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## **Does greater intellectual capital disclosure reduce a firm's cost of capital?**

*Musa Mangena, Richard Pike & Jing Li, Bradford University School of Management*

Every business recognises that in today's global, information-driven society, economic performance is increasingly dependent upon the effective use of intangible assets such as knowledge, innovation and networks producing competitive advantage. This has led to considerable interest in the role of intellectual capital (often termed knowledge capital) in the value-creating processes and activities within firms, with heavy investment in intellectual capital, such as research and development, brand development, franchises, customer-base creation, and staff development. The problem, however, is that these investments are either immediately expensed in the financial statements or arbitrarily amortised and therefore are not fully reflected in the financial statements. This, it is argued, has reduced the value-relevance of traditional financial reports because they do not fully reflect information about the corporate value-creating processes and activities of the firm.

Given the growing importance of intellectual capital and the limited value-relevance of traditional financial reports, calls have been made by the accounting profession, regulators and academics for firms to provide greater disclosure of intellectual capital information in the annual reports. These calls argue that because intellectual capital is frequently the dominating factor in the process of valuing firms, investors require such information to make informed choices. Studies suggest that although still relatively low, there has been an increase in intellectual capital disclosure in annual reports in recent years.

One important issue is whether firms can benefit from improved intellectual capital disclosure via a lower cost of capital. A commonly expressed view by academics, practitioners, and accounting bodies and regulators is that enhanced disclosure lowers the cost of capital. Greater information, it is argued, may lower the estimation risk of future returns and reduce the information gap between managers and investors, thus enhancing market liquidity and lowering the required rate of return. However, to date, empirical research investigating the relationship between disclosure and cost of capital is inconclusive,

some finding a negative relationship, others a positive relationship, and yet others no relationship. Additionally, the empirical research also suggests that different types of disclosures may as well affect the cost of equity capital in different fashions.

The objective of our study is to gain insights into this issue by investigating, the relationship between the cost of equity capital and intellectual capital disclosure by UK firms. The key issue addressed by our study is whether firms with higher intellectual capital disclosure tend to have a lower cost of equity capital and, if so, whether this effect differs according to type of intellectual capital – human, structural or relational. Human capital refers to the knowledge, professional skills, experience and innovativeness of employees within an organisation. Structural capital consists of the structures and processes employees develop and deploy in order to be productive, effective and innovative, whilst relational capital captures the knowledge of market channels, customer and supplier relationships, and governmental or industry networks. We also study whether intellectual capital and voluntary financial disclosures complement each other in lowering the cost of equity capital.

We address these issues using data from 126 UK firms listed on the London Stock Exchange. The level of intellectual capital and financial disclosures for the firms was measured by a disclosure index, developed from a content analysis of the firm's annual reports. The computation of the cost of equity capital was undertaken by applying the price-earnings growth (PEG) model, which estimates the cost of capital using one-year- and two-year-ahead analysts' earnings forecasts and share price data.

Our results suggest that the level of intellectual capital disclosure in UK annual reports is extensive, with a mean disclosure level of 70% of the intellectual capital items used in this study being reported in some way. This is surprisingly high, particularly given that intellectual capital reporting is not regulated and that most prior studies reported lower disclosure levels. Overall, firms seem to provide more human capital information than structural and relational capital, perhaps because of the belief that human capital provides the means by which firms enhance their competitiveness. It is possible, therefore, that firms may disclose more of this information to signal the quality of their human capital, hence their ability to compete.

We find that the average cost of equity capital for the sampled UK listed firms is about 10.29%, and intellectual capital disclosure level is negatively associated with the cost of equity capital. This suggests that enhanced intellectual capital disclosure in annual reports provides the market with useful information and disclosing firms benefit in terms of a lower cost of equity capital. Firms with greater levels of intellectual capital disclosure have cost of equity capital estimates ranging from 2.3-2.8% lower than for

firms with low intellectual capital disclosures across all categories of intellectual capital. The highest benefit for firms seems to come from a commitment to disclose greater levels of human capital information.

Our findings suggest that investors complement intellectual capital information and financial information in making investment decisions. In this respect, our results for interacting intellectual capital disclosure and financial disclosure scores show that the cost of equity reduces significantly for firms with both high intellectual capital and financial disclosure. The cost of equity capital resulting from the interaction is 0.28% and 0.88% lower than for only intellectual capital and financial disclosure, respectively.

In further analysis, we show that intellectual capital intensive sectors (such as banks, insurance, telecommunications, biotech and pharmaceuticals) have cost of equity capital that is about 0.88% higher than non-intellectual capital intensive sectors (such as utilities, retail, and real estate). Within the intellectual capital intensive sectors, our results suggest that firms with greater disclosure have cost of equity capital that is 3.32% lower than for firms with lower disclosure. This seems to suggest that cost of equity capital benefits from enhanced intellectual capital disclosure are more likely to be greater in intellectual capital intensive sectors.

In conclusion, our findings are consistent with the notion that disclosure of intellectual capital information may reduce uncertainty about the firm's future earnings, leading investors to demand a lower rate of return. We believe these findings are important as they provide evidence of the relationship between the cost of capital and intellectual capital disclosure in the context of the UK. Unlike previous studies that tend to investigate aggregate annual report disclosures, this is the first study to distinguish between intellectual capital and financial disclosures. This distinction allows a determination of how each of the disclosure types is related to the cost of capital as well as how the two interact with each other to affect the cost of capital. This is particularly important today given the debate on the role of intellectual capital and the weaknesses of the financial reporting model.

### **Implications for policy and practice**

These findings are of considerable importance to policy-makers, the accounting profession and firms:

- **Evaluating the cost and benefits of disclosure.** They provide insights into whether increased intellectual capital disclosure affects firms' cost of equity capital. This provides policy-makers and regulators with a basis upon which to evaluate the costs and benefits of

potential regulations regarding the disclosure of intellectual capital information.

- **Principles over rules.** The extensive intellectual capital disclosure revealed in this study suggests that firms respond to voluntary reporting guidelines, such as the Operating and Financial Review. In this respect, the focus for policy should be to develop best practice guidelines for intellectual capital reporting and encourage compliance. Such an approach reduces problems with prescriptive guidelines which require enforcing.
- **Improved IC reporting to reduce cost of capital.** Insights from these results are also important to firms because they are able to see the benefit of enhanced disclosure in terms of a reduction in their firm's cost of capital. The realisation that there are cost of capital-related benefits in enhancing the reporting of intellectual capital information may lead to a commitment by firms to improve disclosure of this type of information. This will also benefit market participants in terms of having more relevant and quality information available, and therefore reducing the cost of gathering private information.

However, there is still need for further research into the costs and benefits of intellectual capital reporting. Nevertheless, this study suggests that intellectual capital disclosures are important to firms and the capital markets.

Intellectual Capital Disclosure Practices and Effects on the Cost of Equity Capital: UK evidence is published by ICAS in 2010 and the full report and executive summary are available to download from the ICAS website ([https://www.icas.com/\\_data/assets/pdf\\_file/0009/10611/13-Intellectual-Capital-Disclosure-Practices-and-Effects-on-the-Cost-of-Equity-Capital-UK-Evidence-ICAS.pdf](https://www.icas.com/_data/assets/pdf_file/0009/10611/13-Intellectual-Capital-Disclosure-Practices-and-Effects-on-the-Cost-of-Equity-Capital-UK-Evidence-ICAS.pdf)). This research was funded by The Scottish Accountancy Trust for Education and Research (SATER).