The communication of intellectual capital: the "whys" and "whats"

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Abstract

Purpose – The purpose of this paper is twofold: first, to identify motivations that drive communication of IC (CIC); and second, to investigate content and format used in CIC from three perspectives, namely, human capital information, relational capital information and structural capital information.

Design/methodology/approach – A global survey was conducted with 200 banks' senior executives responsible for annual report (AR), followed by content analysis of each bank's AR.

Findings – The study found four motivations of CIC, namely, management responsibility to stakeholders, collective behavior, corporate responsibility and compliance. Content analysis of banks' AR found structural capital information most prevalent, followed by human capital and relational capital. Five types of formats were analyzed to show the different presentation used in the CIC.

Research limitations/implications – Current data source was limited to banking and focussed on English language publications.

Practical implications – The study provides regulators insights to forces that either compel or hinder CIC, and updates literature on management's thinking and priorities in CIC.

Originality/value – This study is possibly the first paper that investigates the motivation of CIC for reporting, where IC is an important asset to organizations. The findings on the content and format used in CIC extend existing studies to a wider, global scale.

Keywords Motivation, Communication, Banks, Intellectual capital reporting, Content and format

Paper type Research paper

1. Introduction

The communication of IC (CIC) as a distinct field of study has gained attention only in the recent decade (Serenko *et al.*, 2010). It is defined as the information disclosure of an organization's IC assets through annual reports and supplementary corporate disclosure (ARS), be it mandatory or voluntary. Past studies have shown that the ARS is focussed as it is a good source to analyze the CIC as part of corporate reporting (Dumay and Garanina, 2013; Guthrie *et al.*, 2004). The CIC is fueled in part by changes in regulatory reporting frameworks (Coldwell *et al.*, 2012; PricewaterhouseCoopers, 2014), stakeholders' demand (Bismuth and Yoshiaki, 2008; Ousama *et al.*, 2011) and the need to manage organizational image (Herzig and Schaltegger, 2006).

However, current literature on the motivations behind the CIC (the "Whys") is limited. This is an important research gap for two reasons. First, understanding these motivations allow governing bodies such as regulators and trade councils to identify forces that either compel or hinder organizations to communicate IC (Abhayawansa and Abeysekera, 2009; Christensen and Mohr, 2003; European Commission, 2013). Second, addressing the research gap will update literature on management's thinking and priorities in the CIC (Demartini and Pailoni, 2013; Dumay, 2009).

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In addition, extant study of the CIC has shed little light on the "Whats," namely, content and formats (Duck and McMahan, 2010; Ousama *et al.*, 2011; Peters, 2012). In terms of content, the coverage in most research tends to lean toward the reporting of employee-related information such as employee numbers and social benefits (Bukh, 2003; Eccles *et al.*, 2001). There has not been much details on other aspects of IC such as processes, strategic directions and external relationships of the organizations (Bismuth and Yoshiaki, 2008). Much less was discussed on the formats used in the CIC although a variety of formats including narratives, tables, graphs and visuals can commonly be found. These formats could carry multiple messages that have rich and varied interpretations, and they hold the emotional power to influence the reader (Davidson, 2014). Hence, the use of formats could be a powerful impression management tool (Anderson and Frankle, 1980; Spoehr and Lehmkuhle, 1982).

For the reasons above, this paper seeks to deepen existing knowledge on the CIC with a twofold objective. First, the paper identifies motivations that drive the CIC. Second, it investigates the content and format used in the CIC and provides insights to management's thinking. In terms of practical contribution, organizations can take advantage of the knowledge gained from this paper to drive, share and analyze the CIC in line with its strategic direction (Green, 2006). This paper also extends prior studies on the CIC in terms of geographic coverage, where few multiple jurisdictions investigations were covered (Abeysekera and Guthrie, 2002; Petty and Guthrie, 2000).

2. Literature review

The importance of the CIC in building organizational resilience is widely recognized (Kamath, 2007; Lengnick-Hall *et al.*, 2011). Scholars have also previously emphasized the need to analyze, measure and disclose IC in supporting organizational performance (Andriessen, 2004; Giuliani, 2009; Mouritsen *et al.*, 2003). However, comprehending the underlying motivations that drive the CIC is still limited in the field of IC. Existing IC literature, albeit scanty, suggests that organizations are pressured by government to report IC in the ARS (Holder-Webb *et al.*, 2009). This is part of corporate governance to improve documentation and connections with stakeholders (Gan *et al.*, 2013). While corporate governance was identified as a possible motivating force, organizations also faced the dilemma of balancing two other forces, to manage stakeholders' impression of the organization's image and to meet stakeholders' demand for relevant non-financial information on decision making and operations (Bismuth and Yoshiaki, 2008; Ousama *et al.*, 2011). As the CIC is linked to information disclosure by organizations, the forces of motivation could be examined from the perspectives of management and business-related disciplines.

Accounting literature has shown that high-management ownership could result in lower information disclosure as management will have more discretion in reporting beyond what is required by law (Craft, 1981; Leung and Horwitz, 2004). Studies from the accounting discipline also highlight the role of leadership in the communication of non-financial information, where market leaders influence the industry standard of reporting (Ahmed and Courtis, 1999; Ernst & Young, 2014; Robb and Zarzeski, 2001). Peers have also been found to influence information disclosure practices and thus, the CIC could be influenced by the herd instinct within the community (Cooke, 1989; Gibbins *et al.*, 1990; Tartari *et al.*, 2014).

Literature from business strategy advocates organized structures and management systems given that these are necessary to support the capture and reporting of IC as part of non-financial information to stakeholders (Perrini and Tencati, 2006; Yongvanich and

Guthrie, 2006). In ethical and environmental reporting studies, the influence of the organization's level of media exposure is found to positively affect information disclosure of the organization (Brammer and Pavelin, 2004; Liu and Anbumozhi, 2009). Table I summarizes current literature on the eight possible motivations that could drive the CIC. They are governance, image, stakeholders' demand, management ownership, leadership, herd instinct, system and media exposure.

While the forces of motivations in Table I apply to information disclosure by organizations, the relationship between information disclosure by the organization and the CIC has not been established. This provides ground for investigation to ascertain the applicability of these motivations in the CIC.

Scholars have generally defined IC using three components, namely, human capital, relational capital and structural capital (Bontis, 2002). Human capital is closely associated with the employees and it refers to their knowledge, competencies and experiences (Edvinsson and Malone, 1997; Sveiby, 2007). Relational capital refers to the knowledge embedded in the relationships that the organization has developed internally and externally (Bontis, 1999; Tsai and Ghoshal, 1998). Structural capital refers to the processes, intellectual property and internal networks of the organization (Brooking, 1996). Likewise, the CIC can be segmented into human capital information, relational capital information and structural capital information, to reflect information disclosure of the three IC components.

While existing literature has shown the significance of the CIC to assess future revenue generation and sustainability (Abhayawansa, 2014; Petty and Guthrie, 2000; Sveiby, 2007), studies have also highlighted the need to understand the types of content and formats used in the CIC (Dumay, 2009; Hassan *et al.*, 2010). In terms of content, the demand to publicize human capital information is increasing as organizations are relying more on human assets to generate earnings, and are expected to compete on knowledge held by the employees and the organization (Lajili and Zeghal, 2005). With employees being a fundamental part of an organization's operating efficiency,

Motivation	Description	Discipline
Governance	Corporate governance improves documentation and connections with stakeholders (Gan *et al.*, 2013)	Intellectual capital
Image	Managing stakeholders' impression of organizations' image to maintain vested interest (Bismuth and Yoshiaki, 2008; Ousama *et al.*, 2011b)	Intellectual capital
Stakeholders' demand	Stakeholders' demand for relevant non-financial information on decision making and operations (Bismuth and Yoshiaki, 2008; Ousama *et al.*, 2011b)	Intellectual capital
Management ownership	Management ownership causing lower information disclosure (Craft, 1981; Leung and Horwitz, 2004)	Accounting
Leadership	Leadership influences industry reporting (Ahmed and Courtis, 1999; Ernst & Young, 2014; Robb and Zarzeski, 2001)	Accounting
Herd instinct	Herd instinct influences habit of information disclosure (Cooke, 1989; Gibbins *et al.*, 1990; Tartari *et al.*, 2014)	Accounting
System	Structure and system supported capture and reporting of IC to stakeholders (Perrini and Tencati, 2006; Yongvanich and Guthrie, 2006)	Business strategy
Media exposure	Media exposure affects information disclosure (Brammer and Pavelin, 2004; Liu and Anbumozhi, 2009)	Ethical and environmental reporting

Table I.
Motivations that could drive the communication of IC

disclosure on training, employee retention and human resources is increasingly important in labor and capital markets (Aboody *et al.*, 2004; Lev, 2004).

While human capital information is a vital resource for organizations, content on the organization's relational capital such as information related to clients and suppliers is imperative for organizational survival. To sustain profitability, maintaining stable relationships is as important as enhancing competitiveness (Huang and Salleh, 2010). Finally, content on structural capital information is seen to increase the value of the organization in a competitive environment, and includes information on intellectual property, processes, strategic plans and accreditation (Drucker, 1994; Porter, 1985). As such, the content in the CIC is a significant aspect of the documentation used to connect with and manage stakeholders' expectations on resource management and decision making (Cinquini *et al.*, 2012; Ousama *et al.*, 2011).

With the push by regulators and organizations such as the International Integrated Reporting Council and Global Reporting Initiative for sustainability reporting, the demand for the CIC, particularly among large organizations listed on stock exchanges, is higher (Andriessen, 2004; Branstrom and Giuliani, 2009; Ordónez de Pablos, 2002). As a result, the ARS has increased significantly in terms of page length, voluntary information and the adoption of different formats (Beattie *et al.*, 2008). Formats have evolved beyond narratives (Cho *et al.*, 2010) to include graphs (Penrose, 2008), pictures and visuals (such as illustrations and flowcharts) (Davidson, 2010). Narratives are "scene-setting device" (Beattie *et al.*, 2008) that either tells a story or presents specific data (Hyland, 1998; Smith and Taffler, 2000). Graphs are used to shape the perception of the organization and help in the interpretation of its financial health (Penrose, 2008). At the same time, graphs are also used to attract attention and stimulate interest, especially if they are colored (Beattie and Jones, 1992). Pictures, like graphs, are ubiquitous, constitute part of impression management in making reports more attractive, and convey rich, complex messages with diverse meanings (Davidson, 2014; McKinstry, 1996).

While a number of studies have examined organizational disclosure practices, discussion on formats used in the CIC is not widely covered (Li and Mangena, 2014). Thus, there have been calls in extant literature to investigate the use of formats in contributing to the CIC (Davidson, 2013, 2014; Li and Mangena, 2014).

3. Methodology

3.1 Dataset

The banking sector was chosen for analysis in this study in view of its dependence on IC to remain competitive (Demirguc-Kunt *et al.*, 2010; Goh, 2005). Moreover, being a regulated industry, banks have better editorial control over the information published and are less susceptible to the potential risk of external media interpretations or falsification (Curado, 2008; Guthrie and Parker, 1989).

There were two sources used in this study. First, senior executives from 200 banks, who were responsible for publishing the ARS, were surveyed. These senior executives were selected based on stratified proportional sampling of 50 banks from four regions, namely, the America, Asia Pacific, Europe and the Middle East and Africa (MEA), to prevent over-representation or under-representation (Hill *et al.*, 2007; Lund Research Ltd, 2015). The sampling method provides an "equal voice," rather than representativeness of the global population, for this study (Goddard and Melville, 2001; Maxwell, 2013). Second, the same banks' ARS were used for content analysis. The CIC is often reported either in the annual report, or as a standalone supplementary corporate disclosure often labeled "Integrated Reporting," "Sustainability Reporting" or

"Intellectual Capital Reporting" (Beattie and Smith, 2013; Dumay *et al.*, 2015; GRI, 2015). This study only used ARS that were published in English for the financial year ending 2014 and contained content on the CIC.

3.2 Data collection instruments and procedure

To examine the motivations behind the CIC, data were gathered using a 24-items survey questionnaire (Table AI) focussed on eight factors, namely, governance (Gov), image (Image), management ownership (Mgt), leadership (Lead), stakeholders' demand (Stake), herd instinct (Herd), system (Sys) and media exposure (MeEx), as developed from the literature review section earlier. Respondents were asked to provide their views on opinion statements with respect to the eight possible factors that drive the CIC using a five-point Likert scale, which ranged from 1 = "strongly disagree" to 5 = "strongly agree." Open-ended questions were also included to gather opinions on other motivations not listed in the questionnaire.

To investigate content used in the CIC, data were gathered from a second questionnaire comprising 27 items that focussed on three components of the CIC (see Table AII), adapting from past IC studies that have undertaken similar approaches in data collection (Abdel-Aziz *et al.*, 2010; Bontis, 2003). In human capital information, human resources, employee retention and training were examined as they reflect the pool of talent, experience and knowledge of employees. Relational capital information included information on clients, suppliers and business alliances. Structural capital, associated with the permanent structures in the organizations, encompassed intellectual property, processes and accreditation. Respondents were asked to provide their views on opinion statements about the content used with respect to the three components of the CIC using a five-point Likert scale (1 = "strongly disagree"-5 = "strongly agree"). Open-ended questions were also included at the end of the questionnaire to gather further insights into opinions on the content used in the CIC.

The survey questionnaire in Tables AI and AII were launched concurrently. From a pilot study undertaken, it was found that the term "the CIC" was not generally understood. Respondents was also able to better comprehend the concepts of the CIC if the survey in Table AII was carried out first before Table AI, and the term "non-financial information" was used collectively to represent human capital information, relational capital information and structural capital information. The data generated from the pilot study were not included as part of the data collected for this study.

In reviewing the format used, a count was made for narratives (number of words), tables, graphs, illustrations (visuals and flowcharts) and pictures. This method of data collection is commonly undertaken in a number of studies in the CIC (Beattie and Thomson, 2007; Dumay, 2009). Each format counted was further streamlined into the three sub-components of the CIC. Two reviewers were responsible for the content codification of the ARS. To test for inter-coder reliability, Cohen's κ measure was used based on a pilot sample size of 30 banks representing approximately 15.0 percent of the total dataset (Lacy and Riffe, 1996; McHugh, 2012). Cohen's κ measure of 0.80 indicated an acceptable level of agreement between the reviewers (Allen and Bennett, 2008; Cohen, 1998). Table AIII provides examples of keywords identified in the narrative format coding of the CIC compiled from the dataset of 200 banks.

3.3 Methods of analysis

In analyzing the motivations behind the CIC, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were undertaken on the 24-items survey.

Evaluating the appropriateness of the EFA factor-analytic model, three tests were undertaken as part of the computation of the correlation matrix – Bartlett test of sphericity, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and anti-image matrices (Allen and Bennett, 2008; Coakes *et al.*, 2010).

To test validity and structure of the CFA measurement models, SMARTPLS 2.0 was used to assess the measurement and the structural models. For the measurement model assessment, the model was reviewed in terms of internal consistency, convergent reliability and the discriminant validity of the model (Bagozzi and Yi, 1988; Barclay *et al.*, 1995; Hulland, 1999). In reviewing the structural model, the path significance levels using *t*-values were estimated by applying bootstrap method (Ringle *et al.*, 2005).

Analysis of the content and format used in the CIC was undertaken using statistical methods and content analysis, as commonly adopted by past scholars (Beattie and Thomson, 2007; Guthrie *et al.*, 2004). The 27-item survey questionnaire (Table AII) was first checked for its internal consistency, using Cronbach's α (> 0.76), which was considered acceptable for research purposes (Allen and Bennett, 2008). A one-way repeated measures analysis of variance (ANOVA) was used to compare the 200 respondents' opinions on the content used in the CIC in the ARS. Tests of normality, homogeneity of variance and sphericity were undertaken to ensure that assumptions were met for analysis (Tabachnick and Fidell, 2007). To further determine which content was opined to have greater emphasis, pairwise comparison was undertaken. In addition to the survey findings, content analysis of the format used in line with the three components of the CIC was tabulated for comparison and review.

4. Findings

4.1 Background

The dataset, gathered from interviews conducted with 200 banks' senior executives and their respective ARS, represented four regions and 56 countries. In terms of size, the total assets of the banks ranged from US$344.15 million to US$2.63 trillion. Table II provides a summary description of the sample of banks used in this study.

Majority of the respondents came from finance and investor relations cum communications departments, as shown in Table III. The literature reported that the responsibility of publishing the ARS was moving from the purview of the CFO to investor relations (Arvidsson, 2011). This shift of responsibilities reflected the balancing act that management had to face in the CIC between accountability and impression management (Bismuth and Yoshiaki, 2008; Highhouse *et al.*, 2009;

		Total asset			Revenue		
Region	Number of banks	Min USD (million)	Max USD (billion)	Mean USD (billion)	Min USD (million)	Max USD (billion)	Mean USD (billion)
Asia Pacific	50	406.39	1,024.40	77.03	18.67	28.74	2.33
America	50	344.15	2,573.13	268.41	16.71	94.21	11.53
Middle East and Africa (MEA)	50	848.55	164.31	36.71	101.53	9.09	1.75
Europe	50	504.70	2,634.14	403.05	9.96	63.36	9.07
	200	344.15	2,634.14	195.85	9.96	94.21	6.27

Table II. Descriptive statistics of banks

Departments	Number of respondents	Examples of titles
Finance	94	Chief financial officer (CFO) (Senior) Finance manager Head of finance, business performance and analytics (Deputy) Finance director Market risk manager, finance Financial controller
Investor relations/communications	91	Investor relations director/manager/ specialist Head of corporate communications Head of public relations Group head strategy and communications Head of reporting and investor relations Head of strategy and investor relations
Sustainability/corporate social responsibility (CSR)	11	Sustainability director/manager Head of sustainability Head of corporate sustainability Department head, president's office Head of CSR Corporate governance officer
Others (such as human resource and operations)	4	Country head Vice president, operations General manager, human resource Chairman

Table III.
Description of respondents

Ousama *et al.*, 2011). Other executives responsible for the publishing of the ARS included senior executives from the office of the president and leading figures such as country head and the chairman of the bank.

4.2 Factors affecting the CIC

An EFA was conducted with 24-items grouped, a priori, into eight categories, namely, governance (Gov), image (Image), management ownership (Mgt), leadership (Lead), stakeholders' demand (Stake), herd instinct (Herd), system (Sys) and media exposure (MeEx). Data collected were subjected to principal axis factoring with varimax rotation to investigate the underlying structure (Huang *et al.*, 2007). All items were significant and retained after using Bartlett test of sphericity ($p < 0.05$) and KMO test of sampling adequacy showed 0.861 (Coakes *et al.*, 2010). In determining the number of initial factors to be extracted, components had eigenvalues greater than 1.0 (Kaiser, 1960, 1974). As shown in Table IV, four factors were identified where these factors account for 38.13 percent of the variance in the data collected. Items with factor loadings greater than 0.30 were considered significant for loading (Allen and Bennett, 2008).

The four factors in Table IV were tested for reliability using Cronbach's α, where values were greater than 0.65 and thus acceptably reliable (Gliem and Gliem, 2003; Goode and Harris, 2007).

To validate the factors found from EFA, measurement model and structural model assessments were undertaken for CFA. For the measurement model assessment, partial least squares analysis was undertaken on the four factors identified, with results

Factors named items	Factor 1 Management responsibility to stakeholders	Factor 2 Corporate responsibility	Factor 3 Collective behavior	Factor 4 Compliance
1. Mandatory communication (Gov1)		0.368		
2. Corporate governance policy (Gov2)	0.456			
3. Documentation policy (Gov3)				0.476
4. Communicate branding (Image1)				0.405
5. Manage stakeholders' impression (Image2)		0.560		
6. Maintain vested interest (Image3)		0.422		
7. Stakeholders demand for information (Stake1)	0.504			
8. Better evaluation for Stakeholders (Stake2)	0.522			
9. Keeping stakeholders informed (Stake3)		0.541		
10. Responsibility to stakeholders (Mgt1)	0.655			
11. Management is also the owners (Mgt2)	0.586			
12. Mandate to communicate IC (Mgt3)	0.343			
13. Market leadership (Lead1)		0.631		
14. Leading by example (Lead2)		0.531		
15. Influence on the industry (Lead3)		0.643		
16. Everyone is doing it (Herd1)			0.385	
17. Influenced by peers (Herd2)			0.601	
18. Common practice (Herd3)			0.534	
19. Established reporting framework (Sys1)	0.581			
20. Capturing and reporting (Sys2)				0.455
21. Dedicated team responsible (Sys3)				0.463
22. High level of media exposure (MeEx1)			0.404	
23. Increasing exposure to media (MeEx2)			0.454	
24. High-disclosure practice (MeEx3)				0.308
Eigenvalues	7.389	1.730	1.542	1.279
Percentage of variance	12.248	11.339	7.670	6.870
Cumulative percentage	12.248	23.587	31.257	38.127

Table IV. Exploratory factor analysis

shown in Figure 1. The loadings of each individual item were examined and six items were removed for not meeting with threshold value to establish unidimensionality (Hair *et al.*, 2005). In ascertaining reliability and validity of the measurement model, checks were undertaken to ascertain the internal consistency (> 0.6), convergent reliability (average variance extracted > 0.5) and the discriminant validity of the model (Bagozzi and Yi, 1988; Fornell and Larcker, 1981).

Reviewing the structural model assessment, based on a two-tailed t-test with significance level of 5 percent (Field, 2005), the path coefficient of all figures reflected were above 1.96 ($p < 0.001$), with the exception of "Collective Behavior → Compliance" linkage (0.796), which was not significant. The final result of CFA is shown in Figure 2.

Management responsibility to stakeholders. The results of the factor analysis showed that organizations with management responsibility to stakeholders (MRS) had clear corporate governance policies (Gov2 = 0.649), responsibility toward stakeholders (Mgt1 = 0.794) for better evaluation (Stake1 = 0.703) and information (Stake2 = 0.703), and established reporting framework (Sys1 = 0.776) to drive the CIC. Interview results showed that at least 61.5 percent of the respondents rated these items "agree" or "strongly agree," enforcing management's mandate toward stakeholders by taking initiatives, not only to comply, but also to enable stakeholders, particularly shareholders and investors, to make better decisions and to invest in a longer term with the organization. Illustrating this point, the CFO of a MEA bank commented that "(banks) voluntarily adopted an international framework not only to comply, […] (but also to) raise presence in the international platform for communication, […] (to) encourage foreign investments and reflect sustainability for business realization."

Collective behavior. The factor with the highest loadings was collective behavior (CB), where the CIC was adopted because everyone was doing it (Herd1 = 0.755), as influenced by peers (Herd2 = 0.764) and seen as common practice (Herd3 = 0.726).

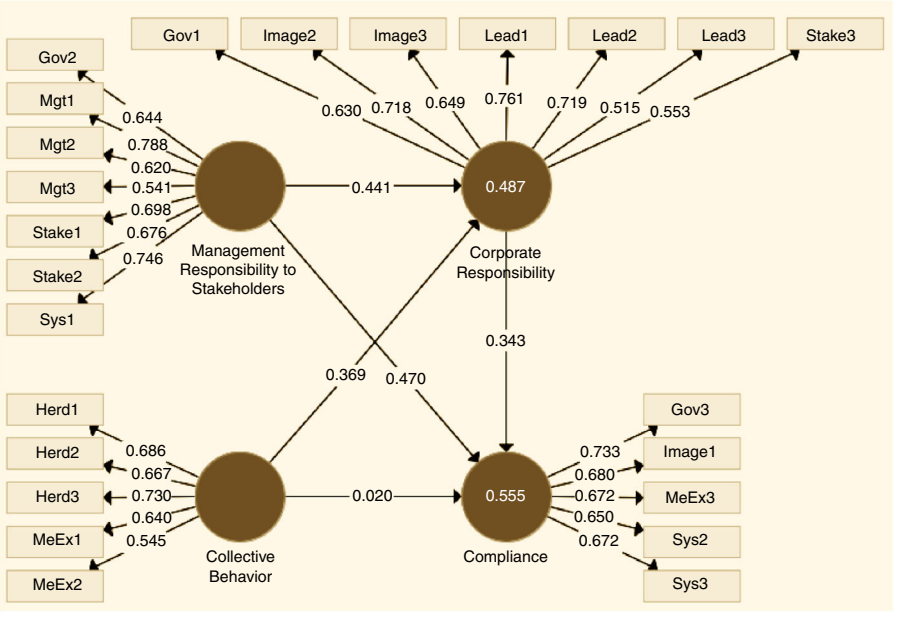

Figure 1.
Initial statistical analysis of the measurement model

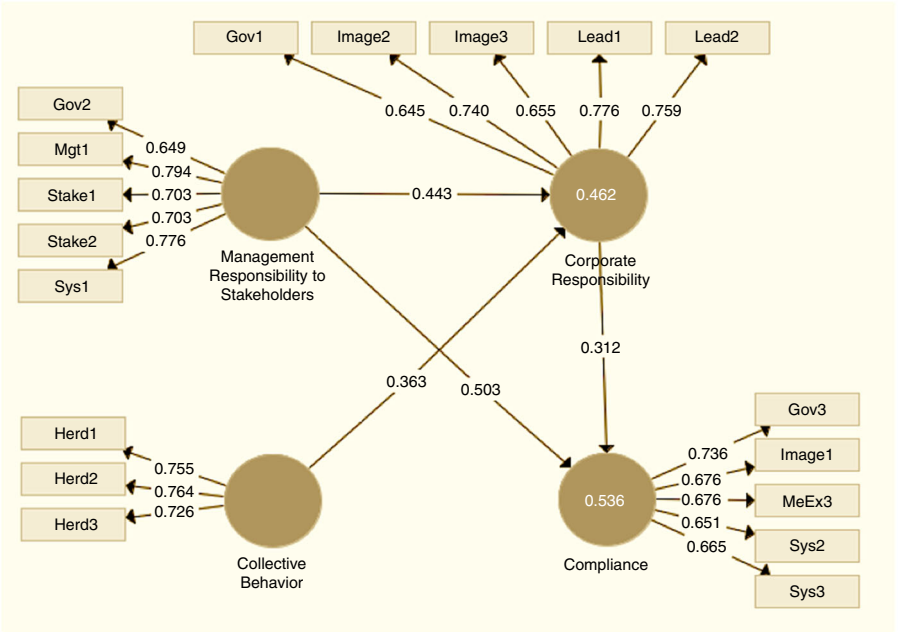

Figure 2.
Final statistical analysis of the measurement model

Interview results showed that at least 52.0 percent of the respondents rated these items "agree" or "strongly agree." Most respondents were of the opinion that nobody wanted to be considered outside the pack, and generally followed the trend in the CIC to remain competitive against their peers. The remaining respondents were less convinced of the herd influence and were more driven by governance and management's responsibility to meet with stakeholders' demand for information. According to the investor relations manager of an American bank, banks were "influenced in part due to awareness of the importance or benefit of such disclosure, and also due to peer pressure." Respondents also highlighted that market forces could be instrumental in driving such CB. For example, an investor relations manager of a leading bank in the America commented that the push for sustainability indices by the stock exchanges would result in "many listed companies definitely wanting to be part of this index […] (to attract) investors. As a result, organizations will improve their disclosure to be considered for this index."

Corporate responsibility. The analysis of the inner model showed that MRS and CB could explain 46.2 percent of corporate responsibility (CR). Corporate behavior included the organization's mandatory communication (Gov1 = 0.645), managing stakeholders' impression (Image2 = 0.740), maintaining stakeholders' vested interest in the organization (Image3 = 0.655) and obligation of the organization as market leader (Lead1 = 0.776 to lead by example (Lead2 = 0.759). Interview results showed that at least 60.5 percent of the respondents rated these items "agree" or "strongly agree." These respondents differentiated leadership from management, equating leadership with strategy and management with structure. As part of CR, banks needed to show "a clear plan (strategy) […] not just regulatory (compliance) […] that focus beyond current ability is important […] to cope with future," an insight shared by the Head of Sustainability Reporting in one of the largest banks in Europe.

Compliance. Management responsibility to stakeholders and CR explained 53.6 percent of compliance, where organizations having documentation policies (Gov3 = 0.736), communication of branding (Image1 = 0.676), high-corporate disclosure practices (MeEx3 = 0.676) and supported by a dedicated team (Sys3 = 0.665) to capture and report the CIC (Sys2 = 0.651). Interview results showed that at least 60.0 percent of the respondents rated these items "agree" or "strongly agree." Respondents agreed that there was a need to be compliant, even though the CIC was not mandatory but guidelines set in most jurisdictions interviewed. Respondents that voted "disagree" or "strongly disagree" were mostly from jurisdictions where the CIC was mandatory. Respondents from less developed nations believed that an international framework would raise their standard of reporting to international levels. Generally, respondents agreed that "what is important in the communication of IC […] is relevant, quality […] and accurate information […] delivered timely. You cannot achieve this without a system," echoing the sentiment of the head of finance of a bank in the MEA region.

4.3 The content and formats used in the CIC

Content used in the CIC. One-way repeated measures ANOVA was used to compare 200 survey questionnaires on the content used in the CIC, reviewed from three perspectives, namely, human capital information, relational capital information and structural capital information. Normality was supported as the skewness and kurtosis statistics were all between −1 and +1; $F_{\max}$ was 1.32 for human capital information, 1.14 for relational capital information, and 1.44 for structural capital information, indicating homogeneity of variances. Mauchly's test (Sig > 0.05) indicated that the assumption of sphericity was not violated (Allen and Bennett, 2008).

The ANOVA indicated that there was a significant difference in the importance of content in the CIC, $F(2,398) = 58.69$, $p < 0.001$, partial $\pi^2 = 0.23$. Pairwise comparisons further revealed that structural capital information ($M = 34.77$, SD = 5.46) was significantly more "important" than relational capital information ($M = 31.80$, SD = 5.77) and human capital information ($M = 31.10$, SD = 5.83). Over 80 percent of the respondents agreed that structural capital information was most important, when compared to human capital information and relational capital information, as it reflected "the foundation and structure of the organization, critical to survival," according to the CFO of a bank in the MEA region.

Most respondents interviewed linked structural capital information to transparency, human capital information to culture and relational capital information to strength and reliance. For example on structural capital information, a CFO of a large bank in Europe said that "investors don't want to see just the financials, but also what the proper controls are […] the processes in place to derive these numbers." On human capital information, as commented by an investor relations manager of a bank in Asia Pacific, "(it) tells a story about the bank […] our culture, diversity and fair employment […] to attract talent […] to showcase our people." Illustrating relational capital information, a head of finance with a regional bank in Asia Pacific said, "we disclose our strengths in relationship to show that we have credible clients and quality suppliers for security and reliance."

Human capital information. Drilling deeper for insights into each component of the CIC, the ANOVA results showed that the use of human capital information in the ARS was significant at $F(2,398) = 25.28$, $p < 0.001$, partial $\pi^2 = 0.11$.

Pairwise comparisons further revealed that information on training ($M = 11.12$, SD = 2.33) was more significant than information on human resources ($M = 10.23$, SD = 2.53) and employee retention ($M = 9.75$, SD = 2.68). Interview results showed 67.2 percent agreed that training was most important, as banks were totally dependent on employees to function. Agreeing on the disclosure of training information, the head of sustainability of a bank in Asia Pacific commented that "information on training has greater impact on the future growth and sustainability than reporting on diversity and employment numbers."

Relational capital information. Likewise for relational capital information, ANOVA results were also significant, $F(2,398) = 26.80$, $p < 0.001$, partial $\pi^2 = 0.12$. Pairwise comparisons further revealed that information on clients ($M = 11.20$, SD = 2.32) was more significant than business alliance ($M = 10.64$, SD = 2.30) and suppliers ($M = 9.97$, SD = 2.46). Information on business alliance was also more significant than information on suppliers. Interview results showed 64.3 percent agreed that information on clients was important as customers were considered assets to the banks, and were not represented in the ARS. Respondents generally agreed that showcasing client relations was "part of marketing strategy […] to reflect […] (the bank as) reliable and secure," in accordance to an investor relations manager of a bank in the Asia Pacific.

Structural capital information. Finally, in the use of structural capital information, ANOVA results were significant, $F(2,398) = 5.86$, $p < 0.001$, partial $\pi^2 = 0.03$. Pairwise comparisons further showed that information on accreditation ($M = 11.79$, SD = 2.18) was more significant than intellectual property ($M = 11.28$, SD2.47). Likewise, information on processes ($M = 11.70$, SD = 2.06) was more significant than intellectual property. While transparency was important, the need to showcase accreditation was stronger in gaining trust and building confidence with stakeholders of the bank. Interview results showed 33.2 percent respondents "strongly agreed" in disclosing accreditation as opposed to 28.8 percent that "strongly agreed" in disclosing processes. Generally, respondents felt the need to provide a sense of assurance and security. Reflecting this general consensus is a quote made by the head of sustainability reporting in a large regional bank in Asia Pacific, "We need to provide assurance to stakeholders as we are holding other people's money."

Format used in the CIC. Reviewing each type of format used in the CIC, content analysis on the ARS of the respondents' banks showed that for narratives, it is most used in the communication of structural capital information (84.79 percent) and followed distantly by human capital information (7.86 percent) and relational capital information (7.35 percent), as shown in Figure 3. While narratives appeared to dominate in terms of numbers across the different types of formats, it would not be logical to compare narratives apple-to-apple with other forms of format. The reason for this non-comparison was that narratives was an essential form of format necessary as a "basis to be able to tell a story," per words borrowed from an investor relations manager of a bank in Asia Pacific.

Evaluating the other non-text formats, in terms of numbers, pictures were most widely used in the CIC, followed by tables, illustrations and flowcharts, and graphs. The frequency for pictures exceeded the other non-text formats by over 7.5 times. Pictures were found to be the highest in the communication of human capital information (64.42 percent), and lower in relational capital information (24.46 percent) and structural capital information (11.12 percent). Most pictures involved human subjects to represent profiles of staff at work, the culture of the bank and the service offerings to customers.

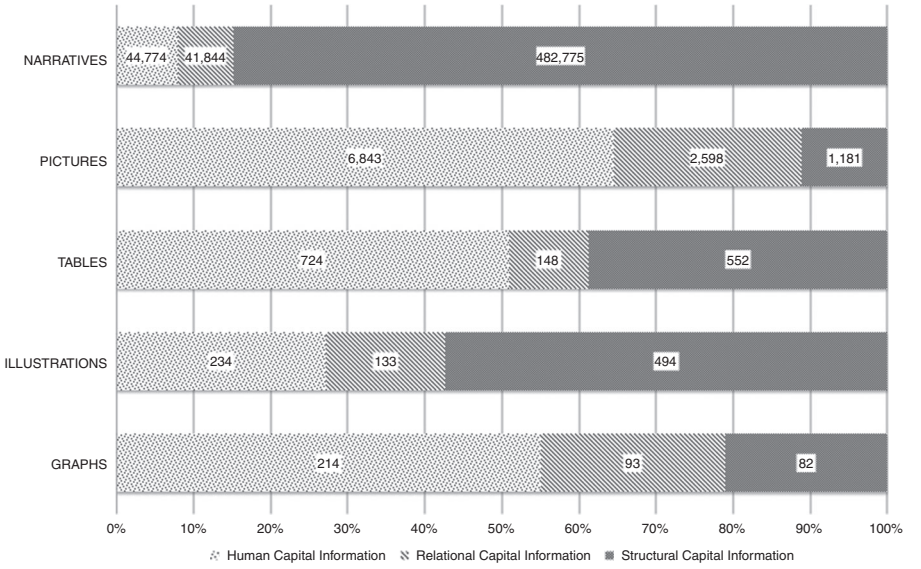

Figure 3.
Frequencies of the format used in the communication of IC

Tables were also often used in the communication of human capital information (50.84 percent), followed by structural capital information (38.76 percent) and relational capital information (10.39 percent). The use of tables was common in reflecting segmentation figures, for example, staff breakdown by geography or function, and a list of items, such as a list of awards received. For illustrations and flowcharts, the use of this format was highest in the communication of structural capital information (57.38 percent), and lower with human capital information (27.18 percent) and relational capital information (15.45 percent). Illustration and flowcharts were to used reflect process flow and control structures within the organization. Finally graphs were well presented in human capital information (55.01 percent), relational capital information (23.91 percent) and structural capital information (57.38 percent). Graphs were often used to depict a trend in comparison to previous years, for example the growth in the number of accounts served and improvements in operational performances.

5. Discussion

5.1 Not one but a combination of factors compel the CIC

The factor analysis undertaken to examine the motivations behind the CIC uncovered no clear clustering of the items considered in the study, with the exception of CB, as shown in Figure 2. This result was consistent with market and organizational research studies that dealt with non-homogeneous and overlapping groups (Punj and Stewart, 1983; Sharma and Kumar, 2006). The cross-clustering suggests that perhaps not one, but a combination of factors had to be considered together in order to compel the CIC. Illustrating this point, in an interview with the CFO of a leading bank in the America, "a combination of many factors will produce a catalytic effect […] on the importance of the communication of IC […] it is not dependent on one factor but a combination of factors that resulted in a mindset change."

Though it is not uncommon for a combination of factors to effect a change, there is limited literature covered on this topic in relations to the CIC. As the CIC is a form of

information disclosure by organizations, studies from communication literature found that organizational communication was effective only after consideration was made on some, or a combination, of factors that shaped the context of the message (Sadowski-Rasters *et al.*, 2006). Drawing from this literature, organizations planning to implement the CIC in the ARS would have to take into consideration, not one but four motivations, as identified in this study, to effect the CIC.

5.2 Compliance is a major motivation found in the CIC

This study found four motivations behind the CIC, namely, MRS, CB, CR and compliance. Compliance is the major motivation found in the CIC, where MRS and CR could explain 53.6 percent of compliance. The findings reinforced the relevance of the "1984" stakeholders' theory, which stated that organizations and their leaders were held accountable to its stakeholders and are thus obligated to disclose the status of the organization and its performance (Maak and Pless, 2006).

Compliance, in this study, involved documentation policies (Gov3 = 0.736), communication of branding (Image1 = 0.676), high-corporate disclosure practices (MeEx3 = 0.676) and support by a dedicated team (Sys3 = 0.665) to capture and promote the CIC (Sys2 = 0.651). While compliance is a form of mandatory enforcement that could result in the increase of volume and quality of the CIC, such enforcement would also give rise to complex concealment tactics to deprive stakeholders of regulated information (Criado-Jimenez *et al.*, 2008; Greco, 2012). Recent studies have recommended that rather than making the CIC mandatory, the promotion of voluntary reporting with supporting policies or guidelines, and a management mindset change could be more effective in motivating the CIC (Dumay and Adams, 2014; Maaloul and Zeghal, 2015).

5.3 Structural capital information leads in the content on the CIC in ARS

The study found structural capital information was opined to be the most significant content in the CIC in the ARS, where ANOVA indicated significant difference, $F(2,398) = 58.69$, $p < 0.001$, partial $\pi^2 = 0.23$. Pairwise comparisons further revealed that structural capital information ($M = 34.77$, SD = 5.46) was significantly more "important" than relational capital information ($M = 31.80$, SD = 5.77) and human capital information ($M = 31.10$, SD = 5.83). Content analysis of the ARS, which corroborates with this statistical analysis, showed that narrative content on structural capital information was highest at 84.79 percent as compared to human capital information at 7.86 percent and relational capital information at 7.35 percent. This finding seems to differ from recent studies that showed that relational capital information was highest (Huang and Salleh, 2010). The findings could be due to the peculiarities and practices linked to the financial industry, as banks need to be transparent to provide assurance on their security and reliability, which are aspects of structural capital information.

As with studies done in China (Liao *et al.*, 2013) and in Nigeria (Ahmed and Mubaraq, 2012), the findings in this study showed that structural capital information dominated the CIC in the ARS. However, the findings were inconsistent with a study done among Turkish banks (Yildiz *et al.*, 2014), which found that relational capital information was more prevalent, and another study done among European-headquartered banks (Mention, 2011), which found that the communication of relational capital information was the highest, followed by human capital information

and structural capital information. While studies reflected differences, these studies generally agree that there is an upward trend observed for the disclosure of structural capital information (Ahmed and Mubaraq, 2012; Mention, 2011).

5.4 Different formats have been used to present the sub-components in the CIC

There were five formats reviewed in this study. Narrative was the most prevalent format used in the CIC as it was the basis for description. However, narrative was not the best in the CIC that are tacitly complex, such as corporate culture and decision-making processes. As such, visuals, in the form of pictures, graphs and illustrations, can better express and bring to attention the intended message (Davidson, 2014). In fact, pictures were most used in the communication of human capital information (64.42 percent) to reflect employees and the culture of the bank. Illustrations and flowcharts were most suited and commonly used to describe structural capital information, in particular risk management processes, strategies and hierarchy within the organization (57.38 percent). For trend analysis, comparison and segmentation, graphs and tables were often preferred over the use of narrative text (Davidson and Skerratt, 2007). This study found most banks used graphs and tables mostly to reflect human capital information (graphs 55.01 percent, tables 50.84 percent). The use of tables was much popular than graphs, and there was at least three times more tables than graphs found in this study. Relational capital information had the lowest content, due to client confidentiality particularly for banks, and had a spread of formats used, with the highest representation for pictures (24.46 percent) and followed distantly by graphs (23.91 percent) and tables (10.39 percent).

The findings in this study are consistent with existing literature on formats used in the CIC. In line with current findings, a recent study confirmed that many organizations used pictures for the CIC, particularly on employees and brands (Steenkamp and Hooks, 2011). Likewise in the UK, a content analysis of the ARS of 100 IC-intensive listed UK firms found that narrative was the most commonly used format, while the use of graphs and pictures were very low (Li and Mangena, 2014).

6. Conclusion

This paper seeks to identify the motivations that drive the CIC. In addition, it aims to investigate the content and format used in the CIC from three perspectives, namely, human capital information, relational capital information and structural capital information. From the data collected, the study found four motivations behind the CIC, namely, MRS, CB, CR and compliance (COM), where MRS and CB could explain 46.2 percent of CR, and MRS and CR explained 53.6 percent of COM. Moreover, the study identified that a combination of factors considered together, with supporting management mindset and policies was necessary to drive the CIC, even though compliance was found to be a major motivation factor.

The findings also showed that ANOVA indicated significant differences in the content used in the CIC, $F(2,398) = 58.69$, $p < 0.001$, partial $\pi^2 = 0.23$. Pairwise comparisons further revealed that structural capital information ($M = 34.77$, $SD = 5.46$), in particular accreditation and processes, was significantly more important than relational capital information ($M = 31.80$, $SD = 5.77$) and human capital information ($M = 31.10$, $SD = 5.83$). Information on clients was most significant for relational capital information, and information on training was most important for human capital information. This finding on the importance of structural capital

information as a key content in the CIC could be peculiar to the banking sector, as banks needed to be transparent to provide assurance on its security and reliability.

In terms of format, narratives dominated the format used in the CIC, as narrative was the basis of reporting. Pictures were most used in the communication of human capital information (64.42 percent) to reflect the employees and culture of the bank. Illustrations and flowcharts were most commonly used to describe structural capital information, in particular risk management processes (57.38 percent), which could also be unique to the banking sector. Graphs (55.01 percent) and tables (50.84 percent) were used mostly to reflect human capital information, and often to show comparative or segmented figures.

There are two limitations to this study. First, the current data source was limited to the banking sector, which may not be representative of the organizations operating in different sectors. Second, the study is reliant on English language publications of banks removing publications in other mediums such as Japanese, Chinese and several European languages due to insufficient ability to translate or comprehend the language concerned. Scholars interested in replicating this study should be aware that the term "intellectual capital" is not a commonly used layman's terms, and as result may need to reconsider the use of the term or further explanation in a survey.

This paper offers three contributions. First, this study provided insights into the factors that could influence organizations' adoption and management decision in the CIC. Second, the study increased the generalizability of similar research, where studies were often derived from small datasets, covering mostly one jurisdiction (Garcia-Meca *et al.*, 2005; Kent and Zunker, 2010; Steenkamp and Hooks, 2011). Third, this study could assist management to better comprehend the use of content and format in the CIC for monitoring and reporting.

The push for greater transparency in corporate reporting globally by regulators and organizations such as International Integrated Reporting Council, Global Reporting Initiative, World Intellectual Capital Initiative and Sustainability Accounting Standards Board to develop policies and guidelines will further drive the CIC (Gan *et al.*, 2013; SASB, 2014). As such, further research can be undertaken in two areas. First, similar research can be expanded to include to other industries, outside of the banking sector. Second, studies can be undertaken to explore the impact of the CIC with the performance of the organization.

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(The Appendix follows overleaf.)

Appendix

Table AI.
Survey to explore the factors affecting the communication of intellectual capital

Opinion statements: to what extent do you agree with the following statements?	Variables
1. It is mandatory to communicate non-financial information annually	Gov1
2. We communicate non-financial information as it is part of our organization's corporate governance policy	Gov2
3. Communication of non-financial information is an important aspect of documentation used to connect with and manage stakeholders' expectations	Gov3
4. We communicate the organization's non-financial information as part of our branding and image	Image1
5. We report non-financial information to manage stakeholders' impression of our company	Image2
6. We regularly report non-financial information to maintain vested interest in our organization	Image3
7. Our stakeholders demand that we provide non-financial information on a regular basis	Stake1
8. We believe that communicating non-financial information can help our stakeholders better evaluate our company	Stake2
9. Stakeholders need to be informed how resources are managed and used for decision making	Stake3
10. Management has decided that it is important for us to report non-financial information as it is our responsibility to stakeholders	Mgt1
11. We need to communicate non-financial information to our management, who are also the key owners of the organization	Mgt2
12. We have a hands-on management that insists on the reporting of non-financial information	Mgt3
13. As the market leader in our industry, we lead in the communication of non-financial information	Lead1
14. We believe in leading by example, including the communication of non-financial information	Lead2
15. We have influence over industry reporting of non-financial information	Lead3
16. We communicate non-financial information as everyone in our industry is doing it	Herd1
17. We are influenced by our peers in communicating non-financial information	Herd2
18. We report non-financial information as it is a common practice	Herd3
19. We have an established reporting framework to communicate non-financial information on a regular basis to our management	Sys1
20. Our current management system supports the capturing and reporting of non-financial information	Sys2
21. We have a dedicated team responsible for communicating non-financial information on a regular basis	Sys3
22. We report non-financial information as we have a high level of media exposure	MeEx1
23. We disclose non-financial information as it will increase our exposure to media	MeEx2
24. We communicate non-financial information as we have a high-disclosure practice	MeEx3

Components of the communication of intellectual capital	Sub-components of the communication of intellectual capital	Elaboration of concepts used as expressed through the following sentences
Human capital information	Human resources	We report the number of employees by seniority
		We provide figures of our staff by country/region
		We report gender numbers (men/women employees)
	Employee retention	We report the numbers of new hires (and departures) in our organization
		We disclose the number of staff promoted
		We report staff retention numbers in our organization
	Training	We showcase our talent development
		We report on our investment in training employees
		We provide indicators that reflect training investments (e.g. training hours per employee per year)
Relational capital information	Customers	We report statistics of customers satisfaction surveys
		We showcase our strength in client numbers
		We profile our satisfied customers
	Suppliers	We document our commitment to quality while dealing with suppliers
		We disclose our relationship with major suppliers and contractors
		We report collaboration with suppliers
	Alliances	We profile our business alliances
		We highlight our collaboration with third parties partners
		We report our strength in marketing channels relationships
Structural capital information	Intellectual property	We report the strategy implemented to enhance business performance
		We disclose our efforts to improve our operating procedure
		We describe activities that enhance our product/service standards
	Processes	We report technology developments within our organization
		We disclose investments made to improve business processes
		We showcase new technology implemented
	Accreditation	We communicate our brand value
		We provide details of our networks within the country and worldwide
		We showcase the awards and other service recognition received

Table AII.
Survey on the importance of content in the communication of intellectual capital

Components of the communication of intellectual capital	Sub-components of the communication of intellectual capital	Examples of indicators as found from data collected
Human capital Information	Training	"Training programs" "Diversity training and mentoring" "Training given to employees by grade"
	Human resources	"Employees worldwide" "Employment diversity" "Gender distribution"
	Employee retention	"Structure classification of jobs offered" "Staff turnover" "Annual attrition rate of senior and middle management"
Relationship capital Information	Customers	"Customer service" "Percentage of customers who are very satisfied or satisfied with their cooperation with the Bank" "Customer Statistics"
	Suppliers	"Support services" "Important contracts" "Relations with stakeholders (including suppliers)"
	Alliances	"Strategic external initiatives" "Foreign correspondents" "Key partnerships"
Structural capital Information	Intellectual property	"Patents and know-how" "Our brand promise" "R&D Expenditure and achievement for the Last Two Years"
	Processes	"Employee participation for improvement and innovation" "Workplace security and health" "Implementation of risk management and internal control"
	Accreditation	"Ranking and awards" "Good corporate government assessment" "Prizes, rewards and certifications"

Table AIII.
Examples of communication of IC recognized for narrative format coding

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