

Enterprise Risk Management under Sustainability Platform

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Abstract: Enterprise Risk Management (ERM) has become the most important part of management for all organizational types. As a consequence of globalization, public expectations have risen that businesses should behave responsibly and accountably in terms of minimizing their environmental and social impacts. Most private organizations have developed ERM system to take into account shareholders' interests. However, existing ERM frameworks fail to address sustainability risk as a core component even though sustainability is crucial for ERM. The area of volatility included in ERM framework should be extended to include emerging sources of instability in environment and society if the organization is to achieve robust growth and create wealth in the long run. This paper proposes ERM framework under sustainability platform and discusses required roles of board of directors and senior executives.

Key words: sustainability; enterprise risk management; environmental issue; social impact

JEL codes: M14, M19, D81

1. Introduction

Risk management used to be practiced only among financial institutions like banks, insurance companies, and securities firms. Risk management frameworks for these financial institutions have been developed through time, but existing frameworks cover only three main risk categories: credit risk, market risk, and operational risk, with an additional underwriting risk for insurance companies.

For non-financial institutions, risk management has become a significant component of management. The most cited framework is the one by Committee of Sponsoring Organization of the Treadway Commission (COSO) Enterprise-wide risk management, which has been developed since 2003 after the enforcement of Sarbanese-Oxley (SOX) Act in 2002. Even though the framework was meant for the US companies to be able to comply with the SOX Act, it is widely accepted as ERM framework in many countries, including Thailand. The areas of risk being considered in the COSO ERM framework include strategic risk, operational risk, financial reporting risk, and compliance risk.

Clearly, all of these frameworks do not address sustainability risks, which could be one of the most critical risk areas for both financial and non-financial institutions. Sustainability is defined by the Bruntland commission as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The meaning of sustainability is more pronounced with the concept of "Triple Bottom Line" introduced by John Elkington in 1997. He suggested that corporate sustainability required not only economic bottom line but environmental and social performance as well.

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Over time, there is an effort of shareholders to pressure the firms to pay more attention on sustainability risks. One example is the Coalition for Environmentally Responsible Economies (CERES), which has worked extensively on pressuring the companies to adopt sustainability concepts in their ERM practices. CERES together with the Interfaith Center on Corporate Responsibility (ICCR) representing 275 faith-based institutional investors with combining holdings of around \$90 billion have been active in sponsoring the filing of shareholder resolutions on global warming.

The debate on whether global warming impacted businesses and society is now over. Increasing emissions and concentration of greenhouse gas in the atmosphere are effectively thickening the blanket and causing temperature to rise. Environmental and social risk resolutions are brought up against not only big carbon producers and users of energy products, but also companies whose operations harm the environment and society. In most countries, directors and senior officers may face penalties and litigation for failure to effectively manage sustainability risks. Nike, ExxonMobil, Citigroup, Shell, Nestle, and many other firms have suffered financial and reputation damages from boycotts against their operations. Even so, many companies have not incorporated sustainability risks into their ERM practices.

This paper proposes a new way to look at ERM by taking into account sustainability risks, which are very different from those found in most existing ERM frameworks. The paper is structured as following: Section 2 describes existing ERM frameworks. Section 3 discusses sustainability risks and opportunities. Section 4 explains a proposed ERM framework under sustainability platform. Section 5 addresses the role of board of director and senior management. Finally, section 6 discusses the conclusions.

2. Enterprise Risk Management Frameworks

When implementing an ERM process tailored to the company's needs, management should begin with a suitable framework as a point of reference.

There are different frameworks from which to choose: COSO ERM, ISO 31000 Risk Management—Principles and Guidelines on Implementation, BS 31100 Code of Practice for Risk Management, FERMA Risk Management Standard, and OCEG Red Book 2.0 (GRC Capability Model), and many others.

The most referred and widely used frameworks are the COSO ERM and ISO 31000. COSO ERM framework was issued in 2003 and revised in 2004. ISO 31000 was published in 2009. COSO ERM framework is not focused on specific activities of the risk management process, but rather provides flexibility in evaluating standard against which to evaluate the current ERM process. ISO 31000's emphasis is on providing guidance on risk management process and implementation, which broadens its appeal for those companies looking for insights on implementation of ERM. To this end, COSO has later issued a document of practical approaches and implementation guidance.

Implementing ERM is a journey because companies must evolve their strategy based on their experience on risks. Two frameworks are based on similar aspects of the risk management process. In practice, choosing a framework is often a matter of personal preference. COSO ERM framework is often selected because a company wants to leverage prior process using the COSO internal control framework due to the fact that COSO ERM framework incorporates internal control framework within it. The role of board members and senior executives in ERM process and implementation is as important as a suitable ERM framework. Furthermore, effective risk management requires an open and transparent risk culture, a balanced compensation structure, and policy of

actions taken when the warning signs are apparent.

The COSO defines 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. ERM is equivalent to the ISO definition of risk management framework, which is a set of components that provide the foundations and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organization. Such foundations include the policy, objectives, mandate, and commitment to manage risk.

By definitions, both frameworks do not seem to exclude potential sustainability risks. However, the COSO ERM framework focuses on the establishment of corporate objectives in strategic, operational, reporting, and compliance areas. The COSO ERM framework contemplates either interrelated components, which are internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring. The ISO 31000 ERM Framework consists of seven components, which include mandate and commitment to ERM framework, risk management policy, integration of ERM in the organization, risk management process, communications and reporting, accountability, and monitoring, review and continuous improvement. The components in both frameworks are very similar and based on the very same concept, but sustainability is missing from all these components.

Although sustainability risks are often viewed as a primary concern for carbon producers and users of energy products but not for financial institutions, they have grown in significance for financial services companies. JP Morgan, a global bank, has acted to incorporate environmental and social risk management into its corporate lending and adopted the Equator principles for its project finance where total project capital costs exceed US\$10 million. The development of equator principles is a result of a campaign against CitiBank for financing a project that included a clearing of rainforest. Equator principles is the only risk management framework developed by the World Bank for determining, assessing, and managing environmental and social risk in project finance, which is often used to fund the development and construction of major infrastructure and industrial projects. Financial institutions adopting equity principles commit to not providing loans to projects where the borrower will not or are unable to comply with their respective social and environmental policies and procedures. To date, there are 76 financial institutions in 32 countries officially adopted the equity principles, counted for over 70 percent of international project finance debt in emerging markets¹.

In addition, regulatory frameworks for both insurance and banking industries introduced requirement on operational risk to cover the risk of loss arising from inadequate or failed internal processes, personnel or systems, or from external events, in which reputational damage is often considered a key consequence of operational failure. The fact that reputational risk caused by sustainability factors cannot be hedged or transferred; it can only be mitigated, makes sustainability risks become a central focus of operational risk management.

3. Sustainability Risks and Opportunities

Sustainability should be considered not only as an emerging area of risk, but also as an agenda of the firm's strategic management. Sustainability risks include social and environmental considerations, which are the two key components affecting both companies and society. Even though these two components are outside the scope of

¹ The Equity Principles Association, available online at: <http://www.equator-principles.com/>.

existing ERM frameworks, some companies report their sustainability concerns due to potential legal liability. As a result, only sustainability risks that could incur financial liability or reputational risk to the company are addressed under compliance risk based on COSO ERM framework even though environmental and social expectations can go beyond legal and compliance requirements. Some business transactions can create sustainability risk to the firm even when they are perfectly legal, especially transactions that involve different markets.

Another aspect of sustainability is that they are often viewed as a constraint for businesses. In fact, sustainability risks, like other types of risks, impose not only potential losses but also opportunities for businesses. ERM under sustainability platform can help improve environmental and social performance by holding down the costs of risk. Companies that can identify sustainability risks are equipped with useful data to reap opportunities through innovative product and process development, which can increase shareholders' value. In other words, sustainability can be an actual source of competitive advantage.

Shareholders are now more aware of exposures of the companies, in which they invest to sustainability risks, including climate and social change, depletion of nonrenewable resources, energy consumption, emission of greenhouse gases, and reputation damage due to related sustainability issues. Sustainable and responsible investing (SRI) is a broad-based approach to investing under the concept that your investments can result in a better world by building healthy communities, promoting economic equity, and fostering a clean environment. SRI now encompasses an estimated \$3.07 trillion out of \$25.2 trillion investment in the US investment market. SRI investors encourage companies to improve their practices on environmental, social, and governance issues. In the U.S., the number of SRI retail funds grew from 55 in 1995 to 493 in 2010², with the asset size grew from US\$12 billion to US\$569 billion. Of US\$569 billion, about US\$316 billion were SRI mutual funds, while the rest were exchange traded funds and closed end funds. SRI mutual funds perform as well as non-SRI funds over time. FTSE KLD 400, the longest running SRI index, has the return of 9.51 percent from its inception in 1990 through the end of 2009, compared with 8.66% for S&P 500 over the same period³.

CERES launched the Global Reporting Initiative (GRI) in 1997 to the framework for corporate sustainability reporting. To date, there are more than 2,500 companies⁴ worldwide voluntarily relying on the GRI to inform investors and the public about how the companies incorporate sustainability concerns in business operation. Information on how companies prepare to sustain in the changing environment are important for investors to evaluate the future prospects of companies.

Sustainability risk and opportunities have created an ongoing pressure for board of directors and senior executives to invest more resources in sustainability strategy. GE announced that the company would double its spending on energy and environmental technologies by 2015 to prepare for a huge global market for products that will help other companies and emerging countries meet their needs for clean energy sources. GE also committed to cut internal energy use by 30% and to reduce greenhouse gas emissions by 1%. PepsiCo has invested in sustainability risk management linked to water scarcity because water impact input costs, competitiveness, and the ability to maintain production. Its goal is to reduce water usage intensity by 20% between 2006 and 2015 across all manufacturing operations.

IBM has grasped that sustainability market trends can create a huge innovation opportunities for its business. The Green Sigma Industry Coalition was built by IBM to capture market opportunities linked to sustainability

² The Forum for Sustainable and Responsible Investment, SRI Facts, USSIF.org

³ Bloomberg's Environmental, Social, and Governance (ESG) data service.

⁴ Forbes, 6/19/2012.

trends from using IP networks to enhance urban development to deploying enterprise-wide software for energy efficiency programs. Siemens has also seek the opportunities linked to sustainability trends. In 2009, Siemens acquired Solel Solar System in response to a multi-billion dollar market for wind and solar power opened up in Europe, the United States, and China. Siemens' "environmental portfolio" was as large as US\$31 billion in 2009.

Unilever, Nestle, and Procter & Gamble have been working on creating new markets and business models aligned with sustainability trends. Unilever launched the "Unilever Sustainable Living Plan" to increase the quality of life of employees, suppliers, customers, investors, and farmers, by integrating sustainability into its products. The plan can help the company save money by reducing energy, packaging, and waste, as well as make more revenue by creating new products for new markets where consumers and retailers prefer sustainable brands. An unwillingness or inability to compete in these new markets is not only the risk to shareholder value but also the risk for brand damage.

Today, primary lenders often require the firm applying for the loan to invest in an independent assessment of sustainability risks, which could lead to a recommendation for the company to enhance its ERM to include sustainability risks firm-wide and implement much stronger policies and reporting. Sustainability risks also include profitability risk from volatile energy and non-renewable resource price, compliance risk caused by new carbon regulations, and competitiveness risk from product substitution of sustainable alternatives.

It is clear that the pressure for a company to identify and manage sustainability risks come from every stakeholder; investors, customers, lenders, regulators, and even insurance companies. Swiss Re implemented a policy to exclude a company with certain economic activities leading to high sustainability risk from both insurance transactions and investments. These economic activities include the manufacturing of anti-personnel mines, verifiable complicity in systematic, repeated and severer human rights violations, infliction of repeated, severe and unmitigated damage to the environment, and proliferation of nuclear weapons. Swiss Re also has a policy to not directly underwrite risks or make investments into entities that are based in countries, which exhibits a particularly poor human rights record. As of August 2012, North Korea, Somalia, and Sudan are on Swiss Re exclusion country list.

Furthermore, sustainability ratings, measuring quality of sustainability risk management as a key component of managing total business risk, have become widely accepted as a reference for sustainability investing for investors. Companies with a good overall sustainability score will be listed in Dow Jones Sustainability Indexes (DJSI) or the FTSE4Good Index series.

4. ERM Framework under Sustainability Platform

Sustainability used to be considered a luxury concept for companies, and is still perceived that way for some, because environmental and social concerns are usually not counted in a traditional economic bottom line. Over the last two decades, the sustainability concept has gained more attention from executives, investors, lenders, and regulators. However, sustainability risks are still not included in most existing ERM frameworks even though global public expectations have emerged that companies should behave responsibly and accountably in terms of minimizing their environmental and social impacts irrespective of whether the relevant local laws and regulation are weak, strong, or not properly enforced. Therefore, an emerging area of sustainability risks should not be ignored from ERM frameworks designed for either manufacturing companies or financial institutions.

Sustainability platform can give the risk manager a broader view of risks, which provide better information

to make better and longer-term solutions. This paper proposes a new ERM framework under sustainability platform that can have universal appeal for all industries. The proposed framework includes 6 components: sustainability vision, sustainability strategy, ERM process, implementation, reporting, and ERM enhancement.

(1) ERM and sustainability vision

The shift toward greater expectation for effective ERM and sustainability management is complicated by the fact that the volume and complexities of risks affecting the company are increasing. The sophistication of business transactions, the explosion of globalization, rapid changes in information technologies, increased competition, and greater demand for transparency and accountability on a company non-financial impacts, make it more difficult for boards and senior executives to effectively oversee the constantly evolving complex portfolio of risk. In response to these changing trends, the companies are embracing ERM and sustainability concepts because they emphasize a top-down, holistic approach to effect risk management for the entire company.

The first and most important step is to come up with a vision for the company to address its willingness and intention to identify and manage enterprise risk under sustainability platform. The ultimate outcome should be a company that is fully aware of, and does consciously manage and account for, the sustainability impacts of its business transactions to ensure that the inherent conflict between growth targets and sustainability goals is handled in an appropriate manner.

The challenge, as well as opportunity, for the firm is to embed risk and sustainability thinking and ERM under sustainability platform explicitly into the vision and strategy of the firm so that the vision, strategy, and risk mindsets are one in the same. The goal of ERM under sustainability platform is to increase the likelihood that a company will achieve its objectives by managing risks to be within the stakeholders' risk appetite while minimizing environmental or social impacts in all business transactions.

(2) Sustainability strategy

To include sustainability in the firm's strategic management, the awareness of sustainability risks in all business transactions from daily operations to investment decisions is required. A broad-based educational program on sustainability risks should be conducted throughout the organization, across all functions and levels. The strategy should be clear in demonstrating to the business and functional unit leaders as well as their management teams the importance of considering the impact of sustainability risks within their actions and decision-making.

The company must review the context in which it operates, starting with the external context that includes market conditions, competition, technology trends, legislative requirements, weather and climate impacts, country risks, political environment, globalization factors, key drivers of profitability and sustainability, including financing and other resources, external stakeholders' needs issues and concerns, and any other factors that influence threats or opportunities and their associated risks. The internal context should include the complexity of the company in terms of size, number of locations, number of countries, degree of vertical integration, existing regulatory and legal requirements, key internal drivers of the company, the objective of the company, existing strategies and organizational structure of the company, and any other internal factors that will impact ERM and sustainability of the company. The combination of above external and internal contexts can help the company to set a suitable ERM strategy under sustainability platform.

Gap analysis of existing ERM framework against a proposed ERM under sustainability platform can provide a baseline for the design of the framework as well as to confirm potential benefits. The gap analysis can be complicated by the existence in organizations of several existing risk management activities each with its own

unique terminology and processes. For the ERM under sustainability platform to integrate and incorporate existing activities, it is necessary to specify some basic principles, standard terminology, and a method of translating them into a common risk management process.

(3) ERM process under sustainability platform

The ERM process under sustainability platform should comprise risk identification, risk assessment, and risk response strategy. ERM process should include sustainability risks of the greatest interest to customers, investors and key stakeholders. Sustainability risks must be identified, managed, and monitored, in addition to other types of risks. This proposed ERM framework under sustainability platform suggests four main risk categories shown in Figure 1, which includes sustainability risk, financial risk, operational risk, and strategic risk. Sustainability risks cover the emerging areas of risks for business like environmental, social, and ethical issues. Financial risks can be subdivided into credit risk, market risk, and liquidity risk. Similar to Basel definition, operational risks cover potential loss from human, system, internal process, or external events. Finally, strategic risks include potential loss from changes in economic landscape, technology innovation, competitiveness, and globalization.

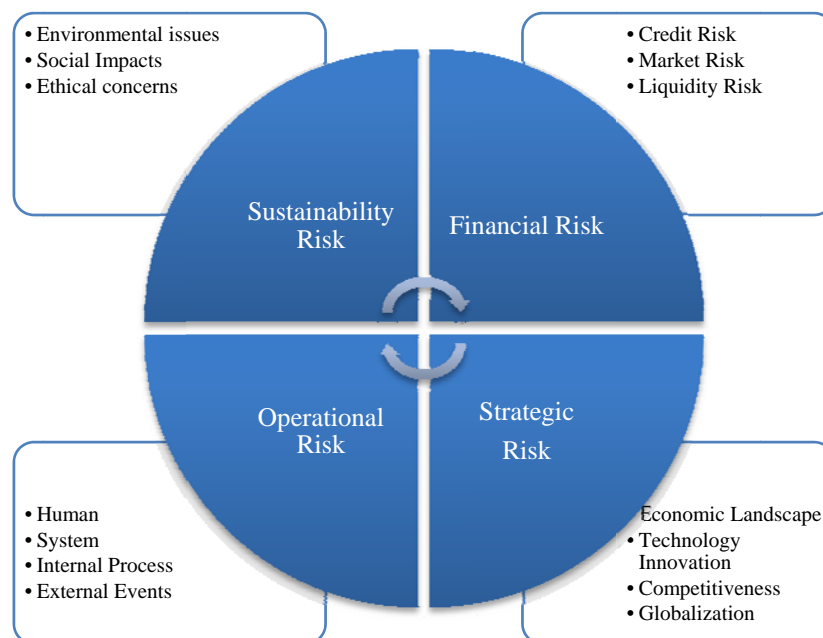


Figure 1 Four Risk Categories for ERM Framework under Sustainability Platform

The identification of sustainability risk can be supplemented by a media survey to help identify the environmental, social, and ethical issues that occupy the public. Another useful source for identification of sustainability risks is from the NGOs who can provide the company with early warning of new sustainability issues. Moreover, it is also helpful for the company to dialogue with the NGOs to develop appropriate risk response strategy.

Risk assessment can provide decision makers with sufficient understanding of the risk to be able to make the decisions on risk tolerance level and appropriate risk response strategy. The basic idea is to evaluate each risk from two dimensions; frequency and severity, to identify areas of vulnerabilities or opportunities. Risk assessment process can be a combination of quantitative and qualitative methods depending on the amount of available data and risk types.

Risk response strategy include both control and non-control options. Cost and benefit analysis of each option should be conducted to select the best treatment for each risk. The selected risk response strategy should include identified risk owner and be in line with board level risk appetite and risk tolerance. In order to define the risk appetite for sustainability concerns, we need to determine what is at stake when a sustainability challenge negatively affects stakeholder perceptions and become clear on the practical implications of the core values of the company. It is also worth trying to attach a monetary value to the integrity of corporate principles and values. This value can be estimated by calculating the amount of possibly foregone business. The other more difficult task is to quantify the value of stakeholder trust and reputation where no one universally applicable approach exists. This understanding is the basis for the subsequent development of a group-wide policy on managing environmental, social and ethical aspects in business transactions. Finally, the reputation risk stems from a perceived lack of integrity that cannot be hedged, diversified, or transferred. It can only be managed by reducing exposure to sustainability risks in individual transactions.

(4) Implementation

Implementation is the most difficult step that requires active roles of board of directors, senior executives, risk owners, and operating staffs. Key to an effective ERM implementation in business transactions is that the ownership for the framework is clearly defined and embedded in the overall ERM system. This includes the assignment of responsibility for identifying the relevant sustainability topics, assessing their potential impact on the company, and the development and maintenance of principles and implementation guidelines. More importantly, escalation procedures need to be in place should conflicts between business and risk management interests arise. Business decisions, which could potentially have a significant impact beyond the local entity, but for which no tolerance level has been defined centrally, would need to be escalated to the company's headquarters for ultimate decision-making.

There are limitations to the implementation of transaction-related sustainability risk management across an entire company. Under certain circumstances, sustainability risks either are not identified or not addressed in certain transactions because the company cannot be held responsible for environmental and social impacts of every entity over which they may have some influence but was not a causal agent, direct or indirect, of the harm in question. However, such decisions should be stated explicitly and agreed upon by both risk and transaction management.

(5) ERM reporting

ERM reporting is important for the purpose of monitoring and reviewing. It is a key to the continuous improvement of ERM system. The information needed in ERM reporting includes changes in risk trends and risk contexts as well as effectiveness of ERM implementation and risk control activities. The information must be able to relate to the existence, nature, form, likelihood, severity, evaluation, acceptability, treatment, or other aspects of risk management. The frequency of ERM reporting should be in line with board decision on the frequency of monitoring. Each outcome in ERM report can come from internal audit, third party, or self-assessment, depending on internal work process of each company.

The responsibilities and channels for risk reporting and the role of risk owners as to what information they should provide about their operations, decisions, and risks, must be clearly identified. These responsibilities usually include reporting about both the risk and the risk control activities on a periodic basis. ERM reporting can utilize key risk indicators for risk monitoring. It is very important to specify ERM reporting during crisis situations and the execution of business contingency plans after a crisis. For sustainability risks, ERM reporting

should go beyond internal communication. External communication to all stakeholders outside the company is very crucial in mitigating sustainability risks.

(6) ERM enhancement

Similar to a company's strategy, ERM framework must evolve with changes in market environment and pressures. The enhancement of ERM framework can be achieved through continual improvement of risk management through the setting of organizational performance goals, measurement, review, and the subsequent modification of the processes, system, resources, capability, and skills. Effective external and internal ERM reporting and communication are essential for ERM enhancement. Comprehensive and frequent internal and external reporting on both key risks and on risk management outcomes contributes substantially to effective governance within the company as well as trust by stakeholders.

5. Role of Board of Directors and Senior Management

ERM under sustainability platform should be fully integrated into the management of the company. The integration requires a mandate and commitment from the board and senior management. Although executive attitudes towards sustainability are gradually improving, some still consider sustainability as a cost to the company instead of a source for market opportunity and long-term value creation. Sustainability risks and opportunities pressure executives from multiple sectors to develop a vision for sustainable business and invest in the plan to mitigate sustainability risks and capture market opportunities.

Generally, boards of directors should provide oversight and accountability for corporate ERM and sustainability strategy. Within each company, senior executives should be held responsible for achieving ERM and sustainability goals. For larger companies, the CEO should appoint one senior executive, Chief Risk Officer (CRO), to oversee ERM system, and another senior executive, Chief Sustainability Officer (CSO), to coordinate sustainability efforts. CSO can be effective in integrating sustainability into strategy, planning, and operations. These roles should also be identified in corporate communications in order to encourage personal accountability for sustainability endeavors.

For ERM and sustainability to be effectively implemented, senior executive performance and compensation packages should be linked to ERM and sustainability performance within a company. This leads to increased accountability and positive impacts on organizational culture. To ensure sustainability strategies are executed, companies should integrate them into corporate policies and risk management systems. With respect to risk management systems, companies should incorporate environmental and social risks and opportunities into their business processes. This allows companies to identify events relating to sustainability that are relevant to their business objectives and assess the magnitude of their impact. The boards and executives are also expected to be involved in the development of the company's public policy positions. This expectation calls for transparency and encourages companies to develop best practices for sustainability that are consistent with their social and environmental goals. Corporate board members are obliged to address risks, which include the financial impact of climate regulation and the scarcity of resources. The companies that embrace strong governance will be better positioned to foresee and adapt to changing economic, social, environmental, and political conditions, allowing them to better manage their risks to maximize shareholders' value.

6. Conclusion

Given the increased demand and intensifying scrutiny for greater transparency and accountability on a company's non-financial impacts, every company can no longer safely ignore long-term economic issues, environmental impacts, and social responsibility. A systematic way of handling those environmental, social or ethical issues that occupy our key stakeholders is to incorporate them into ERM system of the company.

This paper proposes a framework for ERM under sustainability platform to assist a company in the first step to becoming more aware of their indirect impacts of sustainability risks and to provide guidance with respect to handling them. There are 6 components in the proposed framework: sustainability vision, sustainability strategy, ERM process under sustainability platform, implementation, reporting, and ERM enhancement.

The most important factor for ERM framework under sustainability platform is active roles of board of directors and senior executives. This paper discusses how and to what extent the board, in concert with senior management, can establish the appropriate "tone from the top" to ensure that ERM system under sustainability platform remain at the forefront of strategic and operating decisions made within the business.

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