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Maria do Rosário Meireles Ferreira Cabrita, Maria de Lurdes Ribeiro da Silva, Ana Maria Gomes Rodrigues, María del Pilar Muñoz Dueñas,

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Competitiveness and disclosure of intellectual capital: an empirical research in Portuguese banks

Maria do Rosário Meireles Ferreira Cabrita
UNIDEMI, Department of Mechanical and Industrial Engineering, Faculty of Science and Technology, FCT, Universidade Nova de Lisboa, Lisboa, Lisboa, Portugal
Maria de Lurdes Ribeiro da Silva
Escola Superior de Gestão do Instituto Politécnico do Cávado e do Ave Campus do IPCA, Barcelos, Portugal
Ana Maria Gomes Rodrigues
Faculdade de Economia da Universidade de Coimbra, Coimbra, Portugal, and
María del Pilar Muñoz Dueñas
Facultad de Ciencias Económicas y Empresariales, Universidad de Vigo, Vigo, Spain

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Abstract

Purpose – The purpose of this paper is to investigate the level of intellectual capital (IC) awareness among Portuguese bank managers and which disclosure techniques are most common. The annual report is regarded by some authors as the most important vehicle of information about banks' affairs because of some specific characteristics of banks' activities. However, organizations are increasingly using their webpages to disclose a broad spectrum of information. The objectives of this study are twofold: to investigate how Portuguese bank managers perceive the impact of IC disclosure on the bank's competitiveness; and to assess the extent to which Portuguese banks voluntarily report their IC in annual reports vs webpages.

Design/methodology/approach – The methodology involved in the exploratory study includes the collection of secondary data – annual reports and websites – collected from the 28 banks operating in Portugal, and semi-structured interviews from 25 banking managers. Content analysis is applied using a constructed index based on two European frameworks – Intellectus and InCaS – slightly modified to take into consideration the peculiarities of the sector.

Findings – Results show higher level of IC disclosure in annual reports than that provided in websites. Human capital and structural capital are the most reported category in annual reports and, conversely, the disclosure of relational capital is higher in the webpages. Findings are found similar in comparison to various other studies on the subject which reveal very low level of IC disclosure, not yet receiving priority from the mentors of banks. Interviews reveal that not many managers recognize the need and significance of measuring and reporting IC, although it is recognized as a driver of competitiveness. For protecting business confidentiality, banks do not want to report information of sensitive nature.

Research limitations/implications – The analysis is limited to a single sector. Future research can expand to other industries (e.g. manufacturing, technological, services) to enable a more comprehensive understanding of IC disclosure in Portugal. The cross-sectional approach is also a limitation. A longitudinal study could be conducted for capturing the trend of reporting practices during the period. Further research could apply research methods other than content analysis (e.g. questionnaire survey, interviews or mixed-methods) in order to obtain a more in-depth view of how the Portuguese organizations manage, measure and report their IC.

Practical implications – Research may be of relevance for both banking managers and regulators. For banking managers because it offers an opportunity to envisage their banks' future potential for growth and competitiveness. For regulators, the relevance of the study focusses on their understanding of developing mandatory reporting or additional policy requirements. This study provides a motivation for further research that contributes to a body of knowledge and practices on the IC disclosure.

Social implications – Emerging from the years of a financial crisis, restoring trust and confidence is the most critical challenge for banks to become competitive. IC disclosure could help to restore confidence.

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Originality/value – The existing literature on the IC reporting and disclosure in the context of banking sector is limited. Based on the Intellectus model and the InCaS model we built an index of IC disclosure to banking sector which contributes to a greater accuracy, transparency and reliability in the disclosure of this unique sector. This initiative may encourage its applicability in other sectors.

Keywords Competitiveness, Data analysis, Disclosure, Intellectual capital reporting, Banking industry

Paper type Research paper

1. Introduction

Intellectual capital (IC) is the dominating resource in the knowledge-based economy; however, traditional accounting practices only partially recognize the value of an organization's IC. Some studies (Guthrie *et al.*, 2007; Chen and Pan, 2011) show that although IC reporting is still low, there has been an increase in IC disclosure in annual reports over the years, even in sectors where IC may not be expected to be a significant value driver, such as real estate, utilities and retailing (Unerman *et al.*, 2007). While there is an increasing evidence that the IC of an organization represents the path to creating modern and competitive environments, there are inadequate disclosures of IC in the financial statements of organizations (Petty and Guthrie, 1999, 2000; Brüggen *et al.*, 2009).

Effective management of knowledge has become a key to corporate success especially in the knowledge-based industries. Data from Morgan Stanley's World Index show that the listed value of these knowledge intensive companies, in the USA, ranges between twice and nine times their book value since much of their value is intangible (Edvinsson and Sullivan, 1996). The difference between the company's market value and book value is said to represent its IC (Edvinsson and Malone, 1997; Sveiby, 1997). But what is the value of IC? – Measuring the value of IC is difficult, but the literature presents a plethora of methods that can do it (Edvinsson, 1997; Sveiby, 1997; Matos, 2013).

The importance of IC transcends sectoral differences, being particularly critical to the banking sector mainly due to the fact that knowledge is the main output and input in these institutions. Differing from the manufacturing industries, the financial service industry provides knowledge-based products and services, integrating professional competencies and market needs to realize profits from financial knowledge and risk management (Shih *et al.*, 2010). The business nature of the banking sector is knowledge intensive and its staff is "intellectually" (Mavridis, 2004, 2005) more demanded than the staff of other economic sectors. Banks use a huge amount of human capital and customer capital for their survival and competitiveness (Kamath, 2007), being described as a knowledge-intensive, skills-based and relationship-rich industry (Muhammad and Ismail, 2009). Banking operations involve close interaction between their employees and customers and rely, to a larger extent, on the integration of information and communication technologies for the development of new products and services (Mention and Bontis, 2013). Although physical capital is important for banks to operate, it is the IC that determines the quality of services provided to customers (Goh, 2005). Additionally, the importance of IC to the banking sector is leveraged by the increasing complexity and more liberal environment that the banks are currently operating in, in which competitiveness depends critically on the quality of human IC and the ability to leverage on these talents (Muhammad and Ismail, 2009). Due to the competitiveness and dynamism of the current operating environment, IC managing and reporting is critical for banks to develop a cutting edge strategy (Joshi *et al.*, 2010).

Furthermore, despite the critical role of IC in banks performance there have been very few studies that explore how banks disclose information on the resources that provide them with their competitive advantages (Bhasin, 2012). Although the literature documents an increasing trend in IC disclosure, there is limited research on whether organizations benefit from improved IC disclosure, namely how it influences their competitiveness. In a review of the current state of financial and external disclosure research, Parker (2007) identified IC reporting as a major area for further research.

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This paper endeavours to examine the extent of the IC disclosure in Portuguese banking sector and how it is perceived by managers to influence its competitiveness. We also seek to comparatively analyze the disclosure made in these entities' annual reports and websites. The study has practical significance to Portuguese organizations as a whole and to the banking sector in particular.

For this purpose, and based on European models for IC measurement and reporting, we constructed a specific index for IC disclosure and applied it to the banking sector in Portugal. By building a specific disclosure index, which reflects the most relevant information in the context of IC in the banking sector, we aim to contribute to understand the extent of disclosures made by Portuguese banks and how banking managers evaluate the impact of IC disclosure in competitiveness. Our findings may encourage its applicability in other sectors, even those that are less IC intensive, thus leading to a disclosure that is more consistent and comparable.

The remainder of the paper is structured as follows. Section 2 provides the review of prior studies on IC disclosure, exploring IC as knowledge applied to organizational practices, the determinants of IC disclosure, the theories that support the IC disclosure, and the most common disclosure practices in banks. Section 3 attempts to assess how IC disclosure is relevant for competitiveness in banks activity. Section 4 describes the methodological approach. Section 5 presents the analysis and discussion of results. Finally, conclusions are offered in Section 6.

2. Literature review and hypotheses development

IC is increasingly acknowledged as the most important asset for business performance and the foundation for competitiveness. A competitive and efficient financial sector is a prerequisite for economic development and growth. Banking institutions, in particular, are dealing with intense competitive pressures which arise from changes in financial environment, technological advancements and changing needs of the consumers in terms of product quality. Therefore, banks need to anticipate and respond to these demands and expectations. Skilled employees as well as sound infrastructures, networking systems, information systems, innovativeness, brand name, trademarks and knowledge bases, normally termed IC components, are needed to facilitate the delivery of high value-added products and services.

2.1 IC as knowledge applied to organizational practices

IChas been recognized as knowledge applied to practice, reflecting organizations ability to perform and not just calculating the value of knowledge in financial terms (Danish Agency for Trade and Industry, 2000). The application of knowledge in innovation and agility to succeed in business is what differentiates today's organizations, i.e., the distinctive capacity of these organizations is their "knowledge in action" (Davenport and Prusak, 1998). For this knowledge to be reflected, organizations should disclose an IC report showing the transactions on knowledge, as the annex to financial statements reflects the transactions within the accounting system (Mouritsen, 2006).

We live in an economy where dematerialization of production, and information and communication technologies, especially the internet, have a leading role, creating a network economy with the intensive use of knowledge and innovation in the production of goods and services. Knowledge is then the main factor of production and competitive pressures have made innovation the key factor for businesses survival.

This type of IC disclosure is valuable information for investors, as it can help them in reducing the uncertainly of the bank's future prospect and facilitate in valuing the bank. Table I provides the main contributions of some of the IC disclosure models available in the literature.

Developed by	Model
Sveiby (1997)	Intangible asset monitor (IAM): monitor's three overall categories: customers (external structure), people (competence) and organization (internal structure). Under each of these interdependent categories the three keys areas of growth, renewal, efficiency and stability are tracked, each with its own performance indicators
Kaplan and Norton (2004)	Balanced scorecard (BSC): management system that added non-financial performance measurements to traditional financial metrics to give managers a more "balanced" view of organizational performance (financial, clients, processes and learning and growth)
Edvinsson and Malone (1997)	Skandia navigator: conceives four key dimensions of a business: financial focus, customer focus, process focus, and renewal and development focus. At the heart of these is human focus, which drives the whole model
Lev (2001)	Value chain scoreboard: A matrix of nonfinancial indicators arranged in three categories according to the cycle of development: discovery/learning, implementation and commercialization
IADE-CIC (2003)	Intellectus model: reference to five components of intellectual capital (human capital, organizational capital, technological capital, business capital, and social capital); implementation of several principles which facilitate the management of intangible activities; internal logic, which explains the combination of relationships defining the entire system through several concepts such as IC components, elements, variables, and indicators
InCaS-Intellectual Capital Statement-Made in Europe	InCaS: management tool to assess and visualize IC

Table I.
Intellectual capital disclosure models

Our study assumes the tripartite dimensions of the IC concept: human capital, structural capital and relational capital.

Human capital includes the knowledge acquired by each person as well as individual characteristics, such as loyalty, versatility or flexibility. The value of each employees' contribution to the company increases its productivity (Canibano *et al.*, 2000). As mentioned by Shih *et al.* (2011), the creation of knowledge comes from a group of enthusiastic employees who have the ability to convert (individual and tacit) knowledge into IC for organizations. People's knowledge and experience are crucial resources through which organizations structure the internal and external information (Meer-Kooistra and Zijlstra, 2001), expressing the capabilities of the individuals that are required to provide solutions for customers (Saint-Onge, 1999). Human capital is the source of innovation and renewal (Stewart, 1997), i.e., the primary source of companies' idiosyncrasy (Cabrita, 2009).

Structural capital is a strategic asset that enables the creation of wealth through a human contribution. It is a set of infrastructures, information systems, databases, patents, trademarks, administrative routines and proceedings that represent the intellectual potential in the organization (Cabrita, 2009). Mentioned as an entity's organizational capability to meet market needs (Stewart, 1997; Saint-Onge, 1999), structural capital is represented by a set of interdependent working groups that relate to each other in an organization. Therefore, it is part of the compilation of knowledge that remains in the company at the end of the work day (Canibano *et al.*, 2000).

The relational capital is the value of an organization's relationships (Stewart, 1997; Bontis, 1998) or the knowledge incorporated in relationships with stakeholders (Cabrita and Cabrita, 2013). It includes a set of resources developed in the organization's external relations with customers, suppliers, shareholders or partners, and investors, among others. It relates not only to the relationships that the entity has with third parties, but also to the perception that these third parties have regarding the entity. These inter-organizational

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relationships produce a superior form of knowledge based on the coordination or combination of part of the knowledge of each of the agents involved in the relationship (Abeysekera, 2007). Relational capital is crucial both for detecting market opportunities, allowing the organization to develop new knowledge, and getting an assessment of their current knowledge. Cañibano and Sánchez (2004) refer that strategic alliances are the main intangible asset within relational capital, while satisfaction, longevity of the relationships, loyalty and trust are attributes of relationships with third parties which form a base of knowledge and a source of access to various resources (Cabrita, 2009).

The IC dynamic nature is stressed in many studies (Stewart, 1997; Cabrita and Bontis, 2008; Cabrita, 2009). For instances, Cabrita (2009) explains that IC is a phenomenon of interrelationships and interactions, having each component little value if considered *per se*, but as a whole it represents great value for the organization.

2.2 Determinants of IC disclosure

IC disclosure may be defined as a report intended to meet the information needs common to users (Abeysekera, 2006). The arguments for organizations to disclose IC are both internal and external. The various forms of IC disclosure provide valuable information for users and investors: helping to reduce uncertainty about future prospects (Bukh *et al.*, 2005); facilitating a more precise valuation of the organizations (Andriessen, 2004); promoting credibility, image and reputation (Córcoles and Ponce, 2013); decreasing information asymmetry (Bontis, 2003; Vergauwen and van Alem, 2005); reducing the cost of capital (OECD, 2006); enabling investors to make better investment decisions (Abeysekera, 2006); benefitting society at large by enabling efficient use of capital (Branco *et al.*, 2011); and leading to IC creation (Singh and Kansal, 2011). In addition, Brüggen *et al.* (2009) argue that IC disclosure can help to increase the value relevance of financial statements, while Canibano *et al.* (1999) show that failures to provide relevant information about IC may lead to a deterioration of the company's financial position and a loss of competitiveness in the long run. In the same line, other authors (Meer-Kooistra and Zijlstra, 2001) suggest that companies are motivated to disclose IC information to create trustworthiness with employees and other stakeholders preventing disadvantages from rumours and gossips (Bornemann and Leitner, 2002). In addition, Meer-Kooistra and Zijlstra (2001) refer that IC disclosure may be used as the company's marketing tool because they can publicly provide evidence about their true values and their wealth creation capabilities. Bhasin (2014) suggests that the low-level of IC disclosure, whose very basis of existence is knowledge and innovation, may be partly because of the fact that IC disclosures are done by organizations purely on a "voluntary" basis.

2.3 IC disclosure theories

There are many theories that support the IC disclosures of organizations. Among others, three theories can be discussed in this context: stakeholder theory (Freeman, 1994; Donaldson and Preston, 1995); legitimacy theory (Suchman, 1995; Deegan, 2002); and signalling theory (Kim *et al.*, 2016). Stakeholders groups include shareholders, customers, employees, suppliers, competitors, lenders, government, communities, also comprising groups representing environmentalists and the media. Financial reporting should include IC disclosure which would give the stakeholders a broader and correct picture of the true value of organization and performance. Legitimacy theory posits that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies. In adopting a legitimacy theory perspective, an organization would voluntarily report on activities if management perceived that those activities were expected by the communities in which it operates. Signalling theory suggests that information asymmetry should be reduced if the party possessing more information can send signals to other interest-related parties.

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It posits that organizations with a high quality should signal their advantages to the market. It not only helps in reassessing the value of firm but also reduces the cost of capital. Among IC studies that have discussed IC disclosure theories are those presented in Table II.

2.4 Annual report and web-based corporate disclosure

Disclosure is the process through which an entity communicates with the outside world, reporting quantitative and qualitative information of financial and non-financial nature for the purpose of facilitating outsiders' decision making. Information about the affairs of an organization can be communicated through different means (e.g. prospectus, financial press releases, annual report, webpages, etc.), and reporting practices differed significantly between organizations in different domains.

Despite the existence of different sources of information, the annual report is regarded by some authors (Li *et al.*, 2006; Joshi and Ubha, 2009) as the most important vehicle of information about an organization's affairs, namely for banks because of two related characteristics. First, banks' activities are less transparent, generally more opaque than non-financial organizations. Second, banks are frequently heavily regulated, because of their importance in the economy, because of their assets' opacity and because they are a ready source of fiscal revenue, thus government imposes an array of regulations on banks.

However, other authors (Lymer, 1999; Marston and Polei, 2004; Sharma, 2013), consider that webpages are now seen as one of the better mediums of disclosure of financial and non-financial information, the major advantage being its ability to provide a direct contact between the organizations' management and stakeholders without depending on intermediaries like the press or analysts. The literature reports some advantages of web-based disclosure: cost effective; covering wider audience with speed; and making the information available in a timely manner. Webpages are used to disclose time sensitive information (Sharma, 2013) and can include annual reports, press releases and Basel II disclosures regarding capital adequacy, and risk management issues (Sharma, 2013). Given the increasing importance of the internet, coupled with a faster, more economical and more visible spread of information, we believe it is important to assess the trend of the disclosure

Theories of IC reporting	Empirical studies	Main findings
Stakeholder theory	Guthrie *et al.* (2006), An *et al.* (2011)	The disclosure practices reduce the information asymmetry between the companies and stakeholders and as a consequence improve the relationships between them
Legitimacy theory	Guthrie *et al.* (2006), Archel *et al.* (2009), Khan and Ali (2010)	Organizations with high levels of IC will be more inclined to disclose their IC because they cannot fully legitimize their standing by means of the traditional symbols of corporate success, the tangible assets While there is no formal guideline available on how organization' IC is going to be measured, an effort to disclose IC information in its report could be seen as part of its strategy to legitimize their existence in an economy of intangibles
Signalling theory	García-Meca *et al.* (2005), Vergauwen, and van Alem (2005)	Signalling excellence to the market could be a strong motivation for companies to report IC although the focus and style of reporting may be varied by different companies Signalling of IC related attributes, for example, voluntary disclosure in the annual report, could bring many benefits to an organization (e.g. improving corporate image, attracting potential investors, lowering capital costs, decreasing volatility of stocks, creating an understanding of its products or services, and improving the relationships with various stakeholders)

Table II.
Studies developed in the scope of IC disclosure theories

by comparing the IC disclosure in annual reports vs webpages. Consistent with previous studies, it is expected that:

H1. IC disclosure in Portuguese banks is higher in webpages than in annual reports.

When breaking down the IC disclosures into three dimensions – human capital, structural capital and relational capital – previous studies reveal that the level of disclosure varies for issues related to each component. Based on the study of Guthrie *et al.* (2006) the extent of the disclosure of information on IC was analyzed in three different but complementary perspectives:

(1) the extent of the disclosure in each attribute (indicator);

(2) the extent of the disclosure by component (human capital, structural capital and relational capital); and

(3) the general/global level of disclosure.

Consistent with previous studies, we expect that:

H2. The disclosure of each of the components of IC is higher in webpages than in annual reports.

3. Competitiveness and IC disclosure in banking sector

Banks have traditionally been considered to be more vulnerable to instability than other industries, for various reasons. Emerging from a dramatic crisis, the most critical challenge for financial sector is to restore the trust and confidence of consumers. This is critical for its survival and competitiveness. In a context of instability, the creation of a fair and competitive environment claims for information transparency and reducing information asymmetries among investors. This is more imperative in knowledge-intensive organizations as banks where competitiveness depends on the resources that differentiate them from their competitors, which are lasting and difficult to imitate or substitute (Serenko and Bontis, 2013). As mentioned by Abeysekera (2006), competitiveness depends less on the strategic allocation of physical and financial resources and more on strategic management of IC. In addition, reporting on IC creates a transparency that allows managers to manage their intangible resources better, facilitating decision making and the management of the organization as a whole. Despite that, the number of studies of IC reporting with specific reference to the banking sector (Khan and Ali, 2010) is still scarce. Table III highlights some studies on the IC disclosure practices in banking sector.

Banking sector has undergone dramatic changes in the last decade forcing banks to rethink their roles as financial intermediaries (Mention, 2011; Walter, 2009). In a context of fierce competition, banks are challenged to adopt a pro-active and innovative posture focussed on developing new financial products and services, i.e., promoting a continuous development of knowledge as the unique resource (Cabrita and Bontis, 2008; Mention, 2011). While physical capital is essential for banks to operate, it is IC that determines the quality of the products and services provided to customers (Goh, 2005). Banks use a huge amount of human capital and customer capital for their survival (Kamath, 2007; Wang *et al.*, 2011). They need to create an environment in which people (human capital) can produce extraordinary results (customer capital) (Sahrawat, 2008). Technology is also crucial in this industry insofar as computer systems, databases and networks will have to be constantly adapted to the most demanding products and services, including those provided by electronic means, making it a factor of development and better responsiveness to competition. The interaction between structural capital and relational capital is a key goal for banks because the creation of value for the customer is no longer in a single transaction, but in the maintenance and development of various transactions (Cabrita and Bontis, 2008).

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Authors	Purpose	Findings
Khan and Ali (2010)	Study IC reporting by private commercial banks in Bangladesh together with the perceptions of a range of stakeholders with respect to such disclosures	IC disclosure is not considered important. The key focus for IC disclosure was on human capital elements
Haji and Mubaraq (2012)	Examine IC disclosure practices of Nigerian banks over the period 2006-2009	The IC disclosures of the Nigerian banks increased moderately over the four years. Human and structural capital are the most disclosed items
Sharma (2013)	Analyze the extent of disclosure, using the internet, by commercial banks in Nepal	All commercial banks use their own websites and annual reports to disclose IC. Foreign ownership, board independence and size were found to be significantly associated with web-based disclosure
Lipunga (2013)	Using annual reports of commercial banks in Malawi, the study visualizes the extent of IC reporting	About 80% of the sampled banks made some sort of IC disclosures in all the three IC categories. The overall IC disclosure index indicates that only 32% of the disclosable items were disclosed. The banks placed more emphasis relatively on internal capital (0.4) followed by external capital (0.32); the least reported was human capital (0.29)
Razak *et al.* (2016)	Examines IC disclosure practice in the annual report of 12 commercial banks listed on Saudi Arabia (Tadawul) Stock Exchange in 2014	All Saudi banks listed in Tadawul Stock Exchange disclosed IC information in their 2014 annual report. IC items mostly were disclosed in discursive form and throughout the annual report. Banks emphasize the disclosure of human (38%), external (35%), while internal capital was significantly lower at 27%

Table III.
Empirical studies on IC disclosure in banking sector

Moving in an environment of high uncertainties and looming crises, banking sector is highly regulated in its complex operations, having to improve its ability in the management of IC to achieve sustainable survival and competitiveness. Because the knowledge required for banking operations is more complex than in most industries, it requires greater transparency and reliability in order to protect stakeholders (Chen and Pan, 2011). The need for transparency and reliability in banks' information is evidenced in the increasing need for information not only as a result of greater demand from economic agents and the greater usefulness of such information for decision making, but also on the need for organizations to maintain or increase their legitimacy in the societies in which they operate. In an uncertain and volatile environment, IC disclosure can contribute to restore the trust and confidence – core intangible assets in banking sector – making banks more competitive.

4. Methodological approach

The methodology involved in the exploratory research study includes the collection of secondary data and semi-structured interviews. As part of secondary sources, annual reports and institutional websites information have been collected from the 28 banks, which constitute the universe of banks operating in the Portuguese financial market. In line with other studies (Li *et al.*, 2006; Quinteiro, 2009; Mention, 2011; Herrera-Rodriguez and Macagnan, 2012; Linlin *et al.*, 2013; Ramadan and Majdalany, 2013) our research focusses only on the banking sector. Linlin *et al.* (2013, p. 667) refer that "banking industry is not only knowledge-intense but probably also has the most of IC reports produced among other industries". Those 28 banks published their individual annual reports in 2015 and had an active and autonomous webpage in August 2016. As a technique of gathering data, both quantitative and qualitative information were picked up from those sources. The universe of banks involved in the study is listed in Table IV.

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1. Novo Banco, SA	15. BANIF – Banco de Investimento, SA
2. Banco BAI Europa, SA	16. Banco Português de Gestão, SA
3. Banco BPIT, SA	17. BEST – Banco Electrónico de Serviço Total, SA
4. Banco Invest, SA	18. Banco Cofidis SA
5. Banco Santander Totta, SA	19. Banco Santander Consumer Portugal, SA
6. Banco Bilbao Vizcaya Argentaria (Portugal), SA	20. Banco BIC Português, SA
7. Banco Ativo Bank, SA	21. Banco EFISA, SA
8. Caixa-Banco de Investimento, SA	22. Novo Banco dos Açores, SA
9. Banco Comercial Português SA	23. Banco Privado do Atlântico - Europa, SA
10. Caixa Geral de Depósitos, SA	24. BNI – Banco de Negócios Internacional (Europa), SA
11. Banco Popular Portugal SA	25. Banco CTT, SA
12. Haitong Bank, SA	26. Banco LJ Carregosa, SA
13. Banco Finantia SA	27. Banco Primus SA
14. Banco de Investimento Global SA	28. Banco Credibom, SA

Table IV.
Banks involved in the study

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4.1 Content analysis and encoding techniques

Content analysis and encoding techniques were used as popular methods when investigating the extent, structure and trends of the disclosure of information on IC. Text encoding techniques aim to determine the significance of the information content in a "systematic", "objective", "reliable" and "reproducible" manner (Krippendorff, 1990) in order to obtain valid and replicable inferences (Guthrie and Petty, 2000). The encoding of the content to be analyzed is based on verifying the existence (or not) of the information to be gathered, assigning a numerical coding of 1 (one) if such information was disclosed and 0 (zero) if it was not.

4.2 Construction of the IC index

A disclosure index is defined by Coy (1995, p. 122) as "a qualitative-based instrument designed to measure a series of items which, when scores for the items are aggregated, gives a surrogate score indicative of the level of disclosure in the specific context for which the index was devised". The specificity of banking sector dictated the development of a singular disclosure index that is not easily replicable to other sectors. This index aimed to be the analysis tool of the extent or range of IC disclosure and of each of its components – human capital, structural capital and relational capital.

The IC index disclosure was built on the basis of the Intellectus models – developed by the Centro de Investigación sobre la Sociedad del Conocimiento from the Universidad Autónoma de Madrid (CIC-IADE) – and InCaS (intellectual capital statement – made in Europe), which were adapted and applied to the disclosure of information on IC in the banking sector in Portugal.

As referred by Cabrita (2009), the measurement/disclosure model should be chosen according to the understanding of the elements and the context in which the organization operates, i.e., the indicators used for analysis in an organization (sector) are not necessarily useful in other organizations (sectors), so that these indicators must be the most specific possible to evaluate the critical knowledge to achieve the strategy of each organization. Based on this premise and given the singularity of the sector, we found in the structure of the Intellectus model and in some concepts and elements of the InCaS model the support in which to conceive our research. We believe that these two models reveal features that may adapt themselves to what is intended to investigate. The detail and depth that result from the structure presented by the Intellectus model to identify the components of IC, as well as the existence of studies conducted by the Intellectus model's working group on its application in several Spanish financial institutions to measure IC, allowed us to assess the most common features of the indicators applied to the banking sector. Likewise, the

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applicability of the InCaS model to the organizational reality at European level can add valuable inputs to our research. In this model, we sought relevant conceptual orientations, particularly because it has been developed for the identification and reporting of the organizations' intangible resources. InCaS model contributed to the development of an IC statement, harmonized at European level, facilitating comparability among organizations.

Drawing on the previous studies, we found 66 items (21 for human capital, 24 for structural capital and 21 for relational capital) were more likely to be reported by banks. General disclosure index is decomposed into disclosure sub-indices of human capital, structural capital and relational capital. Results are shown on average, therefore, highly aggregated. Included in human capital we consider indicators on professional skills, social competencies and motivation as shown in Table V.

Structural capital comprises indicators adequate to identify the factors related to organizational structure and banking processes such as corporate culture, internal cooperation and transfer of knowledge, information technology and explicit knowledge as defined in Table VI.

Relational capital indicators (Table VII) present the variety of the relationships established with business agents and social entities with whom banks relate. These relationships comprise customers, investors and other stakeholders.

4.3 Semi-structured interviews

The combination of research methods has been successfully applied to investigate voluntary reporting in IC, mainly the use of content analysis of annual reports together with semi-structured interviews (Guthrie *et al.*, 2006).

Semi-structured interviews were conducted for 25 banking managers (human resources, marketing and governance departments) of different banks. The objective was to gain

Elements CH (3)	Variables (6)	Indicators of disclosure (21)
CH1 – Professional skills	CH1.1 – Qualified employees	CH1.1.1 – Number of employees in each professional category
		CH1.1.2 – Number of employees per schooling
		CH1.1.3 – Number of qualified employees per level of salary
	CH1.2 – Continuous training	CH1.2.1 – Number of hours of training
		CH1.2.2 – Themes of training
		CH1.2.3 – Number of employees in training
	CH1.3 – Contract	CH1.3.1 – Number of admissions per competencies
		CH1.3.2 – Number of employees with working contracts
		CH1.3.3 – Number of employees working part-time
		CH1.3.4 – Number of employees in apprenticeship
CH2 – Social competencies	CH2.1 – Social/ cultural activities	CH2.1.1 – Internal social/cultural activities
		CH2.1.2 – Social/cultural activities involving civil community
CH3 – Motivation	CH3.1 – Promotions and incentives	CH3.1.1 – Number of employees promoted on a regional, national and international level
		CH3.1.2 – Benefits and bonuses given to the employees
		CH3.1.3 – Incentive plans to attract and keep talent
		CH3.1.4 – Payment plans of variable salaries
		CH3.1.5 – Plans for employee satisfaction (motivation questionnaires
	CH3.2 – Stability	CH3.2.1 – Rotation rate
		CH3.2.2 – Absenteeism rate
		CH3.2.3 – Average age of employees
		CH3.2.4 – Identification of employees by average age

Source: Based on the Intellectus and InCaS models

Table V.
Human capital indicators

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Elements CE (3)	Variables (9)	Disclosure indicators (24)
Organizational capital		
CE1 – Corporate culture	CE1.1 – Mission and strategic objectives	CE1.1.1 – Disclosure of mission and strategic objectives
		CE1.1.2 – Description of organization's functional structure
		CE1.1.3 – Existing best practices
		CE1.1.4 – Existing codes of conduct, declarations of principles or mission
	CE1.2 – Operational objectives	CE1.2.1 – Definition of management by objectives systems
		CE1.2.2 – Existence of evaluation of performance systems
		CE1.2.3 – Information about performance indicators
	CE1.3 – Investigation and development	CE1.3.1 – Expenses with I&D
		CE1.3.2 – Existing projects of I&D
	CE1.4 – Recognition	CE1.4.1 – Description of the context of the bonuses received and formal recognitions
		CE1.4.2 – Market share
CE2 – Internal cooperation and transference of knowledge	CE2.1 – Team work and cooperation between departments	CE2.1.1 – Number of projects
		CE2.1.2 – Programs and rate of internal mobility and working flexibility
		CE2.1.3 – Plans of management of competencies and development of leadership
	CE2.2 – Sharing of tacit knowledge	CE2.2.1 – Informal activities of knowledge sharing
		CE2.2.2 – Programs and rate of internal mobility and working flexibility
Technological capital		
CE3 – Technologies of information and explicit knowledge	CE3.1 – Internal systems of communication and control	CE3.1.1 – Existing internal communication channels
		CE3.1.2 – Existing external communication channels
		CE3.1.3 – Systems of auditing and internal control
	CE3.2 – Protocols and partnerships with other organisms	CE3.2.1 – Existing technologies of information and communication
		CE3.2.2 – Information and communication technologies to be applied or in development
	CE3.3 – Quality evaluation	CE3.3.1 – Certificates obtained
		CE3.3.2 – Methodologies and results of internal evaluation of products/services quality
		CE3.3.3 – Results of external evaluation of products/services quality

Table VI.
Structural capital indicators

Source: Based on the Intellectus and InCaS models

understanding of how banking managers perceive the impact of IC disclosure in banking competitiveness. For this, the interviewees were asked to consider the following questions: Does your bank use any tool of IC measurement and reporting? Do you consider IC as a driver of banking competitiveness? Is IC disclosure relevant to banking competitiveness? Is your bank available to disclose strategic information? and Which IC components are more available to be disclosed?

5. Analysis and discussion of results

The average IC disclosure in annual reports is 0.3693, with a standard deviation (SD) of 0.2063, as shown in Table VIII. Disclosure in webpages is 0.2860, with a SD of 0.1192. In both cases, values show a large variability from the average, but this variability is lower in the disclosure in webpages, i.e., values are closer to average in the disclosure on webpages and there is a greater dispersion of values regarding the average in the disclosure in annual reports.

Elements CR (3)	Variables (8)	Disclosure indicators (21)
Business capital		
CR1 – Customer relations	CR1.1 – Accessibility and client support	CR1.1.1 – Number of branches/agencies and their location
		CR1.1.2 – Online customer service channels
		CR1.1.3 – Other communication and customer service channels
		CR1.1.4 – Products/services solutions for clients
	CR1.2 – Group relations	CR1.2.1 – Countries where group operates
		CR1.2.2 –Products supplied by groups´ companies
		CR1.2.3 – Strategic alliances of group
	CR1.3 – Client satisfaction	CR1.3.1 – Number of Clients
		CR1.3.2 – Information regarding systems for handling suggestions and complaints
		CR1.3.3 – Client satisfaction measuring processes
CR2 – Relations with investors	CR2.1 – Future oriented information	CR 2.1.1 – Information about company's growth
		CR 2.1.2 – Information about future projects
	CR2.2 – Importance of the investor	CR2.2.1 – Information about investor support networks
		CR2.2.2 – Information about relationship with investor
Society capital		
CR3 – Relations with other stakeholders	CR3.1 – Actions in social and environmental fields	CR3.1.1 – Identification of the organizations and the form of relationship
		CR3.1.2 – Social responsibility activities and human rights protection
		CR3.1.3 – Commitments regarding good environmental and energetic practice
	CR3.2 – Protocols and partnerships with other organisms	CR3.2.1 – Description of organisms with whom partnerships are maintained
		CR3.2.2 – Form of partnership developed or to be developed
	CR3.3 – Other stakeholders	CR3.3.1 – Identification of stakeholders
		CR3.3.2 – Forms of communication and relationships

Source: Based on the Intellectus and InCaS models

Table VII. Relational capital indicators

Intellectual capital	*N*	Average	Minimum	Maximum	SD
Annual reports	28	0.3693	0.1052	0.8016	0.2063
Webpages	28	0.2860	0.1528	0.6032	0.1192

Table VIII. Extent of intellectual capital disclosure

Comparing average IC disclosure in both annual reports and webpages we found the same conclusion. According to the results shown in Table IX, the Wilcoxon test statistically confirms a higher IC disclosure in annual reports than in webpages. The difference between both is statistically significant ($p = 0.013$). This result allows us to refuse the hypotheses of the existence of higher IC disclosure in webpages than in annual reports regarding the banks operating in Portugal.

Intellectual capital	*N*	Average	SDn	*Z*
Annual reports	28	0.3698	0.2063	−2.482
Webpages	28	0.2860	0.1192	$p = 0.013$

Table IX. Comparison of the average disclosure of intellectual capital between annual reports and webpages

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Some authors (Striukova *et al.*, 2008; Guthrie *et al.*, 2008; Branco *et al.*, 2011) compared IC disclosure in annual reports and in webpages in different organizations using the disclosure index of the study of Petty and Guthrie (2000). The results of our study are consistent with those obtained by Guthrie *et al.* (2008). The authors focussed on 19 Australian companies from a single sector (Australian food and beverage industry) and concluded that there was a greater IC disclosure in annual reports than in webpages, as well as large discrepancies between organizations regarding disclosure practices. However, our results contradict those found by Branco *et al.* (2011), and those revealed by Striukova *et al.* (2008).

Striukova *et al.* (2008) analyzed the disclosure practices of IC in 12 UK companies from four different sectors. They concluded that there was a greater IC disclosure in companies' webpages than in annual reports. Branco *et al.* (2011) analyzed IC disclosure in 24 Portuguese companies from traditional industries and knowledge-intensive sectors (media, banks and technology) and found greater IC disclosure in webpages than in annual reports.

The analysis of the aggregate IC disclosure may not respond to the accuracy and usefulness sought by studies on this subject, in particular to the requests of many stakeholders. Therefore, we consider that there is a need to analyze separately the disclosing of the IC components. To reach this objective, we drew up the *H2* to assess whether the disclosure of each of the IC components is higher in webpages than in annual reports. Table X compares the average disclosure of IC components between annual reports and websites. It was found that there was a higher disclosure of human capital in banks' annual reports than in their webpages, with a disclosure average of 0.2670 and 0.0612, respectively. Wilcoxon test for paired data is statistically significant ($p = 0.000$) rejecting the *H2* with regard to the human capital component, concluding that the disclosure of this component is not higher in webpages than in annual reports. Moreover, this finding agrees with previous studies conducted by Guthrie *et al.* (2008) and Branco *et al.* (2011), and contradicts the result obtained by Striukova *et al.* (2008).

Structural capital has an average disclosure of 0.3512 in annual reports and 0.2187 in webpages. This result also rejects the *H2* concluding that the disclosure of the structural capital component is not higher in webpages than in annual reports. It contradicts the result obtained in the study of Branco *et al.* (2011) and confirms the results obtained by Guthrie *et al.* (2008) and Striukova *et al.* (2008).

Regarding the relational capital, the average disclosure is higher in webpages (0.5782) than in annual reports (0.4898). This difference is statistically significant ($p = 0.020$) supporting the *H2* and confirming that the disclosure of relational capital is higher in webpages than in annual reports. These findings are in line with those obtained by Striukova *et al.* (2008) and Branco *et al.* (2011) in their studies. However, it contradicts the results obtained by Guthrie *et al.* (2008). Table XI summarizes the results for the *H2*.

The results reveal that webpages are the preferred means for disclosing a more customer/market-oriented information, emphasizing the relationships with customers and investors, as well as with other stakeholders (relational capital). However, webpages are not a relevant vehicle for disclosing operational resources, namely, technological and

Table X.
Comparison of the average disclosure of the components of intellectual capital between annual reports and webpages

	Human capital		Structural capital		Relational capital	
	Annual reports	Webpages	Annual reports	Webpages	Annual reports	Webpages
N	28	28	28	28	28	28
Average	0.2670	0.0612	0.3512	0.2187	0.4898	0.5782
SD	0.1906	0.0765	0.2194	0.1364	0.2727	0.2015
Z	−4.107		−4.050		−2.335	
	$p = 0.000$		$p = 0.000$		$p = 0.020$	

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organizational (structural capital). Human capital is barely disclosed through webpages, since it is generically identified as "taboo information". The result presented in this component's disclosure in the internet may be explained by two generic reasons: the vulnerability and easiness of manipulation associated with this means of disclosure and the non-relevance of this information for the webpages' main users (mainly customers).

There is evidence of a greater uniformity in the disclosure of IC components in the annual reports and a greater concentration on the disclosure of relational capital in webpages, which confirms a high heterogeneity in the quality and quantity of information disclosed regarding each of the components of IC in the webpages. These results show that there is a strategy to disclose in webpages' information that is more specific and targeted to the main users of this means (mainly customers and the general public), while considering that the annual reports are more able to disclose information for a wider group of stakeholders, including shareholders, investors, regulatory and supervisory bodies and researchers. The results confirm those obtained by Gandia (2003) on the existence of a large heterogeneity in the quantity (and quality) of the disclosure of intangibles in the internet. More recent studies (Orens *et al.* (2009)) concluded on the economic benefits of a strategy that discloses IC in the webpages, positively associated with the value of the companies analyzed.

It seems that the Portuguese banks prefer the use of annual reports as a channel for IC disclosure, while webpages are seen as a complementary tool for disclosing it. This tendency may be a trend justified not only by the strategic option to respond to requests from the various stakeholders through the disclosure channels they prefer, but also by seeking to use the appropriate means to ensure the legitimacy of the activity, in accordance with the environment pressures in which banks operate.

Semi-structured interviews were conducted at the direction level of banks because IC pertains to strategic domain. We used only banking direction (key informant) respondents in order to reduce information and motivation bias effects associated with different hierarchical levels (Hambrick, 1981).

Interviews allowed us to obtain a qualitative image of the organization in terms of IC disclosure and its impact in banking competitiveness. Information collected using the pages filled in by the interviewees is summarized in Tables XII and XIII.

According to the interviewees on the majority of the banks participating in the study there are no periodic reports on IC, nor supplementary documents on IC; however, there is evidence that banking managers consider IC as a driver of competitiveness. Although the content analysis of the interviews shows that banks do not use an IC measurement tool and do not report IC, we are able to verify that the topic "intellectual capital" is widely known by the interviewees and

Intellectual capital components	Hypothesis	Statistical confirmation
Human capital	*H2*: The disclosure of each of the components of intellectual capital is higher in webpages than in annual reports	Rejected
Structural capital		Rejected
Relational capital		Confirmed

Table XI. Outcomes for *H2*

Sex		Age		Position		No. of years in position	
Male	18	< 40	5	HR	11	< 5	7
Female	7	41-50	10	Governance	5	6-20	17
		51-60	8	Marketing	4	> 20	1
		> 60	2				

Note: $N = 25$

Table XII. Data on the interviewee and the institution

Table XIII.
Resume of the interviews' results

Does your bank use any tool of IC measurement and reporting?	In general, very low-level of IC disclosures is recognized. There are no official periodic reports on IC. Not many managers recognize the need and significance of measuring and reporting IC
Do you consider IC as a driver of banking competitiveness?	The majority recognizes that IC has come to play an important role in the process of value creation of organizations and a source of competitive advantage
Is IC disclosure relevant to banking competitiveness?	33% of participants consider that it is crucial to take a leadership role in measuring and voluntary disclosing the IC of their banks because this would set an example for other banks to follow the road
Is your bank available to disclose strategic information?	Few banking managers are able to identify initiatives within their bank that are designed to disclosing strategic information
Which IC components are more available to be disclosed?	The relational aspects were most frequently highlighted

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generally associated with the potential of value creation and also related to characteristics involving people in the organization, like knowledge, competence and relationships. Regarding the assumption that IC is a driver of competitiveness, all interviewees have recognized that IC is the source of value creation and competitiveness in contemporary organizations. However, 67 per cent of banking managers do not consider that IC disclosure is relevant for being competitive. Yet, given the sensitive nature of some IC attributes, 58 per cent of participants in the study do not consider at all to disclose neither IC attributes (e.g. competencies, compensation schemes, technological advances) nor relevant strategic information. Relational capital was referred as the IC component most available to be disclosed.

The overall implications of our findings are that: there is a lack of specific evidence regarding the usage of the IC measurement, management techniques and tools by Portuguese banks; the disclosure practices for IC items are not consistent at all; banking managers not yet assume IC disclosure practices as drivers of competitiveness in a sector where trust, confidence and transparency are key factors of success.

6. Conclusions

This study aims to fill a research gap of limited works with respect to IC reporting in Portugal. We examine both the extent of IC disclosure and the IC components disclosure through constructing an IC disclosure index. It also explored the means chosen by banks to disclose IC information. Annual reports and webpages were found to be the primary means to IC disclosure. Along with the official and audited disclosure included in the annual reports, banks also give importance to an informal disclosure through the internet, namely in what concerns relational capital.

Supported on the Intellectus model and the InCaS model (Mertins *et al.*, 2006) we built an index of IC disclosure to banking sector in Portugal to analyze the extent of IC disclosure in Portuguese banks and the level of exposure of each of its components – human capital, structural capital and relational capital. The study shows a higher average IC disclosure in annual reports (0.37) than in webpages (0.29). The reporting is not uniform and no evidence of a well-defined measurement basis was found in the annual reports. With regard to the components of IC, the disclosure of human capital and structural capital is higher in annual reports than in webpages and, conversely, the disclosure of relational capital is higher in the webpages. There is evidence of the disclosure of a single component (relational capital) in webpages, while the disclosure of all IC components is more homogeneous in the annual reports.

Our findings are similar to those of prior studies on the subject (Bontis, 2003; Kamath, 2007; Joshi and Ubha, 2009) where very low level of IC disclosure was registered. IC disclosure has not yet received any priority from the top management of Portuguese banks and a higher level of voluntary IC disclosure is not seen as a driver of competitiveness.

Several factors can help to explain this situation. First, there is no established and generally accepted model for IC reporting around the world (Abeysekera, 2006). Second, although banks may benefit from the disclosure of IC to the market there is also the risk of such information being used by their competitors. Third, some attributes of IC are sources of competitive advantage and once disclosed may be replicated. Thus, for protecting business confidentiality, banks do not want report information of sensitive nature.

6.1 Theoretical and practical implications

More broadly, the findings of this work have theoretical, practical and societal implications. From a theoretical standpoint, it provides insights on IC disclosure in the banking sector and captures top managements' observation on such disclosure, thereby extending our current understanding of the IC research phenomenon in the specific context of the financial sector. From a practical point of view, the study may be of relevance to regulators and other standard setting bodies in developing mandatory reporting or additional policy requirements. Intangibles reporting needs a strong conceptual framework to improve the comparability, reliability and usefulness of intangibles information to users. In this sense, a policy intervention is needed to assist banks in their IC management. They are: create a framework of corporate values and intellectual assets and communicate these values; promote corporate management and monitoring of intangible assets; and elaborate guidelines and indicators and encourage disclosure based on the guidelines. From a societal standpoint, the study opens up the prospect of further research in the area of IC disclosure and the benefits of reducing the information gap between informed and uninformed users, helping to ameliorate information asymmetry and litigation risks.

There is much scope for extending the present work. Consistent with previous research, the current level of IC disclosure by Portuguese banks is not high; however, increased appreciation of the levels of IC disclosure may encourage greater debate over this topic in Portuguese organizations. Disclosure should be viewed as a tool to improve the internal decision-making of organizations. The IC disclosure index can be employed by other researchers in other organizations which can facilitate comparative research. Future research can expand to other sectors (e.g. manufacturing, technological, services, etc.) to enable a more comprehensive understanding of IC disclosure in Portugal. A longitudinal study could be conducted for capturing the trend of reporting practices during the period. Further research could apply research methods other than content analysis (e.g. questionnaire survey, interviews or mixed-methods) in order to obtain a more in-depth view of how the Portuguese organizations manage, measure and report their IC. Owing to the lack of generally accepted framework for IC reporting, further works need to be done to develop an IC disclosure model applicable to banking institutions. Finally, more research is needed that will help to understand in which measure IC disclosure contributes to leverage competitiveness in banking sector.

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References

Abeysekera, I. (2006), "The project of intellectual capital disclosure: researching the research", *Journal of Intellectual Capital*, Vol. 7 No. 1, pp. 61-77, doi: 10.1108/14691930610639778.

Abeysekera, I. (2007), "Intellectual capital disclosing between a developing and developed nation", *Journal of Intellectual Capital*, Vol. 8 No. 2, pp. 329-345.

An, Y., Davey, H. and Eggleton, I. (2011), "Towards a comprehensive theoretical framework for voluntary IC disclosure", *Journal of Intellectual Capital*, Vol. 12 No. 4, pp. 571-585.

Andriessen, D. (2004), "IC valuation and measurement: classifying the state-of-the-art", *Journal of Intellectual Capital*, Vol. 5 No. 3, pp. 230-242.

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Archel, P., Husillos, J., Larrinaga, C. and Spence, C. (2009), "Social disclosure, legitimacy theory and the role of the state", *Accounting, Auditing & Accountability Journal*, Vol. 22 No. 8, pp. 1284-1307.

Bhasin, M. (2012), "Intellectual capital disclosure scenario: evidence from a developing country", *European Journal of Business and Social Sciences*, Vol. 1 No. 9, pp. 26-45.

Bhasin, M. (2014), "Disclosure of intellectual capital in annual reports: comparing evidence from India and Australia", *International Journal of Management and Innovation*, Vol. 6 No. 2, pp. 103-126.

Bontis, N. (1998), "Intellectual capital: an exploratory study that develops measures and models", *Management Decision*, Vol. 36 No. 2, pp. 63-76.

Bontis, N. (2003), "Intellectual capital disclosure in Canadian corporations", *Journal of Human Resource Costing & Accounting*, Vol. 7 No. 1, pp. 9-20.

Bornemann, M. and Leitner, K.-H. (2002), "Measuring and reporting intellectual capital: the case of a research technology organization", *Singapore Management Review*, Vol. 24 No. 3, pp. 7-19.

Branco, M.C., Delgado, C., Sousa, C. and SÁ, M. (2011), "Intellectual capital disclosure media in Portugal", *Corporate Communications: An International Journal*, Vol. 16 No. 1, pp. 38-52.

Brüggen, A., Vergauwen, P. and Dao, M. (2009), "Determinants of intellectual capital disclosure: evidence from Australia", *Management Decision*, Vol. 47 No. 2, pp. 233-245.

Bukh, P.N., Nielsen, C., Gormsen, P. and Mouritsen, J. (2005), "Disclosure of information on intellectual capital in Danish IPO prospectuses", *Accounting, Auditing & Accountability Journal*, Vol. 18 No. 6, pp. 713-732.

Cabrita, M.R. (2009), "Intellectual capital as a phenomenon of interrelationships", *International Journal of Business and Systems Research*, Vol. 3 No. 2, pp. 229-256.

Cabrita, M.R. and Bontis, N. (2008), "Intellectual capital and business performance in the Portuguese banking industry", *International Journal of Technology Management*, Vol. 43 Nos 1/2/3, pp. 212-237.

Cabrita, M.R. and Cabrita, M. (2013), "Applying social marketing to healthcare: opportunities and challenges", in Kapoor, A. and Kuldshresthe, C. (Eds), *Dynamics of Competitive Advantage and Consumer Perception in Social Marketing*, Chapter 4, IGI Global, Hershey, PA, pp. 78-97.

Canibano, L. and Sanchez, M.P. (2004), "Medición, gestión e información de intangibles, Lo más nuevo", *Revista de Contabilidad y Dirección*, Vol. 1, pp. 99-139.

Canibano, L., Covarsi, M.G.A. and Sanchez, M.P. (1999), "The value relevance and managerial implications of intangibles: a literature review", paper presented at International Symposium: Measuring and Reporting Intellectual Capital: Experiences, Issues and Prospects, Amsterdam, June.

Canibano, L., Garcia-Ayuso, M. and Sanchez, P. (2000), "Accounting for intangibles: a literature review", *Journal of Accounting Literature*, Vol. 19, pp. 102-130.

Chen, K. and Pan, C. (2011), "A study of credit risk efficiency and productivity change for commercial banks in Taiwan", *The Journal of American Academy of Business*, Vol. 16 No. 2, pp. 279-286.

Córcoles, Y. and Ponce, A. (2013), "Cost-benefit analysis of intellectual capital disclosure: university stakeholders' view", *Revista de Contabilidad*, Vol. 16 No. 2, pp. 106-117.

Coy, D.V. (1995), "A public accountability index for annual reporting by NZ universities", PhD thesis, University of Waikato, Hamilton.

Danish Agency for Trade and Industry (2000), *A Guideline for Intellectual Capital Statements – A Key to Knowledge Management*, Danish Agency for Trade and Industry, Copenhagen, available at: www.juergendaum.com/articles/Danish_ICS.pdf (accessed 17 December 2015).

Davenport, T. and Prusak, L. (1998), *Working Knowledge: How Organizations Manage what they Know*, Harvard Business School Press, Boston, MA.

Deegan, C. (2002), "Introduction: the legitimising effect of social and environmental disclosures – a theoretical foundation", *Accounting, Auditing & Accountability Journal*, Vol. 15 No. 3, pp. 282-311.

Donaldson, T. and Preston, L.E. (1995), "The stakeholder theory of the corporation: concepts, evidence, and implications", *Academy of Management Review*, Vol. 20 No. 1, pp. 65-91, available at: www.jstor.org/stable/258887 (accessed 17 November 2011).

Edvinsson, L. and Sullivan, P. (1996), "Developing a model for managing intellectual capital", *European Management Journal*, Vol. 14 No. 4, pp. 356-364.

Edvinsson, L. (1997), "Developing intellectual capital at Skandia", *Long Range Planning*, Vol. 30 No. 3, pp. 366-373.

Edvinsson, L. and Malone, M. (1997), *Intellectual Capital: Realizing Your Company's True Value by Finding its Hidden Brainpower*, Harper Collins, New York, NY.

Freeman, R.E. (1994), "The politics of stakeholder theory: some future directions", *Business Ethics Quarterly*, Vol. 4 No. 4, pp. 409-421.

Gandía, J.L. (2003), "Intangibles disclosure information on internet by multinational corporations", *The International Journal of Digital Accounting Research*, Vol. 3 No. 5, pp. 61-99.

García-Meca, E., Parra, I., Lárran, M. and Martínez, I. (2005), "The explanatory factors of intellectual capital disclosure to financial analysts", *European Accounting Review*, Vol. 14 No. 1, pp. 63-94.

Goh, P.C. (2005), "Intellectual capital performance of commercial banks in Malaysia", *Journal of Intellectual Capital*, Vol. 6 No. 3, pp. 385-396.

Guthrie, J. and Petty, R. (2000), "Intellectual capital: Australian annual reporting practices", *Journal of Intellectual Capital*, Vol. 1 No. 3, pp. 241-251.

Guthrie, J., Petty, R. and Ricceri, F. (2006), "The voluntary reporting of intellectual capital: comparing evidence from Hong Kong and Australia", *Journal of Intellectual Capital*, Vol. 7 No. 2, pp. 254-271.

Guthrie, J., Petty, R. and Ricceri, F. (2007), "Intellectual capital reporting investigations into Australia and Hong Kong", Institute of Chartered Accountants of Scotland, Edinburgh.

Guthrie, J., Ward, L. and Cuganesan, S. (2008), "Intellectual capital reporting media in an Australian industry", *International Journal of Learning and Intellectual Capital*, Vol. 5 No. 1, pp. 48-62.

Haji, A. and Mubaraq, S. (2012), "The trends of intellectual capital disclosures: evidence from the Nigerian banking sector", *Journal of Human Resource Costing & Accounting*, Vol. 16 No. 3, pp. 184-209.

Hambrick, D. (1981), "Strategic awareness within top management teams", *Strategic Management Journal*, Vol. 2 No. 3, pp. 263-279.

Herrera-Rodriguez, E.E. and Macagnan, C.B. (2012), "Nivel de transparência de recurso intangibles de los bancos: Panamá, Brasil y España", *Proceedings of Tourism and Management Studies International Conference Algarve*, *Vol. 3*, *21-24 November*, pp. 731-761.

IADE-CIC (2003), "Model for the measurement and management of intellectual capital: Intellectus Model", Documentos Intellectus 5, Universidad Autónoma de Madrid, Madrid.

Joshi, M. and Ubha, D. (2009), "Intellectual capital disclosures: the search for a new paradigm in financial reporting by the knowledge sector of Indian economy", *Electronic Journal of Knowledge Management*, Vol. 7 No. 5, pp. 575-582.

Joshi, M., Cahill, D. and Sidhu, J. (2010), "Intellectual capital performance in the banking sector: an assessment of Australian owned banks", *Journal of Human Resource Costing and Accounting*, Vol. 14 No. 2, pp. 151-170.

Kamath, G.B. (2007), "The intellectual capital performance of Indian banking sector", *Journal of Intellectual Capital*, Vol. 8 No. 1, pp. 96-123.

Kaplan, R.S. and Norton, D.P. (2004), *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*, Harvard Business School Press, Boston, MA.

Khan, H. and Ali, M. (2010), "An empirical investigation and users' perceptions on intellectual capital reporting in banks", *Journal of Human Resource Costing & Accounting*, Vol. 14 No. 1, pp. 48-69.

Kim, P., Buffart, M. and Croidieu, G. (2016), "TMI: signaling credible claims in crowdfunding campaign narratives", *Group and Organization Management*, Vol. 41 No. 6, pp. 717-750, doi: 1059601116651181.

Krippendorff, K. (1990), *Metodología de análisis de contenido. Teoría y práctica*, Paidós Comunicación, Barcelona.

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Lev, B. (2001), "Intangibles: management, measurement, and reporting", Brookings Institute Press, Washington, DC.

Li, J., Pike, R. and Hannifa, R. (2006), "Intellectual capital disclosures in corporate annual reports: a European comparison", Working Paper Series No. 06/24, Bradford University School of Management.

Linlin, C., Eric, T. and Benny, C. (2013), "A critical analysis of intellectual capital reports in banking industry from 1994 to 2011", *Proceeding of the 10th International Conference on Intellectual Capital, Knowledge Management and Organisational Learning, Washington, DC, 24-25 October*, pp. 667-673.

Lipunga, A. (2013), "Visualization of Intellectual capital disclosures in annual reports of commercial banks of Malawi", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 5 No. 3, pp. 155-169.

Lymer, A. (1999), "The Internet and the future of corporate reporting in Europe", *European Accounting Review*, Vol. 8 No. 2, pp. 289-301.

Marston, L. and Polei, A. (2004), "Corporate reporting on the internet by German companies", *International Journal of Accounting Information System*, Vol. 5 No. 3, pp. 285-311.

Matos, F. (2013), "A theoretical model for the report of intellectual capital", *The Electronic Journal of Knowledge Management*, Vol. 11 No. 4, pp. 339-360.

Mavridis, D.G. (2004), "The intellectual capital performance of the Japanese banking sector", *Journal of Intellectual Capital*, Vol. 5 No. 1, pp. 92-115.

Mavridis, D.G. (2005), "Intellectual capital performance drivers in the Greek banking sector", *Management Research News*, Vol. 28 No. 5, pp. 53-62.

Meer-Kooistra, J. and Zijlstra, S.M. (2001), "Reporting on intellectual capital", *Accounting, Auditing & Accountability Journal*, Vol. 14 No. 4, pp. 456-476.

Mention, A.-L. (2011), "Exploring voluntary reporting of intellectual capital in the banking sector", *Journal of Management Control*, Vol. 22 No. 3, pp. 279-309.

Mention, A. and Bontis, N. (2013), "Intellectual capital and performance within the banking sector of Luxembourg and Belgium", *Journal of Intellectual Capital*, Vol. 14 No. 2, pp. 286-309.

Mertins, K., Alwert, K. and Will, M. (2006), "Measuring intellectual capital in European SME", in Tochtermann, K. and Maurer, H. (Eds), *Proceedings of I-KNOW '06, 6th International Conference on Knowledge Management, Graz*, pp. 21-25.

Mouritsen, J. (2006), "Problematising intellectual capital research: ostensive versus performative IC", *Accounting, Auditing & Accountability Journal*, Vol. 19 No. 6, pp. 820-841.

Muhammad, N. and Ismail, M. (2009), "Intellectual capital efficiency and firm's performance: study on Malaysian financial sectors", *International Journal of Economics and Finance*, Vol. 1 No. 2, pp. 206-212.

OECD (2006), "Intellectual assets and value creation: implications for corporate reporting", available at: www.oecd.org/dataoecd/2/40/37811196.pdf (assessed April 2016).

Orens, R., Aerts, W. and Lybaert, N. (2009), "Intellectual capital disclosure, cost of finance and firm value", *Management Decision*, Vol. 47 No. 10, pp. 1536-1554.

Parker, L. (2007), "Financial and external reporting research: the broadening corporate governance challenge", *Accounting and Business Research*, Vol. 37 No. 1, pp. 39-54.

Petty, R. and Guthrie, J. (1999), "Managing intellectual capital – from theory to practice", *Australian CPA*, Vol. 69 No. 7, pp. 18-21.

Petty, R. and Guthrie, J. (2000), "Intellectual capital literature review: measurement, reporting and management", *Journal of Intellectual Capital*, Vol. 1 No. 2, pp. 155-176.

Quinteiro, C.E. (2009), "Evidenciação do capital intelectual em bancos abertos no Brasil e na Espanha", Master Tesis, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo.

Ramadan, M. and Majdalany, G. (2013), "The impact of corporate governance indicators on intellectual capital disclosure: an empirical analysis from the banking sector in the United Arab Emirates", *Proceedings of the 5th European Conference on Intellectual Capital: ECIC, Bilbao, 11-12 April*, pp. 351-361.

Razak, R., Mohammad, J. and Tobiagi, S. (2016), "Intellectual capital disclosures practices and intellectual capital performance in Saudi Arabia financial institution", *Journal of Business Studies Quarterly*, Vol. 7 No. 4, pp. 1-14.

Sahrawat, K. (2008), "Intellectual capital: acquisition and maintenance: the case of New Zealand banks", *Journal of Internet Banking and Commerce*, Vol. 13 No. 1, pp. 1-32.

Saint-Onge, H. (1999), "Tacit knowledge: the key to the strategic alignment of intellectual capital", in Zack, M.H. (Ed.), *Knowledge and Strategy*, Butterworth-Heinemann, Woburn, MA, pp. 223-230.

Shih, K., Chang, C. and Lin, B. (2010), "Assessing knowledge creation and intellectual capital in banking industry", *Journal of Intellectual Capital*, Vol. 11 No. 1, pp. 74-89.

Shih, K., Chang, C. and Lin, B. (2011), "Assessing the quality gap of intellectual capital in banks", *Total Quality Management & Business Excellence*, Vol. 22 No. 3, pp. 289-303.

Serenko, A. and Bontis, N. (2013), "Investigating the current state and impact of the intellectual capital academic discipline", *Journal of Intellectual Capital*, Vol. 14 No. 4, pp. 476-500.

Sharma, M. (2013), "Web-based disclosures and their determinants: evidence from listed commercial banks in Nepal", *Accounting and Finance Research*, Vol. 2 No. 3, pp. 1-13, available at: www.sciedupress.com/journal/index.php/afr/article/viewFile/2871/1700

Stewart, T.A. (1997), *Intellectual Capital: The New Wealth of Organizations*, Doubleday, New York, NY.

Singh, S. and Kansal, M. (2011), "Voluntary disclosures of intellectual capital: an empirical analysis", *Journal of Intellectual Capital*, Vol. 12 No. 2, pp. 301-318.

Striukova, L., Unerman, J. and Guthrie, J. (2008), "Corporate reporting of intellectual capital: evidence from UK companies", *The British Accounting Review*, Vol. 40 No. 4, pp. 297-313.

Suchman, M.C. (1995), "Managing legitimacy: strategic and institutional approaches", *Academy of Management Review*, Vol. 20 No. 3, pp. 571-610.

Sveiby, K. (1997), *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, Berrett-Koehler, Brisbane.

Unerman, J., Guthrie, J. and Striukova, L. (2007), *UK Reporting of Intellectual Capital*, Institute of Chartered Accountants of England and Wales, London.

Vergauwen, P.G.M.C. and van Alem, F.J.C. (2005), "Annual report: IC disclosure in The Netherlands, France and Germany", *Journal of Intellectual Capital*, Vol. 6 No. 1, pp. 89-104.

Walter, I. (2009), "Economic drivers of structural change in the global financial services industry", *Long Range Planning*, Vol. 42 Nos 5/6, pp. 588-613.

Wang, W., Lu, W. and Wang, Y. (2011), "The relationship between bank performance and intellectual capital in East Asia", *Quality & Quantity*, Vol. 47 No. 2, pp. 1041-1062.

Further reading

Campbell, D. and Abdul Rahman, M.R. (2010), "A longitudinal examination of intellectual capital reporting in marks & spencer annual reports, 1978-2008", *The British Accounting Review*, Vol. 42 No. 1, pp. 56-70.

Corresponding author
Maria do Rosário Meireles Ferreira Cabrita can be contacted at: m.cabrita@fct.unl.pt

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