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

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Introduction

The communication of intellectual capital (IC) 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 focused as it is a good source to analyze the communication of IC as part of corporate reporting (Dumay and Garanina, 2013; Guthrie et al., 2004). The communication of IC 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 communication of IC (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). Secondly, addressing the research gap will update literature on management's thinking and priorities in the communication of IC (Demartini and Pailoni, 2013; Dumay, 2009).

In addition, extant study of the communication of IC 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 towards 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 communication of IC 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 communication of IC with a two-fold objective. First, the paper identifies motivations that drive the communication of IC. Second, it investigates the content and format used in the communication of IC 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 communication of IC in line with its strategic direction (Green, 2006). This paper also extends prior studies on the communication of IC in terms of geographic coverage, where few multiple jurisdictions investigations were covered. (Abeysekera and Guthrie, 2002; Petty and Guthrie, 2000).

Literature Review

The importance of the communication of IC 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 communication of IC is still limited in the field of intellectual capital. Existing IC literature, albeit scanty, suggests that organizations are pressured by government to report IC in the annual reports and supplementary corporate disclosure (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 communication of IC 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; Robb and Zarzeski, 2001; Ernst & Young, 2014). Peers have also been found to influence information disclosure practices and thus, the communication of IC 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 1 summarizes current literature on the eight possible motivations that could drive the communication of IC. They are governance, image, stakeholders' demand, management ownership, leadership, herd instinct, system and media exposure.

While the forces of motivations in Table 1 apply to information disclosure by organizations, the relationship between information disclosure by the organization and the communication of IC has not been established. This provides ground for investigation to ascertain the applicability of these motivations in the communication of IC.

Table 1 – Motivations that could drive the communication of IC

Motivation	Description	Discipline
Governance	Corporate governance improves cocumentation 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

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

Whilst 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 communication of IC 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 communication of IC, 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 communication of IC 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 communication of IC (Davidson, 2013, 2014; Li and Mangena, 2014).

Methodology

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. Firstly, senior executives from 200 banks, who were responsible for publishing the annual reports and supplementary corporate disclosure (ARS), were surveyed. These senior executives were selected based on stratified proportional sampling of 50 banks from four regions, namely the Americas, Asia Pacific, Europe, and the Middle East & 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). Secondly, the same banks' ARS were used for content analysis. The communication of IC 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, 2015; GRI, 2012). This study only used ARS that were published in English for the financial year ending 2014 and contained content on the communication of IC.

Data Collection Instruments and Procedure

To examine the motivations behind the communication of IC, data was gathered using a 24-items survey questionnaire (Appendix 1) focused 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 communication of IC using a 5-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 communication of IC, data was gathered from a second questionnaire comprising 27 items that focused on three components of the communication of IC (See Appendix 2), 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 Communication of IC using a 5-point Likert scale (1 = "strongly disagree" to 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 communication of IC.

The survey questionnaire in Appendix 1 and 2 were launched concurrently. From a pilot study undertaken, it was found that the term "the communication of IC" was not generally understood. Respondents was also able to better comprehend the concepts of the communication of IC if the survey in Appendix 2 was carried out first before Appendix 1, 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 communication of IC (Beattie and Thomson, 2007; Dumay, 2009). Each format counted was further streamlined into the three sub-components of the communication of IC. Two reviewers were responsible for the content codification of the ARS. To test for inter-coder reliability, Cohen's Kappa measure was used based on a pilot sample size of 30 banks representing approximately 15.0% of the total dataset (Lacy and Riffe, 1996; McHugh, 2012). Cohen's Kappa measure of 0.80 indicated an acceptable level of agreement between the reviewers (Allen and Bennett, 2008; Cohen,

1998). Appendix 3 provides examples of keywords identified in the narrative format coding of the communication of IC compiled from the dataset of 200 banks.

Methods of Analysis

In analyzing the motivations behind the communication of IC, 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 communication of IC 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 (Appendix 2) was first checked for its internal consistency, using Cronbach's Alpha (>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 communication of IC 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 communication of IC was tabulated for comparison and review.

Findings

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 2 provides a summary description of the sample of banks used in this study.

Table 2 – Descriptive statistics of banks

REGION	Number of Banks	Total Asset			Revenue		
		Min USD (million)	Max USD (billion)	Mean USD (billion)	Min USD (million)	Max USD (billion)	Mean USD (billion)
Asia Pacific	50	406.39	1024.40	77.03	18.67	28.74	2.33
Americas	50	344.15	2573.13	268.41	16.71	94.21	11.53
Middle East & Africa (MEA)	50	848.55	164.31	36.71	101.53	9.09	1.75
Europe	50	504.70	2634.14	403.05	9.96	63.36	9.07
	200	**344.15**	**2634.14**	**195.85**	**9.96**	**94.21**	**6.27**

Majority of the respondents came from Finance and Investor Relations cum Communications departments, as shown in Table 3. 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 communication of IC between accountability and impression management (Bismuth and Yoshiaki, 2008; Highhouse et al., 2009; 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.

Table 3 – Description of Respondents

Departments	Number of Respondents	Examples of Titles
Finance	94	Chief Financial Officer (CFO) (Senior) Finance Manager Head of Finance, Business Performance & 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 & 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

Factors Affecting the Communication of IC

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 was 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 Kaiser-Meyer-Olkin (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 4, four factors were identified where these factors account for 38.13% of the variance in the data collected. Items with factor loadings greater than 0.30 were considered significant for loading (Allen and Bennett, 2008).

Table 4 – Exploratory Factor Analysis

	Factor 1 Management Responsibility to Stakeholders	Factor 2 Corporate Responsibility	Factor 3 Collective Behavior	Factor 4 Compliance
1. Mandatory communication (Gov1)		.368		
2. Corporate governance policy (Gov2)	.456			
3. Documentation policy(Gov3)				.476
4. Communicate branding (Image1)				.405
5. Manage stakeholders' impression (Image2)		.560		
6. Maintain vested interest (Image3)		.422		
7. Stakeholders demand for information (Stake1)	.504			
8. Better evaluation for Stakeholders (Stake2)	.522			
9. Keeping stakeholders informed (Stake3)		.541		
10. Responsibility to stakeholders (Mgt1)	.655			
11. Management is also the owners (Mgt2)	.586			
12. Mandate to communicate IC (Mgt3)	.343			
13. Market leadership (Lead1)		.631		
14. Leading by example (Lead2)		.531		
15. Influence on the industry (Lead3)		.643		
16. Everyone is doing it (Herd1)			.385	
17. Influenced by peers (Herd2)			.601	
18. Common practice (Herd3)			.534	
19. Established reporting framework (Sys1)	.581			
20. Capturing and reporting (Sys2)				.455
21. Dedicated team responsible (Sys3)				.463
22. High level of media exposure (MeEx1)			.404	
23. Increasing exposure to media (MeEx2)			.454	
24. High disclosure practice (MeEx3)				.308
25. EIGENVALUES	7.389	1.730	1.542	1.279
26. PERCENTAGE OF VARIANCE	12.248	11.339	7.670	6.870
27. CUMULATIVE PERCENTAGE	12.248	23.587	31.257	38.127

The four factors in Table 4 were tested for reliability using Cronbach's alpha (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 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 (Fornell and Larcker, 1981; Bagozzi and Yi, 1988).

Figure 1 – Initial statistical analysis of the measurement model
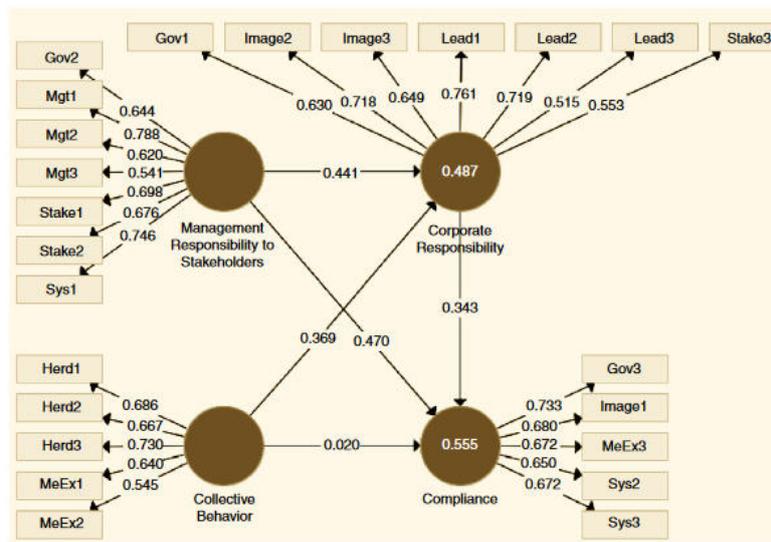
Reviewing the structural model assessment, based on a two-tailed t-test with significance level of 5% (Field, 2005), the path coefficient of all figures reflected were above 1.96 (p<0.001), with the exception of "Collective Behavior -> Compliance" linkage (0.796), which was not significant. The final result of CFA is shown in Figure 2.

Figure 2 – Final statistical analysis of the measurement model
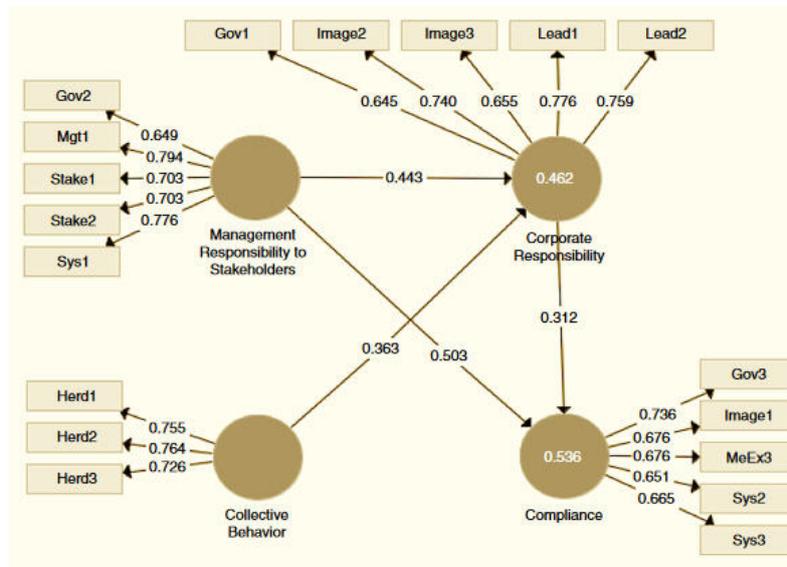
Management Responsibility to Stakeholders

The results of the factor analysis showed that organizations with management responsibility to stakeholders had clear corporate governance policies (Gov2=.649), responsibility towards stakeholders (Mgt1=.794) for better evaluation (Stake1=.703) and information (Stake2=.703), and established reporting framework (Sys1=.776) to drive the communication of IC. Interview results showed that at least 61.5% of the respondents rated these items "agree" or "strongly agree", enforcing management's mandate towards 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, where the communication of IC was adopted because everyone was doing it (Herd1=.755), as influenced by peers (Herd2=.764) and seen as common practice (Herd3=.726). Interview results showed that at least 52.0% 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 communication of IC 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 collective behavior. For example, an Investor Relations Manager of a leading bank in the Americas 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 management responsibility to stakeholders and collective behavior could explain 46.2% of corporate responsibility. Corporate behavior included the organization's mandatory communication (Gov1=.645), managing stakeholders'

impression (Image2=.740), maintaining stakeholders' vested interest in the organization (Image3=.655), and obligation of the organization as market leader (Lead1=.776 to lead by example (Lead2=.759). Interview results showed that at least 60.5% 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 corporate responsibility, 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 corporate responsibility explained 53.6% of compliance, where organizations having documentation policies (Gov3=.736, communication of branding (Image1=.676, high corporate disclosure practices (MeEx3=.676, and supported by a dedicated team (Sys3=.665) to capture and report the communication of IC (Sys2=.651. Interview results showed that at least 60.0% of the respondents rated these items "agree" or "strongly agree". Respondents agreed that there was a need to be compliant, even though the communication of IC was not mandatory but guidelines set in most jurisdictions interviewed. Respondents that voted "disagree" or "strongly disagree" were mostly from jurisdictions where the communication of IC 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.

The Content and Formats used in the Communication of IC

Content used in the Communication of IC

One-way repeated measures analysis of variance (ANOVA) was used to compare 200 survey questionnaires on the content used in the communication of IC, 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 >.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 communication of IC, $F(2,398)=58.69$, $p<0.001$, partial $\pi^2 =.23$. 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% 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 communication of IC, 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 $\pi^2=.11$. 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% 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 $\pi^2=.12$. 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% 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 $\pi^2=.03$. 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% respondents "strongly agreed" in disclosing accreditation as opposed to 28.8% 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 Communication of IC

Reviewing each type of format used in the communication of IC, 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%) and followed distantly by human capital information (7.86%) and relational capital information (7.35%), 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.

Figure 3 – Frequencies of the Format used in the Communication of IC
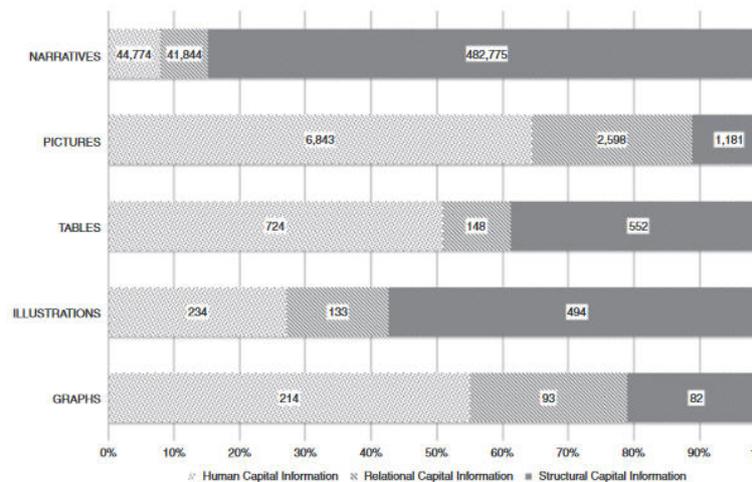
Evaluating the other non-text formats, in terms of numbers, pictures were most widely used in the communication of IC, followed by tables, illustrations and flowcharts, and graphs. The frequency for pictures exceeded the other non-text formats by over 7.5 times. Pictures were found to be the highest in the communication of human capital information (64.42%), and lower in relational capital information (24.46%) and structural capital information (11.12%). Most pictures involved human subjects to represent profiles of staff at work, the culture of the bank and the service offerings to customers.

Tables were also often used in the communication of human capital information (50.84%), followed by structural capital information (38.76%) and relational capital information (10.39%). 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%), and lower with human capital information (27.18%) and relational capital information (15.45%). 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%), relational capital information (23.91%) and structural capital information (57.38%). 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.

Discussion

<u>Not one but a combination of factors compel the communication of IC</u>

The factor analysis undertaken to examine the motivations behind the communication of IC uncovered no clear clustering of the items considered in the study, with the exception of collective behavior, 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 communication of IC. Illustrating this point, in an interview with the CFO of a leading bank in the Americas, *"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 communication of IC. As the communication of IC 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 communication of IC in the ARS would have to take into consideration, not one but four motivations, as identified in this study, to effect the communication of IC.

Compliance is a major motivation found in the communication of IC

This study found four motivations behind the communication of IC, namely management responsibility to stakeholders, collective behavior, corporate responsibility and compliance. Compliance is the major motivation found in the communication of IC, where management responsibility to stakeholders and corporate responsibility could explain 53.6% 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=.736), communication of branding (Image1=.676), high corporate disclosure practices (MeEx3=.676), and support by a dedicated team (Sys3=.665) to capture and promote the communication of IC (Sys2=.651). While compliance is a form of mandatory enforcement that could result in the increase of volume and quality of the communication of IC, 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 communication of IC mandatory, the promotion of voluntary reporting with supporting policies or guidelines, and a management mindset change could be more effective in motivating the communication of IC (Dumay and Adams, 2014; Maaloul and Zeghal, 2015).

Structural capital information leads in the content on the communication of IC in ARS

The study found structural capital information was opined to be the most significant content in the communication of IC in the ARS, where ANOVA indicated significant difference, $F(2,398)=58.69$, $p<0.001$, partial $\pi^2 =.23$. 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% as compared to human capital information at 7.86% and relational capital information at 7.35%. 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 communication of IC 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).

Different formats have been used to present the sub-components in the Communication of IC

There were five formats reviewed in this study. Narrative was the most prevalent format used in the communication of IC as it was the basis for description. However, narrative was not the best in the communication of IC 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%) 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%). 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%, Tables 50.84%). 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%) and followed distantly by graphs (23.91%) and tables (10.39%).

The findings in this study are consistent with existing literature on formats used in the communication of IC. In line with current findings, a recent study confirmed that many organizations used pictures for the communication of IC, 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, whilst the use of graphs and pictures were very low (Li and Mangena, 2014).

Conclusion

This paper seeks to identify the motivations that drive the communication of IC. In addition, it aims to investigate the content and format used in the communication of IC 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 communication of IC, namely management responsibility to stakeholders (MRS), collective behavior (CB), corporate responsibility (CR) and compliance (COM), where MRS and CB could explain 46.2% of CR, and MRS and CR explained 53.6% of COM. Moreover, the study identified that a combination of factors considered together, with supporting management mindset and policies was necessary to drive the communication of IC, 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 communication of IC, $F(2,398)=58.69$, $p<0.001$, partial $\pi^2 =.23$. 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 communication of IC 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 communication of IC, as narrative was the basis of reporting. Pictures were most used in the communication of human capital information (64.42%) 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%), which could also be unique to the banking sector. Graphs (55.01%) and tables (50.84%) were used mostly to reflect human capital information, and often to show comparative or segmented figures.

There are two limitations to this study. Firstly, the current data source was limited to the banking sector, which may not be representative of the organizations operating in different sectors. Secondly, 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. Firstly, this study provided insights into the factors that could influence organizations' adoption and management decision in the communication of IC. Secondly, 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). Thirdly, this study could assist management to better comprehend the use of content and format in the communication of IC 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 communication of IC (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 communication of IC with the performance of the organization.

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