Journal of Intellectual Capital

Relational capital disclosure, corporate reporting and company performance: Evidence from Europe

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Abstract

Purpose – The purpose of this paper is to analyse the content of relational capital disclosure (RCD) information communicated by a sample of European listed companies. It also investigates the links between RCD and certain corporate financial performance indicators.

Design/methodology/approach – This research did a cross-country analysis on a sample of 80 companies and a content analysis based on 51 items inherent to the relational capital (RC) framework of mandatory and voluntary reports. An RCD index has been used in certain bivariate and multivariate statistical analyses to investigate whether RCD is positively correlated to particular indicators adopted as proxies for measuring company performance.

Findings – The results show that RCD supports statistically significant relationships with revenues, net operating cash flow and capital expenditures. In contrast, there is no statistically significant association with enterprise value.

Research limitations/implications – This study evaluates the information disclosed in annual reports or other standalone reports, although companies might communicate such information using other information channels. The main caveat of this study is sample size; therefore, it could be insightful to extend this cross-country study.

Practical implications – The research could encourage preparers to improve the disclosure of specific items of RC and could offer useful suggestions to policymakers, for instance, to the European Commission, as it has recently announced new requirements for non-financial information reporting (Directive 2014/95/UE).

Originality/value – Given the crucial role of RC in company success and RCD's importance for the decision-making process, this study provides interesting insights into the debate on RC reporting's impacts on company performance.

Keywords Content analysis, Financial performance, Capital expenditure, Enterprise value, European listed companies, Relational capital disclosure

Paper type Research paper

Journal of Intellectual Capital
Vol. 17 No. 2, 2016
pp. 186-217

1469-1930
DOI 10.1108/JIC-07-2015-0065

1. Introduction

Since the early 1990s, research in the field of intellectual capital (IC) has used many definitions and terms to characterise IC or intangible assets (IAs). In different cross-disciplinary studies, scholars have identified IC or IAs as various resources,

properties and attributes, or as non-monetary assets that can generate value or future benefit (Choong, 2008). From a non-accounting perspective, several definitions have proposed a categorisation of IC into three components: structural capital, organisational capital and relational or external capital (Sveiby, 1997; Stewart, 1997; Edvinsson and Malone, 1997; Meritum, 2002; Bontis, 2002; Mouritsen *et al.*, 2002; Ordoñez de Pablos, 2003b; Marr and Adams, 2004). Drawing on its growing relevance to relational resources, such as customer relationships (Dyer and Singh, 1998; Srivastava *et al.*, 2001; Gulati *et al.*, 2002; Ordoñez de Pablos, 2003a; Khalifa, 2004; Duparc, 2012; Sussan, 2012) and social capital (Nahapiet and Ghoshal, 1998; OECD, 2002; Adler and Kwon, 2002; ADECCO, 2007; Arregle *et al.*, 2007; Zahra, 2010; Still *et al.*, 2013), this paper focuses primarily on relational capital (RC). Stewart (1997, p. 186) writes that "any company that has clients has client capital". In other words, RC refers to the knowledge embedded in the marketing channels and customer relationships that an organisation develops (Bontis, 1998).

However, RC refers not only to customer relationships but also to relationships with all external stakeholders. Recently, the International Integrated Reporting Council (IIRC, 2013) proposed a new categorisation that distinguishes between RC and social capital. Despite RC's crucial role in company value creation, this theme has not been disclosed in the mandatory annual reports or in other standalone reports drafted voluntarily by companies.

In response to this gap in disclosure, the paper seeks to:

(1) investigate how relational capital disclosure (RCD) features in corporate reports while distinguishing between information disclosed in mandatory and voluntary reports;

(2) understand how each European listed company considered in the sample may be sensitive to RCD to different extents;

(3) analyse the influences of specific environmental factors (i.e. the typology of the legal system); and

(4) examine the relationship between the RCD and certain corporate performance indicators.

The remainder of the paper is structured as follows. In Section 2, describes the literature on the associations between intellectual capital disclosure (ICD) and certain corporate variables. Sections 3 and 4 outlines the research hypotheses and the research methodology. In Section 5, the authors explain the sample selection and the data collection and presents the empirical findings. Finally, in Sections 6 and 7, the authors summarise and discuss the main results of the paper and depict the main study limitations and the future research implications of its findings.

2. Literature overview

In the past few decades, the steady growth of the importance of IAs has changed company profiles. Specifically, processes of generation and conservation of IAs have assumed particular importance, as they have come to be evaluated, both in terms of their intrinsic characteristics essential for the acquisition and maintenance of competitive advantage and, more generally, in relation to the company's ability to create value. IAs are thus identified as a crucial component of a company's success, as well as a main source of its competitive advantage (Porter, 1987; Itami, 1987; Hamel and Prahalad, 1990, 1994; Lev, 2004).

Therefore, it is essential to identify all the distinct IA types, since these represent pivotal resources for companies by enabling them to identify their so-called core competencies, i.e. unique unmatched or company-specific capabilities not owned by competitors (Hofer and Schendel, 1978; Teece *et al.*, 1997). One of these components is RC, which – along with human and structural capital – gives the term IC its traditional meaning.

The well-known threefold classification suggested by Sveiby and in many contexts, variously modified (Maines *et al.*, 2003; Marr and Adams, 2004), corresponds to a framework comprising three areas:

(1) human capital;

(2) structural or organisational capital; and

(3) RC (Sveiby, 1997; Meritum, 2002; Bontis, 2002).

RC is strictly dependent on human capital. RC can be considered as the result of human resource activities oriented towards building and managing the relationship between a company and its external environment.

RC encompasses the set of direct and indirect relationships established by a company with its stakeholders. A more extensive and specific definition is: "Relational Capital is defined as all resources linked to the external relationships of the firm, with customers, suppliers or R&D partners. It comprises that part of Human and Structural Capital involved with the company's relations with stakeholders (investors, creditors, customers, suppliers, etc.), plus the perceptions that they hold about the company. Examples of this category are image, customer loyalty, customer satisfaction, links with suppliers, commercial power, negotiating capacity with financial entities, environmental activities, etc." (Meritum, 2002, p. 11).

Undoubtedly, customers constitute the largest group of stakeholders in any company. In certain contexts, in fact, RC is identified (in the authors' view, reductively) as customer capital (Sussan, 2012), which is considered by managers as a principal driver of company revenues. Customer satisfaction/loyalty is regarded as a key lever by which to maintain or expand market share.

Many studies have proposed different definitions of IC and its three components: in particular, concerning RC (i.e. external capital) and social capital, some scholars deem it necessary to identify two different research fields (Still *et al.*, 2013), while other researchers use social and relational interchangeably or in association with each other (Nahapiet and Ghoshal, 1998). Indeed, RC is sometimes interpreted as a component of social capital, i.e. the "form of social capital embedded in business relationships" (Kohtamäki *et al.*, 2013, p. 73). The importance of social capital was recently confirmed by the definition proposed by the IIRC. This committee's preference for social and relationship capital, rather than RC, is inferable from the following statements: "The institution and the relationships within and between communities, groups of stakeholders and other networks, and the ability to share information to enhance individual and collective well-being. Social and relationship capital includes: 1) shared norms and common values and behaviours; 2) key stakeholders relationships, and the trust and willingness to engage that an organization has developed and strives to build and protect with external stakeholders; 3) intangibles associated with the brand and reputation that an organization has developed; and 4) an organization's social license to operate" (IIRC, 2013, p. 12) (Tables I and II).

Despite certain critical issues related to the categorisation of the various definitions proposed in the literature, relational/social capital differs significantly from structural

Author(s) year	Definitions of relational capital
Dyer and Singh (1998); Wathne and Heide (2004)	Relational capital in alliances refers to a relational rent generated in an exchange relationship that cannot be generated by either firm in isolation. It has been identified as a resource that is created through social network processes
Bontis (1999)	Relational capital represents the potential an organisation has due to ex-firm intangibles. These intangibles include the knowledge embedded in customers, suppliers, the government or industry associations
Gulati *et al.* (2002)	The value of firm's network of relationships with its customers, suppliers, alliance partners and employees
Ordoñez de Pablos (2003a, b)	Relational capital extends the definition of customer capital: it is a broader term that encompasses not only the value of customer relationships, but also the value of relationships with shareholders, governments, suppliers, competitors, research institutes, industry associations or other external networks linked into the organisational value chain
Luo *et al.* (2004)	Customer relationships is defined as customers' trust in and commitment to the firm. Customer trust and commitment reduce customer transaction uncertainty (e.g. customer avoidance of performance unpredictability, favourable interactions relative to service) and enhance meaningful affiliation, such as a customer's bond to a firm's brand, which binds the customer to future interactions
ADECCO (2007)	Relational capital is defined as an intangible asset that is based on developing, maintaining and nurturing high-quality relationships with any organisation, individual and group that influences or impacts your business, including customers, suppliers, employees, governments, partners, other stakeholders and even competitors
Welbourne and Pardo-del-Val (2009)	Relational capital is defined as the set of all relationships – market relationships, power relationships and cooperation – established between firms, institutions and people
Duparc (2012)	The dimension of relational capital has two sides: internal (relationships among employees) and external (relationships with stakeholders)
Abhayawansa and Guthrie (2014)	All resources linked to a firm's relationships with external stakeholders, including suppliers, customers, partners, government and the community plus the perceptions held about the firm by these stakeholders that can benefit the firm

Source: Own elaboration, adapted from Still *et al.* (2013, p. 421)

Table I. Definitions of RC (the list, which is not exhaustive, is in chronological order)

or organisational capital, because it is constituted by the network of relationships the company has with its external environment and thus differs from the other two components of IC, human and structural capital, which are internal to the company.

The knowledge embedded in customers, suppliers and governmental or related industry associations (Bontis, 1999) is more difficult to develop and to codify than the knowledge rooted in human and structural capital (Bontis, 1999). To improve the recognition and disclosure of a company's RC resources, the company's corporate reports must adequately communicate the use and the development of the three components of IC in the successful achievement of the company's objectives (Boedker *et al.*, 2005; Petty and Guthrie, 2000, Striukova *et al.*, 2008). RC is an IA that cannot be captured by mandatory financial accounting metrics (Beattie *et al.*, 2004; Petty and

Author(s) year	Definitions of social capital
Nahapiet and Ghoshal (1998)	Social capital is the sum of resources embedded within, available through and derived from the network of relationships by an individual or a social unit
OECD (2002)	Social capital is defined as the norms and social relationships embedded in the social structures of societies that enable people to co-ordinate action to achieve desired goals
Arregle *et al.* (2007)	Social capital refers to the goodwill and resources a firm amasses because of its connections and relationships with others
World Bank (2007)	Social capital refers to the institutions, relationships and norms that shape the quality and quantity of a society's social interactions. Social capital is not just the sum of the institutions that underpin a society, it is the glue that holds them together
Weber and Weber (2007)	Theories rooted in the concept of social capital focus on the significance of relationships as resources for social action. Their central proposition is that social networks (i.e. personal relationships) often develop over time, provide the basis for trust and cooperation, and constitute a valuable actual or potential that aids the conduct of social affairs and improves a company's economic performance
Zahra (2010)	Social capital plays a major role in building mutually beneficial relationships between companies, thereby enhancing value creation
Kohtamäki *et al.* (2013)	Social capital is generally understood to exist in social and interpersonal networks, bridging and bonding individual actors with societies

Table II. Definitions of social capital (the list, which is not exhaustive, is in chronological order)

Source: Own elaboration, adapted from Still *et al.* (2013, p. 421)

Guthrie, 2000; Petty *et al.*, 2008). Given the difficulties of disclosing many intangible resources in mandatory and voluntary financial and non-financial reporting (Striukova *et al.*, 2008), there is growing academic interest in alternative practices for ICD.

Focusing on RCD may cause difficulties and risks owing to the disclosure of sensitive information to competitors. In other words, this kind of disclosure can represent a threat to securing a competitive advantage (Beattie *et al.*, 2013). Furthermore, strong disincentives to RCD are the costs associated with reports preparation for both internal and external communication, as well as the risks related to potential litigation (Elliott and Jacobson, 1994). Owing to such critical issues, the propensity to engage in RCD seems problematic, and the effects concerning benefits may appear to be contradictory in terms of the creation or destruction of company value (Beattie *et al.*, 2013).

Some studies on the perceptions of preparers and senior managers of RCD reveal that the measurement, reporting and management of RC (and in general of IC) are underdeveloped. Furthermore, in broad terms, external reporting is not positively assessed (Chaminade and Roberts, 2003; Roslender and Fincham, 2004; Unerman *et al.*, 2007). The reluctance to engage in RCD derives from the fact that RCD is perceived as a potential threat that can weaken competitiveness (Günther and Beyer, 2003). Information concerning market outlook, product innovation and customer service is typically communicated within the firm, while mandatory RCD for external reporting remains comparatively limited.

The recognition by academics and practitioners over RC's crucial role in company success and its importance in facilitating decision making, both for internal and external purposes, has sparked a proliferation of studies on the measurement of the extent and the quality of information in mandatory and voluntary reporting.

Three strands of studies in the field of content analysis (CA) use RCD as a proxy to demonstrate RC's importance to a company's success and decision-making process. The first field refers to the investigation of RC and RCD within a single country (Guthrie and Petty, 2000; Brennan, 2001; Bontis, 2003; Bozzolan *et al.*, 2003; April *et al.*, 2003; Goh and Lim, 2004; Abeysekera and Guthrie, 2005; Abdolmohammadi, 2005; Unerman *et al.*, 2007, Li *et al.*, 2008; Campbell and Rahman, 2010). The second field pursues the same objectives, but with a cross-country approach (Bozzolan *et al.*, 2006; Vergauwen and van Alem, 2005; Vandemaele *et al.*, 2005, Guthrie *et al.*, 2006). The third field examines, again via CA, the quantity and quality of IC information in analysts' reports rather than in corporate annual reports (García-Meca, 2005; García-Meca and Martínez, 2007; Flöstrand, 2006; Orens and Lybaert, 2007). Despite the clear problems concerning the use of CA, the empirical results related to the quantity and quality of communication about RC indicate, in many cases, the considerably greater importance of RC information compared to the other two components (Abeysekera, 2006). This trend could be explained by the strong pressures caused by market globalisation and the increasing need for companies to enhance the disclosure of items such as distribution channels, value chains and customer relationships (April *et al.*, 2003).

A recent study of analyst reports in Australia shows similar results. The findings suggest that RC is the most extensively disclosed IC component and that brand is the most commonly used RC item (Abhayawansa and Guthrie, 2014).

However, the strengthening of this type of information is inadequately supported by detailed mandatory rules, despite its perception by managers as essential to increasing transparency in financial markets and raising stakeholder confidence (Beattie *et al.*, 2013).

Thus, the preparers use a narrative reporting form for voluntary disclosure, also considering RCD as a valuable marketing tool (van der Meer-Kooistra and Zijlstra, 2001). In particular, the external disclosure of RC can represent a valid instrument for enhancing corporate reputation and do affect how a company is perceived externally (Toms, 2002), with clear benefits in terms of improving perceptions of a company's image, honesty, sincerity and professionalism. The presence of a significant number of items related to RC within the report narrative may indicate a strong propensity by the company to provide information on its relationships with partners, suppliers and customers, the extent of its understanding and knowledge of partners, suppliers and customers, and the presence of alliances and licensing agreements (Sharabati *et al.*, 2010).

RCD can therefore positively affect different variables related to a company's financial performance and can drive value creation within it (Ashton, 2005). Studies on IC value's relevance also showed that certain items of IC have a stock price impact in isolation. Concerning RC, brand values and brand quality (Barth *et al.*, 1998; Kallapur and Kwan, 2004), customer satisfaction (Fornell *et al.*, 2006), customer base and penetration (Amir and Lev, 1996) and alliances, among others, are considered to be value relevant. Thus, there is a growing interest in highlighting the contribution of ICD and particularly of RCD, to company financial performance (Luo *et al.*, 2004; Chen *et al.*, 2005; Tan *et al.*, 2007; Salehi *et al.*, 2014).

To this end, this study provides useful insights into the ongoing debate on RCD's effects on company performance. The paper investigates this research question with a cross-country analysis in the European context based on both mandatory and voluntary reports (Table III).

Author(s) year	References	IC and financial/market variables
Bontis (1998)	"Intellectual capital: an exploratory study that develops measures and models", *Management Decision*, Vol. 36, No. 2, pp. 63-76	Application of ICAP model: dimensions of IC and business performance
Chang (2004)	"The study of relationships among intellectual capital, business performance and business value for the biotechnology industry in Taiwan", *Management Decision*, Vol. 36, No. 2, pp. 63-76	Associations between innovation capital and business performance in the biotechnology industry
Baum and Silverman (2004)	"Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups", *Journal of Business Venturing*, Vol. 19, No. 3, pp. 411-436	Associations between components of IC and venture capital firm's decisions and performance
Luo *et al.* (2004)	"The effects of customer relationships and social capital on firm performance: a Chinese business illustration", *Journal of International Marketing*, Vol. 12, No. 4, pp. 25-45	Associations between customer relationships/social capital and company performance (i.e. sales growth and ROI)
Tan *et al.* (2007)	"Intellectual capital and financial returns of companies", *Journal of Intellectual Capital*, Vol. 9, No. 1, pp. 76-95	Associations between IC and financial performance
Rudez and Mihalic (2007)	"Intellectual capital in the hotel industry: a case study from Slovenia", *International Journal Hospitality Management*, Vol. 26, No. 1, pp. 188-199	Effects of the components of IC on financial performance of the Slovenian hotel industry
García-Meca and Martínez (2007)	"The use of intellectual capital information in investment decisions: an empirical study using analyst reports", *The International Journal of Accounting*, Vol. 42, No. 1, pp. 57-81	Associations between IC disclosure and corporate profitability
Richieri *et al.* (2008)	"Intellectual capital and the creation of value in Brazilian companies", available at: http://ssrn/abstract = 1081849 (accessed August 2014)	Associations between intangible value and intellectual capital efficiency and ROE, ROA and ROS
Yang and Kang (2008)	"Is synergy always good? Clarifying the effect of innovation capital and customer capital on firm performance in two contexts", *Technovation*, Vol. 28, No. 10, pp. 667-678	Associations between innovation capital and customer capital on financial performance
Hsu and Fang (2009)	"Intellectual capital and new product development performance: the mediating role of organizational learning capability", *Technological Forecasting & Social Change*, Vol. 76, No. 5, pp. 664-677	Relationships between intellectual capital and new development product performance
Ting and Lean (2009)	"Intellectual capital performance of financial institutions in Malaysia", *Journal of Intellectual Capital*, Vol. 10, No. 4, pp. 588-599	Associations between intellectual capital performance (VAIC) and financial performance (ROA) in a sample of Malaysian companies

Table III.
Association between IC/RC and financial/market variables: an overview (the list, which is not exhaustive, is in chronological order)

(*continued*)

Author(s) year	References	IC and financial/market variables
Nogueira *et al.* (2010)	"Intellectual capital and profitability in the leather set up, leather artifacts, travelling products and footwear sector in Brazil", available at: http://ssrn.com/abstract=1567584 (accessed August 2014)	Associations between IC and profitability in Brazilian companies
Zeghal and Maaloul (2010)	"Analyzing value added as an indicator of intellectual capital and its consequences on company performance", *Intellectual Capital*, Vol. 11, No. 1, pp. 39-60	IC's effect on economic, financial and stock market performance of UK companies
De Barros *et al.* (2010)	"Intangible assets and value creation at Brazilian companies: an application for the Brazilian textile manufacturing sector", available at: http://ssrn.com/abstract=1567570 (accessed August 2014)	Relationships between IC and value creation
Wagiciengo and Belal (2011)	"Intellectual capital disclosures by South African companies: a longitudinal investigation", *Advances in Accounting*, Vol. 28, No. 1, pp. 111-119	IC disclosure in South African companies
Abdullah and Sofian (2012)	"The relationship between intellectual capital and corporate performance", *Procedia-Social and Behavioral Sciences*, Vol. 40, No. 3, pp. 537-541	Associations between IC and corporate performance of Malaysian publicly listed companies
Mosavi *et al.* (2012)	"A study of relations between intellectual capital components, market value and finance performance", *African Journal of Business Management*, Vol. 6, No. 4, pp. 1396-1403	Relationships between the components of IC and market value and financial performance
Mehralian *et al.* (2013)	"Prioritization of intellectual capital indicators in knowledge-based industries: evidence from pharmaceutical industry", *International Journal of Information Management*, Vol. 33, No. 3, pp. 209-216	Associations between structural capital, investment ratios and R&D
Salehi *et al.* (2014)	"The relationship between intellectual capital with economic value added and financial performance", *Iranian Journal of Management Studies*, Vol. 7, No. 2, pp. 259-283	Independent variables: VAIC, EVA, HC efficiency, RC efficiency, SC efficiency IC efficiency, dependent variable: return on assets (ROA)

Source: Own elaboration

Table III.

3. Research hypotheses development

Prior literature has demonstrated a relationship between RC and financial performance (Ashton, 2005). In particular, some studies have shown that certain items of IC have a stock price impact in isolation. Furthermore, concerning the RC, researchers have recognised the value relevance of brand values and brand quality (Barth *et al.*, 1998; Kallapur and Kwan, 2004), customer satisfaction (Ittner and Larcker, 1998; Yeung and Ennew, 2001; Fornell *et al.*, 2006), customer base and penetration (Amir and Lev, 1996) and alliances. Other studies have shown the relationship between RC and company profitability, highlighting the importance of firm relationships and network for company success and growth (Holland, 1999; Guthrie *et al.*, 2006; Davey *et al.*, 2009; Kianto and Waajakoski, 2010; Hormiga *et al.*, 2011). Thus, there is a growing interest in understanding

RCD's contribution to specific company performance (Luo *et al.*, 2004, Chen *et al.*, 2005; Tan *et al.*, 2007; Salehi *et al.*, 2014). In this regard, the current research considers company performance, looking at: the revenue levels; the enterprise value, as a proxy of the company market value; the net operating cash flow; and the capital expenditure. In particular, building on legitimacy theory, it is insightful to suppose that RCD has a positive relationship on company performance, increasing the company's legitimacy towards its stakeholders. Previous studies have suggested that firms may use voluntary and mandatory disclosure to highlight their commitment to operating in ways that are consistent with social values and stakeholder expectations (Guthrie and Parker, 1989; Lindblom, 1994; Guthrie *et al.*, 2005; Abeysekera and Guthrie 2005; Petty and Cuganesan, 2005; Whiting and Miller, 2008). Furthermore, having strong relationships with customers, suppliers, banks, institutions and other stakeholders represents a value source for competitive advantage for a company (Dyer and Singh, 1998). Communicating the existence of these consolidating relationships can stimulate a virtuous circle that can improve a company's reputation and legitimacy in the internal and the external environment. Indeed, company disclosure can be considered a means by which management can influence external perceptions of the organisation (Deegan, 2002; Ousama *et al.*, 2011) by affecting market actors (Unerman *et al.*, 2007). Thus, the dissemination of information about customer trust, customer satisfaction, brand loyalty, corporate image and reputation, business collaborations and licensing agreements, alliances within several networks should therefore produce immediate effects on company performance (Bontis, 1998; Cabrita and Bontis, 2008; Namvar *et al.*, 2010; Sharabati *et al.*, 2010; Steinfield *et al.*, 2010; Kamukama *et al.*, 2011; Mehdivand *et al.*, 2012).

Recent surveys about RC's role have analysed how this type of capital, particularly the dimension related to the customers, can create value within the company and how a positive association between RC and company performance can be demonstrated. The presence of strong customer relationships in terms of customer trust, satisfaction and commitment can increase a company's legitimacy and reputation, and can reduce customer transaction uncertainty (Srivastava *et al.*, 2001; Luo *et al.*, 2004). The presence of social capital characterised by relationships, alliances, networks, cooperative behaviour and synergies with various public and private business partners can increase efficiency and company legitimacy, and can help a company to achieve or maintain a sustainable competitive advantage (Peng and Luo, 2000). Furthermore, the development of such relationships can positively influence company sales, because customers may become more likely to spend more money (O'Brien and Jones, 1995) and can generate positive word of mouth (Reichheld and Teal, 1996), increasing the company's customer portfolio size and volume (Oliver, 1999; Han *et al.*, 1998; Narver and Slater, 1990). Thus, the following hypothesis is formulated:

H1. RC is positively related to revenues.

Prior studies (Chen, 2006) have shown that firms high in ICD are considered to be of high value by external stakeholders. In particular, the literature has recognised strong relationships between IC and ICD and company market value (Edvinsson and Malone, 1997; Riahi-Belkaoui, 2003; Firer and Mitchell Williams, 2003; Bozbura, 2004; Abdolmohammadi, 2005). With a specific focus on RC, it is widely believed that companies with strong relationships are able to gain resources that are important for competitive advantage and that these relationships can increase the market share's value (Park and Luo, 2001). The literature has recognised that IC can improve: a company's reputation within the market; income level; access to technology; innovation

level; the extent of barriers to entry for potential competitors, with positive consequences for company value (Mhedhbi, 2013). Thus, strong relationships with stakeholders can enhance company reputation and legitimacy, with a significant influence on external stakeholders' perceptions of a firm, increasing its market value. Building on these considerations, the authors posit:

H2. RC is positively related to enterprise value.

IC is also important to create business partner relationships that can serve as company competitive resources (Dubini and Aldrich, 1991; Holm *et al.*, 1999; Peng and Luo, 2000). In particular RC, especially the relationships with suppliers and other external partners, can help a firm to obtain legitimacy and to improve its bargaining power, to reduce the likelihood of opportunistic behaviours by suppliers and other stakeholders (Morgan and Hunt, 1994), to strengthen the company's position concerning distribution channels (Peng and Luo, 2000), and to reduce the overall costs of production (Dyer and Singh, 1998), with positive effects on company working capital and liquidity level. Furthermore, Srivastava *et al.* (1998) demonstrated that different items of RC, such as customer relationships, channel relationships and partner relationships can enhance cash flows, and can reduce cash flow volatility and vulnerability, with a positive influence on company value. Thus, the authors hypothesise:

H3. RC is positively related to net operating cash flow.

RC allows a firm to expand its network in the external environment (Pfeffer and Salancik, 2003) and plays a crucial role in facilitating access to strategic information and opportunities, improving environmental scanning and awareness of other firms' operations and activities (Pfeffer and Coote, 1991; Useem, 1984; Burt, 1983). It can also ensure access to specific know-how and complementary skills (Kale *et al.*, 2000; Eisenhardt and Schoonhoven, 1996). In this sense, RC can help a company to become aware of many investment opportunities, which can increase its competitiveness. Furthermore, the legitimacy a firm gains in the external environment via the disclosure of its stakeholder relationships can enhance the company's willingness to invest in strategic activities. On the basis of these considerations, it is hypothesised that:

H4. RC is positively related to capital expenditures (Capex).

4. Research design/methodology

The methodology adopted in this paper is CA (Weber, 1990; Krippendorff, 2008, 2013). Hayes and Krippendorff (2007, p. 77) defined CA as "a systematic interpretation of textual, visual, or audible matter, such as newspaper editorials, television news, advertisements, public speeches, and other verbal and nonverbal units of analysis". CA is particularly useful in textual analysis and can be considered a valid instrument to analyse the narrative aspect of economic-financial reports, sustainability reports or other reports that provide non-financial information. Using CA it is possible to classify a text into lexical or semantic groups based on a set of conceptual frameworks that measures specific lexical items in terms of quantity and quality (kind, magnitude and frequency of data).

Previous studies have used CA to measure external disclosure (Beattie *et al.*, 2004; Beattie and Thomson, 2007), building a disclosure scoring system (Robb *et al.*, 2001; Vanstraelen *et al.*, 2003). In this field, a primary opportunity to apply CA is measuring ICD, focusing on IAs (April *et al.*, 2003; Bozzolan *et al.*, 2003; Guthrie *et al.*, 2004;

Abeysekera, 2006; Beattie and Thomson, 2007; De Silva *et al.*, 2014). To analyse ICD, scholars have used from a minimum of 22-24 items up to more than 100 items, classified into three categories: structural capital, RC and human capital (Guthrie and Petty, 2000; Brennan, 2001; Abeysekera and Guthrie, 2005).

Despite the important contribution CA offers in the analysis of the narrative parts of company reports, it suffers of some critical aspects. The main problems concern:

- the units of textual analysis (i.e. words, sentences, groups of sentences, paragraphs, number of pages);
- the identification of the suitable framework, i.e. the number and type of lexical units that require monitoring in the narrative part of a report;
- the documents to be analysed;
- the search typology (i.e. manually or via statistical software); and
- the disclosure rating (i.e. by dummies or frequency counts).

However, to achieve high reliability and objective results, CA should be performed by specific software. Furthermore, certain tests should be conducted (Milne and Adler, 1999; Krippendorff, 2008, 2013).

Regarding these recommendations, the authors performed CA using the software TaLTac to make the study repeatable and to avoid mistakes resulting from human error in the codification process.

The authors conducted a cross-country analysis based on a sample of 80 European listed companies. The following countries were included: France, Germany, Italy and the UK. From a methodological perspective, CA was carried out by considering 51 items inherent to the RC framework for mandatory and voluntary reports. Then, an RCD index was built, and its reliability was measured by calculating Cronbach's coefficient α (Cronbach, 1951; Carmines and Zellner, 1979). This disclosure index was applied in certain bivariate and multivariate statistical analyses to investigate the aforementioned research question. Specifically concerning the bivariate analyses, the Mann-Whitney non-parametric test was used to verify the presence of significant differences, in terms of specific environmental factors (i.e. the typology of legal systems) and of sensitivity to the RCD among the European countries in the sample. Afterwards, concerning the multivariate analyses, four ordinary least squares (OLS) regression models were run; each incorporates a lag of two years between the independent variables and the dependent one. The latter refers to the 2013 financial year, while the independent variables refer to the 2011 financial year. In other words, the study examined, in depth, RCD's influence on company performance over two years, starting in 2011 (i.e. relative to 2012-2013). To tackle heteroskedasticity and auto-serial correlation problems, and thus to safeguard the reliability of OLS regression models, the Newey-West (HAC) method (Wooldrige, 2009) was applied to determine the robust standard errors. Another robustness test was computed (i.e. the Breusch-Godfrey serial correlation Lagrange multiplier (LM) test) to establish a stronger reliability of empirical results.

The key independent variable of this study is RC. The authors measured it by building an index. In particular, drawing on the literature review and adopting the CA, the authors first identified and then detected the items reported in the following table (Table IV).

To limit researcher team subjectivity, each item was assigned a value of 1 when, from the CA, there was at least one occurrence, otherwise 0. Therefore, for each

Item	Category
Acquaintance with community	ALA
Acquaintance with government	ALA
Acquaintance with suppliers	R.PSC
Basic marketing capability/ies	K.PSC
Brand(s)	K.PSC
Business collaborations	R.PSC
Client profile(s)	K.PSC
Collaboration(s)	ALA
Commercial power	R.PSC
Competitive intelligence	K.PSC
Competitor(s)	K.PSC
Connectivity	K.PSC
Corporate image and reputation	K.PSC
Customer knowledge	K.PSC
Customer loyalty	K.PSC
Customer names	K.PSC
Customer relationship(s)	R.PSC
Customer reputation	K.PSC
Customer satisfaction	K.PSC
Customer(s)	R.PSC
Diffusion	R.PSC
Distribution	R.PSC
Distribution channel(s)	R.PSC
Environmental activity/ies	ALA
External contracts	ALA
Favourable contracts	ALA
Financial contracts	ALA
Financial relations	ALA
Franchise agreements	ALA
Government and other relationships	ALA
Image	R.PSC
Intensity	R.PSC
Joint ventures	ALA
Knowledge of community	K.PSC
Knowledge of government	K.PSC
Knowledge of suppliers	K.PSC
Licensing agreement(s)	ALA
Links with suppliers	R.PSC
Market intensity	K.PSC
Market share	K.PSC
Mergers and acquisitions	ALA
Negotiating capacity with financial entities	ALA
Networking	ALA
New strategic customer(s)	R.PSC
Private-public partnership(s)	ALA
Reputation	R.PSC
Research collaborations	ALA
Stakeholder(s)	ALA
Strategic alliance(s)	ALA
Subsidiaries and associates	ALA
Suppliers knowledge	K.PSC

Notes: R.PSC, relationships with partners, suppliers and customers; K.PSC, knowledge about partners, suppliers and customers; ALA, alliances, licensing and agreements
Sources: Own elaboration and Sharabati *et al.* (2010)

Table IV.
RC: items and categories

observation included in the sample, the index inherent to the RC can range from 0 (i.e. the minimum value) to 51 (i.e. the maximum value). After standardising the data, the authors verified the RC index's reliability by calculating Cronbach's coefficient α, which was 0.68. Based on previous studies (Lang and Lunholm, 1993; Ahmed, 1995; Botosan, 1997), the latter coefficient can be considered appropriate to specify the RC. The RC index code is *RC_Index*.

The other two independent variables are closely related to the aim of facilitating a cross-country analysis. To capture the presence of significant differences between the sample countries' legal systems, the authors used a dummy variable, *Common_Law*. It assumes a value of 1 when the country adopts a common law system, and 0 otherwise. Applying the Mann-Whitney non-parametric test between the *RC_Index* and the present dummy variable rendered a statistically significant result ($Z = -1.812$; p-value $= 0.070$). Thus, it is useful to investigate the country legal system's role in negotiating the relationship between the RC and certain dependent variables.

The second independent variable inherent to the cross-country analysis concerns government effectiveness, which is coded as *Government_Effectiveness*. The authors collected data pertinent to this variable from the Worldwide Governance Indicators data set, owned by the World Bank Group. This database covers 1996-2012. Government effectiveness appears fitting for empirical analysis of this study because, among others, it pertains to some distinctive characteristics of a legal system, such as the "[…] independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (World Bank Group, 2013). The present variable, which captures the vote attributed to each country, ranges from −2.5 (weak) to 2.5 (strong).

For the so-called control variable, the authors selected the total assets to consider company context conditions (Scherer, 1980; Kasznik and Lev, 1995). Furthermore, the authors computed the (natural) logarithm and they assigned the code *Ln_total_assets*.

The first dependent variable is amenable to the annual revenue, as it is able to capture the company's desire to grow by interacting with its customers (e.g. customer satisfaction, customer knowledge). This variable is coded as *Revenues*.

In this research design, the second independent variable is ascribable to the enterprise value. Building on previous empirical studies (Sudarsanam *et al.*, 2006; Tan *et al.*, 2007), it is insightful to examine the relationship between the RC and corporate value in depth[1]. Hence, this independent variable is coded *Enterprise_Value*.

The third and fourth independent variables are the net operating cash flow and the capital expenditure (henceforth Capex), respectively. Both were selected since they are considered adequate proxies for measuring financial performance (Weir *et al.*, 2002; Boesso and Michelon, 2010). These variables are coded as follows: *Net_Operating_Cash Flow* and *Capex*.

Sample selection

The initial sample comprised the 80 largest listed companies in terms of market capitalisation in Germany, France, the UK and Italy. Specifically, European countries with the highest gross domestic product were selected (World Bank Group, 2007). Despite many other factors (e.g. cultural differences, pre-2005 GAAP differences, stock market features and so on), the similar high GDP level was the crucial criterion for analysing and comparing these countries. The choice for the largest companies in terms of market capitalisation stems from their greater influence on equity markets (Cairns *et al.*, 2011). Furthermore, some studies indicate that the corporate disclosure

level is positively related to company size, since large companies possess more financial resources (Kang and Gray, 2011), and the largest companies are more focused on improving governance and managerial practices. Studies on corporate reporting disclosure (including ICD) show the same size effect (Ahmed and Courtis, 1999).

The authors also decided to exclude financial companies such as banks, insurers and real estate firms. According to some scholars (Graham and King, 2000; Dahmash *et al.*, 2009; Kvaal and Nobes, 2010), such exclusion is rooted in the different rules regarding legislation for certain accounting items that are specific to this industry. The accounting data were obtained from FactSet.

Data collection

CA was performed on the basis of the following documents:

(1) annual reports; and

(2) other forms of corporate reporting.

The annual report is one of the most important communication tools for companies and the capital markets (Abdolmohammadi, 2005; Abeysekera, 2006; Guthrie *et al.*, 2004). Narrative sections provide opportunities to disclose non-financial information and to establish the company's business model (Roslender and Wilson, 2008). However, scholars have argued that a CA of the annual report is insufficient to accurately estimate the impact of communication on non-financial performance. They held that an exclusive reliance on the CA can lead to irrelevant or misleading results (Unerman, 2000; Striukova *et al.*, 2008). Thus, to analyse mandatory disclosure, the authors conducted a CA of the annual report. Furthermore, to analyse voluntary disclosure, they carried out a CA of other additional reports that conveyed non-financial information.

In other words, for each disclosure type, the present study considered the following reports:

(1) mandatory reports – annual report; and

(2) voluntary reports, such as the social and environmental report, human rights internal guide, corporate social responsibility report and code of business conduct and ethics.

Each report was downloaded from the company website. For each report, a .pdf version was downloaded and then converted into a .txt file, the format accepted by TaLTac2 software. The authors then tabulated the CA results using Excel. The quantity of RC items and benchmark assessment of the companies' RCD is presented in tables, to facilitate analysis.

The final sample comprised 73 companies. Seven companies were excluded for the following reasons:

(1) in one case, company reports did not provide results in terms of the CA; and

(2) in the other six cases, financial information for 2013 was unavailable in the FactSet database.

5. Empirical findings

Table V presents the descriptive statistics. The variable *RC_Index* ranges from 0 to 23. Thus, in no case did RC cover all the items considered in the research design of this study.

Model 1 is statistically significant, with an *F*-statistic well below the value of 0.001. R^2 equals 0.4104[2] (Table VI).

In Table VII, once can see the scant risk of multicollinearity problems, since the variance inflation factors (VIFs) are always below 1.5. Some scholars recommend that this critical threshold be 10 (Neter *et al.*, 1983; Gujarati, 2004).

Although the Newey-West method allowed to tackle the heteroskedasticity and auto-serial correlations problems, it has also been ran the Breusch-Godfrey serial correlation LM test (Greene, 2000) to further verify the findings' reliability. Given that the Prob. *F*-statistic is greater than 0.05, the OLS regression model's assumptions are not violated (Studenmund, 2001) (Table VIII).

Table V.
Descriptive statistics

	n	Min.	Max.	Mean	SD
RC_Index	73	0	23	13.95	3.98
Common_Law	73	0	1	0.21	0.41
Govern_Effectiveness	73	0.38	1.55	1.21	0.49
Ln_total_assets	73	3.35	12.69	10.31	1.55
Revenues	73	18.82	285,576.10	39,549.84	48,732.69
Enterprise_Value	73	11.27	138,988.39	46,463.10	40,854.02
Net_Operating_Cash Flow	73	−2,132.00	21,473.00	4,206.32	4,463.49
Capex	73	0.53	22,400.00	3,260.34	4,528.73

Table VI.
OLS regression analysis results – Model 1

Dependent variable: *Revenues*	Coefficient	Robust SE	*t*-statistic	Prob.
RC_Index	0.154	892.559	2.116	0.038*
Common_Law	0.155	15,578.590	1.188	0.239
Government_Effectiveness	0.093	8,201.500	1.136	0.260
Ln_total_assets	0.564	3,892.576	4.538	0.000***
R^2	0.4104			
F-statistic	11.832			
Prob. (*F*-statistic)	0.0000***			

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table VII.
Robustness tests: multicollinearity – Model 1

	VIFs
RC_Index	1.032
Common_Law	1.357
Government_Effectiveness	1.467
Ln_total_assets	1.159

Table VIII.
Robustness tests: serial correlations – Model 1

	F-statistic	Prob. *F*-statistic
Breusch-Godfrey serial correlation LM test	1.273	0.287

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Notably, the RC positively affects revenues. Thus, the results are consistent with *H1*.

Table IX presents the results inherent to the second OLS regression model. The *F*-statistic is less than 0.001, while R^2 equals to 0.5539.

Multicollinearity problems are irrelevant, as VIFs values are less than the aforementioned critical threshold (see Table X).

The following table shows that the results are reliable, since the LM test exhibits a probability *F*-statistic greater than 0.05 (Table XI).

In other words, Model 2 shows that RC's effect on enterprise value is not statistically significant (β standardised coefficient: 0.077; *p*-value $= 0.498$). Thus, *H2* is rejected.

Table XII highlights the findings pertinent to the third OLS regression model. The *F*-statistic is less than 0.001, and R^2 equals 0.5833.

Dependent variable: *Enterprise_Value*	Coefficient	Robust SE	*t*-statistic	Prob.
RC_Index	0.077	1,155.954	0.681	0.498
Common_Law	0.156	6,754.832	1.948	0.055****
Government_Effectiveness	0.683	3,626.050	4.949	0.000***
Ln_total_assets	0.077	1,155.954	0.681	0.498
R^2	0.5539			
F-statistic	21.109			
Prob. (*F*-statistic)	0.0000***			

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table IX. OLS regression analysis results – Model 2

	VIFs
RC_Index	1.523
Common_Law	2.668
Government_Effectiveness	3.176
Ln_total_assets	1.965

Table X. Robustness tests: multicollinearity – Model 2

	F-statistic	Prob. *F*-statistic
Breusch-Godfrey serial correlation LM test	1.426	0.248

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table XI. Robustness tests: serial correlations – Model 2

Dependent variable: *Net_Operating_Cash Flow*	Coefficient	Robust SE	*t*-statistic	Prob.
RC_Index	0.313	92.966	3.786	0.000***
Common_Law	0.345	725.280	5.212	0.000***
Government_Effectiveness	0.023	576.805	0.359	0.721
Ln_total_assets	0.598	396.085	4.337	0.000***
R^2	0.5833			
F-statistic	23.801			
Prob. (*F*-statistic)	0.0000***			

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table XII. OLS regression analysis results – Model 3

Multicollinearity tests were passed, since the VIFs never exceed the aforementioned critical threshold (Table XIII).

Similarly, the serial correlations test provided a positive result, since the Prob. *F*-statistic is greater than 0.05 (Table XIV).

Model 3 shows that RC positively affects net operating cash flow. Thus, the upshots support *H3*.

Table XV presents the findings concerning the fourth OLS regression model. The *F*-statistic is less than 0.001, and R^2 equals 0.4389.

In this OLS regression model, there were neither multicollinearity problems (in fact, the maximum value of VIFs < 2.5, as shown in Table XVI) nor serial correlations problems (indeed, Prob. *F*-statistic > 0.05, as displayed in Table XVII).

Furthermore, RC positively influenced Capex (β standardised coefficient: 0.238; p-value = 0.008). Thus, *H4* is confirmed.

Table XIII. Robustness tests: multicollinearity – Model 3

	VIFs
RC_Index	1.178
Common_Law	2.216
Government_Effectiveness	3.184
Ln_total_assets	1.538

Table XIV. Robustness tests: serial correlations – Model 3

	F-statistic	Prob. *F*-statistic
Breusch-Godfrey serial correlation LM test	1.076	0.347

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table XV. OLS regression analysis results – Model 4

Dependent variable: *Capex*	Coefficient	Robust SE	*t*-statistic	Prob.
RC_Index	0.238	99.038	2.743	0.008**
Common_Law	0.263	811.940	3.598	0.001**
Government_Effectiveness	−0.040	674.857	−0.553	0.582
Ln_total_assets	0.567	463.777	3.562	0.001**
R^2	0.4389			
F-statistic	13.300			
Prob (*F*-statistic)	0.0000***			

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

Table XVI. Robustness tests: multicollinearity – Model 4

	VIFs
RC_Index	1.210
Common_Law	2.034
Government_Effectiveness	2.475
Ln_total_assets	1.387

6. Discussion

Building on the existing literature, this empirical study sought to verify the existence of a link between RCD and certain dependent variables tightly tied to corporate financial performance. These variables are based on both accounting and market information (see Table AI).

Previous research showed that, in several samples of European companies (in particular, some analyses performed on companies in the UK and Italy), there are greater amounts of information available on RC compared to the other two components of IC. Specifically, the percentages of ICD category referring to external (relational) capital range on values greater than 50 per cent, on average. In one case, the maximum value exceeded 60 per cent (Striukova *et al.*, 2008). Within the RC category, the highest frequency occurred in the customer elements and distribution channels (Bozzolan *et al.*, 2006; Striukova *et al.*, 2008; Singh and Kansal, 2011).

In contrast to the present study, prior studies exhibited the following characteristics:

(1) Comparative studies are typically performed between only two countries, or at most among three countries. Thus, it may be insightful to conduct a cross-analysis between the four countries with the highest GDP. Many studies compared two countries, in particular UK/Italy and UK/Australia (Bozzolan *et al.*, 2006; Ordoñez de Pablos, 2002; Guthrie *et al.*, 2006; Subbarao and Zeghal, 1997; Vandemaele *et al.*, 2005; Vergauwen and Van Alem, 2005). Furthermore, other studies centred on emerging countries, such as Africa and Asia-Pacific (April *et al.*, 2003; Abeysekera and Guthrie, 2005; Goh and Lim, 2004; Guthrie and Petty, 2000; Guthrie *et al.*, 2006; Ordoñez de Pablos, 2005). To best knowledge of the authors, a comparative analysis has not been performed for the major European economies, which are marked by a certain homogeneity, since the European continent is often considered as a whole.

(2) Previous studies have mainly focused on all three components of IC or on a limited number of studies that considered only one component of IC, often human capital or innovation.

(3) In previous studies, in addition, the CA's results have analysed both the quantity and the quality of data. Thus, there is a need to investigate and elaborate the existence of a relationship between RCD and certain corporate variables. Typically, the analysis of this link is performed between indicators able to capture IC (such as the VAIC^{TM}) and some financial variables (such as ROI and ROA).

To fill these gaps, the authors posited and tested four research hypotheses.

Model 1 sought to verify a relationship between RCD and company sales volume, to measure the monetary impact and direction of RCD on market feedbacks. The findings suggest that the extent of disclosure detected by the CA in relation to the various items of the RC that influence revenue volume. The disclosure of the social and relational dimensions of IC clearly affected the total sales amounts generated by the sample companies.

Table XVII. Robustness tests: serial correlations – Model 4

	F-statistic	Prob. *F*-statistic
Breusch-Godfrey serial correlation LM test	0.364	0.697

Notes: Significance level: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$; ****$p < 0.1$

The presence of a positive link between RCD and revenues could strengthen a generalised guidance that identifies the extent to which sales could be considered a proxy of RC (Wang, 2008; Ferraro and Veltri, 2011).

Given that a certain degree of information on RC positively influences sales volume, it seems insightful to provide practical suggestions to marketing directors, since stronger RCD can increase company competitiveness.

Concerning Model 2, several studies have tried to demonstrate a relationship between voluntary disclosure of IC and capital market performance. Specifically, in some empirical studies, the association between RC, expressed by indicators of customer satisfaction (Ittner and Larcker, 1998) or estimated by brand values (Barth *et al.*, 1998; Demers and Lev, 2000) and market value, was positive. Thus, the authors expected a positive relationship between the RCD index and enterprise value, since voluntary disclosure of IC is relevant to investors (Orens and Lybaert, 2007) and financial analysts (Flöstrand, 2006; Abhayawansa and Guthrie, 2014). Surprisingly, in the empirical study, there is no statistically significant relationship between RCD and the variable used to measure company market value (see Table AI). The reason for this result may be the fact that RCD does not influence company valuation, since relationships with customers and/or other stakeholders can produce effects in the short term (i.e. on the sales volume) rather than in the medium to long term (i.e. on the enterprise value).

Model 3 shows the existence of a positive link between RCD and net operating cash flow. The latter is used to summarise company financial performance and is reflected in stock returns/prices (Nunez, 2014). The existence of a relationship between the information in terms of social and RC and cash flow from operating activities can be interpreted as a result of the positive influence exerted by RCD over company sales volume and financial performance related to the core business. Net operating cash flow is often used to measure company performance, mainly due to its strong predictive ability (Dechow, 1994; Burgstahler *et al.*, 1998; Livnat and Zarowin, 1990). Indeed, it is the most important indicator for diagnosing bankruptcy (Thode *et al.*, 1986). The existence of a positive relationship between RCD and net operating cash flow may suggest a decisive influence of the information concerning RC over a result that some scholars consider superior, in terms of more effectively capturing the performance of financial dynamics related to the core business, compared to other indicators, such as net income plus depreciation or working capital from operations (Thode *et al.*, 1986).

Furthermore, a value relevance may be assigned to cash flow from operations, since its value can be reflected in stock price movements. Thus, one can argue that RCD can affect the timing and amount of future cash flows. The prediction of future operating cash flows has a key role in financial statement analysis activities (Habib, 2010).

Model 4 shows a positive relationship between RCD and capital expenditures. Companies' attitudes to communicating specific information items such as negotiating capacity with financial entities, financial relationships and financial contracts can therefore produce better investment opportunities that, as shown by other studies, may significantly change post-investment operating performance (Chen, 2006). Companies with large capital investment amounts would also invest more in IAs. In particular, companies with investment projects of a certain level tend to allocate significant resources to IAs (Wyatt, 2005). This investment level may therefore spur reports on existing projects related to IAs. In contrast, companies with a limited budget for capital investments could invest less in IAs and, as a result, the extent of disclosure on intangible projects could decrease. In other words, it is insightful to point out the

presence of a virtuous cycle in which RCD positively influences capital expenditures, which – in turn – include and can foster investments in IAs, in order to strengthen company competitiveness.

7. Conclusion

This study sought to assess RCD practices over a sample of the largest listed companies in four European countries. Drawing on previous research, the empirical analysis centred around the relationships between RCD and certain company performance indicators. The empirical analysis focused on a single IC category – RC – to assess specific items related to customers, such as client's profile, business collaboration, customer reputation or items related to social capital, such as stakeholders or subsidiaries and associates. The analysis of annual reports and additional voluntary reports shows a positive link between RCD and revenues, net operating cash flow and Capex. There is no statistically significant link between RCD and enterprise value.

Although these findings are unsurprising, they serve mostly three functions concerning the related literature stream. First, the results of this research confirm the influence of RCD on financial performance in the European market. Much research on ICD has been conducted one a single European country. This study extends the findings to some major European economies. Second, the upshots provide a theoretical and empirical foundation for the disclosure of a single component of IC – RC – that is becoming critical for company success and that substantially contributes to value creation (Singh and Kansal, 2011; Shakina and Barajas, 2014). RCD may satisfy the needs of different internal and external users (Estes, 1976), and may improve decision making and reduce investor uncertainty. Third, concerning future research avenues, the empirical results provide intriguing cues to better investigate the relationship between RCD and enterprise value. Indeed, from a long-term perspective, it seems insightful to explore this relationship concerning the adoption of interaction variables (i.e. moderating variables), since the presence of possible moderating effects might further close the research gap and might advance the body of knowledge.

Practical implications

From a managerial perspective, the current research provides insights into several fields. The empirical findings suggest that RCD strongly influences either sales or financial performance, but there is no statistically significant link to enterprise value. Thus, these findings show that enhanced RCD may provide economic results but are not reflected in enterprise value and does not positively influence financial markets. Nonetheless, managers should be more careful in their approaches to customer-focused management and marketing practices, given that both affect company performance.

In terms of practical implications, this work could encourage preparers to improve RCD. Indeed, they should refine RCD and should build specific RC items to positively influence enterprise value.

Overall, this paper could offer insightful suggestions to policymakers, for instance, to the European Commission, which recently introduced new requirements for non-financial information reporting (i.e. European Directive 2014/95/UE on 22 October 2014 of the European Parliament and of the Council amending Directive 2013/34/EU regarding the disclosure of non-financial information).

Research limitations

The sample size represents the main limitation. Nonetheless, also the findings merit further research. It could be insightful to include the variables inherent in directors' RC in the items that make up the RCD index. In this way, the abovementioned index encompasses not only a relevant but also an emergent feature of the corporate governance model. Finally, the cross-country study should be extended to include other European State members, since previous studies have paid particular attention to emerging and developing economies (e.g. China, India).

Acknowledgements

The authors gratefully acknowledge the two anonymous reviewers and the Editor for their valuable and helpful comments in the development of this paper. An earlier version of this study was presented at the tenth Interdisciplinary Workshop on Intangibles, Intellectual Capital and extra-financial information, Ferrara, Italy, 18-19 September 2014 in the parallel session "Firm performance and behavior". The authors would like to thank the chairperson Professor Stefano Zambon, the session chair Professor Vèronique Blum and all participants for their suggestions.

Notes

1. See Table AI.
2. The β coefficients reported in the OLS regression models are standardised. The standardisation derives from the adoption of the following formula: β unstandardised $\times$ (standard deviation (X)/standard deviation (Y)).

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Appendix

Name	Category	Factset specification	Description
Net sales or revenues	Financial services/income statement	FF_SALES	Represents gross sales and other operating revenues less discounts, returns and allowances
Enterprise value	Ratios/size	FF_ENTRPR_VAL	This is calculated as: (price close (fiscal period) multiplied by common shares (used to calculate fully diluted earnings per share)) plus preferred stock (carrying value) plus total debt plus accumulated minority interest (total) minus cash and short-term investments
Net cash from operating activities	Cash flow/ operating	FF_OPER_CF	Returns net cash from operating activities for the period. This is calculated as the sum of the following elements: funds from operations extraordinary items funds from/for other operating activities
Capital expenditures – total	Cash flow/ investing	FF_CAPEX	Returns total capital expenditures for the period. This is calculated as the sum of capital expenditures – additions to fixed assets (which represents the funds used to acquire fixed assets other than those associated with acquisitions). Additions to other assets (which represents the amount used to increase all other assets except fixed assets and net assets from acquisitions)

Table AI. Description of variables

Source: FactSet 2014

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