation of it. The effective implementation, in turn, hinges on to what extent the firm pays attention to some critical success factors (CSFs) during implementation phase of such a program. Since ERM program is relatively new in the corporate management history in the area of business performance improvement techniques, implementing ERM program can be seen as equivalent to

instituting a corporate change management program which requires a substantial amount of mindset and paradigm shift within the organization concerned to ensure the program achieves its intended purposes. In the same context, it follows that implementing ERM program can also be regarded as a business process re-engineering (BPR) agenda of the firm.

According to Khong and Richardson (2003), "BPR is the fundamental rethinking and radical redesign of the business processes to achieve dramatic improvements in critical measures of performance such as cost, quality, service and speed". They emphasized that BPR projects must be implemented appropriately so that dramatic improvement could be achieved and its implementation process must be monitored closely. Al-Mashari and Zairi claimed that BPR implementation process is complex. They categorized the implementation process into five dimensions namely, Change of Management System and Culture, Management Competence, Organizational Structure, BPR Project Management, IT Infrastructure. Each dimension consists of various critical success factors (Al-Mashari and Zairi quoted by Khong and Richardson, 2003).

In the context of our ERM framework, these BPR's critical success factors become the second moderating factor in influencing the outcomes of the ERM program. This relationship is indicated by the dotted arrow C as in Figure 2.

All the tangible and intangible benefits as a result of ERM program implementation will then lead to lower cost of capital as shown by arrow D and contribute to business performance such as improve price-to-earning ratio of share price as depicted by arrow E. The lowering of cost of capital is due to risk premium reduction as a result of the firm lowering its idiosyncratic or unsystematic risk profile[1]. The improving price-to-earning ratio of the firm's share prices on the other hand, happens because investors are willing to pay a higher price for the company's share at a given level of earning-per-share (EPS) due to the firm's perceived lower risk profile. These two causal relationships represent the value creation from ERM program.

2.7   Rebuttal of the Risk Management Irrelevance Proposition: Systematic versus Unsystematic risks

The classical finance theory (CFT) advocates two primary risk management tools for investors in their wealth investment, namely, (i) diversification[2] and (ii) asset allocation[3]. These two concepts of investors' risk management tools were first studied and popularized by Harry Markowitz (Belmont, 2004).

Harry Markowitz in 1952 extended his work by introducing a Model of Portfolio Theory. He theorized a relationship between risk and return. Markowitz's model of portfolio theory emphasizes on risk return

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[1] Discussion of the research model on the interaction between a risk premium framework and the firm's unsystematic risk is presented in the later part of this chapter.

[2] Diversification of portfolio means the exercise of distributing portfolio holding across a greater number of assets (i.e. to include more than one asset type in the investment holding such as combining stocks, bonds, money market instruments, commodities, real estate and etc in order to reduce exposure to risk).

[3] Asset allocation, on the other hand, entails the decision of determining the amount of wealth being invested across asset classes.

trade-off in terms of mean-variance efficient portfolio, hence the introduction of the Efficient Frontier of various assets combination and weight. An efficient frontier of an investment domain (Figure 2) represents a set of "efficient portfolios" that maximize expected returns at a given level of portfolio risk, or that minimize portfolios risk for a given expected return (Belmont, 2004).

Figure 2: The Efficient Frontier
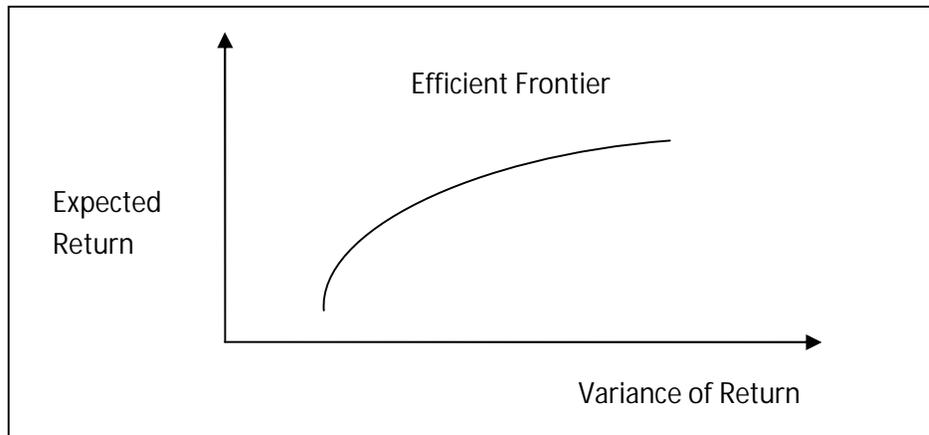
Source: Belmont (2004), pp.22.

However, Markowitz (1952) posited that there are as many efficient portfolios that lie on the efficient frontier as there are investor risk preferences. Nonetheless, by referring to this efficient frontier and base on their risk preferences, investors can construct risk-return efficient portfolios that offer them the optimal return (Belmont, 2004); that is, a diversified portfolio of securities that provide investors with the highest level of return for a given level of risk (Chatterjee et al., 1999). Essentially, Markowitz's model of portfolio theory also stipulates that investors can only get a higher return but accepting a higher level of risk along the "efficient frontier" (Chatterjee et al., 1999).

Applying these two powerful options of diversification and asset allocation advocated by the CFT, neo-classical financial theory (NCFT) (i.e. Modern Portfolio Theory and CAPM) on the other hand, postulates that any internal risk management effort undertaken by the firm to reduce its firm-specific risk will be of no value to shareholders because shareholders can easily employ the above two risk management options, and arguably at a cheaper cost, to attain the same purpose and effect through building an investment portfolios. This argument holds true unless firm-specific risk management can prove to result in the increase of the present value of the firm's cash flow. As such, internal risk management by the firm should focus only on reducing its systematic risk by such ways of hedging or buying insurance (Belmont, 2004).

This conclusion of NCFT somehow runs counter to the initial value proposition of corporate risk management by the CFT. For instance, Markowitz's model of portfolio theory would suggest that if

managers could find ways to minimize the firm's cash flows volatility, or "total risk"[4], then they could create value for shareholders as long as the stabilized cash flows would not come at the expense of their expected value. NCFT such as CAPM, which extended Markowitz's portfolio theory, demonstrated that in equilibrium, the "market portfolio" is the only one efficient portfolio that applies to all investors, regardless of their risk preferences. Hence, therein gives rise to the notion of beta. Thus, according to CAPM, beta risk is the only risk that investors should be concerned about in equilibrium (Chatterjee et al., 1999).

Notwithstanding so, it is worth noting that according to another school of thought, i.e. a classic efficient market theory, even the management of systematic risk is futile. This is because it will not add value to shareholders since the costs of such activities like hedging and buying insurance policies will completely offset the value of eliminating such systematic risk. Hence, a zero sum game ensued for shareholders (Belmont, 2004; Doherty, 2000).

2.8   Recent Challenges to CAPM

Chatterjee et al. (1999) highlighted that CAPM's theoretical veracity has been questioned by many scholars owing to its simplifying assumptions which do not conform to reality. For instance, they cited examples such as Kadlec & McConnel (1994), Levy (1978) and Merton (1987) who doubted that investors are fully diversified as assumed by CAPM; Roll and Ross (1994) who claimed the impossibility to construct a fully diversified portfolio; Teece (1984) who referred to CAPM's static equilibrium as a "fictitious state"; Grossman & Stiglitz (1980), Stein (1988, 1989) who rejected CAPM's perfect market assumption from economic of information point of view on the premise of information asymmetries that exist in the markets; Arrow (1974) who stressed that the reason why markets fail and organizations form is because markets do not distribute information thoroughly, albeit efficiently. Due to these asymmetries, Chatterjee et al. (1999) noted that it has created principal-agent problems which prompted agency theorists championing the setting up of a proper governance mechanism within corporate structure.

Besides, CAPM's predictive validity has also been challenged. Fama & French (2004) and Chatterjee et al. (1999) cited examples of Reinganum (1981); Lakonishok and Shapiro (1986); Merton (1987); Bhandari (1988); Chan, Hamao and Lakonishok (1991), who doubted the predictive ability of beta. These authors provided empirical evidence which indicated that investors concern more than just beta. In addition, Chatterjee et al. (1999) also highlighted other studies; such as Levy (1978); Basu (1983); Merton (1987); Bhandari (1998) which suggested that the predictive power of non-market (firm-specific) factors (i.e. earnings-to-price ratio; leverage) are better than beta alone when it comes to predicting stock returns. In conclusion, in determining a firm's risk premium, investors are concerned with more than just the covariance of the firm's earnings with that of market portfolio, or beta. Other state variables (i.e. inflation) as previously cited and firm-specific elements are as just relevant and important in deciding a firm's share prices and in estimating long-term returns (Fama & French, 2004; Chatterjee et al., 1999). The growing recognition of firm-specific measures in asset pricing, nonetheless, has posed "a challenge to CAPM because of their atheoretical nature" (Chatterjee et al., 1999: 558). Fama and French label these measures as "empirical anomalies" because they are not given any "special standing in asset-

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[4] "Total risk is defined as the standard deviation in a firm's returns over some specifies time period-say, 150 trading days" (Chatterjee et al., 1999:564). In the concept of portfolio risk, total risk is the sum of systematic (market) risk and unsystematic (firm-specific) risk.

pricing theory" (Fama & French quoted by Chatterjee et al., 1999: 558). Notwithstanding so, these measures are given due recognition by authors like Fama, French, Lakonishok, Haugen, DeBondt, and others in estimating a firm's risk premium (Fama & French, 2004; Chatterjee et al., 1999).

2.9   Unsystematic risk and risk premium: CAM modification

CAPM's theoretical framework clearly indicates that there is no favorable risk pricing effect for reduction in unsystematic risk, hence implying that any deliberate effort on the part of the firms to manage their unsystematic risk is futile. However, assuming if there would be a positive effect on managing unsystematic risk, how would this notion impacts the variables in the CAPM formula then? It should follow that variable r, representing the required rate of return for an asset or a project, should be reduce due to the lower risk profile (either perceived or otherwise). A lowered r, which is also used for discounting firms' expected cash flows, should yield a higher firm value as follows:

Firm value = $\boxtimes$ $E(CF_t) / (1 + r_t)^t$

Where $\boxtimes$ $E(CF_t)$ is the sum of all expected cash flows, t is the time period, and r is the discount rate. And according to NCFT, on the basis of maximizing shareholders' wealth, the appropriate firm-decision rule is for managers to pursue all investment opportunities that will yield a positive net present value (NPV) (Belmont, 2004).

In CAPM's formula $E(r) = R_f + \beta^m_i [E(R_m) - R_f]$, where R_f is the risk free rate, β^m_i is the firm's (asset) beta or the correlation coefficient of that particular firm to the market portfolio. The term $[E(R_m) - R_f]$ is the market potfolio's risk premium and the term $\beta^m_i [E(R_m) - R_f]$ is the firm's risk premium. The reduction of expected or required rate of return, $E(r)$, will be significantly influenced by the firm's risk premium term, or $\beta^m_i [E(R_m) - R_f]$. The return on a risk-free asset (R_f) and the expected return on the market $[E(R_m)]$ are externality variables to the firm that there is nothing much managers can do to influence them managerially hoping that these variables can change in the direction that favoring the firm for risk pricing reduction. The same applies to the firm's beta (β^m_i). Beta measures the covariance of the firm's return to that of the market, or in other words, the measurement for the firm's systematic risk. The only way the beta of the firm will change is by way of the firm varying its existing business line so that its business risk profile relative to that of the market shifts. One example of this is to initiate business diversification through either the firm's product lines or target markets. But this managerial maneuvering involves the systematic risk aspect of the firm. As such, in order to capture the positive effect of managing a firm's unsystematic risk and reflect it in the CAPM formulation, we may attempt to include an additional variable, i.e. ③, to impact the firm's risk premium term. This variable should take a negative value so that it can have diminishing effect on the term $\beta^m_i [E(R_m) - R_f]$ such that the new risk premium term of the firm becomes $\beta^m_i [E(R_m) - R_f] - ③$. Thus, the modified CAPM formula that recognizes the effect of managing a firm's unsystematic risk shall be:

$E(R_i) = R_f + \beta^m_i [E(R_m) - R_f] - ③$

Conceptually, it should be noted in the above formula that the effect of unsystematic risk does not come in the form of a direct reward for bearing them in the way similar to bearing systematic risk in the asset pricing model. Rather, the reward comes from the nature for its successful reduction or elimination. This notion runs counter to the concept of market risk in asset pricing. Whereas investors are being rewarded for bearing market risk because it is not diversifiable. Nonetheless, the notion of unsystematic

risk management does not suggest that firms to be rewarded for bearing unsystematic risks. This is because those risks are diversifiable. However, the notion suggests that firms to be rewarded for their ability to reduce those unique risks that they face. The rationale for this reward system is by giving the recognition that managing firms' unsystematic risk can result in firms enhancing their capability to improve earnings. This earnings improvement can come in the form of reducing or eliminating negative profit variation, reducing cost of financial distress, minimizing agency problem, enhancing corporate brand name and the likes. Managers, thus, should endeavor to manage firms' unsystematic risk well enough to earn the largest possible value of -③ as possible from the investors in order to reduce the firms' required rate of return (risk premium) or cost of capital.

In the context of asset pricing, the idea for managing firms' unsystematic risk comes from the hypothesis where it is postulated that investors would welcome such a reduction in firms' specific risks. As a result, investors would demand a relatively lower risk premium for their investment in the firm. Nonetheless, in transforming the above hypothesis into precise mathematical formulation, the challenge would emerge in the area of firms' valuation. The measurability of firms' value enhancement as a result of this unsystematic risk management would hinge on the market's ability to identify and quantify the reduction of each firm-specific risk for a reward (i.e. the reduction in discount rate)., that is, the ③, as mentioned above.

2.10   A Strategic Conceptualization of Risk Premium: The CLS Model

To begin with, we may describe the apparent contradictory conclusions of neo-classical financial theory (NCFT) that sits on one camp and classical/strategy theory on the other by drawing reference to some anecdotal evidences of the practices of corporate risk management in the real world. Risk management in the context of NCFT would only mean diversification, asset allocation and to a certain extent, the hedging or transfer of risk (Belmont, 2004). However, Belmont (2004: 21) also pointed out that, in the real world realm, corporate risk management activities include "a logical and systematic method of establishing the context, identifying, analyzing, evaluating, mitigating, monitoring and communicating risk associated with any financial activity, function or process in a way that will enable organizations to minimize financial losses and maximize financial opportunities".

In comparison, a stark distinction of the concept of ERM to the notion of risk management by NCFT is the management of unsystematic risk or firm-specific risk. Apart from managing systematic risks, our ERM framework also highlights the importance for managing unsystematic risk with the belief that it will lead to an enhanced shareholders value. This concept blends perfectly well with the value enhancing notion as postulated by strategy theory.

Hence, to bridge the gap of the seemingly contradicting conclusions regarding unsystematic risk management between modern financial theory and strategy research, it requires a model that fits well within the two disciplines. This model will serve as the value enhancing transmission mechanism of enterprise risk management. And one such model is related to the risk premium of the firm.

To this end, our framework attempts to theorize a model capturing the causal relationships of the risk that strategically associated with firms' business performance and cost of capital. We highlight the notion of managing firms' unsystematic (specific) risk via an enterprise risk management framework that leads to the enhancement of shareholders' value. The mechanism through which firms' value enhancement takes place is by developing a strategic conceptualization of risk premium.

The focus is on the adaptation of a model called "a dynamic framework of a firm's risk premium" developed by Chatterjee, Lubatkin, and Schulze (1999) which will reconcile and fill-in the gap between modern financial theory and strategy theory.

We refer to this risk premium model developed by Chatterjee et al. (1999) as the CLS risk premium model.

2.11   The CLS risk premium Model

The CLS model was developed based on the assumption that investors do care about firm-specific risk. This is owing to the fact most investors are not as fully diversified and markets are not as perfect as CAPM assumes. The interactions among constructs in the CLS risk premium model take reference from information economics, resource-based view of the firm, and the industry structural view of strategy (Chatterjee et al., 1999). The information economics highlights the existence of information asymmetries in the market and notices that the belief among market participants to be heterogeneous. The resource-based view of the firm provides explanation that the asymmetries that happen in the resources markets are caused by the characteristics of the resources in which they are lumpy, heterogeneous, and to be acquired with a cost. The industry structural view of strategy on the other hand, sees asymmetries in market power distribution in the input and output markets (Chatterjee et al., 1999).

In developing the CLS risk premium model, Chatterjee et al. (1999) postulated that investors are exposed to various classes of firm-specific risk in a world of partial diversification and imperfect markets. And this notion forms the core of the CLS model. In other words, CLS model makes extension to the CAPM notion where apart from recognizing the sensitivity of a firm's expected returns to macroeconomic uncertainties, CLS risk premium model also gives inclusion to the sensitivity of a firm's expected returns to three additional classes of firm-specific risks. This is the part where CAPM has omitted.

CLS model categorizes these three classes of unsystematic risk as tactical, strategic, and normative risk. As Chatterjee et al. (1999) pointed out that, tactical risk exists mainly in information asymmetries, whilst strategic risk comes from imperfections in the resource and output markets, and finally normative risk presents itself in the forces that define institutional norms.

2.12   Tactical risk

The nature of tactical risk lies with the uncertainty in firm's expected earnings. It is based on the assumption that investors are averse to earnings surprises owing to information asymmetries. Hence, investors will request lower risk premium from firms who can stabilize earnings.

Firms can employ three strategies to manage tactical risk. That is, the use of financial tactics, hedges, and real options. Chatterjee et al. (1999) pointed out that financial tactics include earnings management, governance, and liquidity.

Figure 3: The CLS Risk Premium Model
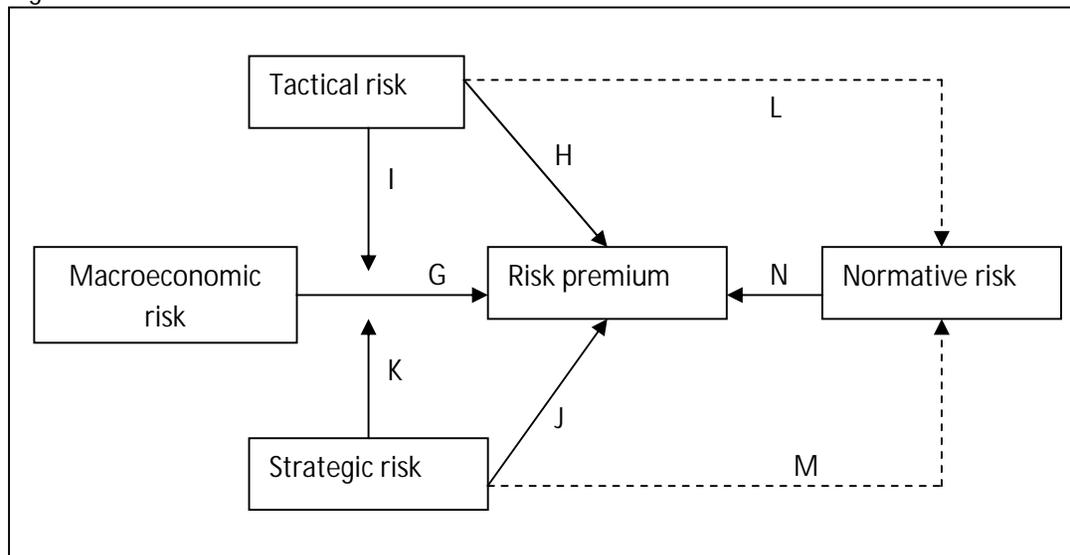
The use of financial tactics has a direct link to risk premium as depicted by arrow H in Figure 4. Whereas the use of hedges and real options present indirect relationship between firm-specific actions and macro-economic risk to the firm's risk premium as indicated by arrow I in Figure 3.

2.13   Strategic risk

The nature of strategic risk is due to the uncertain performance outcomes from the firm's committed resources. It is caused mainly by imperfections in resource and output markets (Chatterjee et al., 1999). Since firms' survival in the marketplace hinges on how well the firms formulate strategy in committing and deploying their scarce yet precious resources to stay competitive, it follows then that risks exist if the goal to attain and sustain such competitive advantage from the committed resources cannot be achieved.

Thus CLS model defines strategic risk as "the probability that a firm can isolate its earnings from macroeconomic and industry-specific disturbances" (Chatterjee et al., 1999:560). This risk is represented by arrows J and K in Figure 3.

The concept of earnings isolation can find its core in strategy literature such as those of Barney (1991) and Rumelt (1984). As pointed out by Chtterjee at al. (1999), strategy literature provides good accounts for various determinants of strategic risk. These include the firm-structure view, resource-based view, knowledge-based view, and strategic options view.

For instance, Porter (1980) analyzed strategic risk from the firm-structure view. He categorized strategic risk in his "five forces" analysis of market rivalry. Chatterjee at al. (1999) postulated that firms that are able to flex their market power to stabilize and enhance their cash flows by leveraging and sustaining their structural advantages will enjoy lower risk premiums.

The resource-based view (RBV) of strategic risk argues that a firm may keep its resource-based advantages from the knowledge of its rivals. This is because valuable resources are sometimes

intangible and tacit, coupled with the fact that their distribution is not homogeneous. The nature of these advantages hence, enables a firm to keep them invisible from the detection of competitors. As a result, it will help cripple competitors' effort to strategize against the firm (Barney, 1991; Connor, 1991). Chatterjee at al. (1999) deduced the fourth determinant of strategic risk from strategic options literature such as that of Sanchez (1993). Chatterjee et al. (1999) explained that strategic options might have originated from "real" options, which are contingent in nature, but later turned to its form when firm committed its resources to the contracts due to changes in market conditions. According to Raynor (2008), strategic options are fundamentally different from growth options in that their focus is not to create possible avenue for new growth, but to create the opportunity to redirect strategy in the existing business model. Chatterjee et al. (1999: 561) reckoned that strategic options are investments that are difficult to undo once committed. Firms undertake such commitment in order to "mitigate specific sources of macroeconomic and industry-specific disturbances risk". Miller (1998) noted that the use of strategic options is due to the unavailability of other type of options, like hedges. Nonetheless, Raynor (2008) pointed out that to manage strategic risk effectively a firm has to establish a portfolio of strategic options so that it can create "strategic flexibility" without compromising the need to commit.

Normative risk and dynamic forces

CLS model posits that risk premium advantages attained through active management of tactical and strategic risks are temporary. Due to competitive forces, any previous advantages will be imitated by competitors and will be neutralized after some time. At this point, the ability of tactical and strategic risk management to reduce risk premium will diminish and they will become "nothing more than a source of variance about some baseline level of firm-specific risk" (Chatterjee et al., 1999: 562). Tactical and strategic actions will then lose its uniqueness and differentiating factor but become institutionalized and pre-requisites for firm to stay in the industry (Chatterjee et al., 1999; Scott, 1995; Hamel & Prahalad, 1994). This relationship is presented by arrows L and M in Figure 3.

Normative risk, thus, is defined as the risk premium (or penalty) that a firm is subjected to if it fails to comply with its institutional norms or rules that it is expected to follow (Graf, 2004; Chatterjee et al., 1999). These norms represent the common expectations of the firm's stakeholders (i.e. investors, regulators, interest groups) with regards to its behavior (Graf, 2004). CLS model stresses that complying to pre-requisite norms will not yield firms any reward but will be slapped with higher risk premium if firms fail to observe them. This is owing to investors having to bear additional risk without the promise of higher return (Chatterjee et al., 1999). Financial accounting literature such as Jones (1996) provided indirect support for this assertion. Jones noted consistent evidence that the incremental information provided by going-concern audit opinions had an influence on investors' reaction (Jones quoted by Chatterjee et al., 1999). This relationship is depicted by arrow N in Figure 3.

As such, firms have to ensure their proper compliances to institutional norms and industry rules so to avoid penalty charged onto their risk premium.

2.15   Summary of CLS Risk Premium Model

CLS risk premium model highlights the notion that there are dynamic relationships between unsystematic risk (i.e. tactical, strategic, and normative risks) and a firm's risk premium. Thus, firm-specific activities and skills derived from the active management of those risks will influence a firm's risk premium. This argument is well supported by the current theories of strategy (Graf, 2004).

However, this assertion is apparently inconsistent with CAPM which does not acknowledge such a relationship. CAPM defines that all firm-specific activities, which are measured by the variance of the error term in the market model, as unsystematic risk. And this unsystematic risk is not correlated with risk premium. Thus, it is irrelevant (Belmont, 2004; Chatterjee et al., 1999). Nonetheless, as has been discussed earlier, the theory of CAPM has been subjected to much challenges of late. This is especially with the beta being doubted by many studies to be a reliable proxy of a firm's risk premium (Chatterjee et al., 1999).

The concept of CSL model, on the other hand, takes a multivariate approach. The constructs of the model include macroeconomic, tactical, strategic, and normative risks, all of which are omitted by CAPM. Besides, CSL model also pays due recognition to the dynamic of the continuous interplay between elements of the firm's activities and market forces (Chatterjee et al., 1999). This approach of conceptual assertion not only comes in tandem with the studies of strategic management, but also offers to connect the former with the theories in financial economics in providing a solid and robust conceptual framework for enterprise risk management (ERM). This linkage of theories from the two disciplines (i.e. strategic management and financial economics) enables the building of a new theory postulating that ERM can lead to improved business performance and enhanced shareholders value. In effect, Chatterjee et al. (1999: 563) suggested building "a more conceptually complete asset pricing model" with the combination of contributions from the empirical discovery of financial economics as well as the conceptual description of strategic management.

Risk premium is a crucial element for firms. It has a profound impact on firms' cost of capital. Firms with risky profiles in the eyes of investors will suffer from incurring higher costs when raising capital. This comes in the form of either selling equity at lower prices or issuing bond/debt with higher coupon/interest rates (Chatterjee et al., 1999). Firms encountering this situation will face an unfavorable strategic opportunity set (Copeland et al., 2005). Besides, higher capital costs will return lower present value when discounting firm's future earnings. As such it can become a source of competitive disadvantage when a firm faces its rivals in accessing capital markets (Belmont, 2004; Chatterjee et al., 1999).

3.0   THE THEORETICAL FRAMEWORK

From the discussion thus far, we postulate that a dynamic ERM framework will enhance shareholders value through enhanced business performance and the reduction of the firms' cost of capital.

We hence theorize that a firm's commitment and implementation intensity of its ERM program will be determined by the various challenges faced during such implementation process. The success of such ERM implementation, thus the amount of benefits received, in turn, is affected by how well the corporations manage some critical success factors hinging on the effective implementation of the ERM program.

We further theorize that in the event of corporations successfully implement the ERM program, the benefits received from such effective execution will have a long-term positive impact in creating value for the corporations' shareholders. This value creation process is achieved via a two-pronged process.

Firstly, shareholders' value is created by way of lowering the corporations' cost of capital which takes place through a dynamic framework of risk premium reduction mechanism (CLS risk premium model) as discussed earlier.

Figure 4: Theoretical framework's diagram
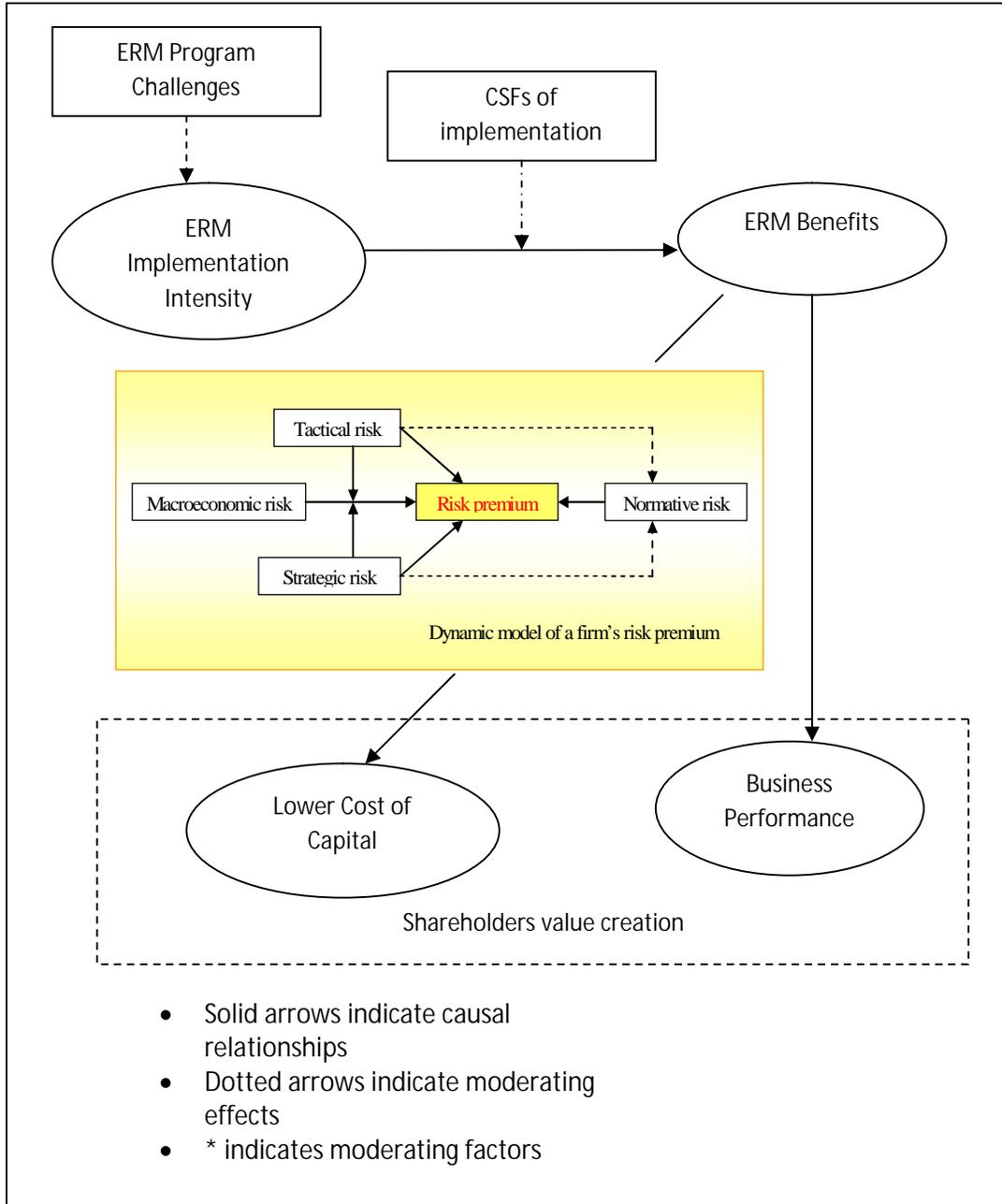
Note: Figure 4 is reproduced from Figure 1 with the inclusion of the dynamic model of a firm's risk premium which works as the transmission mechanism of the value-enhancing effect of ERM framework.

Secondly, the value is created by means of a generic improvement of business performance. This improvement encompasses all functional areas such as finance, operations, marketing, human resources, and governance.

The final result of this two-pronged value creation process is the higher return of share prices for shareholders. These theoretical relationships are depicted by Figure 5.

In addition, the CSFs for effective implementation of ERM program posited within this theoretical framework can in turn, serve as predictors for having a successful ERM program for the firms.

4.0   HYPOTHESES DEVELOPMENT - VALUE MAXIMIZATION OF ERM

Discussion laid out earlier on (i) the rebuttal of neo-classical finance theory on unsystematic risk; (ii) recent challenges to CAPM theory; and (iii) a strategic risk premium model; have provided both empirical and conceptual support for a value-enhancing corporate risk management through our ERM framework. Drawn from this discussion, we develop the following hypotheses:

4.1   Hypotheses for Direct Effect

H_1:   Managing firm-specific risk through ERM will be rewarded by the equity market

H_2:   ERM implementation outcomes have a positive association with cost of capital

H_3:   ERM implementation outcomes have a positive association with overall business performance

H_4:   ERM implementation outcomes have a positive association with reducing firm's overall risk premium

H_5:   ERM implementation outcomes have a positive association with reducing firm's macroeconomic risk

H_6:   ERM implementation outcomes have a positive association with reducing firm's tactical risk

H_7:   ERM implementation outcomes have a positive association with reducing firm's strategic risk

H_8:   ERM implementation outcomes have a positive association with reducing firm's normative risk

H_9:   ERM implementation outcomes have a positive association with profit maximization of firm

H_{10}:   ERM implementation outcomes have a positive association with minimizing financial distress cost

H_{11}:   ERM implementation outcomes have a positive association with lowering tax burden

H_{12}:   ERM implementation outcomes have a positive association with avoiding costly external financing

H_{13}:   ERM implementation outcomes have a positive association with reducing information friction/ asymmetries

H_{14}:   ERM implementation outcomes have a positive association with minimizing agency cost

Hypotheses for Indirect Effect (Moderating Factors)

Our ERM framework postulates two moderating effects. The corresponding hypotheses are:

H_{15}:   Challenges faced by firm will impact ERM implementation intensity
H_{16}:   CSFs of ERM implementation process have an effect on the outcomes or benefits received from ERM program

5.0 THE METHODOLOGY

5.1 The Analytic - Structural Equation Model for Path Analysis

The estimation of the multiple interrelated dependence relationships as per our ERM framework discussed preciously involves the incorporation of latent and manifest variables. According to Hair et al. (1998: 585), a latent variable is a "hypothesized and unobserved concept that can only be approximated by observable or measurable variables". On the other hand, the manifest or the observed variables are gathered "from respondents through various data collection methods (e.g., surveys, tests, observations)".

For instance, all the variables shown in Figure 5 namely, ERM Program Challenges, ERM Implementation Intensity, CSFs of Implementation, ERM Benefits, Dynamic Framework of Firm's Risk Premium, Lower Cost of Capital, and Business Performance are latent variables. These latent variables or observed concepts in turn, will be individually measured by another set of manifest variables respectively. These manifest variables are presented as statements in survey questionnaires to be answered by respondents.

As far as data analysis procedure is concerned, we can address these multiple issues (as per the multiple causal relationships in the ERM framework) simultaneously with a single multivariate technique. Since the development of our ERM framework mentioned above embodies theoretical issues, we ought to rigorously test its theoretical soundness.

To this end, we propose employing structural equation modeling (SEM) for the analysis. SEM is a path model whose analytical procedure is an extension of several multivariate techniques such as multiple regression and factor analysis. SEM enables the comprehensive examination of "a series of dependence relationships simultaneously" (Hair et al., 1998: 578). The primary purpose of setting up a structural equation model for path analysis is to validate theory by testing the total, direct, and indirect effects of latent and manifest factors (variables). The path analysis also allows investigation for the effect of mediation (intervention) that exists among variables (Anderson & Gerbing, 1988; Hair et al., 1998; Chin, 1998; Hoe, 2008).

SEM consists of measurement model or confirmatory factor analysis (CFA) and structural model (Hoe, 2008). Measurement model in SEM refers to the process of specifying indicators for each construct and the assessment of the each construct's reliability in estimating the causal relationship. Structural model, on the other hand, refers to the set of one or more dependence relationships linking the hypothesized model's constructs (Hair et al., 1998). SEM's statistical supremacy, namely its ability to detect and reject a poor model, is derived from the fact that it combines both measurement and structural models into a simultaneous statistical test to estimate a series of separate, but interdependent, multiple regression

equations (Hoe, 2008; Chin, 1998; Hair et al., 1998). In applying SEM, a researcher will "draw upon theory, prior experience, and the research objectives to distinguish which independent variables predict each dependent variable" (Hair et al., 1998: 584). According to Hair et al. (1998), in a structural model, some independent variables become dependent variables in subsequent relationships.

Hoe (2008: 76) noted that SEM is especially effective in inferential data analysis and the testing of hypothesis "where the pattern of inter-relationships among the study constructs are specified a priori and grounded in established theory". Besides, according to Chin (1998: 7), SEM offers researchers with great flexibility to "(a) model relationships among multiple predictor and criterion variables, (b) construct unobservable latent variables, (c) model errors in measurements for observed variables, and (d) statistically test a priori substantive/theoretical and measurement assumptions against empirical data (i.e., confirmatory analysis)".

5.2 Path Diagram

Figure 5 depicts a pictorial portrayal of the relationships among all concepts/constructs in our ERM framework. This pictorial portrayal is termed as a path diagram. It serves as the basis for a path analysis to empirically estimate the strength of each relationship (represented by each path) depicted in the diagram (Hair et al., 1998).

Referring to the causal relationships path diagram in Figure 5, one independent variable of ERM challenges (X_1) predicts the dependent variable ERM intensity (Y_1) [arrow A]. Likewise, dependent variable of ERM benefits (Y_2) is predicted by two independent variables of ERM intensity (Y_1) [arrow B] and implementation CSFs (X_2) [arrow C]. Lastly, dependent variable shareholders value (Y_3) is predicted by variable ERM benefits (Y_2) [arrow D].

Figure 5: Path Diagram of ERM Relationships
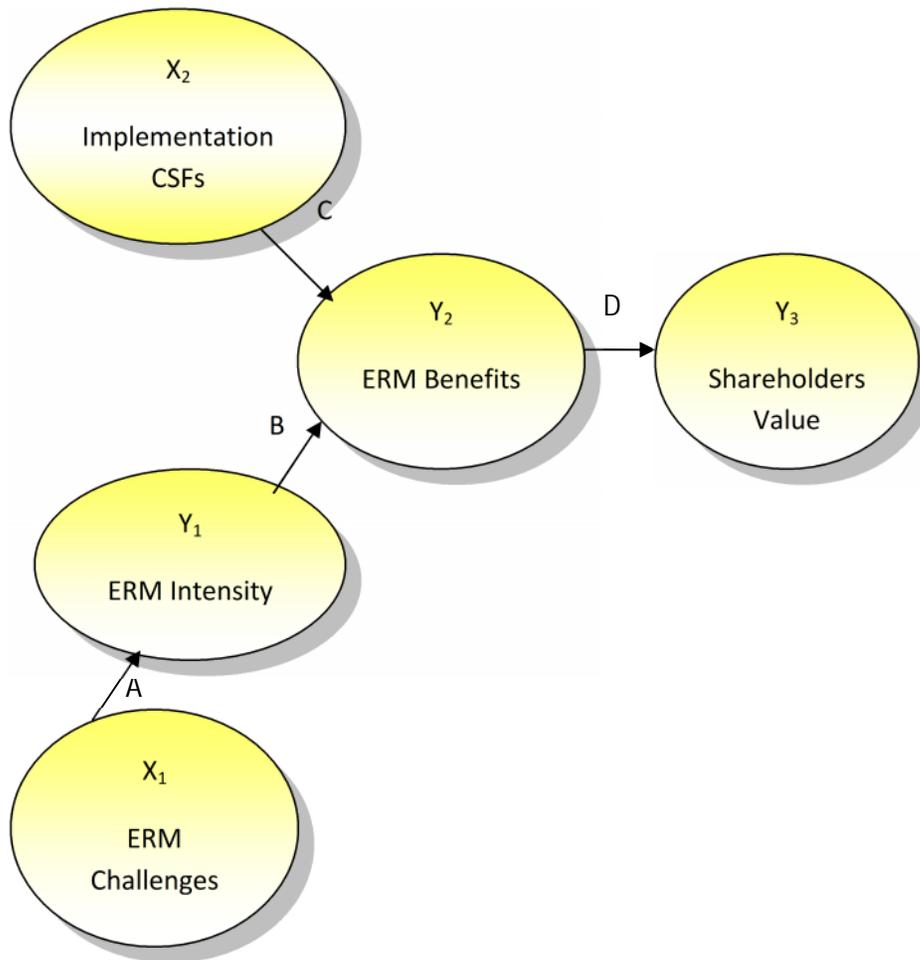
Mathematically, these causal relationships can be stated in the following equations:

$Y_1 = b_1X_1$ - path A

$Y_2 = b_2Y_1 + b_3X_2$ - path B and C

$Y_3 = b_4Y_2$ - path D

where

Y_1, Y_2, and Y_3 are endogeneous variables; whereas

X_1 and X_2 are exogeneous variables; and

b_i in all equations are the coefficients for the strength of causal relationships among constructs Y_i and X_i.

6.0   CONCLUSION

We can conclude from the discussion earlier that the views of modern financial theory (neo-classical finance theory) and that of strategy theory are somehow contradicting when it comes to corporate risk management; in this context the efficacy of ERM.

In effect, the argument made by modern financial theory also runs contrary to that of classical theory (i.e. Markowitz) in this respect. Nevertheless, as Bettis (1983: 409) aptly put it: "To alter either result is to disrupt significantly the logical structure of the underlying discipline".

But then, how can one provide plausible and sensible explanations in an effort to describe this discrepancy and to even reconcile the difference?

Therefore, it will be of great interest and significance to attempt to provide a theoretical linkage among the three schools of thought, namely the classical finance theory, neo-classical finance theory, and strategy theory.

Our ERM framework, hence, endeavors to provide such linkage.

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