CORPORATE GOVERNANCE IN ASIA

SECTION 3

THE EFFECT OF INTEGRATED REPORTING ON CORPORATE FINANCIAL PERFORMANCE: EVIDENCE FROM THAILAND

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Abstract

The objectives of the study were to investigate the extent and level of integrated reporting in the annual reports of companies listed on the Stock Exchange of Thailand (SET), to test the different level of integrated reporting between SET100 companies and Non-SET100 companies, and between Corporate Social Responsibility (CSR) award companies and Non-CSR award companies, and to test the effect of integrated reporting on the corporate financial performance. By simple random sampling, 150 listed companies from the SET were selected for use as the sample. Content analysis was used to quantify the extent and level of integrated reporting in annual reports between 2012 and 2015. As the results, the companies provided an average of 603.59 words of integrated reporting in annual reports during the period being study. Intellectual capital reporting was the most common form of integrated reporting by the companies, while environmental capital reporting was the least common form. There were significant differences in the level of integrated reporting between SET100 and non-SET100 companies, as well as between CSR award and non-CSR award companies. Manufactured capital reporting and holding a CSR award positively affected corporate financial performance, while the corporate financial performance was negatively related to environmental capital reporting.

Keywords: Integrated Reporting, Financial Performance, Annual Reports, Thailand

1. INTRODUCTION

In today's world, considering only the economic perspective cannot guarantee corporate sustainability, but the social and environmental perspectives also need to be taken into account. Therefore, corporate actions and activities tend to be balanced between the economic, social, and environmental perspectives. The reporting of information has also changed from the traditional disclosure of purely financial information to reporting which also includes disclosures of nonfinancial information which take into account the social and environmental perspectives. Since companies may no longer wish to provide only a one-sided form of information reporting there are a number of forms of reporting which combine both financial and non-financial information reporting such as triple bottom line reporting, sustainable development reporting, and sufficiency economy philosophy reporting. However, there are some limitations in using these reporting frameworks. For example, all these forms of reporting are still voluntary so that companies can pick only positive

information to report to their stakeholders. Moreover, it is also hard to compare non-financial information between companies because the guidelines of each reporting framework use different indicators to measure and disclose corporate information. Therefore, a new form of reporting namely integrated reporting (IR) can be adopted to solve the problems of using both financial and non-financial information reporting, including the raising awareness of the long-term sustainable development perspective, increasing the comparability of global corporations, and reducing the risk of affecting corporate reputation.

IR is a form of combined reporting launched by the International Integrated Reporting Committee (IIRC) in 2010 (IIRC, 2012) and is a corporate management and reporting tool combining financial and non-financial performance. It is used to codify corporate financial and non-financial information in a logical manner. The main features of IR include strategic focus, connectivity of information, future orientation, responsiveness to stakeholders, and the reporting of information about governance and remuneration. IR thus provides a broader explanation of corporate performance than the traditional approach adopted in traditional financial annual reports. Therefore, some global corporations have started to report their performance using IR as their form of annual reporting (Frias-Aceituno et al., 2014).

However, although the use of IR has rapidly increased (IIRC, 2013), it is unclear why corporations adopt it as their reporting framework. Moreover, though important initiatives are being taken, annual reports using IR are currently produced by only a small number of companies at the vanguard of the process (Frias-Aceituno et al., 2014). The IR framework will push corporations out of their comfort zone by forcing discussions away from what is known and real. Compared with traditional financial information reporting, systems for reporting non-financial information, such as intellectual, human, social, and environmental information, are less developed. There is very little published scholarly work focused on the empirical analysis of the content and form of IR. Those prior studies of IR that have taken place have looked only at developed countries such as the USA, Australia, New Zealand, South Africa, and the European countries (Jensen and Berg, 2012; Garcia-Benau et al., 2013; Higgin et al., 2014; Steyn, 2014), but none have been conducted in emerging countries including Thailand which do not have the same degree of sustainability and regulation, nor are their markets so well-developed. Moreover, IR is still in its early stages of development and is currently focused more on soft (general) measures, and less on hard (specific) measures.

Moreover, there have been few prior studies of the relationship between IR and corporate performance (See Frias-Aceituno et al., 2014; Wild and Van Staden, 2013; Churet and Eccles, 2014) and in those that have been conducted, the results have been mixed, which may be because the principles behind IR may provide two different influences on corporate performance. On the one hand, having IR can meet companies' stakeholders' demands, so that when companies satisfy their stakeholders', the stakeholders will encourage them towards better performance. On the other hand, adopting IR may cause companies to spend more money so may be linked to lower company performance.

Based on the research problems set out above, the present study aimed (1) to investigate the extent and level of integrated reporting in the annual reports of companies listed on the Stock Exchange of Thailand (SET), (2) to test the different level of integrated reporting in annual reports between SET100 companies and non-SET100 companies, and between companies holding a Corporate Social Responsibility (CSR) award and non-CSR award companies, and (3) to test the effect of integrated reporting on the corporate financial performance of companies listed in the SET. Therefore, there were three main questions in this study: (1) What is the extent and level of integrated reporting in annual reports of companies listed in the SET? (2) Are there different levels of integrated reporting in the annual reports of companies listed in the SET between SET100 companies and non-SET100 companies, and between CSR award companies and non-CSR award companies? If so how are they different? and (3) Does integrated reporting have an effect on the corporate financial performance of companies listed in the SET?

The study will provide contributions to the literature relating to integrated reporting in the following ways. Firstly, the study will enhance the understanding of the relationship between IR and corporate performance in developing the country to stand alongside similar studies in developed countries. Secondly, it will also contribute useful knowledge to investors, shareholders, and creditors who consider IR when making investment decisions and it may lead to improvements in the working of Thai IR regulations. This study may also contribute legal and management scholarship by determining the impact that IR has on corporate financial performance. The study may motivate Thai listed companies to provide IR in their annual reports. It will also provide useful insights into the future direction and impact of IR as well as its potential costs and benefits.

The organization of the remainder of this article is as follows: Section 2 describes the theories adopted in conducting the research, while Section 3 deals with the motivation for IR. Section 4 reviews relevant literature and deals with the development of hypotheses. Section 5 details the research methodology, while Section 6 presents the results and discussion. Conclusions and recommendations are provided in Section 7.

2. THEORIES

Although previous related studies have cited a number of theories to explain IR, such as political costs theory, proprietary costs theory, legitimacy theory, signalling theory, and institutional theory (Jensen and Berg, 2012; Wild and Van Staden, 2013; De Villiers et al., 2014), this study adopts two main theories, stakeholder theory and agency theory to explore IR and to meet the objectives of the study, which are to investigate the extent, nature, and level of IR in the annual reports of Thai listed companies between 2012 and 2015; to test the different levels of IR in the annual reports of SET100 firms and non-SET100 firms as well as CSR award firms and non-CSR award firms, and to test the effect of IR on corporate financial performance.

According to stakeholder theory, a company will perform activities and actions to meet its stakeholder demands. Even though the power of the various stakeholder groups is different, the company will not respond only to financial stakeholders such as investors, creditors, and shareholders, but will also respond to the demands of other stakeholders, such as employees, customers, society and the community, the environmental lobby, and regulators. Therefore,

different companies with different corporate characteristics such as the size of the company, the industry sector, the type of auditors used, the ownership status, and business type may provide different IR in terms of the extent and level of disclosures because they have different types and numbers of stakeholders. Stakeholder theory can be used to explain the extent and level of IR in the annual reports of Thai listed companies as well as the different levels of IR between the groups of interest in this study.

The concept of IR reporting in Thailand is supported by stakeholder theory because corporates depend on their stakeholders. Each group of stakeholders has a right to receive information from the company, even though the stakeholders might not use the information, nor have a direct influence on the firm (Gray et al., 1998). Different types of stakeholder have different degrees of power to compel and affect corporate actions and activities, and companies need to continually adapt their operating and reporting behaviours (Islam and Deegan, 2010). In addition, companies also need to maintain their relationships with their stakeholders by frequently providing information through, for instance, IR reporting in annual reports. According to Fauzi et al. (2007), stakeholders can be classified into two categories: primary and secondary. Primary stakeholders such as customers, suppliers, employees and investors are directly affected by every decision made by the company. On the other hand, secondary stakeholders may be either directly or indirectly affected by the company's decisions. These stakeholders include business groups, local communities, the media, social activist groups, and foreign and local governments.

Agency theory posits that a corporation faces problems from conflicts of interest between agents (top management) and principles (owners) such as higher agency costs, and information asymmetry. To reduce agency costs, Frias-Aceituno et al. (2014) found that the corporation has to be prepared to publish greater amounts of information. Disclosing more information can also reduce the problem of information asymmetry. Therefore, agency theory may be able to explain why IR can affect corporate financial performance.

To adopt IR, companies need to focus on both financial and non-financial information as an indicator of long-term performance rather than only financial information about short-term performance (De Villiers et al., 2014). Moreover, reporting long-term corporate performance under IR can reduce conflicts of interest and information asymmetry between top management and shareholders. Therefore, the balance needs between principles and agents can be met by adopting IR. When companies are able to satisfy the information demands of both management and owners, they can benefit from better financial performance (Nasi et al., 1997). Therefore, agency theory can explain the reasons why corporations adopt IR reporting in their annual reports.

3. THE MOTIVATION FOR INTEGRATED REPORTING

IR is the latest and most modern tool in the evolution of corporate combined reporting and can both solve the problems of traditional financial and non-financial reporting as well as building on earlier developments which extended the provision of information to corporate stakeholders (Eccles and Krzus, 2011). Although there are some combined reporting frameworks, such as triple bottom line, sufficiency economy philosophy reporting, and sustainable development, reporting, all these frameworks are still voluntary where companies can choose to report only information which is beneficial to their stakeholders (Bebbington and Gray, 2001). Moreover, it is hard to make comparisons between companies especially with regard to the reporting of non-financial information because the guidelines of each reporting framework use different indicators to measure and disclose corporate information. IR, on the other hand, can solve these problems as well as increasing awareness of the long-term sustainable development perspective, and increasing the comparability of corporations globally, as well as reducing the risk of adverse effects on companies' reputations.

The development of IR was given impetus by the global financial crisis and driven by the perceived need for an improved method of reporting, that incorporates a range of financial and non-financial information reporting necessary for effective decision-making and risk management in the current business, and financial environment (Abeysekera, 2012). There has been also a growing awareness on the part of both corporates and investors of the interconnectedness between financial stability and environmental and social sustainability, the need for greater integration between financial and non-financial information, and present and future-oriented data in reporting to their stakeholders.

IR was developed by the International Integrated Reporting Council (IIRC) which was formed in 2010 from the Global Reporting Initiative (GRI) and the Prince of Wales Accounting for Sustainability Project (IIRC, 2012). The main objectives of IR are to develop corporate reporting of both financial and non-financial information, and its goals include setting up a framework and guidelines for IR. The benefits of IR include facilitating the seeking of new business opportunities, safeguarding corporate reputation, maximizing competitive advantage, and mitigating operational risks. In 2012, the IIRC re-launched the International IR Framework Outline including the Prototype of the International Framework (IIRC, 2013). The Prototype of the International Framework sets out definitions of the key concepts and principles which are intended to underpin the content and description of IR. The IIRC announced its intention to publish the first version of the IR framework (1.0) in 2013. Further, IR has become a mandatory form of reporting in some countries such as South Africa and some European Countries. However, IR is still voluntary in Thailand.

IR is divided into five guiding principles for IR structure, six content elements, and six corporate capitals. The guiding principles of IR structure consist of strategic focus, information connectivity, future orientation, responsiveness and stakeholder inclusiveness, and conciseness, reliability, and materiality. The six content elements are an organizational overview and business model, operating context including risks and opportunities, strategic objectives and strategies to achieve those objectives, governance and remuneration, performance, and future outlook. For the corporate capitals, IR includes not only financial capital, but also manufactured, human, intellectual, natural, and social and relationship capitals as well.

This study will quantify IR based on reporting relating to the six corporate capitals in the annual reports of Thai companies listed in the SET.

4. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Because IR has only been in existence since 2010, there have been few studies to date (Jensen and Berg, 2012; Solomon and Maroun, 2012; Garcia-Benau et al., 2013; Churet and Eccles, 2014; Frias-Aceituno et al., 2014; Rensburg and Botha, 2014; Steyn, 2014). For instance, Garcia-Benau et al. (2013) found that companies in cultural systems with stronger collectivist and feminist values are more likely to provide IR as such systems emphasize good corporate governance, ethics and solving sustainability issues. Jensen and Berg (2012) compared the qualitative characteristics of companies that produce either traditional sustainable development reporting or IR, and tested for relationships between national institutional framework factors (i.e. the political system, the financial system, education and the labour system, the cultural system, and the economic system) and on sustainable development reporting and IR, based on a sample of 309 leading world companies. The results show that disclosures are different under sustainability reporting and IR. Moreover, investor and employment protection laws, the intensity of market orientation and ownership concentration, the level of the economy, the degree of national corporate responsibility, and the country of origin affect the adoption of IR. This is because IR is not motivated by market demands, but involves corporates attempting to appeal to their stakeholders. They also found that IR is more common in developed countries than in developing countries.

Wild and Van Staden (2013) investigated the extent and nature of the IR of 58 companies from the database of the IIRC, and tested for a relationship between corporate characteristics consisting of size, industry, profitability, country, and auditor, and the level of IR. They found that most companies address financial, human, natural, and social capitals in their annual reports, while manufactured and intellectual capitals are not well addressed. The results indicate that there is a negative relationship between the type of industry and the level of IR, but there was no relationship with the level of IR for the any of the other corporate factors tested.

Some prior studies have used a qualitative approach to investigate IR. For example, Higgin et al. (2014) interviewed managers in Australia finding that IR benefits their companies, and they, therefore, considered it to be a resource within corporate strategy which can assist the generation of forward looking information and management strategies. Steyn (2014) interviewed the senior executive managers of listed companies on the Johannesburg Stock Exchange in South Africa regarding the benefits of the adoption of IR and whether they outweigh its costs and found that the primary motivation for adopting IR in their companies was to advance the corporate image and to comply with the regulatory requirements. Atkins and Maroun (2015) interviewed 20 institutional investors in South Africa, finding that the investors interviewed considered that IR enhanced the competitiveness of South Africa.

There have been a small number of studies on the relationship between integrated reporting and financial performance (Frias-Aceituno et al., 2014; Wild and Van Staden, 2013; Churet and Eccles, 2014). For example, Frias-Aceituno et al. (2014) tested the corporate characteristics influencing the integrated sustainability and financial reporting of 1590 international companies around the world during the period 2008 to 2010. Logistic regression and panel data analysis were used to analyse the data in their study. Citing agency theory, signalling theory, political costs theory, and proprietary costs theory, their study found that industry type had a negative impact of on the development of IR. Moreover, they found that large companies with higher profitability were more likely to adopt IR than small companies with lower profitability because they are more politically visible and face higher agency costs. However, Churet and Eccles (2014) also tested the relationship between IR and financial performance, but failed to find any relationship between them and, overall, the results of studies of the relationship between integrated reporting and corporate financial performance have been mixed. Moreover, there is still no literature relating to the relationship between IR and corporate financial performance in developing countries especially in Asia where the business context is different from that in developed countries.

The present study takes note of previous studies relating to the relationship between combined information reporting and corporate performance. On the one hand, most prior studies have found a positive relationship between both financial and non-financial information reporting and corporate performance (See Garcia-Castro et al., 2010; Nakao et al., 2007; Chirapanda and Yoopetch, 2008; Kantabutra, 2006) because companies with better financial performance and a higher firm value tend to satisfy the information demands of their stakeholders, including demands for combined information reporting (Nasi et al., 1997). Agency theory can explain how IR can reduce conflicts between corporate owners and managers by increasing financial performance, with companies earning profits which may more than offset the cost of integrated disclosures (Frias-Aceituno et al., 2014). On the other hand, however, Connelly and Limpaphayom (2004) found that corporations are likely to view voluntary reporting as a cost acting to reduce corporate profits and those companies will thus provide as little IR as possible to meet the minimum requirements. Therefore, there would tend to be a negative relationship between integrated reporting and corporate financial performance (Wright and Ferris, 1997). Some prior studies have found no relationship between both financial or non-financial information reporting and corporate performance (Rahman et al., 2010; Aras et al., 2009). Therefore, to investigate the relationship between IR and corporate performance in developing countries represented by Thailand, the study tested six hypotheses following the six corporate capitals of IR as follows:

H1: Financial capital reporting has a positive effect on corporate financial performance.

H2: Manufactured capital reporting has a positive effect on corporate financial performance.

H3: Intellectual capital reporting has a positive effect on corporate financial performance.

H4: Human capital reporting has a positive effect on corporate financial performance.

H5: Social capital reporting has a positive effect on corporate financial performance.

H6: Environmental capital reporting has a positive effect on corporate financial performance.

Two control variables from among the corporate characteristics were used to test the relationship between IR and corporate financial performance, which were the holding of a CSR award and the size of the company. The first control variable was adopted because a CSR award reflects how listed companies respect and respond not only to their shareholders and investors but also to all of their stakeholders. The main aim of CSR awards is to encourage companies to balance their economic, societal, and environmental responsibilities to achieve corporate sustainability. Moreover, CSR awards are taken as an indicator of how companies satisfy societal expectations through both societal and environmental responsibility as well as exercising financial responsibility. In prior studies, Suttipun (2014) and Deegan and Gordon (1996) found that the holding of a CSR award had a positive influence on the relationship between non-financial information reporting and corporate performance. Therefore, the study selected the holding of a CSR awards as a control variable and hypothesized that:

H7: A CSR award has a positive effect on corporate financial performance.

The second control variable, company size, was selected because larger companies need to report more information than smaller companies in respect of both financial and non-financial matters because they have a greater number of and more varied stakeholders (Cowen et al., 1987). Previous studies (Raar, 2002; Camfferman and Cooke, 2002) have found a positive association between the level of nonfinancial information reported and the size of the company. Further, the notion of corporate growth in mainstream economics, typified by the concept of "larger is better than smaller", has become entrenched in the business environment. Some previous studies (Majumdar, 1997; Almajali et al., 2012) have been able to show that larger companies produce a higher level of performance than smaller companies. Therefore, this study hypothesized that:

H8: Size of the company has a positive effect on corporate financial performance.

5. RESEARCH METHODOLOGY

The method adopted in this study can be separated into three parts consisting of data and sample selection, the measurement of the dependent and independent variables used in the study, and data analysis including the equations used in the study. Firstly, the population in this study was all the companies listed on the SET (556 firms). Using simple random sampling, 150 companies listed on the SET were chosen as the sample in this study (SET, 2015). Table 1 indicated population and sample used in this study. The sources of IR information were 2012 to 2015 annual reports of the companies selected. This source was adopted because the annual report is a conveniently available source of information and is provided regularly every year (Amran and Devi, 2008). It also represents the main form of corporate communication to stakeholders. Moreover, many previous studies relating to IR have used corporate annual reports as their main source of information. The data were collected between July 2015 and June 2016.

Six independent variables, one dependent variable, and two control variables were measured in this study. The independent variables, consisting of

the level of IR reporting relating to the six corporate capitals have previously been measured in five different ways: content analysis, questionnaire survey, reputational measures, uni-dimensional indicators, and ethical rating. However, in this study, content analysis was selected because it has been the most common method used for assessing non-financial information reporting (Gray et al., 1998) and has been used in many previous studies (Raar, 2002; Hackston and Milne, 1996). Moreover, Krippendorff (2004) asserted that content analysis is a technique allowing a replicable and valid inference from data according to the context. A word count from the annual reports was used as the analysis unit because it can be more easily categorized, and needs less subjective judgment by the researcher (Gamerschlag et al., 2011). Based on the limitations of the Thai context, the study cannot use sentence count because the Thai language does not use full stops to denote sentences. Moreover, there is no regulation about the font or paper size to be used for producing annual corporate reports, therefore, line and page count are also not appropriate to be used in this study. Six independent variables were adopted from the International Integrated Reporting Framework by using the guideline of IR reporting on the corporate capitals (IIRC, 2013). The corporate capitals were categorized within six capitals that were financial, manufactured, intellectual, human, social, and environmental capitals.

Table 1. Population and sample

	Industry	Population		Sample	
		N	%	N	%
1	Agriculture and Food	50	9.04	15	10.00
2	Finance	56	10.13	18	12.00
3	Natural Resources	85	15.37	12	8.00
4	Consumer products	147	26.58	31	20.27
5	Property and Construction	37	6.69	21	14.00
6	Industrial Products	98	17.72	26	17.33
7	Technology	40	7.23	10	6.67
8	Service	40	7.23	17	11.33
Total		533	100	150	100

For the measurement of the dependent variable, corporate financial performance, Fiori et al. (2007) suggested that it can be measured by profitability, solvency, liquidity, and efficiency. The most common measures of performance which have been used in previous studies are return on assets (ROA), return on equity (ROE) and Tobin's Q (Margolis and Walsh, 2001) and Tobin's Q was used in this study because it has been commonly and widely used as an indicator of a company's financial performance in previous studies (e.g. Aras et al., 2009; Margolis and Walsh, 2001). Tobin's Q data was collected from the website of the SET[23]. Two control variables as the size of company and firm given CSR award were used in this study. Company size was separated by market capitalization into two groups as SET100 (larger) companies and Non-SET100 (Small) companies. Firm given CSR award was also divided into two groups as CSR award and Non-CSR award.

All the data was hand collected. To meet the studies' objectives, descriptive analysis was used to quantify the extent and level of IR in the annual reports of Thai listed companies selected, independent sample t-tests were used to test the

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[23] www.set.or.th/set/commomlookup.do

different level of integrated reporting in the annual reports of SET100 firms and non-SET100 firms and between CSR award firms and non-CSR award firms, and multiple regression was used to test the effect of integrated reporting on the corporate financial performance of Thai listed companies. For the multiple regression, there were two models used in this study which are:

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + error

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + b7SCOM + b8CARAW + error

TOBIN = Corporate financial performance (Tobin's Q)

FCR = Financial capital reporting (Content analysis by word count)

MCR = Manufactured capital reporting (Content analysis by word count)

ICR = Intellectual capital reporting (Content analysis by word count)

HCR = Human capital reporting (Content analysis by word count)

SCR = Social capital reporting (Content analysis by word count)

ECR = Environmental capital reporting (Content analysis by word count)

SCOM = Size of companies (Dummy variable with 1 as SET100 firms, and 0 as otherwise)

CARAW = CSR award firms (Dummy variable with 1 as CSR award firms, and 0 as otherwise)

6. RESULTS AND DISCUSSIONS

Table 2 shows the extent and level of IR in the annual reports of companies listed in the SET during the period 2012 to 2015. The results show that the average level of IR was 603.59 words (SD = 509.59) of which the most common form of IR was intellectual capital reporting (average, 180.44 words) followed by social capital reporting (average, 129.27 words), financial capital reporting (average, 116.08 words), human capital reporting (average, 76.77 words), manufactured capital reporting (average, 59.05 words), and environmental capital reporting (average, 41.98 words). Within eight industry sectors in the SET, the companies in the technology sector (average, 969.49 words) provided the highest level of IR during the period being studied, while the lowest level of IR was in the property and construction sector (average, 262.48 words) which was around four times smaller than companies in the technology sector. The result relating to the most common form of IR in this study was different from that of Wild and Van Staden (2013) who found that intellectual capital reporting was not well addressed by listed companies in Africa. This may be because the companies need to satisfy their stakeholders, but different groups of stakeholder have a different power to compel the companies (Islam and Deegan, 2010). Therefore, based on the result of this study, companies have been forced by their stakeholders to provide more intellectual capital reporting than other forms of capital reporting.

Table 2. Integrated reporting in each capital by industry sector

Industry	Finance M (SD)	Manufactured M (SD)	Intellectual M (SD)	Human M(SD)	Society M (SD)	Environment M (SD)	Average M (SD)
Agriculture and Food	93.00 (24.72)	45.83 (19.98)	133.55 (33.47)	76.40 (38.84)	143.37 (73.52)	23.38 (11.37)	515.53 (187.11)
Finance	117.68 (20.68)	6.46 (5.15)	257.92 (80.40)	57.28 (22.83)	73.63 (26.96)	18.78 (7.64)	531.74 (138.30)
Natural Resources	145.12 (11.62)	112.05 (12.75)	226.68 (22.05)	100.87 (11.05)	176.57 (19.74)	78.02 (7.61)	839.30 (78.21)
Consumer products	75.63 (10.96)	26.73 (11.47)	101.85 (46.48)	17.96 (3.90)	46.25 (14.99)	18.25 (8.16)	286.67 (84.58)
Property and Construction	89.28 (12.76)	9.65 (2.76)	86.87 (14.52)	27.06 (5.15)	41.27 (7.77)	8.35 (2.69)	262.48 (32.64)
Industrial Products	87.33 (7.03)	76.68 (8.03)	151.13 (7.40)	80.55 (4.99)	100.88 (6.98)	49.15 (5.26)	546.20 (29.44)
Technology	159.51 (26.03)	111.50 (17.67)	260.68 (44.92)	138.60 (23.00)	223.87 (40.37)	75.32 (13.70)	969.49 (144.08)
Service	138.13 (10.62)	93.05 (9.98)	223.17 (20.54)	115.53 (12.47)	213.77 (26.10)	65.96 (7.79)	849.61 (81.17)
Average	116.08 (76.23)	59.05 (44.49)	180.44 (172.30)	76.77 (73.66)	129.27 (118.19)	41.98 (34.59)	603.59 (509.59)

Figure 1 shows the IR in Thai listed companies' annual reports based on the six forms of capital reporting consisting of financial, manufactured, human, intellectual, social, and environmental. The findings indicate that the most common IR related to intellectual capital representing being 30 % of the total IR, followed by social capital reporting (21 %), human capital reporting (19 %), human capital reporting (13 %), manufactured capital reporting (10 %), and environmental capital reporting (7 %). The findings indicate a difference from the prior study of Suttipun (2012) which found that the most common form of triple bottom line reporting in the annual reports of Thai listed companies in the year 2011 was financial information reporting (economic information) rather than non-financial information reporting (social and environmental information). The difference in the results may be because nonfinancial information reporting can impact a wider variety of groups of stakeholders than financial information reporting which can only affect shareholders, investors, and creditors.

Figure 1. The proportion of integrated reporting by capital reporting
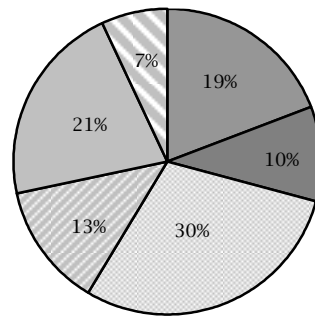
☐Finance ☐Manufactured ☐Intellectual ☐Human ☐Society ☐Environment

Table 3 shows the results of independent sample t tests in respect of the level of IR in the annual reports of SET100 companies and non-SET100 companies as a proxy for company size and between CSR award companies and non-CSR award companies. In terms of company size, SET100 companies (n = 70 firms) provided an average of 868.87 words of IR in their annual reports, while non-SET100 companies (n = 80 firms) disclosed an average of 371.48 words of integrated reporting, which represented a significantly different level of IR between SET100 and non-SET100 companies at the 0.01 level. This result is consistent with the findings of Suttipun (2015) who found a significant

difference in the sustainability reporting in the annual reports of Thai listed companies between SET50 firms and non-SET50 firms. In terms of CSR awards, there were 35 companies which had received a CSR award during the period being study, while 115 firms had not been given a CSR award. The study found a significant difference in the level of reporting by CSR award companies (average, 868.91 words) and non-CSR award companies (average, 522.85 words) at the 0.01 level. This result was consistent with Suttipun (2014) who found a significant difference in the CSR reporting of companies listed in the SET between CSR award companies and non-CSR award companies.

Table 3. Independent sample t-tests of IR based on company size and CSR awards

Independent sample t-test		*N*	*Mean*	*SD*	*t-test*	
					t	*Sig.*
Company size	SET100	70	868.87	598.306	6.919	.000**
	Non-SET100	80	371.48	220.802		
CSR award	Have	35	868.91	584.526	3.709	.000**
	Don't have	115	522.85	448.753		

*Note: ** significant at 0.01 level, * significant at 0.05 level*

Table 4 shows a descriptive analysis including the means and SD of all the variables together with a correlation matrix to test for any multicollinearity among the variables used in this study. From the results, the average level of intellectual capital reporting (ICR) was 180.44 words followed by social capital reporting (SCR) at 129.27 words, financial capital reporting (FCR) at 116.08 words, human capital reporting (HCR) at 76.77 words, manufactured capital reporting (MCR) at 59.05 words, and environmental capital reporting (ECR) at 41.98 words. The average Tobin's Q (TOBIN) used to

measure the corporate financial performance in this study was 1.65 (SD = 0.94). The correlation matrix used to test for multicollinearity among the nine variables, consisting of one dependent variable, six independent variables, and two control variables indicated that the variance inflation factor (VIF) of the correlation matrix among the variables was 1.386. Therefore, since the VIF did not exceed 10, which indicated that there was no multicollinearity, the multiple regression models were applied to the data to investigate the study's hypotheses as detailed below.

Table 4. Correlation matrix

Variable	*TOBIN*	*FCR*	*MCR*	*ICR*	*HCR*	*SCR*	*ECR*	*SCOM*	*CSRAW*
Mean	1.65	116.08	59.05	180.44	76.77	129.27	41.98	0.53	0.76
SD	0.94	76.23	64.49	172.30	129.27	148.19	44.59	0.50	0.42
TOBIN	1	.040	.170*	.110	.067	.126	.054	.130	.033
FCR		1	.589**	.536**	.733**	.658**	.574**	.367**	.153
MCR			1	.488**	.742**	.737**	.824**	.318**	.281**
ICR				1	.661**	.604**	.604**	.479**	.284**
HCR					1	.892**	.792**	.395**	.196*
SCR						1	.768**	.466**	.268**
ECR							1	.355**	.270**
SCOM								1	.337**
CSRAW									1

*Note: ** significant at 0.01 level, * significant at 0.05 level*

Two regression models were used to test the effect of IR on the corporate financial performance of the sample of listed companies, as shown in table 5, the first (model 1) without control variables; and the second with two control variables (model 2). In model 1, the study found a significant positive effect of MCR on corporate financial performance at the 0.01 level, while the corporate financial performance was negatively influenced by ECR an effect which was significant at the 0.05 level. However, the study found no significant effect from FCR, ICR, HCR, or SCR on corporate financial performance at the 0.05 level. In model 2, the study tested the effect of IR on corporate financial performance controlled by the size of the company; and the holding of a CSR award. The findings indicate the same results as achieved with model 1 that there was a positive effect from MCR, a negative effect from ECR, and no significant effect from FCR, ICR, HCR or SCR on the company's financial performance after controlling for the size of the company and the holding of a CSR award. Moreover, the study found a significant positive effect of a CSR award on corporate financial performance at the 0.01 level, while company size had no significant effect on financial performance at the 0.05 level.

The finding of a relationship between MCR and corporate financial performance was similar to the result of Garcia-Castro et al. (2010) and Nakao et al. (2007). These results can be explained by agency theory which suggests that manufactured capital reporting can prevent conflicts between principles and agents by increasing corporate financial performance so that the company can earn profits which more than offset the cost of MCR (Frias-Aceituno et al., 2014). On the other hand, this study found a negative relationship between ECR and corporate financial performance which was similar to the findings of Connelly and Limpaphayom (2004) and Wright and Ferris (1997). The reason may be that companies are likely to view voluntary reporting as a cost acting to reduce corporate performance. Therefore, companies will provide as little ECR as possible to meet the minimum requirement of stakeholders. This study's findings in respect of MCR and ECR, therefore, demonstrate that agency theory can explain the change of corporate financial performance of the sample of Thai listed companies based on value/cost-relevance. Moreover, IR reporting also helps to reduce information asymmetry and agency costs.

The finding in this study of a positive significant relationship between the control variable, CSR award and corporate financial performance is similar to that of Suttipun (2014) and Deegan and Gordon (1996). The reason may be that a CSR award represents how companies respect and respond not only to their shareholders and investors but also to all of their stakeholders. Therefore, when a company satisfies all of their stakeholders, it will be rewarded by higher financial performance.

Table 5. Multiple regression

Variable	Model 1		Model 2	
	B	t (sig)	B	t (sig)
Constant	1.560	10.726 (.000**)	1.281	2.697 (.008**)
FCR	-.001	-.729 (.467)	-.001	-.844 (.383)
MCR	.006	2.737 (.007**)	.007	2.961 (.004**)
ICR	.001	1.525 (.129)	.001	1.457 (.147)
HCR	-.003	-1.175 (.242)	-.003	-1.292 (.199)
SCR	.002	1.445 (.151)	.002	1.361 (.176)
ECR	-.007	-2.063 (.041*)	-.007	-1.996 (.048*)
SCOM	-	-	.195	1.051 (.292)
CSRAW	-	-	.334	2.707 (.009**)
R Square	.083		.105	
Adjust R Square	.045		.055	
F-value	2.171 (.049*)		2.074 (.042*)	

*Note: ** significant at 0.01 level, * significant at 0.05 level*

7. CONCLUSIONS AND RECOMMENDATIONS

This study aimed to investigate the extent and level of IR in the annual reports of a sample of companies listed in the SET, to test for differences in the level of IR in the annual reports of SET100 companies and non-SET100 companies, and between CSR award companies and non-CSR award companies, and to test the effect of IR on corporate financial performance of the sample of listed companies. The study found that the companies provided an average of 603.59 words of IR in their annual reports during the period being studied. ICR was the most common form of reporting by the sample of Thai listed companies, while ECR was the least common form of IR. The companies in the technology sector disclosed the highest level of IR, whereas the companies in the property and construction sector provided the lowest level of reporting. There were significant differences in the level of IR between SET100 companies and non-SET100 companies, as well as between CSR award companies and non-CSR award companies. In testing the effect of IR on financial performance, the study found that MCR and the holding of a CSR award positively affect the level of IR, while ECR has a negative affect on the level of IR.

This study has some implications and provides several practical contributions to the literature in the field of IR. First, the practical contributions are that the study enhances the understanding of the relationship between IR and corporate financial performance in developing countries adding to previous findings relating to developed countries. Second, it also contributes useful knowledge to investors, shareholders, and the other stakeholders who consider IR in their decision making. Third, the

results implicated scholars having the literature of IR studies in developing countries where the numbers of evidence were lack. Fourth, policy makers may be able to take the study's findings to regulate the IR reporting instead of voluntary reporting. Next, the study can lead to developments in the working of IR regulations in Thailand. Finally, this study also contributes legal and management scholarship by determining the impact that IR has on corporate financial performance.

In terms of theoretical contributions, stakeholder and agency theories have been demonstrated to explain that IR has the potential to (1) increase non-financial information reporting in Thailand as well as financial information reporting, and (2) by virtue of the findings of respectively the positive and negative effects of MCR and ECR on the corporate financial performance of Thai companies listed in the SET if they take into consideration value/costs-relevance, and may also help to reduce information asymmetry and agency costs.

However, there are some limitations to this study. The size of the sample used in this study must be stated as a limitation because out of over 500 SET listed companies, this study selected only 150 firms as the sample investigated. Therefore, the results may not be generalizable to the whole population. The proxy of corporate financial performance used in this study was Tobin's Q. However, there are several other proxies of financial performance such as total assets, total investments, total equity, and economic value added. Further, the study quantified the IR based only on the six corporate capitals rather than basing it on the five guiding principles of IR structure and the six content elements. In light of these limitations, future studies should also investigate IR based on the five guiding principles of IR structure and the six content elements in the annual reports of all the companies listed in the SET, and test for a relationship between IR and other proxies of corporate financial performance.

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