

Linking Balanced Scorecard and COSO ERM in Thai Companies

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This study investigates the relationship between successful Balanced Scorecard (BSC) and successful COSO Enterprise Risk Management (ERM) in Thai listed companies. Data were collected from a mailed survey. Targeted respondents were corporate strategic planning managers or others who held a similar position of the Stock Exchange of Thailand (SET) listed companies, which applied both BSC and COSO ERM. Result shows a significant positive relationship between a successful BSC and an effective COSO ERM. It can be implied that the combined approach of these management tools should be taken into consideration in order to realize full benefits.

INTRODUCTION

In an era of competition, all types of business would thrive and gain competitive advantage through efficient and effective allocation of resources. A performance measurement system (PMS) is used as a management tool to help a firm determine the most advantageous resource allocation. The PMS initially consisted of solely financial measures, but it was found several decades after it was introduced that traditional financial measures were unable to evaluate the feasibility of intangible assets, for example, employee skills, technology, and customer satisfaction. This led to the addition of non-financial measures to resolve this problem. A popular PMS that captures both financial and non-financial measures is known as a Balanced Scorecard.

The Balanced Scorecard (BSC) is a management system that was initially proposed by Kaplan & Norton (1992) in order to solve the problem inherent in the traditional financial accounting model, which is the inability to value the organization's intangible assets (Kaplan & Norton, 1992, 1996, 2001). The system focuses on four perspectives: financial, customer, internal business processes, and learning and growth. According to Kaplan & Norton (1996), the Balanced Scorecard is not simply a management system, but is a strategic management system that clearly emphasizes on strategic implementation. Kaplan & Norton (2001) suggested organizations that failed to execute strategic objectives to focus and align the strategy by using the five principles of a Strategy-Focused Organization. These five principles are 1) translating the strategy to operational terms, 2) aligning the organization to the strategy, 3) making strategy everyone's everyday job, 4) making strategy a continual process, and 5) mobilizing change through executive leadership. However, risk management is rarely written into the BSC context because the conventional BSC is not designed to manage related risk that may be dangerous for strategic execution (Kaplan & Norton, 1996; 2004; Calandro Jr & Lane, 2006; Nagumo & Donlon, 2006). In their

view, a conventional BSC without risk management cannot be the best choice for retaining and enhancing shareholder value in the ever-changing business environment.

Running a business in a changing and complex operating environment involves riskier decision-making that might lose long-term value for a short-term profit. A better way to retain shareholder value is integrating the BSC with appropriate risk management mechanism as introduced by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Many researchers (for example, Beasley et al., 2006; Calandro Jr & Lane, 2006; Nagumo & Donlon, 2006; Shenkir & Walker, 2006) also found that core elements of COSO Enterprise Risk Management (COSO ERM) - Integrated Framework are strategy and risk, which are focused and aligned across the entity. Thus, it is possible to state that an integrated approach is the better choice for businesses that intend to thrive in a changing world economy.

This study focuses on the relationship between a successful BSC and an effective COSO ERM - Integrated Framework. The objectives of the study are 1) to examine the success of BSC implementation as measured by best-practice standards of the Strategy-Focused Organization, 2) to examine an effective enterprise risk management using eight components of COSO ERM (internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring) as criteria, and 3) to examine the relationship between a successful BSC implementation and an effective COSO ERM system.

LITERATURE REVIEW

The Five Principles of the Strategy-Focused Organization

Kaplan & Norton (1992) constructed a BSC for the reason that financial measures do not capture the intangible assets in long-term value creation. The BSC classifies financial performance as a lagging indicator, which is improved by three leading indicators: customer; internal business process; and learning and growth. Four perspectives of the BSC framework are linked in a cause-and-effect relationship, and are used as an operational measurement system and as a strategic management system. In the role of strategic management system, the BSC communicates the company's strategy in a chain of cause-and-effect relationship. Moreover, it can be used to manage strategy over the long run by achieving four critical management processes, which are 1) clarifying and translating vision and strategy, 2) communicating and linking strategic objectives and measures, 3) planning, setting target and aligning strategic initiatives, and 4) enhancing strategic feedback and learning (Kaplan and Norton, 1996). The BSC implemented in the strategic management system starts at the top where the leaders establish a sense of urgency. The executive team uses the BSC, as a communication device, to mobilize strategic implementation project to all employees and business units. While the executives were launching an explicit transition between management system and strategic management system, the governance process must have been set. This transition governance is composed of the creation of strategy teams, town hall meetings, and open communication. During the change process, the executives develop their current management system to become a strategic management system.

According to Kaplan & Norton (2001), successful companies that use a BSC approach practiced the five principles of the strategy-focused organization to accomplish their strategic focus and alignment. The five principles are 1) translating the strategy to operational terms, 2) aligning the organization to the strategy, 3) making strategy everyone's everyday job, 4) making strategy a continual process, and 5) mobilizing change through executive leadership. These principles are fundamental in the effective implementation of the BSC, which could be derived into a communication tool, a framework, and a supporting process. Additionally, the ownership and active involvement of the executives are extremely important for a successful BSC implementation.

The COSO ERM Framework

In 1996, Kaplan & Norton noted that "In general, risk management is an overlay, an additional objective that should complement whatever expected return strategy the business unit has chosen." Risk is a possibility of loss, which is classified into three types: financial risk; operating risk; and technological

risk (Kaplan & Norton, 2004). Furthermore, the definition of risk within the BSC context could be “the deterrent factors and uncertainties inherent in achieving the strategic objectives as defined in the BSC and the potential losses that may result through their implementation” (Nagumo & Donlon, 2006; Shenkir & Walker, 2006). The strategic and operational failures are the risks that have an effect on the shareholder value (Shenkir & Walker, 2006). Risk is also presented as an unsuccessful strategic implementation or execution resulting from either unintentional or intentional reasons (Calandro Jr & Lane, 2006). In view of Beasley et al. (2006), risks are the events threatening an enterprise through its supply chain.

According to the definitions of risk mentioned above, it could be stated that organization’s goal could not be fully achieved due to the existence of risks that has not yet been managed. The implementation of BSC without appropriate risk management is extremely dangerous, for example, stretch target setting through BSC might create a risky behavior leading to long-term value loss. On the other hand, risk management framework that does not clearly focus on corporate strategic objectives could be an unproductive system, because key risks affecting an entity do not receive proper attention from risk owners and are not efficiently mitigated. Consequently, BSC and appropriate risk management must be integrated to ensure that shareholder value is protected.

The integrated approach takes the relationship between strategy and risk management into consideration. Meanwhile, the risk management system that focuses on aligning strategy and risk across the entity is the Committee of Sponsoring Organizations’ Enterprise Risk Management (COSO ERM) framework.

COSO (2004) defined Enterprise Risk Management (ERM) as “*a process, affected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives*”.

The definition focuses on the achievement of entity objectives. COSO ERM is composed of four objectives, eight interrelated components of risk management, and the organizational units. The four entity objectives are 1) strategic, 2) operations, 3) reporting, and 4) compliance. The entity is expected to provide reasonable assurance to the executive team regarding the achievement of these objectives. Eight components of enterprise risk management are derived from the way management runs an enterprise and integrated with the management process. These components are 1) internal environment, 2) objective setting, 3) event identification, 4) risk assessment, 5) risk response, 6) control activities, 7) information and communication, and 8) monitoring.

Drawing from COSO (2004), there is a relationship between the four objectives and the eight components of COSO ERM. The effectively functioned eight components are the criteria for effective enterprise risk management as they are the key factors that enable the four objectives to be achieved. This paper deliberately examines an effective ERM with eight components of COSO ERM based on the literature reviews.

The Synergism Between Risk Management and Strategic Implementation

The aforementioned issues referred to the BSC, a strategic management system that operates on a cause-and-effect relationship; and COSO ERM which consists of the eight interrelated components and four objectives. The BSC and COSO ERM could be simultaneously implemented because they share many elements. They are both a continuous process that is linked to the corporate strategy in order to enhance the possibility that activities of risk management and strategic execution are achieved. These two management systems approach strategy and risk on a holistic perspective and require strong support from executives for managing all organizational units within a single corporate entity. Importantly, the significant shared element between the BSC and COSO ERM is that all employees understand and conduct their daily jobs in a way that contributes to the achievement of the entity’s objectives (Beasley et al., 2006). Clearly, there are various commonalities between BSC and COSO ERM; however these management mechanisms will not work properly if risk management is not linked to the BSC context. Nagumo & Donlon (2006) clarified that 1) using Key Performance Indicators (KPIs) in terms of Key Risk Indicators (KRIs), 2) risk management project, 3) risk management strategic theme, and 4) implementing

risk management in the BSC framework, are the limitations of using risk management in separation from the BSC.

Executing risk management as a distinct objective is not a good choice for protecting shareholder value, thus, integrating the BSC and COSO ERM framework is the development of strategic management system and risk management to achieve ultimate goal.

To integrate risk management to BSC, Nagumo & Donlon (2006) starts with installing risk management sub-themes for each of the internal process strategy themes, and employing the corporate strategic objectives for the implementation of risk response approach. The second step is clarifying key financial impact on the cause-and-effect relationships by setting up “Optimize Risk/Return” strategic objective in the financial perspective, linking the interrelated components of COSO ERM to four perspectives of the BSC, and identifying Key Performance Indicators (KPIs) in a Key Risk Indicators (KRIs) manner to enhance risk awareness throughout the entity. Additionally, Damelincourt (2013) found that traditional KPIs without risk management are inefficient, because risks lurking in strategic objectives are not professionally mitigated. Hence, KPIs have to be modified by taking risk management into consideration.

Nagumo & Donlon (2006) also illustrated risk-adjusted KPIs on each perspectives of the BSC, for example, 1) Risk Adjusted Return on Capital (RAROC) could be used to evaluate risk that is related to long-term shareholder value in the financial perspective; 2) Brand indicators could be utilized to assess uncertain events threatening corporate reputation in the customer perspective; 3) KPIs, in the internal process perspective, are metrics of the status that served as a measure of risk control activities; and 4) KPIs, in the learning and growth perspective, are designed to test human; information; and organization capital for implementing risk control.

Furthermore, the benefits of using risk-adjusted KPIs are that 1) risk events affecting the organization are mitigated on a strategic basis; 2) the enterprise has more accurate and more realistic indicators; and 3) it heightens management and the board of directors risk awareness (Damelincourt, 2013). In the final step of installing integrated approach, making strategy and risk everyone’s everyday job through cascading the entity’s objectives to organizational units and all employees. When individuals have conducted their daily task in a way which contributes to the success of the entity’s objectives, the evaluation method starts. Nagumo and Donlon (2006) suggested that in COSO ERM – integrated BSC evaluation procedure, harmful strategic activities should be carefully appraised. The harmful strategic activities might obtain an unsatisfied evaluation result because an instant financial success of those dangerous activities leads to medium- and long-term potential risks.

Another good example of an integrated approach is a study done by Beasley et al. 2006, which presents the linkage between COSO ERM and BSC for supply chain management. In terms of the learning and growth perspective, objectives and measures related to learning about risk management could be created to increase recognition of risk to the employees. In the internal business process, goals related to risk appetite or risk tolerance and risk performance metrics could be applied into this perspective to reduce impact threats to business process. Regarding customer satisfaction, risk goals and metrics related to customers; markets; and corporate reputation could be applied into this perspective, whereas the financial performance uses ERM cost/benefit analysis to link with this perspective (Beasley et. al., 2006).

Ballou et. al. (2006) proposed the matrix of COSO ERM – integrated BSC methodology to expand the executives’ understanding of risk categories affecting an entity, and to successfully manage those types of risks through COSO ERM framework. This matrix is composed of BSC perspectives displaying in rows and COSO ERM framework risk categories in columns. Each cell of the matrix could contain one or more measures that are created in association with each category of risks. All sixteen cells are evaluated and determined by senior management and the board of directors.

Furthermore, a study of Ballou et. al., (2006) gave an explicit example of Wal-Mart COSO ERM – integrated BSC matrices. Four measures are used to briefly explain BSC perspectives and COSO ERM risk categories. These four measures are 1) number of new private-label product innovations, 2) average salary and benefits at each level for gender and race, 3) number of brands available for a product, and 4) external

auditor fees. Firstly, in the learning and growth perspective, *number of new private-label product innovations* that involves effective research and development of product lines is used to test an effectiveness of strategic risk management. Secondly, in the business process perspective, *average salary and benefits at each level for gender and race* evaluates a fairness of compensation and benefits for particular minority group classified as a compliance risk. Thirdly, in the customer perspective, Wal-Mart applied a *number of brands available for a product* as a metric to assess operation risk related to customer dissatisfaction with organizational supply chain management.

Finally, in the financial perspective, *external auditor fees* are used to measure reporting risk. Ballou et. al., (2006) recommended Wal-Mart to present external auditor fees at a reasonable level by comparing the fees to its stakeholders' expectations and other public companies. The study emphasized on the connection between BSC concept and COSO ERM framework. This COSO ERM – integrated BSC framework would be useful to an enterprise as it provides better understanding of risks-related corporate strategic objectives.

An objective of COSO ERM – integrated BSC approach is to execute strategy within the limit of corporate risk appetite that results in creating long-term shareholder value. Additionally, risk management provides feedback for strategic implementation by identifying key risks on each perspective of the BSC. Those key risks are prioritized on the basis of likelihood and impact, including the consideration of the importance of strategy (Nagumo & Donlon, 2006). Hence, it is possible to understand that the BSC and COSO ERM develop and complement each other.

RESEARCH METHODOLOGY

This study examines the relationship between a success on BSC and an effective COSO ERM. Data were collected from a mailed survey. The investigation is limited to the 93 companies which are listed in the Stock Exchange of Thailand (SET) that implement both BSC and COSO ERM. Targeted respondents are corporate strategic planning manager or others who held a similar position of each sample company. They were asked to participate in answering a questionnaire on the evaluation of the success on BSC and an effective COSO ERM of Thai listed companies. Five-point Likert's scale was used where 1 means least successful and 5 means most successful. The success of BSC was measured for each of the components in strategy-focused organization, namely translating the strategy to operational terms, aligning the organization to the strategy, making strategy everyone's everyday job, making strategy a continual process, and mobilizing change through executive leadership. On the other hand, the success of COSO ERM was measured for each of the component in effective ERM, namely internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring. A questionnaire that is packaged in a postage-paid and self-addressed envelope is mailed out to each targeted respondents in February 2013. After data was collected, structural equation modeling (SEM) technique was used.

FINDINGS AND RESULTS

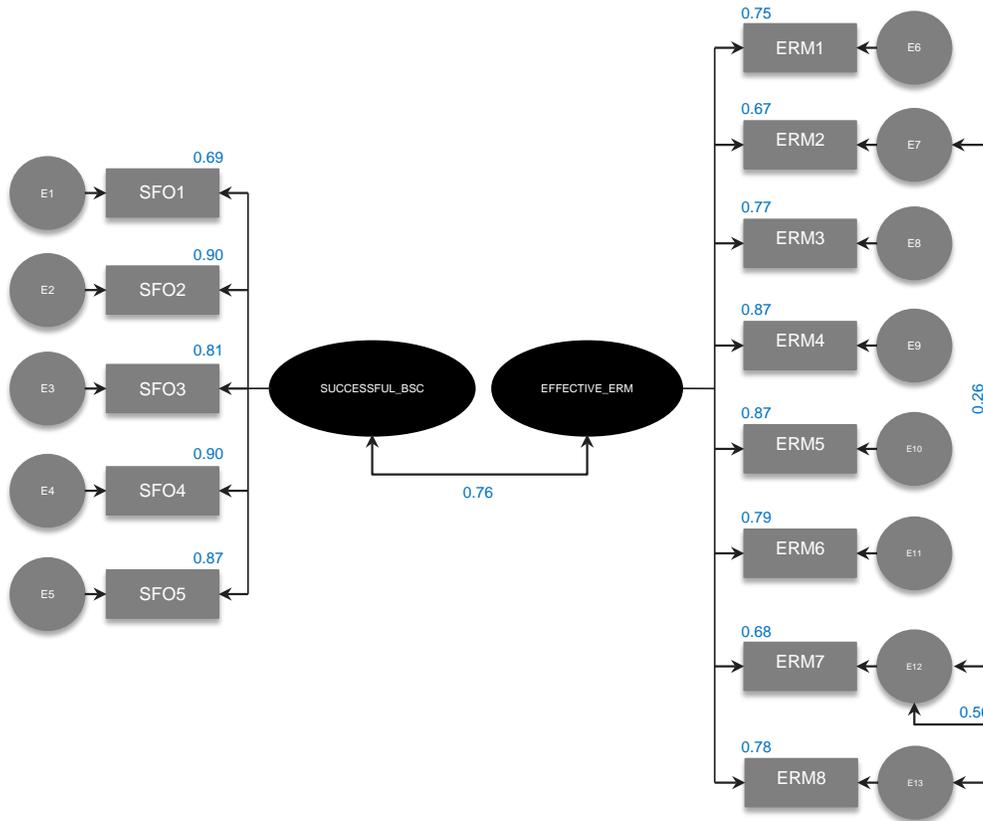
124 questionnaires were finally returned but only 93 responses were usable because some companies did not employ either BSC or COSO ERM or failed to complete the questionnaire. Therefore, the usable response rate is 75 percent. Around 52 percent of respondents are male, 72 percent graduated the Master's degree, 47 percent are in the middle manager position, and 17 percent are in the property and construction industry. TABLE 1 presents the industry of companies participating the survey, overall mean score, and specific score of successful BSC and effective COSO ERM for each industry.

TABLE 1
INDUSTRY OF COMPANIES PARTICIPATING THE SURVEY AND MEAN SCORE OF
SUCCESSFUL BSC AND EFFECTIVE COSO ERM

Factors of success		Overall mean	Overall standard deviation	Mean scores by industry classification								
				Agribusiness and Food	Consumer Products	Industrial	Financial	Property and Construction	Resources	Service	Technology	MAI
Number of participating companies				4	10	12	14	16	11	17	4	5
Successful BSC implementation												
SFO 1	Translating the strategy to operational terms	3.64	1.021	3.50	3.75	3.43	3.64	4.00	4.00	3.33	4.50	3.33
SFO 2	Aligning the organization to the strategy	3.36	0.978	2.50	3.25	3.21	3.79	3.43	3.56	3.13	3.92	3.22
SFO 3	Making strategy everyone's everyday job	3.34	0.908	3.10	3.47	3.20	3.54	3.68	3.68	3.05	3.50	2.93
SFO 4	Making strategy a continual process	3.35	1.015	2.94	2.96	3.20	3.86	3.78	3.61	3.11	3.38	2.88
SFO 5	Mobilizing change through executive leadership	3.45	0.956	2.50	3.00	3.33	4.00	3.80	3.58	3.39	4.00	2.67
Average				2.91	3.29	3.27	3.77	3.74	3.69	3.20	3.86	3.01
Effective ERM												
ERM 1	Internal environment	2.78	0.930	2.67	3.06	2.33	3.14	2.87	3.21	2.44	3.50	2.33
ERM 2	Objective setting	3.63	0.791	3.00	3.71	3.61	4.11	3.85	4.19	3.33	4.50	3.33
ERM 3	Event identification	3.11	0.834	3.00	3.42	2.93	3.71	3.00	3.25	2.50	4.00	3.67
ERM 4	Risk assessment	3.55	0.862	3.00	3.83	3.43	4.14	3.60	3.75	3.08	4.50	4.00
ERM 5	Risk response	3.61	0.767	3.00	3.92	3.29	4.07	3.70	3.63	3.25	4.50	3.83
ERM 6	Control activities	3.49	0.888	3.00	3.83	3.21	4.14	3.80	3.38	3.04	5.00	3.50
ERM 7	Information and communication	3.66	0.943	3.00	3.58	3.50	4.07	3.60	4.25	3.21	5.00	3.67
ERM 8	Monitoring	3.61	0.977	2.80	3.43	3.20	4.14	3.72	3.90	3.12	4.90	4.07
Average				2.93	3.6	3.19	3.94	3.52	3.7	3.00	4.49	3.55

The conceptual model illustrated in FIGURE 1 was examined by using Structural Equation Modeling (SEM) technique. The values of CMIN/DF = 1.316, GFI = 0.825, NFI = 0.861 and RMSEA = 0.079 (with p-value = 0.171) indicate that the *Final Model* in FIGURE 1 acceptably fits with the data.

**FIGURE 1
FINAL RESEARCH MODEL**



In FIGURE 1, E_i refers to error of measurement for each variable, whereas the numbers that are shown in the *Final Model* are standardized relationship between each variable.

The variables of the successful BSC implementation (SUCCESSFUL_BSC) are organized into five categories as presented in the principles of strategy-focused organization: SFO1, SFO2, SFO3, SFO4, and SFO5. The findings of SEM technique present strong relationships between all components of the strategy-focused organization and successful BSC implementation variables. The results show positive relationship between effective ERM (EFFECTIVE_ERM) and eight interrelated components of COSO ERM framework.

As mentioned in the objectives of this paper, a success on BSC is supposed to be positively related with an effective ERM. The result of *Final Model* analysis indicates that a significant positive relationship between a successful BSC and an effective COSO ERM is found (standardized relationship = 0.76 with p-value = 0.001). In other words, this finding illustrates that there are commonalities between BSC and COSO ERM as discussed in the theoretical explanations of BSC - COSO ERM linkage.

CONCLUSION AND RECOMMENDATIONS

The purpose of this research is to investigate the relationship between BSC and COSO ERM in Thai listed companies, for the reason that the conventional BSC, which does not include risk management,

might risk the deterioration of shareholder value. Consequently, BSC should be developed by integrating risk management into the framework.

In this paper, successful BSC implementation is referred to the application of the BSC as a strategic management system, which is measured by principles of the strategy-focused organization. Furthermore, the effective ERM is that the eight components of COSO ERM are appropriately functioned.

The finding on the connection between successful BSC implementation and effective ERM presented significant positive relationship (standardized regression weight = 0.76 with p-value = 0.001).

The COSO ERM – integrated BSC approach helps executing strategy within the level of risk appetite that results in creating long-term shareholder value. If the company invests in a new high-risk project to receive high return, the early warning process of risk management will be managed to identify an adverse event that might be dangerous to the achievement of corporate strategy. The relationship between BSC and COSO ERM that is found in this study also extends prior studies related to the BSC – integrated COSO ERM (for example, Ballou et. al., 2006; Beasley et. al., 2006; Calandro Jr & Lane, 2006; Nagumo & Donlon, 2006; Shenkir & Walker, 2006; Woods, 2008). Furthermore, this study presents a methodology in which both systems can be simultaneously implemented as the success or failure of one system could impact the success or failure of the other system.

As the integrated approach is proposed for preserving long-term shareholder value, this study anticipates the increasing trend of adopting BSC – integrated COSO ERM. The combined approach of these management tools is one of the aspects that should be taken in consideration when improving BSC framework, which in this case, is by adding risk management to the cause-and-effect relationship of the strategy map.

Nevertheless, the sample size (93 responding companies) of this research is not very large, the results must be carefully interpreted. The generalization of the result might also be limited. Future research may replicate this paper using a larger sample size. The relationship between successful BSC with effective ERM and financial performance of firms can also be studied.

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