

THE STUDY OF RELATIONSHIP BETWEEN THE LEVEL OF SUSTAINABILITY REPORT DISCLOSURE AND SECURITY PRICES OF LISTED COMPANIES IN THE STOCK EXCHANGE OF THAILAND.

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ABSTRACT

The research's objectives were to study the relationship between the level of sustainability report disclosure and the security prices of listed companies in the Stock Exchange of Thailand, and to study the relationship between the level of sustainability report disclosure and the security prices of each industry of listed companies in the Stock Exchange of Thailand. Data were collected from 489 companies listed in the Stock Exchange of Thailand in 8 industries during A.D. 2012 - 2014. Statistics used included simple linear regression analysis and multiple regression analysis.

This research's findings reveal that the level of sustainability report disclosure is positively related to the security prices of listed companies in the Stock Exchange of Thailand. Furthermore, 1) the level of sustainability report disclosure regarding economics is positively related to the security prices, 2) the level of sustainability report disclosure regarding social is not related to the security prices, and 3) the level of sustainability report disclosure regarding environment is not related to the security prices.

Keywords: Sustainability report, security prices

Background and significance of the study

Sustainability has become a trend that all sections in the society paid attention to as for developing economic system, society, and environment sustainably and interchangeably. Such trend is a direction which many countries in the world agreed to use as a frame to develop their organizations and countries (Anakoon, 2015). Listed companies in the Stock Exchange of Thailand is one of an important part to drive national economic system. The Stock Exchange of Thailand encouraged listed companies to operate with sustainability and responded to needs of investors.

Report of sustainability is an economic tool for social communication. It is a way to promote the organization and to strengthen the trustworthiness and image of the organization. The sustainability becomes a part of businesses, organizations, and activities in the world.

The present study aims to examine the relationship between the level of sustainability report disclosure and security prices of listed companies in the Stock Exchange of Thailand. Tobin's Q concept was

utilized to study the relationship, and to reveal business value and market value measurement. It also investigated the positive and negative effects of sustainability report disclosure in economic, social, and environmental aspects on business value and its cause. The level of disclosure was studied to help stakeholders to make decision.

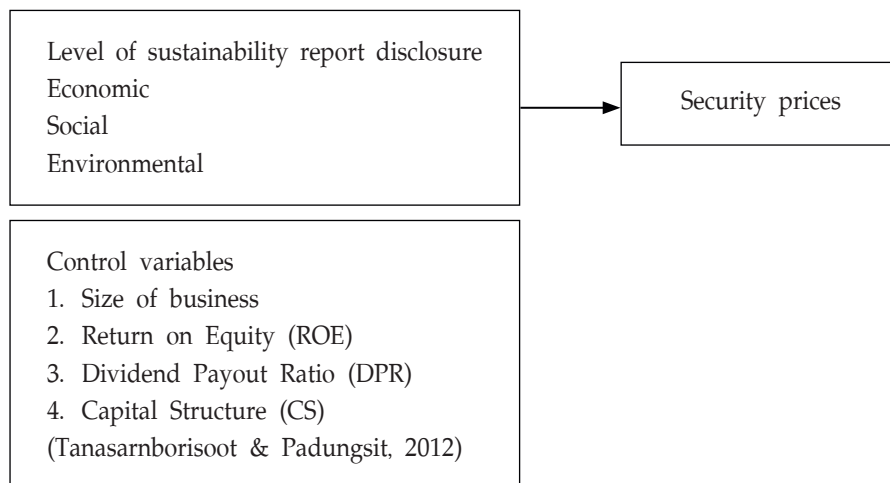
Objectives

1. To examine level of sustainability report disclosure of listed companies in the Stock Exchange of Thailand
2. To investigate relationship between sustainability report disclosure and security prices of listed companies in the Stock Exchange of Thailand

Hypotheses

1. Level of economic sustainability report disclosure has a positive relationship with security prices
2. Level of social sustainability report disclosure has a positive relationship with security prices
3. Level of environmental sustainability report disclosure has a positive relationship with security prices

Conceptual framework



Significance of the study

1. Listed companies can refer to the findings as for strategic adjustment and self-evaluation. The findings can also be applied in the organizations to have sustainable development
2. Investors can get clear and correct information

about strategies and operations of the organizations before deciding to capital budget

3. The Stock Exchange of Thailand can refer to the findings as a base information for developing effective sustainability report disclosure

Scope of the study

The scope of this study was to study the relationship between level of sustainability report disclosure and security prices of listed companies in the Stock Exchange of Thailand. Report disclosed included annual report (Form 56-2), annual information form (Form 56-1), corporate social responsibility report, and sustainability report. An independent variable was the level of report disclosure, i.e. those reports disclosed to public. An dependent variable was the security prices (Tobin's Q) and controlled variables included Size of Business, Return on Equity (ROE), Dividend Payout Ratio (DPR), and Capital Structure (CS).

Tobin' Q concept

Tobin's Q is a concept proposed by Professor James T. Tobin, a professor from Yale University who won Noble Prize in economics in 1981. Tobin's Q was a measurement of operation integrated financial statement and market value calculated by dividing

market value of assets of organizations with replacement cost of such assets. The market value of those assets could measure the market value of stock of shareholders and liabilities. Professor Tobin believes that Tobin's Q is a good measurement that could reveal value of the organization.

Tobin's Q Formula

$$\text{Tobin's Q} = \frac{\text{Market Value}}{\text{Replacement cost}}$$

Sustainability report

Sustainability report is the disclosure of economic, social and environmental operations which provided to response to needs and to add the information found in annual report. The data could be positive or negative but for sustainable development. Sustainability report can be applied with Global Reporting Initiative (GRI) as a sustainability report of the organization for economic, social, and environmental aspects.

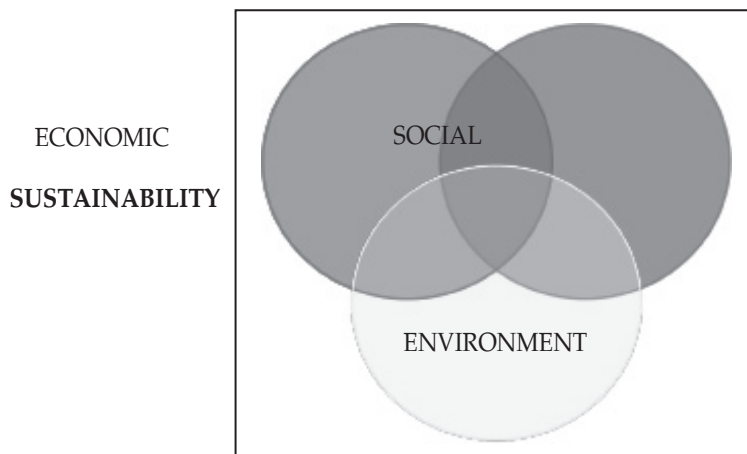


Figure 1 Sustainability dimensions

Instruments

Instruments to collect data are as follows:

1. Work sheets were used to collect data in accordance with variables specified in the annual report (Table 3-5)
2. Checklist was the level of sustainability report disclosure referred to the checklist for annual information form (Form 56-1) and framework for GRI G4

3. Secondary source of data was the annual report (Form 56-2), the annual information form (Form 56-1), the corporate social responsibility report, and the sustainability report from year 2012 - 2014 of listed companies of the Stock Exchange of Thailand.

The organization had specified details to be disclosed and to give analysis method. The details of the organization were not strictly required.

Each organization could describe their profiles differently. The evaluation was conducted by following level of GRI G4 sustainability report. Quantitative analysis was conducted by analyzing all data to find the relationship of between level of sustainability report disclosure and security prices of listed

companies in the Stock Exchange of Thailand. Descriptive analysis was to investigate the criteria, evaluation methods, and level of sustainability report disclosure. Statistics to analyze data included simple linear regression analysis and multiple regression analysis.

Model of the study

$$\begin{aligned} \text{Tobin's Q} = & \beta_0 + \beta_1(\text{EP}) + \beta_2(\text{MP}) + \beta_3(\text{IEI}) + \beta_4(\text{PP}) + \beta_5(\text{PLDW}) + \\ & \beta_6(\text{HR}) + \beta_7(\text{S}) + \beta_8(\text{PR}) + \beta_9(\text{M}) + \beta_{10}(\text{E}) + \beta_{11}(\text{W}) + \beta_{12}(\text{B}) + \beta_{13}(\text{EM}) + \beta_{14}(\text{EW}) + \beta_{15} \\ & (\text{P\&S}) + \beta_{16}(\text{C}) + \beta_{17}(\text{T}) + \beta_{18}(\text{O}) + \beta_{19}(\text{SEA}) + \beta_{20}(\text{EGM}) + \beta_{21}(\text{SIZE}) + \beta_{22}(\text{ROE}) \\ & + \beta_{23}(\text{DPR}) + \beta_{24}(\text{CS}) + e \end{aligned}$$

The researcher calculated Tobin's Q from two concepts, i.e. Lindenberg and Ross (1981) and Chung and Pruitt (1994), since they were the most acceptable.

The formula was adjusted as follow.

$$\text{Tobin's Q} = \frac{\text{Market Value}}{\text{Replacement cost}}$$

Calculating Tobin's Q

Table 1 Market value and replacement cost

| Type | Calculation | |
|------------------|------------------------|---|
| Market value | Common stock | Common stock value at the end of year |
| | Preferred stock | Dividend retrieved from return index of preferred stock |
| | Liability | Book value of current liability and non-current liability |
| Replacement cost | Building and materials | Book value |
| | Inventory | Book value |
| | Other assets | Book value |

Adjusted from concepts of Lindenberg and Ross (1981) and Chung and Pruitt (1994)

Table showing results

Table 2 Descriptive statistics of level of sustainability report disclosure based on sustainability Dimension (n = 1,467)

| Sustainability dimensions | MIN | MAX | SD | \bar{X} |
|---------------------------|------|------|------|-----------|
| Economic | 0.06 | 1.00 | 0.19 | 0.22 |
| Social | 0.00 | 0.84 | 0.11 | 0.18 |
| Environmental | 0.00 | 0.93 | 0.12 | 0.11 |
| Total | 0.02 | 0.92 | 0.14 | 0.17 |

Table 3 Descriptive statistics of level of sustainability report disclosure based on industry group (n = 1,467)

| Industry group | Numbers | MIN | MAX | SD | \bar{X} |
|---------------------------|---------|------|------|------|-----------|
| Property and construction | 91 | 0.03 | 0.89 | 0.12 | 0.16 |
| Technology | 38 | 0.03 | 0.34 | 0.07 | 0.14 |
| Financials | 60 | 0.02 | 0.54 | 0.09 | 0.29 |
| Consumer products | 40 | 0.03 | 0.42 | 0.09 | 0.16 |
| Industrials | 81 | 0.03 | 0.78 | 0.11 | 0.15 |
| Agro and food industry | 50 | 0.03 | 0.50 | 0.08 | 0.14 |
| Resources | 37 | 0.03 | 0.78 | 0.20 | 0.22 |
| Services | 92 | 0.01 | 0.39 | 0.06 | 0.13 |
| Total | 489 | 0.02 | 0.58 | 0.10 | 0.17 |

Table 3 Results of regression analysis for relationship between level of sustainability report disclosure and security prices based on sustainability dimensions

| Sustainability dimensions | Unstandardized(B) | Standardized (β) | Sig | R Square | Expected |
|--|-------------------|--------------------------|---------|----------|----------|
| (Constant) | -68.005 | | 0.001* | 0.268 | |
| Economic | 150.900 | 0.337 | 0.000* | | + |
| Social | -96.030 | -0.128 | 0.000* | | + |
| Environmental | -44.612 | -0.062 | 0.057** | | + |
| SIZE | 7.362 | 0.092 | 0.001* | | |
| ROE | 0.007 | 0.004 | 0.857 | | |
| DPR | -0.011 | -0.009 | 0.728 | | |
| CS | 2.777 | 0.108 | 0.000* | | |
| R = 0.268 R Square = 0.072 F = 5.333 | | | | | |

*Sig = 0.05 **Sig = 0.10

Discussions

The findings on the levels of sustainability report disclosure based on sustainability dimensions revealed that they were at the low level. The level of economic dimension was higher than others since economic data were necessarily revealed to public. The organizations commonly showed such information. Social dimension was the report about workforce and human right. It aims to create loyalty of

employees since the employees were important drivers of the organization. This dimension also revealed responsibility of the organization towards products as for building good relationship with customers and brand loyalty. The environmental dimension was found having the lowest level of sustainability report disclosure because of many reasons, e.g. companies did not do business harming environment, the effects were not able to count, the companies

did not pay attention to this dimension, etc.

The findings on the levels of sustainability report disclosure based on industry groups showed that the report disclosure were increasing. Unfortunately, the disclosures were at the low level. Average of index for all groups was about 17 percent. The group found having highest level of disclosure included financials, resources, property and construction, industrials, agro and food industry, technology, and services. Financials were crucial for national economic system as they provide working capital, support economic activities, and lead to expansion of economic. Bank of Thailand paid the most attention to economic dimension. For social dimension, financials needed work force who were proficient to drive business. Benefits and return were used to prevent corruption. The financials had little operations that have an environmental effect. Another industry group found to disclose at the high level was resources. This group dealt with nature and natural resources. The effects on environment were at the highest level. The group found the lowest level of disclosure was services. This group dealt with abstract units as for responding to needs (Satisfaction and expectation) of customers. Service provider business needs service-minded personnel. This group paid attention to professional development as the highest dimension being disclosed.

The results on relationship between level of sustainability report disclosure and security prices of listed companies in the Stock Exchange of Thailand.

1. Level of sustainability report in economic dimension was found a positive relationship with security prices at the significance level of 0.05. The economic disclosure was required to report to public in annual report and annual information form (56-1) since the Stock Exchange of Thailand requested all listed companies to reveal this information. In addition, economic dimension was important factor affecting investing in securities. Economic problems can lead to other problems and affect investors psychologically. Investors and stakeholders should be clear with economic report being making decision. The report showed expectation and risk to investors.

According to the efficient market theory, when

stakeholders are aware of information disclosed to public, share prices may adjust. It could be inferred that when the level of sustainability report disclosure in economic dimension is high, enterprise value, i.e. security, increases.

2. Level of sustainability report disclosure in social dimension had no relationship with security prices. The social dimension is to reveal interaction between employers and employees, variety of social factors, methods and evaluation to manage effects derived from operations and communication of organizations to stakeholders, policy and responsibility to the goods, products, and services (Guideline for Sustainability Report, year). As a social disclosure, corporate social responsibility (CSR) seriously started in 2006 and it was included in business administration as for leading the sustainability of the organization. The disclosure is considered as showing responsibility to employees, community, corruption, and customers. Although such disclosures have increased, there was no regulations or guideline given from the authority. Limitations of disclosure included characteristics of business, cost for disclosure, competency of employees, and effects of disclosure itself (Jantana & Monvika, 2012). Stakeholders may not have received enough information and viewed this as an effect on economic dimension. This can affect the decision of the investors. They may postpone to invest and misunderstand that social dimension affected security prices.

Level of sustainability report disclosure in environmental dimension did not have a relationship with security prices because the report was to reveal effects from business operations and quantity of raw materials of the organizations. This can be negative image of the business. There was no regulations or guidelines from the authority. There were limitations to reveal some information, e.g. competency of employees, effects of disclosed information, etc. (Jantana & Monvika 2012) Reporting environmental information is crucial for organizations internationally. Quantity and quality of disclosure were different regionally and internationally (Lenciu, 2012). Many organizations were not ready to reveal this dimension or they would do very little on it. In addition, economic dimension was considered the most important factor

which drive the country to move forward. Such development actually affects environment and natural resources (Wongboonsin, n.d.). It does not support environment conservation. This may be the cause of limited numbers in environmental reports. Investors and stake holders received limited information and it was not enough for making decision. They may misunderstand how can environmental report affects security prices.

Suggestions

1. The findings can support theories, i.e. agency theory. Providing correct and effective sustainability report is considered a good representative of the organization. The Stock Exchange of Thailand should encourage or request the organizations to increase numbers of such reports.
2. The findings can support business administration.
 - 1) Listed companies adjust their strategic plans as an instrument for self-evaluation. The findings may be applied for development and sustainable operations of the organization.
 - 2) There was a clear and correct information as a guideline for investors.
 - 3) There was a guideline for the Stock Exchange of Thailand to develop an effective sustainability report format and to request the companies to provide such report.

Suggestions for future study

1. Further studies can be replicated in different periods of time since the change of periods may affect the relationship among factors.
2. Scoring for disclosure can be conducted with other methods, e.g. counting words, lines, etc.

References

- Anakoon, B. (2015). *Sustainability*. Retrieved from <http://www.manager.co.th/iBizChannel/ViewNews.aspx?NewsID=9560000018939>.
- Jantana, T., & Monvika, P. (2012). To study the relationship between the traits of company with the level of social and environment data declaring: A case study of patented companies in stock market M.A.I., *The Journal of accounting Profession*, 30(11), 23-40.
- Tanasarnborisoot , J. & Padungsit, M. (2012). To study the relationship between the traits of company with the level of social and environment data declaring: A case study of patented companies in stock market M. A. I. *The Journal of Accounting Profession*, 30(11), 23-40.
- Lindenberg, E. B., & Ross, S. A. (1981). Tobin's Q ratio and industrial organizations. *Journal of Business*, 54(1), 1-32.
- Wongboonsin, K. (n. d.). *Population and Development*. Bangkok: Chulalongkorn University.
- Chung, K. H., & Pruitt, S. W. (1994), *A simple approximation of Tobin's Q*, *Financial Management*, 23(3), 70-74.
- Lenciu, A. I. (2012). Environmental reporting and corporate governance for FTSE 100 listed companies. *Annals of Faculty of Economics*, 1(2), 681-687.