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# **Voluntary Disclosure of Intangibles by Capital-Raising Companies in Australia**

**by**

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**Submitted in fulfilment of the requirements for the degree of  
Doctor of Philosophy**

**University of Tasmania**

**July 2011**

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## **Abstract**

The decline in the usefulness of financial reports and the invisibility of intangibles information in those reports has resulted in a growing effort to expand disclosure by way of voluntary reporting to reduce the information asymmetry problem. Prior studies on intangibles disclosure have successfully created awareness about the importance of intangibles. However, the literature argues that clear results on the determinants of differential disclosure are still scarce and that prior research does not offer a strong theoretical basis to interpret the motives for disclosure. A direct comparison of disclosure behaviour between firms with and without a capital-raising motive provided by this study should provide an understanding of how these firms signal their intangibles information.

Focusing on the top 200 Australian firms (based on market capitalisation) in 2006-2008, this study aims to determine whether financing decisions provide a strong incentive for firms to signal a greater variety of intangibles information, a higher level of disclosure and more intense information to the capital market. Content analysis of annual reports and prospectuses is carried out to determine the variety, and extent of intangibles disclosure. Incorporating a range of impression management tools in signalling information, this study also explores the concept of intensity of disclosure, which reflects the strength of messages presented based on their type, nature and also their presentation emphasis.

The findings, which support signalling theory, provide evidence that capital-raiser firms disclose a greater variety of voluntary intangibles information with a higher level of disclosure in their annual reports immediately prior to capital-raising activity. Further, capital-raisers provide more intense and powerful signals compared to their non-capital-raiser counterparts. In addition to annual reports, these firms also utilise prospectuses to signal intangibles information during capital-raising activity. However, the variety, extent and intensity of disclosure in prospectuses are significantly lower compared to disclosure in annual reports. The overall findings suggest that in order to compensate for the inadequacy of financial reports, capital-raiser firms strive to make intangibles information visible in both annual reports and prospectuses by not only making narrative disclosures but also by emphasising intangibles using pictures and presentation emphasis by way of repetition. This is

consistent with the motivation to provide intangibles information that investors will not only recognise but that they will also retain and recall when making investment decisions.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background to the Study**

Rapid changes in technology and the nature of business have resulted in a significant amount of investments in intangible resources by companies. The wave of change has given rise to many opportunities and new technologies such as the emergence of knowledge-intensive industries and intangibles-intensive companies. These companies no longer rely so much on physical resources such as land, plant and equipment. Instead they invest in knowledge assets, human resources, research and development and organisational information systems. Changes in the global economy, which have resulted in an increase in competition, changes in customer demand and improvement in technologies, have taken over the physical factors of production as the most important resources for a firm's survival (Stewart, 2001; Bukh et al., 2005). Accordingly, intangible resources have been recognised as the most important value drivers in the current economy in ensuring a firm's survival, its competitive position and its future growth (Bontis et al., 2000; Canibano et al., 2000; Firer and Williams, 2003; Yongvanich and Guthrie, 2005; Sonnier et al., 2008).

The increasing level of business complexity has encouraged firms to put a significant amount of investments in intangible resources. In Australia, particularly, there is an increasing emphasis on several sectors such as financial services, tourism, information technology and niche manufacturing, with a relative decline in the traditionally strong areas of agriculture and mining (Guthrie and Petty, 2000). Despite a claim that intangible resources play an increasingly dominant role in the global economy, intangibles are poorly accounted for (Lev, 2001). This is due to the fact that most intangibles fail the recognition criteria set out in accounting standards which has resulted in information on intangibles being less visible in the financial statements.

In Australia, in July 2004, the Australian Accounting Standards Board (AASB) pronounced the adoption of the International Accounting Standards Board's (IASB) standards from 2005. This has led to the issuance of Australian equivalents of

International Financial Reporting Standards (AIFRS), including AASB 138 which is equivalent to IAS 38, *Intangible Assets*. Adopting IAS 138 means Australian firms are subject to the IASB's recognition, measurement and disclosure rules applicable to intangible assets. It has since been claimed that the application of these restrictive rules has resulted in intangibles disclosure in financial reports being greatly diminished (Ritter and Wells, 2006) because firms now have less opportunity to report their intangibles. Since information relating to intangibles is no longer as visible in the financial statements (except for intangibles that meet the recognition and measurement criteria), it has been proposed that the usefulness of financial statements is, therefore, reduced (Wyatt, 2005; Cheung et al., 2008). A review of corporate intangibles reporting practices in Chapter 2 will outline the criticisms regarding the accounting treatment of intangibles which have resulted in a potential decline in the usefulness of financial statements (see Chapter 2.3.2). Among other reasons that contribute to the decline of the usefulness of financial statements are claims that the current financial reporting framework is insufficient to keep pace with changes in the business world, particularly in capturing intangibles information.

One way in which firms might respond to the inadequacy of financial reporting standards is through voluntary reporting so that the information needs of investors and various stakeholders can still be satisfied. Voluntary disclosure of intangibles has the capability to increase understanding of a firm's future prospects (Snidal, 2007; Nielsen and Madsen, 2009). This is because relevant and useful information about a firm's business can be supplied to investors and various stakeholders through voluntary reporting. Thus, voluntary disclosure is promoted as an important means to inform market actors about the value of a firm (Lee and Guthrie, 2010).

## **1.2 Research Objectives and Research Questions**

Responding to Parker's (2007) proposition that intangibles disclosure is a major area for future research, this study aims to determine the disclosure practice of listed firms in Australia after the adoption of AASB 138 that fundamentally changed the disclosure of intangibles in the financial statements. Specifically, this study seeks to determine whether financing decisions appear to provide a strong incentive for firms to signal more information about their intangibles. This will be done through a direct comparison of disclosure behaviour of firms with a capital-raising motive and firms



without a capital-raising motive. Further, this study also aims to investigate the strength of the voluntary disclosure by introducing the concept of intensity of disclosure. It is an expectation of this study that since firms have less opportunity to feature intangibles information in the financial statements, they will voluntarily disclose the information outside their financial statements in a strong and obvious way so that the information is clearly visible to investors.

Intensity of disclosure is concerned with the way firms emphasise information in order to capture a reader's attention. The emphasis of information can be influenced through the use of certain techniques such as visual representations including pictures, photographs and graphs; and the reporting of quantitative information. Further, firms may also emphasise certain information through presentation techniques such as placement of information in a headline or by way of repetition. These techniques, when combined, indicate the strength of intangibles information conveyed by firms. Stronger signals are presumably better at informing readers and ensuring that the readers are more engaged with the information.

This study examines aspects of voluntary disclosure of intangibles by focusing on the following research questions:

1. What is the variety, extent and intensity of voluntary disclosure of intangibles information in annual reports of capital-raiser and non-capital-raiser firms?
2. Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms and non-capital-raiser firms?
3. What is the variety, extent and intensity of voluntary disclosure of intangibles information in the prospectuses of capital-raiser firms?
4. Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms' annual reports and their prospectuses?

### **1.3 Motivations for the Study**

Corporate voluntary disclosure has been the focus of attention in recent years. Particularly, corporate voluntary disclosure refers to information in excess of requirements that represents free choices on the part of company management to provide accounting and other information deemed relevant to the decision needs of

users of the corporate reports (Meek et al., 1995). It is a discretionary action by managers (Gibbins et al., 1990) and this self-reporting (Gray et al., 1995a) can be utilised for specific strategic purposes. Therefore, management motives for making voluntary disclosure, according to Healy and Palepu (2001), are interesting empirical questions. This is because an understanding of a firm's disclosure behaviour requires knowledge of the factors that determine its voluntary disclosure decisions. More recently, it has been argued that the invisibility of intangibles information in the financial statements has become a breeding ground for the development of voluntary disclosure of intangibles among firms (Riegler and Hollerschmid, 2006).

Since the adoption of AASB 138 in 2005, intangibles information is less visible in the financial statements of Australian firms. Thus, firms are at a disadvantage when they need to signal their significant investment in intangibles because the capitalisation and recognition of intangibles in the financial statements are now limited. With the increasing importance of intangibles as one of the vital factors in ensuring a firm's survival in the future, firms run the risks of exposing themselves to serious problems since they have less opportunity to signal important intangibles information in the financial statements. Lack of information may lead to additional cost of capital, deterioration of share liquidity and lower analyst following which, in turn, can lead to the failure of the capital market (Diamond and Verrecchia, 1991; Botosan, 1997; Holland, 2003; Petersen and Plenborg, 2006). In particular, the present study is motivated by the assumption that a strategy of voluntary disclosure of information has considerable potential for changing investors' perceptions of a firm. Thus, it is the expectation of the present study that firms find an alternative to financial reporting to signal their intangibles, and this is through voluntary disclosure of intangibles information.

Prior studies have documented that firms make use of capital markets for external financing (Singhvi and Desai, 1971). In this case, investors need relevant information to value a company especially in making investment decisions whether to buy, sell or hold shares in a company. Particularly, if firms with a capital-raising motive do not make voluntary disclosures of information, they are potentially exposed to the various problems mentioned previously such as an unnecessary increase in the costs of capital. Therefore, understanding why firms voluntarily disclose information is

useful to both preparers and users of accounting information as well as to accounting policy makers. In particular, among other motives that lead managers to increase their voluntary disclosure is the intention to issue equity (Healy and Palepu, 2001). With regard to companies that intend to raise additional capital, additional information, for example on a firm's strategy, research and development and other investments in intangibles will further help investors in assessing a firm's future prospects. Thus, this study is motivated to investigate firms' disclosure behaviour when they are at a disadvantage in signalling important value drivers while undertaking capital-raising activity.

#### **1.4 Significance of the Study**

With regard to intangibles information, a stream of research has been conducted to determine the level of voluntary disclosure by firms. These studies have examined documents such as annual reports, prospectuses and presentation materials to analysts in order to provide understanding regarding what and how much intangibles information is disclosed by firms. Besides providing an overview of intangibles disclosure, prior research also focuses on the association between intangibles disclosure and various firm-specific factors such as firm size, industry type, ownership structure and board structure. However, prior studies have documented inconsistent results regarding the types of intangibles information disclosed and the level of disclosure. The current state of intangibles disclosure literature, therefore, warrants further investigation so that issues that hamper the consistencies of results can be addressed and more conclusive evidence can be drawn.

Voluntary disclosure in corporate reports such as annual reports and prospectuses has become a source of information in determining a firm's disclosure behaviour. Even though prior research on intangibles disclosure has created awareness about the importance of intangibles, it has paid relatively little attention to capture the actual disclosure behaviour of firms in relation to intangibles and capital-raising. That is, no direct comparison has been made between the disclosure behaviour of firms about their intangibles when they are driven by capital-raising activity as compared to firms that do not have the same intentions. Therefore, this study aims to bridge this gap by comparing the disclosure behaviour of these two groups of firms.

Responding to calls by Kauffman and Schneider (2004) and Davison and Skerrat (2007) that future research is required on how external stakeholders are provided with information on intangibles and how firms approach the task of producing their corporate reports in disclosing intangibles information, this study establishes, explores and demonstrates the concept of intensity of disclosure, which indicates the strength of intangibles information presented by firms. There exist studies that have investigated the content of annual reports on the readability and presentation of information but what is offered by the present study is a new area which has not yet been raised in the literature. That is, this study addresses the manner in which firms behave with regard to intangibles disclosure when they are at a disadvantage in signalling important intangibles information because of inadequate financial reporting standards.

Finally, this study has implications for policy makers and regulators in understanding how lack of intangibles information is associated with voluntary disclosure, particularly among listed firms that are motivated by capital-raising activity. The present study analyses data from 2006 which is the first annual reporting period after the adoption of the AIFRS. Therefore, firms' behaviour after the adoption of the standard with regard to voluntary disclosure of intangibles can be observed.

## **1.5 Research Method**

Content analysis of annual reports and prospectuses is carried out to address the research questions. This study analyses Australia's top 200 companies (based on market capitalisation) listed on the Australian Securities Exchange in 2006-2008. Year 2006 is the first annual reporting period after the adoption of the AIFRS. Therefore, the selection of firms in this particular period is appropriate because disclosure behaviour of firms after the adoption of the new standard can be observed.

The content of annual reports and prospectuses is captured through a 24-item intangibles classification index derived from Lev (2001) and Guthrie and Petty (2000) to indicate the variety of intangibles disclosure. The extent of disclosure is measured by counting the individual intangible items that appear both in textual and visual form and the result of counting is represented by the absolute frequency score for each sample company. Besides variety and extent, the intangibles information in

the annual reports and prospectuses is analysed based on its intensity which is represented by various techniques utilised by firms to emphasise the information. To test for differences between capital-raiser and non-capital-raiser firms, independent sample Mann-Whitney U tests are used. Independent sample Mann-Whitney U tests are also used to test for differences between disclosures in annual reports and prospectuses of capital-raiser firms.

## **1.6 Findings**

The empirical evidence shows that capital-raiser firms disclose more intangibles information compared to their non-capital-raiser counterparts. Therefore, consistent with signalling theory, the results support the proposition that financing decisions explain differential disclosure between firms. Firms disclose incremental information presumably to compensate for lack of intangibles information in the financial statements. Therefore, the financing decision motivates firms to report a wide variety and a higher level of intangibles information. The findings confirm the expectations that firms disclose a wide variety of information when they require external financing (Lang and Lundholm, 1993; Healy and Palepu, 2001). That is, the need to disclose intangibles information is stronger when firms require a positive evaluation from investors, especially when intangibles information in the financial statements is insufficient to convey a firm's investment in intangibles.

Based on the descriptive analysis and statistical tests, the findings strongly support the expectations that the variety, extent and intensity of intangibles disclosure are higher in capital-raiser as compared to non-capital-raiser firms. Further, firms also signal intangibles information through prospectuses in addition to annual reports. In making intangibles information visible so that investors realise its existence, not only do capital-raiser firms provide more information but they also present the information in more intense form, such as through pictures and repeated information as compared to their non-capital-raiser counterparts.

The overall findings provide an understanding of what intangibles information is disclosed when firms are motivated by capital-raising activity and how it is disclosed. The results provide support for the contention that financing decisions provide a strong incentive for firms to signal more information. Further, in order to

make intangibles visible, firms approach the task of producing annual reports and prospectuses by emphasising the existence and potential of intangibles through pictures and repeated information presumably to ensure that investors are better informed and more engaged with the information. Therefore, the findings suggest that firms' disclosure behaviour after the adoption of the AIFRS is consistent with the claims that intangibles information is less visible in the financial reports, which could lead to a decline in the usefulness of the financial statements (Wyatt, 2005; Ritter and Wells, 2006; Cheung et al., 2008).

## **1.7 Structure of the Thesis**

This thesis is organised as follows.

Chapter 2 presents a review of corporate reporting in relation to the increasing importance of intangibles among firms. The chapter explains how the rise of intangibles has contributed to the decline of value-relevance of the traditional financial statements. The issues regarding the accounting treatment of intangibles, particularly after the adoption of the AIFRS are acknowledged. Reflecting on the importance of intangibles, this chapter concludes with a discussion concerning demand for expanded disclosure of intangibles information to accommodate the information needs of investors.

Chapter 3 attends to voluntary disclosure practices by reviewing prior empirical studies relating to voluntary disclosure of intangibles to identify research gaps that could be investigated in this study. This chapter also discusses the motives for voluntary disclosure in the capital market. Signalling theory, which provides a theoretical underpinning for voluntary disclosure is also discussed in this chapter.

Drawing on signalling theory, Chapter 4 integrates the discussion of voluntary disclosure of intangibles with capital market consequences to form the basis of expected intangibles disclosure behaviour of firms during capital-raising activity. Chapter 4 also develops a conceptual model and hypotheses to address the research questions.

Chapter 5 discusses the sample selection and the data collection processes. Content analysis, the research method adopted for the study, is discussed and the issues pertaining to content analysis are addressed in this chapter.

Chapter 6 presents the results of content analysis and the hypotheses testing together with the discussion of findings.

The final chapter, Chapter 7, summarises and concludes the study by discussing its contributions and implications. The limitations of the study, together with directions for future research, are also provided in the final chapter.

## **CHAPTER 2**

### **ACCOUNTING FOR INTANGIBLES**

#### **2.1 Introduction**

This chapter outlines the increasing importance of intangibles to business and presents a review of key aspects of corporate financial reporting that relates to intangibles. It also explains how the criticisms of the financial reporting framework have become a source for the development of voluntary disclosure practices for intangibles. In particular, Section 2.2 presents a discussion on the rise of intangibles and Section 2.3 presents a review of key aspects of corporate financial reporting that relates to intangibles which includes a discussion on a transition of the global economy. Section 2.4 presents a discussion on the accounting treatment for intangibles and this includes the specific case of Australia. This chapter concludes with a discussion on the need for expanded disclosure as a result of decreasing value relevance of traditional financial statements in Section 2.5.

#### **2.2 The Rise of Intangibles**

With increasing levels of business complexity, more corporations have put a significant amount of investments in, for example, human resources, information technology and research and development (R&D) in order to remain competitive and to ensure future viability (Canibano et al., 2000). Since the advent of computers and the internet, the nature of business has also changed, resulting in a shift from investment in tangibles resources to investment in intangibles such as information-based resources, where information is regarded as having more value than tangible assets (Canibano et al., 2000; Sullivan, 2000; Yongvanich and Guthrie, 2005). Rapid changes in technology and the way business is conducted have resulted in the rise of intangible resources such as human capital and intellectual property. Changes in the global economy have also given rise to many opportunities and new technologies such as knowledge-intensive industries, information and technology, research activities and investment in intangibles. Furthermore, knowledge-intensive companies, information technology and intangible-intensive companies which do not rely on physical resources, have emerged. These companies rely on their intangibles such as the knowledge of their employees, technology under development, marketing



alliances and networking systems. Arguably, the global economy has altered the way in which business is conducted as there is an increase in competition, along with changes in customer demand and improvement in technologies. As a result, business has put significant investment in intangible resources in order to remain competitive.

### **2.2.1 Terminology**

There is extensive literature on the terms and meanings of intangibles. For example, Lev (2001,p.5) argued that the terms *intangibles*, *knowledge assets* and *intellectual capital* can be used interchangeably as they all refer to the same thing, which is a non-physical claim to future benefits. This view is supported by Abeysekera (2003), who claimed that intellectual capital refers to intangibles not recognised in the financial statements. In contrast, Brennan (2001) defined intangibles as the difference between book value and market value and this difference can be explained by invisible assets or intangible assets which are not recognised in companies' balance sheets (Brennan, 2001). Some authors have defined intangibles or intellectual capital as invisible assets (Roos et al., 1997; Sveiby, 1997a) that are neither tangible nor financial and have no physical or monetary sources (Lev, 2001).

Frequently, intangibles are associated with the generation of profits since the value of a corporation is achieved through the process of innovation and commercialisation of ideas to gain profit (Sullivan, 2000; Lev, 2001). For example, Lev (2001, p.5) claims that 'an intangible asset is a claim to future benefits'. More recently, Abeysekera (2003), Abeysekera and Guthrie (2005) and Garcia-Meca et al. (2005) claim that intangibles refer to intangibles not recognised in the financial statements as assets, which include information on customers, human resources, business processes, innovation, leadership, technological systems, financial relations, training and development and corporate image building. For the purpose of this study, the term "intangibles" is defined following (Lev, 2001, p.5) as 'claims to future benefits that do not have physical or financial embodiment'. Intangibles are 'non-physical sources of value generated by innovation, unique organisational designs or human resources practices' (p. 189).

Given the definition adopted for this study, it is important to look at the key aspects of corporate financial reporting that relate to intangibles, and this is discussed next.

## **2.3 Intangibles Reporting Practices**

The frameworks proposed and mandated by the regulatory bodies such as the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) aim to provide information that is useful to financial statement users and these include shareholders and other salient stakeholders such as employees, suppliers and customers. Essentially, financial reporting provides information about economic resources of a firm so that it supplies investors, creditors and the broader capital market with a feedback mechanism (Jenkins and Upton, 2001). Today most companies in the developed world report under either one (or sometimes both) of the two dominant sets of accounting standards: US Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). The primary objective of these traditional financial reporting standards is the disclosure of information within these frameworks. Nonetheless, despite their importance, both sets of accounting standards have deficiencies. That is, key drivers of corporate value such as human capital, customer relations, R&D and corporate reputation are not reported to investors under traditional financial reporting (Schuster and O'Connell, 2006, p.2).

The rise of intangibles has resulted in a debate about business and financial reporting (Jenkins and Upton, 2001). Initially, financial reporting frameworks were developed to support a more traditional business framework, one with large capital investment, minimal research and development and substantial labour contribution (Eccles and Mavrinnac, 1995). However, financial reporting frameworks have been criticised with financial reports viewed as inefficient and inadequate at best as they lack relevance in assisting users to make efficient economic decisions (Beaver, 2002; Seetharaman et al., 2002; Schuster and O'Connell, 2006). Some claim that annual financial reports are too rigid and provide mostly financial data with little attention given to information pertaining to intangibles information such as management strategy, quality and customer satisfaction (Holland, 2003). Despite the transition to the intangibles-orientated economy, financial reporting models still tend to measure only the value of financial and tangible resources and do not offer solutions for the valuation of intangible resources (Cordazzo, 2007).

### **2.3.1 A shift from ‘p-economy’ to ‘k-economy’**

It has been argued that the increasing importance of intangibles is associated with a shift in the economy from the industrial economy to the new economy. Seetharaman et al. (2002) have proposed how ‘p-economy’ (production orientated) differs from ‘k-economy’ (knowledge-based). In the ‘p-economy’, hard assets such as labour, capital and land were regarded as the important factors of production to determine the value of corporations (Drucker, 1993; Firer and Williams, 2003). The ‘k-economy’, on the other hand, has been variably described as the post-industrial economy; new economy; service economy; knowledge society; knowledge-intensive economy; new industrial age; information age; or idea era (Upton, 2001). The development of intangibles such as knowledge assets, human resources, customer satisfaction and organisational information systems has taken over the traditional factors of production as the most important resources for a corporation’s survival (Stewart, 2001; Bukh et al., 2005).

It has been claimed that traditional financial reporting frameworks, which were developed mostly in the 1950s, do not or may not be able to capture many of the internally generated intangibles or value drivers in the new economy (Stewart, 1997; Lev and Zarowin, 1999; Bontis et al., 2000; Canibano et al., 2000; Jenkins and Upton, 2001; Upton, 2001; Firer and Williams, 2003; Sonnier et al., 2008). It has been argued that the economy of the 21<sup>st</sup> century is fundamentally different from the economy of 1950, and that traditional financial statements do not capture the value drivers that dominate the new economy, such as customer and supplier relations and business processes (Jenkins and Upton, 2001; Lev, 2001). Flamholtz et al. (2002) claim that financial reporting frameworks are still based on the industrial paradigm where only physical and tangible resources are regarded as assets. As a result, traditional reporting mechanisms have been criticised for not being able to cope adequately with the reporting requirements of k-economy firms (Wallman, 1997; Bukh, 2003) where intangibles are becoming more important in the value creation of a firm.

### **2.3.2 Criticisms of traditional financial reporting frameworks**

Reflecting on the criticisms of traditional financial reporting frameworks, Eccles and Mavrinac (1995) argue that financial reporting no longer forms a sufficient basis for

uncovering the growth potential of a firm. Similarly, it has been argued that the financial reporting frameworks have been challenged because of the changing nature of the business environment (Canibano et al., 2000; Yongvanich and Guthrie, 2005). Commenting on the future of accounting and financial reporting, Wallman (1997) admits that there exist certain difficulties inherent in current financial reporting frameworks that have resulted in them failing to keep pace with changes in the business world.

Under current financial reporting standards such as US GAAP and IFRS, companies are not allowed to recognise intangible value drivers as assets because of strict recognition criteria (Ashton, 2005). For instance, when a company invests in tangible assets like equipment or computers, the money paid out is recorded as an asset in the balance sheet. In accounting terms, even though there is a cash outflow, the cost is expensed gradually as the asset is depreciated over its useful life. In contrast, when a company invests in intangibles, such as when it launches a research program, the value of the research is not recorded in the balance sheet. The investment will appear both as a cash outflow and as a cost items in the income statement. The difference in accounting treatment is due to the fact that intangibles must satisfy the specific recognition criteria and should be able to be measured reliably. An intangible asset shall be recognised if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity and the cost of the asset can be measured reliably (IAS 38). These criteria, according to Mouritsen (2003), are rather irrelevant to today's business structures where companies have placed more reliance on intangible investments that are hard to measure in terms of transactions such as research, marketing and organisational capital. Reflecting on the shift in the economy, Wallman (1997) notes that an overemphasis on accounting recognition of intangibles has resulted in less information being communicated to the users of financial statements.

Empirically, Amir and Lev (1996) claim that financial statements, especially those of technology-based companies, are unable to capture value drivers of future performance as the traditional financial statements lack relevant information on intangibles because only information on traditional operating activities is available. They investigate how research and development (R&D) and advertising expenditures

affect the usefulness of accounting disclosure in technology-based industries such as the wireless telecommunication industry. They report that the regression analysis of stock price with R&D and advertising expenditures is statistically insignificant. They conclude that these financial variables by themselves have little explanatory power for the value of the wireless telecommunication firms but their explanatory power increases when combined with the non-financial measures related to potential growth and intangibles. Their findings indicate that because of full expensing of R&D and advertising expenditures analysts tend to disregard earnings in their valuation models, which explained the decreasing relevance of financial statements. They also argue that analysis of firms engaged in technology and the rapidly changing industries with substantial intangibles investment is likely to yield similar results. They go on to suggest that companies with substantial investment in intangibles tend to experience high volatility in their share price because investors do not have relevant information when assessing their investments.

Lev and Zarowin (1999) investigate the usefulness of financial information to investors and find that the usefulness of financial information such as earnings, cash and book values has declined over the decades. As well as specific accounting expenditure such as R&D as examined by Amir and Lev (1996), Mouritsen (2003) also argues that the traditional balance sheet is unable to present a convincing account of the resource value of firms in the new economy that rely heavily on intangibles. The issue of deficient financial statements is also discussed by Canibano et al. (2000) who suggest that intangible investments should be properly accounted for as assets and included in the balance sheet. The exclusion of significant intangibles investment especially by intangibles-intensive companies has led to further distortion of financial statements as it does not reflect the true value of the firm. Bozzolan et al. (2003) also observe an increasing dissatisfaction with traditional financial statements and their ability to convey the wealth creation potential of firms to investors. It has been argued that the traditional financial statements, even though reliable, have lost relevance over time because they do not adequately account for intangibles (Canibano et al., 2000; Beaver, 2002; Lev and Zambon, 2003; Kabir, 2008).

The traditional accounting treatment for intangibles has also resulted in a growing discrepancy between book value on the balance sheet and the market value of a company (Roslender and Fincham, 2004). This phenomenon is not new because Lev (2001) claims that the average market-to-book ratio of the Standard and Poor's (S&P) 500 companies in the US has continuously increased since the early 1980s, reaching the value of 6.0 in 2001. More recently, Beattie and Thomson (2005) examine the market-to-book ratios of UK FTSE 100 and find that nearly 60 per cent of firm value was not reflected in the balance sheet. Elsewhere, Brenann (2001) reports that there is a significant difference in the market value and book value of intangibles-intensive firms in Ireland and argues that the difference is attributable to the value of intangibles not recognised in the financial statements. It has been argued that the differences were due to the 'hidden value' of intangible resources which were not captured in the balance sheet (Lev and Sougiannis, 1996; Brennan and Connell, 2000) and this situation is observed in the knowledge-based and high technology companies (Eccles and Mavrinac, 1995).

Various studies have been conducted world-wide to provide evidence as to whether intangibles are indeed related to a firm's value. The next section discusses value relevance studies with regard to intangibles.

### **2.3.3 Value relevance of intangibles**

Value relevance research provides evidence as to whether accounting numbers relate to a firm's value in the predicted manner (Beaver, 2002). It can be argued that the diminishing value relevance of financial accounting has resulted in growing studies about the increasing value relevance of intangibles. To date, a number of empirical researchers has investigated the relationship between various types of intangibles and a firm's market value to demonstrate the value relevance of intangibles to investors. These studies attempt to find linkages between intangibles such as brand values (Barth et al., 1998), customer satisfaction (Ittner and Larcker, 1998), royalty income (Gu and Lev, 2004) and stock prices. Table 2.1 summarises the findings of value relevance studies of intangibles. For example, Barth et al. (1998), in their study of brand values, provide evidence that the data on brand values are relevant to investors. Ittner and Larcker (1998), through a customer satisfaction index, find that customer satisfaction is relevant to the market but not fully reflected in the book value. With

respect to royalty income, Gu and Lev (2004) find that the market assigns a larger coefficient to royalty income than to other components of earnings. Thus, the findings from these studies indicate that analysts consider a firm's intangibles information when making recommendations to invest in the firm's shares and that investors react positively to intangibles information in making investment decisions (Ghosh and Wu, 2007).

**Table 2.1: Value relevance studies of intangibles**

Author/ Year	Types of intangibles	Findings
Amir and Lev (1996)	R&D and advertising expenditure	Earning-return-coefficient (ERC) is statistically insignificant for cellular communication but statistically significant for the telephone industry. These differences resulted from the full expensing of the R&D and advertising expenditure in the cellular telecommunication industry.
Lev and Sougiannis (1996)	R&D	Adjusted earning values to reflect estimates of capitalised and amortised R&D and advertising expenditures. Their evidence indicates that these adjustments are value relevant to investors.
Aboody and Lev (1998)	Software development costs	There is an association between capitalised software development costs and stock returns.
Barth et al. (1998)	Brand	The coefficient on brand values is positively associated with the market price and is statistically significant.
Ittner and Larcker (1998)	Customers	A Customer Satisfaction Index (CSI) is positively related to market value. They also found evidence that disclosure of customer satisfaction measures to the public provides information to the stock market regarding the company's expected future cash flows.
Lev and Zarowin (1999)	R&D expenditure	The usefulness of reported earnings, cash and book values has been deteriorating over the past 20 years.
Amir et al. (2003)	R & D	Analysts go beyond the traditional financial report to get information on R&D through conference calls and press releases.
Gu and Lev (2004)	Royalty income	The market assigns a larger coefficient to royalty income than to other components of earnings. This result may indicate that royalty income is more permanent than other elements of residual earnings.
Abdolmohammadi (2005)	Organisational structure, customers and employees	There is evidence of a positive correlation between voluntary disclosure of intangibles information and stock market valuation.
Ritter and Wells (2006)	Brand, licence, trademarks, intellectual property	There is a positive association between identifiable intangible assets and realised future periodic income.

Reflecting on the criticisms of the traditional financial reporting model that there is a widening gap between the market and book values of a firm, the decreasing value relevance of financial statement information and the increasing value relevance of intangibles information, it is important to examine the accounting treatment of intangibles, particularly in Australia.

## **2.4 Accounting for Intangibles**

Whilst there has been a general consensus that intangible resources play an increasingly dominant role in the new economy, intangibles are poorly accounted for (Lev, 2001). This is due to one of the most fundamental problems of reporting intangibles, whereby most intangibles are not allowed to be recognised in the financial statements due to their inability to meet the specific recognition criteria. The international financial reporting standard, IAS 38, *Intangible Assets*, states that:

an intangible asset shall be recognised if, and only if, it is probable that expected future economic benefits that are attributable to the asset will flow to the entity; and the cost of the asset can be measured reliably (IAS 38:21).

The standard further prohibits the recognition of internally generated brands, mastheads, publishing titles, customer lists and items that are similar in substance (IAS 38:63). Unfortunately, as argued earlier, these are the intangible resources that play a significant role in the intangibles-orientated economy.

Similarly, US GAAP provide a general principle governing intangible assets which directs a company to record the cost of intangible assets acquired from others, including goodwill, as assets (Jenkins and Upton, 2001). However, the principle states that all costs incurred to develop intangible assets that are not specifically identifiable should be recorded as expenses. Taking the same perspective as the IFRS, this rule prohibits the recognition of internally generated intangibles. At present, financial reporting standards such as IFRS only provide guidelines for purchased goodwill and some development costs to be recognised in the firm's balance sheet. There are no specific guidelines provided by US GAAP or IFRS on how to report other types of intangibles.



Arguably, there are a few issues associated with the recognition and measurement of intangibles in the financial statements. Lev and Zambon (2003) claim that the recognition problem is caused by the difficulty in valuing an exchange of resources. As the traditional financial accounting framework is transaction-based and cost-based, it is difficult to put a value on intangibles. Companies generally do not trade their intangibles, so the value of intangibles cannot be deduced like the value of tangible assets from routine market transactions (Sveiby, 1997b). As a result, there is a risk of under- or over-estimating value in use of intangibles because many intangibles are not linked to transactions.

It has also been argued that it is difficult to measure intangibles because of the difficulty in estimating their future economic benefits, which is the fundamental criterion for recognising intangibles as assets (Bernhut, 2001; Lev, 2001; Upton, 2001). This is due to the fact that it is often difficult to recognise internally developed intangibles because when expenditure to develop an intangible asset is incurred it is often unclear whether that expenditure is going to generate future economic benefits. Take, for example, expenditure incurred to develop and test a new drug. It is often unclear whether the drug under development will pass the clinical tests to be commercialised as a new product. In addition to these factors, there is also no market for many intangibles, which makes it hard for firms to measure their intangible investments (Bernhut, 2001; Bornemann and Leitner, 2002). For instance, there is no market for drugs under test and they can only be commercialised once the drugs are properly tested and there exists a market for them. Therefore, investors will not be able to compare the performance among companies as there is no trade, no market and no price for intangibles.

It has been claimed that accounting for intangible assets is one of the least developed areas of accounting theory and regulation (Powell, 2003). Therefore, it remains one of the biggest challenges facing accounting, with significant economic consequences. Given the issues regarding the recognition and measurement of intangibles, it is important to look at the accounting treatment of intangibles in Australia.

### **2.4.1 Accounting for intangibles in Australia**

In Australia, the appropriate accounting treatment for intangible assets has been a long-standing item on the agenda of the standard setters (Godfrey, 2001). The development of accounting standards in Australia relating to intangibles, according to Bradbury (2009), can be divided into five phases. The first phase was the pre-accounting standards phase where firms enjoyed considerable freedom with regard to their accounting policy choices in recognising and capitalising intangible assets. The second phase was concerned with the development of accounting standards by professional accounting bodies but the standards were only enforceable under their code of ethics. The involvement of professional accounting bodies continued in the third phase. During this time, standards produced by the professional bodies were to be approved by the Accounting Standards Review Board (ASRB) and these standards had legal backing under the *Companies Act 1981*.

The third phase also marked major changes in financial reporting when the ASRB was replaced by the Australian Accounting Standards Board (AASB). The AASB took the role of producing accounting standards and produced AASB 1011, *Accounting for Research and Development* and AASB 1013, *Accounting for Goodwill*. AASB 1011 *Accounting for Research and Development* states that research and development costs shall be charged to the profit and loss account as incurred unless the future economic benefits are expected beyond reasonable doubt to be recoverable. AASB 1013 *Goodwill* regulates goodwill and categorises goodwill as purchased or internally generated. However, only purchased goodwill can be recognised as an asset, not internally generated goodwill. A fourth phase was when the AASB announced its intention to harmonise with the International Accounting Standards Board's (IASB) standards following the issuance of the strategic direction to adopt the International Accounting Standards in 2002. As part of the harmonisation of Australian accounting standards with international accounting standards, in July 2004 the AASB pronounced the adoption of the IASB's standards to apply for full years after 1 January 2005. This fifth phase has led to the issuance of Australian equivalents of International Financial Reporting Standards (AIFRS), particularly AASB 138 which is equivalent to IAS 38, *Intangible Assets*.

As part of the harmonisation of Australian accounting standards with international accounting standards, the Australian accounting practices for intangible assets have fundamentally changed (Chalmers and Godfrey, 2006). Essentially, goodwill amortisation expense is now replaced by the impairment loss test. Further, certain internally generated intangibles can no longer be capitalised and many recognised intangibles must be derecognised. A wide discretion in recognising and capitalising intangibles which corporate managers had enjoyed for a long time has, therefore, been removed because AASB 138 *Intangible Assets* prohibits the recognition of internally generated intangibles such as brands, mastheads, publishing titles and intangible assets arising from research.

Specifically, AASB 138 *Intangible Assets* prescribes the recognition, measurement and disclosures applicable to intangible assets which are not dealt with specifically in another standard. An intangible asset is defined as an identifiable non-monetary asset without physical substance. In addition, to meet the definition of an intangible asset, an asset must be separately identifiable and the entity must have control over the future economic benefits to be generated by the asset. AASB 138 *Intangible Assets* further prescribes that an intangible asset shall be recognised only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity and if the cost of the asset can be measured reliably. Adopting the international perspective, the standard specifically prohibits the recognition of internally generated intangible assets such as brands, mastheads, publishing titles, customer lists and intangible assets arising from research (or from the research phase of an internal project). An intangible asset arising from development (or from the development phase of an internal project) can be recognised only after technical and commercial feasibility of the asset for sale or use have been established.

Prior to the adoption of AASB 138, Wyatt et al. (2001) report that almost half of their sample recognised identifiable intangible assets other than deferred R&D costs and deferred expenditure. They also indicate that this particular behaviour shows how significant identifiable intangible assets are. Reflecting on the significant impact of the AIFRS on Australian firms, Ritter and Wells (2006) argue that prior to the adoption of AASB 138, recognised identifiable intangible assets are value relevant because there is a positive association between stock prices and voluntarily

recognised and disclosed identifiable intangible assets such as brand names, licences, trademarks and intellectual property. Based on Australian studies, it could therefore be argued that investors find capitalised intangibles assets value relevant (Wyatt, 2002). However, as previously discussed, AASB 138 is more restrictive with respect to intangibles recognition and measurement. Therefore, with the application of the more restrictive recognition rules, these disclosures in financial reports will be greatly diminished (Ritter and Wells, 2006). The adoption of AASB 138 has resulted in the information relating to identifiable internally generated intangible assets not being reflected in the financial statements and being omitted due to the inability of these assets to meet the recognition criteria. As Wyatt (2005) and Cheung et al. (2008) argue, the lack of information on intangibles in the balance sheet has, therefore, tended to reduce, rather than improve the usefulness of the financial statements.

By looking at the accounting treatment of intangibles, it is obvious that intangibles information is becoming less visible in the conventional financial statements. Therefore, it can be argued that there is a need for expanded disclosure of intangibles information. Yongvanich and Guthrie (2005) argue that reporting information on items such as intangibles enables better presentation of the strengths of a firm's performance. This is because the extended reporting of intangibles enables companies to satisfy the information needs of a broader group of stakeholders. Further, expanded disclosure enables companies to optimise, manage and report value creation processes from their intangibles (Lev and Daum, 2004).

## **2.5 The Need for Intangibles Information**

As previously discussed, criticisms of the accounting treatment for intangibles arise because the current theoretical approach limits the recognition and measurement of intangible assets (Amir and Lev, 1996; Lev and Zarowin, 1999; Mouritsen et al., 2004). It has been long argued that there is a 'disconnect' between information provided in the financial statements and the information needs of investors in the new economy (Upton, 2001). This is further evidenced by accounting scandals and corporate collapses which highlighted the insufficiency of traditional financial statements in providing information about company value and performance. The collapse of renowned companies, such as Enron, WorldCom, AOL Time Warner and

Daewoo, has resulted in a growing consensus that traditional financial reporting does not provide a complete picture of the strengths and weaknesses of a business. It has also been argued that traditional financial reporting frameworks are inadequate in providing information on a company's future success, which is based, to a large extent, on many strategic intangible resources (Yongvanich and Guthrie, 2005).

Mouritsen et al. (2004) outlined several points why there is a growing need for intangible information. First, smaller shareholders may be disadvantaged as they usually have no access to information on intangibles often shared in private meetings with larger investors. Second, insider trading may occur if managers exploit internally produced information on intangibles unknown to investors. Third, there would be an increase in shares volatility and the danger of incorrect valuations of firms which would lead to investors assessing higher levels of organisation risk and fourth, there would be an increase in a firm's cost of capital.

Reflecting on the importance of intangibles, while agreeing that intangibles are increasingly important, Basu and Waymire (2008) argue that it is not obvious that intangibles can be valued accurately as assets. As previously discussed, there is no guideline on how to disclose intangibles information other than those prescribed by the relevant standards. Therefore, voluntary disclosure has been suggested as a possible solution because voluntary disclosure increases understanding of the firms' position (Core, 2001), especially with the communication of information on how management intends to create value through business strategies for future growth (Snidal, 2007). Further, with a focus on recent changes in the business environment, there is a need for more information about intangibles and for firms to supply the most relevant information through the 'eyes of management' (Snidal, 2007; Nielsen and Madsen, 2009).

It has been claimed that the disclosure of intangibles creates an important and crucial value for the organisation (Gallego and Rodriguez, 2005). This is because the disclosure serves as a supplement to financial reports and at the same time can be a strategic management tool because it gives external parties such as investors relevant information supplementary to financial information (Ordonez de Pablos, 2005). With additional relevant information, investors and other stakeholders can better assess a

firm's future wealth-creation capabilities (Williams, 2001) and can value firms more accurately. It has been claimed that it is unlikely that intangibles other than those prescribed by the relevant standards will be incorporated into traditional financial reporting in the near future (Mouritsen et al., 2004; Yongvanich and Guthrie, 2005) which, therefore, positions reporting of intangibles as a supplementary disclosure issue (Bradbury, 2009; Walker, 2009).

To date, various reporting models have been proposed for disclosing information about intangibles and for valuing them. For instance, Sveiby (1997a) developed the Intangible Asset Monitor to measure intangible assets within a company which is categorised into three groups; internal structure, external structure and employee competence. Research funded by the Danish Agency for Trade and Industry developed a new document called an intellectual capital statement which contains a large quantity of information on company's intangibles (Fincham and Roslender, 2003; Cordazzo, 2007). Skandia, a Swedish conglomerate also proposes Skandia Navigator, a narrative approach to disclose information about intangibles, to accompany the traditional financial statements<sup>1</sup>. While these efforts are basically concerned with a 'story-telling' approach, the North American literature, on the contrary, revolves on measuring and valuing intangibles. It basically involves the modelling and testing of data drawn from annual reports, market reports and analysts' forecasts (Parker, 2007). Examples include the value relevance studies discussed in Section 2.3.3 that attempt to establish links between various intangibles and stock prices.

## **2.6 Summary**

This chapter explained how the rise of intangibles has contributed to the debate regarding the inefficiency of existing accounting treatments for intangibles. The emergence of knowledge-intensive companies, information technology and intangible-intensive companies in the new economy has resulted in a shift of resources from hard assets to intangibles. The fundamental difference between the new economy and the industrial economy has resulted in a situation where the financial reporting framework may not be able to capture the value of intangible

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<sup>1</sup> These approaches are discussed in detail in Chapter 3.

resources. It has also been claimed that a strict application of accounting standards has contributed to a decrease in the usefulness of financial statements in presenting relevant information to users.

As there is a demand for expanded disclosure to accommodate the information needs of financial statements users, preparers of financial statements have moved towards voluntary disclosure to overcome limitations in the traditional financial statements, and at the same time to communicate the relevant information to the users. Reflecting on the need for expanded disclosure, the next chapter presents empirical evidence on the voluntary disclosure practices regarding intangibles. The next chapter also discusses the incentives associated with voluntary disclosure. It also demonstrates firms' disclosure behaviour in overcoming the deficiency of financial statements, especially to capital market participants.

# **CHAPTER 3**

## **VOLUNTARY DISCLOSURE AND CAPITAL MARKET CONSEQUENCES**

### **3.1 Introduction**

As discussed in Chapter 2, traditional financial reporting has been extensively criticised for not being able to meet the information needs of the financial statement users. As a result, there are calls for expanded disclosure, particularly to provide relevant information on intangibles to overcome the deficiencies of traditional financial reporting models. In fact, Riegler and Hollerschmid (2006) argue that criticisms of traditional financial reporting frameworks have become the breeding ground for the development of voluntary disclosure of intangibles. Even though it has been claimed that the developments of voluntary reporting are emerging on a piecemeal basis (Schuster and O'Connell, 2006), voluntary reporting is now, nonetheless, gradually being accepted as part of a company's official external reporting. With regard to intangibles, particularly, intangibles reporting is being promoted as a major vehicle for informing market actors about the value of a firm (Lee and Guthrie, 2010).

Reflecting on the need to provide information supplementary to the traditional financial statements, this chapter presents a broad overview of voluntary reporting together with its impact on the capital market. Particularly, Section 3.2 presents a review of voluntary disclosure practices. The literature on intangibles disclosure is discussed at length in Section 3.3 by integrating various approaches taken worldwide to make intangibles information visible in corporate reports. Various disclosure motives that are driven by both investors and other stakeholders are discussed in Section 3.4. The role of disclosure in the capital market and specific motives, such as raising additional capital are discussed in Section 3.5. Section 3.6 presents a discussion on the reporting of intangibles in the capital market and the chapter is summarised in Section 3.7.



### **3.2 Voluntary disclosure**

Financial reporting regulation only prescribes minimum disclosure requirements but prevents certain disclosures in the financial statements, for example, the recognition of some intangibles as assets. Disclosure beyond this minimum requirement is, therefore, voluntary. Managers may exercise their discretion to report information that, in their judgement, is important in assisting users of financial statements to make decisions. The term voluntary disclosure is commonly thought of as information that is not required by law or regulation (Canibano et al., 2000). It refers to information in excess of requirements that represents free choices on the part of company management to provide accounting and other information deemed relevant to the decision needs of users of the corporate reports (Meek et al., 1995). This definition of voluntary disclosure is adopted in the present study.

Voluntary information includes strategic, non-financial or financial information. Strategic information refers to information on corporate strategies, acquisitions, research and development and future prospects. Non-financial information includes both qualitative information and quantitative non-financial information (McBride, 1997). Financial information includes customer base and market share information, financial reviews and also stock price information. Some firms even prepare additional sections in their annual reports to devote special attention to their stakeholders such as employees, customers and shareholders (Meek et al., 1995) which includes a report on intellectual assets (Yongvanich and Guthrie, 2005).

Voluntary disclosure decisions reflect managerial choice, often being communicated for specific strategic purposes (Lev, 1992; Williams, 2008). Voluntary disclosure can be associated with various positive impacts on firms such as an improvement in the stock liquidity (Diamond and Verrecchia, 1991; Welker, 1995; Leuz and Verrecchia, 2000), reductions in the cost of capital (Botosan, 1997; Sengupta, 1998; Richardson and Welker, 2001) and an increase in financial analyst following (Lang and Lundholm, 1993).

Because corporate voluntary disclosure is a discretionary action (Gibbins et al., 1990) it is up to managers to decide whether to disclose or withhold certain information. Besides being influenced by the positive impacts mentioned above,

there are also associated costs, both direct and indirect costs. In this regard, firms have to incur direct costs such as production, distribution and perhaps auditing (Verrecchia, 1983) which, when aggregated, could result in a greater cost burden that outweighs benefits, in both preparation and audit costs. Indirect costs are also frequently cited as other costs that limit what a company discloses (Lanfranconi and Robertson, 1999). These costs are the results of individuals outside an organisation receiving and using the data to their advantage. According to Schuster and O'Connell, (2006), an increase in disclosure will most likely reduce a company's competitive advantage simply because additional information is revealed to investors. Verrecchia (1983) further argues that managers will only disclose competitive information when the expected increase in a firm's value exceeds the cost of disclosure. Therefore, a disclosure decision is a trade-off between direct costs, proprietary costs and the expected benefits of informing investors (Darrough and Stoughton, 1990; Meek et al., 1995).

Nonetheless, firms make use of voluntary disclosures of information presumably to overcome the inadequacy of intangibles information in the financial statements and, therefore, the next section presents a review of intangibles disclosure practices among companies across several countries.

### **3.3 Voluntary Disclosure of Intangibles**

The fundamental problematic issues regarding traditional financial reporting frameworks have encouraged companies to improve their business reporting by making voluntary disclosures of intangibles information (Oliveira et al., 2006). It has been argued that since firms find traditional accounting disclosures are inadequate in conveying information about a firm's business and future prospects, they are more likely to engage in voluntary disclosure to disclose information about their intangibles.

Various efforts have been undertaken world-wide to attend to the problem of the inadequacy of intangibles information in the financial statements by providing guidelines on how to report forward-looking and non-financial information such as intangibles information. For example, the UK Accounting Standard Board (ASB) has issued the reporting statement 'The Operating and Financial Review' (OFR) as a

guideline for UK listed companies to report on the strategic position and direction of their business. The reporting statement, which can be seen as a general-purpose narrative statement, is aimed at overcoming the inadequacy of intangibles information in the financial statements by presenting more detailed information and explanation about listed companies' operations and performance (Beattie and Thomson, 2005). Once introduced as a statutory requirement for listed companies, the OFR regulations, however, were repealed in 2006. Even though the statutory requirement has been removed, many major companies publish the OFR on a voluntary basis.

Consistent with the argument that the rise of intangibles is evidenced in growing discrepancies between market and book value (Roslender and Fincham, 2004), Beattie and Thomson (2005) examined the market-to-book ratios of UK FTSE 100 and found that nearly 60 per cent of these firms' value was not reflected in the balance sheet. They, therefore, claimed that the OFR can bridge the reporting gap and overcome the absence of most intangibles in the financial statements. This effort could also be a possible vehicle for identifying the importance of intangibles because the OFR includes information on how a company's intangibles contribute to its overall value generation (Mouritsen et al., 2004).

Besides the OFR, there are two other prominent efforts that influenced the disclosure of intangibles; the Skandia Navigator and the Intellectual Capital Statements, both originating from Northern Europe. The European countries take a story-telling approach to report their intangibles voluntarily (Fincham and Roslender, 2003; Steenkamp, 2007), and both approaches are discussed next.

#### *Skandia Navigator*

In a supplement to its annual report, Skandia, a Swedish conglomerate, introduced a framework for understanding the value creating processes within the organisation. Focusing on four themes: human, process, customer and renewal and development, Skandia claimed that the potential or readiness of intangible resources must be realised by design, production, delivery and customer service processes that transform the value potential into realised value (Skandia, 1994). The Skandia Navigator focuses on the process of value creation itself. In principle, there are no

mandatory indicators, with the aim being to identify the most appropriate information to represent the performance of the particular business. For instance, some part of the organisation may have a financial emphasis such as value added per employee and another part may have, for example, the percentage of employees working from home (Fincham and Roslender, 2003). Further, the Navigator provides a narrative approach to show a more balanced picture of a company's position using text and illustrations. By having a 'story' about how intangible resources create value, investors and users of annual reports can utilise the information to assist them in valuing a company more accurately.

### *Intellectual Capital Statements*

The introduction of intellectual capital statements (ICS) in various organisations' corporate reports aims to summarise an organisation's capabilities and competencies, representing them as productive factors with a value that can be recognised and possibly as subject to property rights (Lev and Zambon, 2003). A generic format of ICS emerged from a study funded by the Danish Agency for Trade and Industry (DATI), which contains three elements; knowledge narrative, management challenges and intangibles reporting (Fincham and Roslender, 2003). Knowledge narrative is concerned with how a business ensures that its products or services meet customers' requirements as well the utilisation of resources to achieve these objectives. The second element, management challenges, is concerned with the ability of companies to cope with potential challenges and how they document the challenges. The final element of ICS, intangibles reporting, is concerned with the reporting of intangibles either internally, within management, or externally, to the public. These elements are communicated in various forms such as text, figures, illustrations and many forms of visual representations (DATI, 2000, p.14, cited by Fincham and Roslender, 2003).

The inclusion of intangibles information in the ICS, according to Lev and Zambon (2003), is one of the most significant responses to overcome the deficiencies of traditional financial reporting models. This is because the ICS, as claimed by Ordonez de Pablos (2002), is a supplement to the financial report providing an alternative reporting practice for firms in communicating information regarding their employees, customers, technology and processes to the stakeholders.

A stream of research has been conducted to determine the extent to which companies have used voluntary disclosure to lessen the impact of the deficiencies of traditional financial reporting. The empirical findings of firms' disclosure behaviour with regard to intangibles information is discussed next.

### **3.3.1 Empirical studies**

Studies into the reporting of intangibles have generated much interest among academics, practitioners and policy-makers. Empirical work examines company data in the public domain, such as annual reports and prospectuses, and employs methods such as content analysis, case studies and experiments as well as interviews to understand how and how much information on intangibles is reported by companies. The literature on intangibles disclosure is expanding from a mere description of the disclosure practices of intangibles in various regions over time to the association between the level of disclosure and a firm's specific factors and capital market consequences.

Many authors have attempted to study the content of annual reports and prospectuses to measure the extent of intangibles disclosure among companies across several countries. These authors have devised metrics or indicators to capture the different types of intangibles information disclosed by companies. Generally, the framework has been operationalised from Sveiby's (1997a) Intangible Asset Monitor. The Intangible Asset Monitor (IAM) was developed to measure intangible assets within a company, specifically knowledge-based companies.

Table 3.1 presents summaries of contributions made by scholars in the area of intangibles reporting in various countries: Australia (Guthrie and Petty, 2000; Sujan and Abeysekera, 2007), Ireland (Brennan, 2001), Malaysia (Goh and Lim, 2004), the Netherlands, France and Germany (Vergauwen and Alem, 2005), the Netherlands, Sweden and the UK (Vandemaele et al., 2005) and New Zealand (Steenkamp, 2007). This first strand of literature provides an overview of intangibles disclosure in terms of what and how much intangibles information is disclosed by firms.

Reflecting on the problem of a fundamental shift from a production-economy to a knowledge-economy as discussed in Chapter 2 (Section 2.3.1), Guthrie and Petty

(2000) analysed annual reports of the Australian top 20 companies based on their market capitalisation to determine the extent to which these companies used their annual reports to signal information on intangibles. They revealed that the key components of intangibles such as organisational capital, customer and human capital are inadequately identified and not reported within a consistent framework. They further argued that the incidence of reporting is not great enough to be considered systematic. Particularly, they showed that these companies report their intangible items qualitatively; mostly on human resources, organisational and workplace structures because there is no established framework for reporting intangibles that do not meet the criteria to be recognised as an asset.

Using Guthrie and Petty's (2000) framework, Brennan (2001) takes a different sample group by examining 11 Irish knowledge-based companies to see whether there is a difference in their market and book values and the extent to which these companies address the difference in terms of the extent of voluntary disclosure of intangibles. The significant differences between market and book values indicate that knowledge-based companies have high levels of intangibles. In the absence of an accepted measurement and reporting method, Brennan (2001) find that intangibles information was rarely referred to in annual reports and most reported items were in qualitative form.

Previous studies have found that intangibles information in annual reports was rarely presented and most companies presented it in qualitative terms. Steenkamp (2007) conducted a meaning-orientated study in an attempt to infer meaning from intangibles disclosure in annual reports and found that since intangible resources are not all recognised in the face of financial statements, New Zealand firms voluntarily report the information in the narrative sections. Up-dating the findings of Guthrie and Petty (2000), Sujan and Abeysekera (2007) examined the top 20 Australian companies' reporting practices in 2004 and found that there had been a steady increase in the level of reporting of intangibles. They revealed that the overall intangibles information was reported quantitatively, as compared with Guthrie and Petty's (2000) study where companies reported their intangible items qualitatively. They further argued that the increase in reporting of intangibles in the annual reports represents a significant improvement in voluntary disclosure of intangibles.

Generally, the types of intangibles disclosed by the top 20 companies remained unchanged, with external capital such as customers, business collaborations and firm names being the most disclosed information.

Besides annual reports, there have also been empirical examinations of other accounting-related documents such as prospectuses. For example, examining the content of prospectuses to establish evidence on the amount of disclosure and factors such as managerial ownership, Bukh et al. (2005) reported that voluntary disclosure of intangibles in the prospectus increases over time. They reported that the extent of managerial ownership and industry type affects the amount of intangibles disclosure. Their findings, therefore, highlight the increasing importance of intangibles because companies not only communicate the information in annual reports but also in prospectuses.

Cordazzo (2007) analysed IPO prospectuses issued in the Italian capital market and found that the disclosure level had increased throughout the years 1999-2002. She argued that the IPO prospectus offers additional information on a firm's long-term strategy, company risk and future profitability, which can be utilised to disclose information on intangibles. She went on to argue that the findings imply that the capital market assesses a company's value based on intangibles information such as R&D, human resources and long-term strategy. Besides documenting the level of disclosure, Cordazzo (2007) also analysed the disclosure level with factors such as firm size and managerial ownership. The analysis showed that these two variables explain the differential disclosure. However, consistent with Bukh et al. (2005), firm age is not significant in explaining the level of disclosure.

Besides public disclosure, the level of intangibles information is also being examined using private disclosure such as presentations to financial analysts. Garcia-Meca et al. (2005) constructed a 71-item index, based on six categories: human capital, customers, business process, technology, research, development and innovation and strategy. They proposed that the disclosure of intangibles may not be limited only to publicly available information but that firms also disseminate the information through private channels such as presentations to analysts.

**Table 3.1: Summary of studies into reporting of intangibles**

<b>Author/ Year</b>	<b>Objective (s)</b>	<b>Results</b>
Guthrie and Petty (2000)	To provide an overview of intangibles reporting in Australia.	Key components of intellectual capital are inadequately identified, and not reported within a consistent framework, when reported at all.
Brennan (2001)	To compare book value and market value of companies in Ireland, and to measure the extent to which these companies address the difference by disclosing intangibles.	Intangibles were rarely referred to in annual reports and, when referred to, it was mostly in qualitative terms.
Bozzolan, Pavotto and Ricerri (2003)	To provide an overview of intangibles reporting in Italy.	Most reported external structure (customers, distribution channels, business collaboration, brands); followed by internal structure (infrastructure assets; management process, information system) and human capital (work-related knowledge, work-related competencies, and employee education).
Goh and Lim (2004)	To provide an overview of intangibles reporting practice in Malaysia.	Most reported intangibles information is external capital, followed by internal capital (infrastructure assets, then intellectual property). The least reported is employee competence. All companies disclosed qualitatively, but not quantitatively, on management philosophy, corporate culture and entrepreneurial spirit.
Bukh, Nielsen, Gormsen and Mouritsen (2005)	To provide an overview of intangibles disclosure practice over time in Denmark from 1990-2001 and to see whether the disclosure has changed in the period from 1999-2001.	Total amount of information has increased during the overall period within all categories but there is a decrease in disclosure from 1999 to 2001.
Garcia-Meca, Parra, Larran and Martinez (2005)	To provide an overview of intangibles reporting practice in Spain over time from 2000-2001.	Items most reported are customers, strategy and technology.



**Table 3.1: Summary of studies into reporting of intangibles (continued)**

<b>Author/ Year</b>	<b>Objective (s)</b>	<b>Results</b>
Vandamaele, Vergauwen and Smit (2005)	To provide an overview of intangibles reporting practice over a 5-year time period (1998-2002) in The Netherlands, Sweden and the UK.	Sweden has the highest disclosure, followed by the Netherlands and the UK. Overall, an upward trend, but the amount of disclosure seems to be losing its upward momentum. Lack of significant increase in Sweden over the period 2000-2002, indicates a slowdown in the upward trend in intangibles disclosure.
Vergauwen and Alem (2005)	To provide an overview of intangibles reporting practice in the Netherlands, France and Germany in 2000 and 2001.	The most popular item is information systems. Frequent disclosure of information on intangibles-related information.
Cordazzo (2007)	To provide an overview of intangibles disclosure in Italian IPO prospectuses in 1999-2002.	The amount of intangibles disclosure has increased over the period of 1999-2002, suggesting that managers believe the information is important in the valuation of the firm.
Steenkamp (2007)	To provide an overview of intangibles disclosure in New Zealand firms in 2004.	New Zealand firms are proactive in identifying, recognising and reporting intangibles. The firms used annual reports strategically to report useful information on intangibles and to signal what information is important.
Sujan and Abeysekera (2007)	To provide overview of intangibles reporting practice among the top Australian firms in 2004.	Most reported is external capital, followed by internal and human capital. The least reported attributes are copyrights and trademarks, franchising agreements and vocational qualifications. The attributes which had the most quantitative reporting are distribution channels and customers.
Campbell and Rahman (2010)	To examine intangibles reporting of Marks & Spencer over a 31 year period from 1978 to 2008.	Find an overall increase in intangibles reporting over 31 years especially in relational capital. Also find an increase in narrative reporting.

Another strand of literature on intangibles disclosure focuses on the association between intangibles disclosure and various firm-specific characteristics such as size (Bozzolan et al., 2003; Bukh et al., 2005; Garcia-Meca et al., 2005; Oliveira et al., 2006; Cerbioni and Parbonetti, 2007), industry (Bozzolan et al., 2003; Bukh et al., 2005; Garcia-Meca et al., 2005; Oliveira et al., 2006; Cerbioni & Parbonetti, 2007), ownership structure (Bukh et al., 2005; Oliveira et al., 2006), types of auditor (Oliveira et al., 2006) and board structure (Cerbioni and Parbonetti, 2007).

Table 3.2 presents the results of studies that associate intangibles disclosure practice with a specific company's characteristics. Bozzolan et al. (2003) seek to explain the differences in intangibles disclosure among firms in different industry groups in Italy and the UK. They classify these companies into knowledge-based and traditional industries. The evidence from this study indicates that knowledge-based companies disclose more information on intangibles than traditional firms. Similarly, Oliveira et al. (2006) find that industry type is significant in explaining the variation in the level of disclosure of intangibles. Besides factors such as size and industry type, Cerbioni and Parbonetti (2007) extend the literature by examining the level of intangibles disclosure and corporate governance factors. They find that board size, role duality of the CEO and the chairperson and also board structure are negatively associated with the level of intangibles disclosure but as the percentage of independent directors increases, voluntary disclosure also increases.

**Table 3.2: Summary of studies on the association between intangibles disclosure practice and firm specific characteristics**

<b>Author/ Year</b>	<b>Objective (s)</b>	<b>Results</b>
Bozzolan, Pavotto and Ricceri (2003)	To provide an overview of intangibles reporting in Italy and to explain factors associated with different levels of disclosure.	Industry and size have the highest explanatory potential.
Bukh, Nielsen, Gormsen and Mouritsen (2005)	To provide an overview of intangibles disclosure practice over time in Denmark, and to explain factors associated with different levels of disclosure.	Management ownership creates incentive for greater disclosure. High-tech industries disclose more information. Size and age are not significant.
Garcia-Meca, Parra, Larran and Martinez (2005)	To provide an overview of intangibles reporting practice in Spain overtime, and to explain factors associated with different levels of disclosure.	The traditional factors such as size, listing status and market-to-book ratio are significant in explaining the level of intangibles disclosure.
Oliveira, Rodriguez and Craig (2006)	To identify factors that influence the reporting of intangibles among small capital markets.	Size, ownership concentration, type of auditor and industry are significant in explaining the differential disclosure of intangibles among companies.
Cerbioni and Parbonetti (2007)	To explain the association between the level of intangibles disclosure and corporate governance factors.	Board size, CEO duality and board structure are negatively associated with intangibles disclosure level but as the percentage of independent directors increases, voluntary disclosure increases.

It has been claimed that even though research on intangibles disclosure has created awareness about the importance of intangibles, clear results on the determinants of disclosure are still scarce (Bruggen et al., 2009) and, therefore, this warrants more investigation. A review of prior studies on voluntary disclosure of intangibles presented earlier shows that there is a dearth of evidence about the motivations behind disclosure. With few exceptions (Guthrie et al., 2006; Kang, 2007; Steenkamp, 2007; Sujana and Abeysekera, 2007) studies on intangibles disclosure do not offer a strong theoretical basis to explain the differential disclosure practices and for interpreting the motives behind disclosure (Kaufmann and Schneider, 2004; Abeysekera and Bounfour, 2006). The development of a theory and framework underlying voluntary disclosure of intangibles, according to Abeysekera and Bounfour (2006), is still in its infancy and, therefore, a conclusion cannot be easily drawn.

Lanfranconi and Robertson (1999) argue that decisions on what to disclose should be viewed as an effort to enhance shareholder value, which explains why management often chooses not to be restricted by statutory disclosure requirements in spite of the potential costs of expanded disclosure. With regard to management choices in disclosing information, the next section discusses various motives to explain why firms might engage in voluntary disclosure.

### **3.4 Voluntary Disclosure Motives**

Prior studies on intangibles disclosure that provide theoretical explanations widely adopt legitimacy theory or stakeholder theory to explain the voluntary disclosure behaviour of firms (Guthrie et al., 2004; Kang, 2007; Steenkamp, 2007) and these theories are discussed in the next sub-section.

#### **3.4.1 Legitimacy and Stakeholder theory**

Kang (2007) states that wider aspects of corporate disclosure such as social, environmental and intangible activity are addressed to a growing number of stakeholders. Besides, prior studies imply that voluntary disclosure will help companies to appear legitimate in the eyes of society and at the same time help companies to respond to various demands of stakeholders (Beattie and Thomson,

2007). Following these theoretical perspectives, voluntary disclosure is largely regarded as occurring to address the needs of society and stakeholders.

Legitimacy theory posits that there is a 'social contract' between a company and the society in which it operates. In this case, support that an organisation has from society is a result of it being *perceived to be* legitimate by society (Guthrie et al., 2006). The expectations that society has regarding how an entity should act are considered to constitute a social contract between the organisation and society. In this case, organisational images are shaped by generally accepted standards and social pressures. Accordingly, legitimacy theory provides a foundation for understanding how and why managers might use externally focused reports to benefit their organisations (Deegan, 2000). Following a legitimacy theory perspective, 'organisations continually seek to ensure that they operate within the bounds and norms of their respective societies' (Deegan, 2000, p. 253). That is, they attempt to ensure that their activities are perceived by outside parties as being legitimate. Hence, legitimacy theory implies that corporations will take measures and actions to ensure that their activities and performance are acceptable to the community. Because of this, Steenkamp (2007) argues that firms provide voluntary information to position themselves among society to enhance their perceived value and to legitimise their actions and activities.

Guthrie et al. (2006) suggest that companies are more likely to report on their intangibles if they have a specific need to do it; for instance, when they are unable to legitimise their position on the basis of the hard assets that are traditionally recognised as a symbol of success. This decision, according to Suchman (1995), is one of the strategies to repair or regain legitimacy from the community in which a firm operates. Therefore, communication of information to the public aims to legitimise actions (Deegan, 2000; Haniffa and Cooke, 2005) because legitimacy theorists assume that the communication of information in relation to economic, social, political and environmental factors is, in fact, in response to demands by various stakeholders or government regulations (Guthrie and Parker, 1989). Drawing on legitimacy theory, Steenkamp (2007) and Kang (2007) argue that companies report intangibles to create social images or to improve their reputation and seek to meet explicit and implicit social expectations.

Alternatively, stakeholder theory posits that all stakeholders, including customers, suppliers, employees, community and the general public have a right to be provided with information on how organisational activities impact on them (Deegan, 2000; Guthrie et al., 2006). Therefore, an organisation's management is expected to undertake activities deemed important by their stakeholders and to report on those activities to stakeholders (Guthrie et al., 2006). Based on this assumption, Guthrie et al. (2006) propose that firms will voluntarily disclose information about their intangibles, social and environmental performance in order to meet stakeholders' expectations. Kang (2007) proposes that companies make voluntary disclosure because they are pressed to exhibit social responsibility by their employees, customers, suppliers, general public and other social activities groups. Based on their analysis of Australian companies, Guthrie et al. (2006) indicate that these companies made reference to stakeholder reporting in their annual reports, for example, on future strategies and their relationship with stakeholders. These actions, according to Beattie and Thomson (2007), may be taken to respond to the demands of the stakeholders most critical to a company's ongoing survival.

Kang (2007) proposes that both legitimacy and stakeholder theorists seek to explain perspectives different from that of economic theory and, therefore, they should not be seen as competing perspectives. Voluntary disclosure of intangibles has been discussed in the lenses of legitimacy and stakeholder theories to meet diverse societal expectations, but not specifically based on economic theory. Therefore, it can be argued that legitimacy and stakeholder theories, even though relevant, are insufficient to explain the disclosure behaviour of firms, because managers might also signal important and powerful information to emphasise their strong position in the market and to enhance the perceived value of a firm (Abeysekera and Guthrie, 2005). That is, under the economic viewpoint, signalling theory can be seen as an alternative way to comprehend the behaviour of companies in disclosing intangibles information to the public. In addition, signalling of information is also able to serve legitimacy and stakeholder theory goals because firms may disclose additional information to negate the perceived transparency problems they may have (Kang, 2007) which, in turn, could contribute to positive social images among stakeholders. Besides, it could be argued that firms may not be pressed by society to report information on intangibles but it is in a company's interest proactively to provide

information from its perspective to position itself favourably. Therefore, firms might signal relevant and useful information for capital market participants, especially when firms are driven by capital market motives such as capital-raising intentions.

### **3.4.2 Signalling theory and information asymmetry**

Voluntary disclosure of additional information might help investors to assess the timing and uncertainty of their investment so that they can value firms and make other investment decisions such as choosing a portfolio of securities (Meek et al., 1995). Therefore, companies satisfy the need of investors by disclosing additional information to enable them to raise capital at the best available terms (Frankel et al., 1995; Meek et al., 1995). Additional disclosure can be explained by signalling theory that focuses on the behaviour of managers in signalling favourable firms' performance to distinguish themselves from poor performing firms. Therefore, signalling is a reaction to information asymmetry in the market when companies have information that investors do not.

In the capital market, managers are better informed about the companies they manage because managers have significant information compared to investors. It can be argued that management knows more than outsiders. For example, they know about the company, the environment in which the company operates and its future prospects (Lanfranconi and Robertson, 1999) as well as having superior ability to predict a firm-specific event. Therefore, this information advantage creates an information asymmetry between managers and the market (Dierkens, 1991). The situation of information asymmetry was first demonstrated by Akerlof (1970) using the used-car market. Akerlof (1970) illustrates that the used-car market has high information asymmetry because the sellers of used-cars know more about the true quality of the car than do the buyers. If the sellers of high quality used-cars do not signal the high quality of their products, all used-cars, both good cars and bad cars or 'lemons' in the market will be sold at a single price, reflecting the average level of car quality. In this regard, sellers of poor quality used-cars will make a profit while sellers of good quality cars will suffer a loss because the market does not know that their products are of better quality. Healy and Palepu (2001) provide an example of a firm's business ideas, which can be both good and bad ideas. In this case, lack of information will lead investors to value both good and bad ideas at the same average

level which, in turn, may result in some good ideas being under-valued and some bad ideas being over-valued.

The issue of information asymmetry is important because information asymmetry may increase the opportunity for moral hazard, adverse selection and other opportunistic behaviours between companies and primary stakeholders because investors do not know the true value of a firm (Hughes, 1986; Holland, 2003; Singh and Zahn, 2008). For instance, an opportunistic management might have exploited the information asymmetry situation to engage in fraudulent behaviour such as accounting manipulations or earnings management for their own purposes. The most prevailing example of the information asymmetry problem is the market failures among intangibles-intensive companies during the 1997-2000 'dotcom' episode where the market failed to value these intangibles-intensive companies appropriately (Holland, 2003). Thus, it has been argued that the inconsistencies and deficiencies in reporting of intangibles information are creating growing information asymmetry between managers and investors (Walker, 2006).

It was discussed in the previous chapter that the adoption of the AIFRS in Australia has resulted in less visibility of intangibles information in the financial statements. This situation, therefore, contributes to an information asymmetry situation. In accordance with Morris (1987), who argues that a necessary condition for signalling theory is information asymmetry, it can be argued that signalling theory can explain voluntary disclosure of intangibles information since this information is less visible in the financial statements. In particular, when firms have a specific capital market motive such as to issue additional shares, signalling theory would support voluntary disclosure because firms might want to signal intangibles information to investors to reduce the information asymmetry. Thus, Schuster and O'Donnell (2006) argue that the development in voluntary reporting is to be welcomed because of the capacity of intangibles information to reduce the existing information asymmetries.

In accordance with Murray et al. (2006), who argue that information released voluntarily can be a powerful indicator of performance and be more likely to represent a signal to the market, it can be argued that firms are likely to disclose more information such as on employee competence, company reputation, business

processes and organisational infrastructure to highlight certain aspects of their investments in intangibles. Thus, voluntary release of additional information emphasises a firm's strong position in the market which will, in turn, reduce the information asymmetry and improve investors' decision-making in valuing a company. Thus, voluntary disclosure can play an important role in the capital market and this is discussed next.

### **3.5 The Role of Disclosure in the Capital Market**

Healy and Palepu (2001) identify five motives that lead to managerial participation in voluntary disclosure in the modern capital market economy, which are:

1. *the capital market transactions hypothesis*

It is theorised that managers tend to increase disclosure of information to reduce information risk and, hence, reduce information asymmetry between managers and investors, when they intend to issue equity, debt or make acquisitions and other strategic intentions;

2. *the corporate control hypothesis*

This hypothesis posits that managers might use voluntary disclosure to increase firms' value when they are not performing well so that additional disclosure will mitigate the managers' risk of job loss;

3. *the stock compensation hypothesis*

It is hypothesised that managers with stock compensation plans use voluntary disclosure to reduce the likelihood of insider trading allegations and firms have incentives to increase voluntary disclosure to reduce contracting costs with managers who receive stock compensation;

4. *the litigation cost hypothesis*

This hypothesis indicates that managers have incentive to disclose bad news to avoid legal action in the future for inadequate disclosure but also have an incentive to reduce disclosure of forward-looking information that might have proven to be inaccurate; and

5. *the proprietary cost hypothesis*

It is hypothesised that managers limit voluntary disclosures if they perceive the disclosure could be competitively harmful.



Consistent with the *capital market transactions hypothesis*, it has been discussed previously that demand for disclosure arises from information asymmetry between managers and outside investors because managers normally have an advantage over the market in predicting a firm-specific event (Dierkens, 1991; Healy and Palepu, 2001). Research from a capital market perspective shows that voluntary disclosure can be associated with reductions in the cost of capital (Botosan, 1997; Sengupta, 1998; Richardson and Welker, 2001); improved liquidity for stock (Diamond and Verrecchia, 1991; Welker, 1995; Leuz and Verrecchia, 2000), and increased following by financial analysts (Lang and Lundholm, 1993).

Signalling theory holds that since disclosure reduces information asymmetry between firms' insiders and outsiders disclosure will, in turn, reduce the cost of capital (Diamond and Verrecchia, 1991; Zhang, 2001; Botosan, 2006; Petersen and Plenborg, 2006; Boesso and Kumar, 2007). If information asymmetry persists, firms need to issue shares at a substantial discount, especially those firms with limited liquidity. This discount reduces the funds that firms receive from the issue and, thus, increases the cost of capital. By disclosing more information, firms are likely to reduce the information asymmetry level and they will be able to increase the liquidity of their shares, which leads to a lower cost of capital and more efficient prices of shares (Petersen and Plenborg, 2006). In this regard, greater disclosure reduces the transaction costs for investors. This, in turn, causes greater liquidity and greater demand for the firms' securities (Amihud and Mendelson, 1986; Diamond and Verrecchia, 1991). Increased liquidity, according to Leuz and Verrecchia (2000), is an indication that a firm's shares are popular due to an increased level of information disclosed.

Using self-constructed indices to measure firms' voluntary disclosure behaviour, Botosan (1997) finds a negative relationship between disclosures and the cost of equity capital for firms with low analyst following. She argues that additional disclosure lowers the information risks and, hence, lowers the cost of equity capital for these firms. Besides equity capital, there is also evidence that links increased disclosure and cost of debt capital. Sengupta (1998) reports that bondholders and underwriters do consider corporate disclosure policy when determining the risk premium applicable to interest rates on debt instruments. With increased disclosure,

stakeholders are better equipped to estimate the applicable risk associated with a company. Lower borrowing costs mean lower interest payments on loans and other forms of debt used to finance a company's operations.

With respect to capital-raising activity, there exists empirical evidence that managers tend to increase disclosure of information when they are offering equity (Myers and Majluf, 1984; Lang and Lundholm, 1993; Lang and Lundholm, 2000; Healy and Palepu, 2001). It is recognised that one of the characteristics of capital-raising is significant information asymmetry between the issuing firms' management and potential investors (Cazavan-Jeny and Jeanjean, 2007). Therefore, it has been suggested that managers who anticipate making capital market transactions have incentives to provide voluntary disclosures to reduce the information asymmetry problem, hence reducing a firm's cost of external financing (Healy and Palepu, 2001). This indicates that firms seeking external financing disclose incremental information to get a favourable outcome from investors.

Empirically, studies have shown that firms are more accommodating with their disclosures when they require external financing (Clarkson et al., 1994; Frankel et al., 1995). This is evidenced by a positive correlation between the need to access the capital market and the disclosure output. Researchers have examined the frequency of management forecasts (Ruland et al., 1990; Frankel et al., 1995); analyst ratings of disclosure quality (Lang and Lundholm, 1993); the level of information asymmetry (Dierkens, 1991; Marquardt and Wiedman, 1998; Petersen and Plenborg, 2006); the quality of the Management Discussion and Analysis section in annual reports (Clarkson et al., 1994); and the use of conference calls (Frankel et al., 1995) to indicate the disclosure behaviour of firms having capital-raising activity.

Based on the frequency of management forecasts, Ruland et al. (1990) and Frankel et al. (1995) found that forecasts enhance the ability to attract new capital which may be the most important benefit of forecast release. Their results also revealed that new capital is more likely to be issued subsequent to the date of the forecast. Therefore, the empirical evidence suggests that capital-raising motivates managers to disclose additional information. In addition, the positive association between firm's tendencies to access the capital market and to disclose earnings forecasts suggests

that firms attempt to mitigate the potential consequences of the information asymmetry through voluntary disclosure. Hence, in this respect, market forces tend to provide incentives for additional disclosure.

Welker (1995) used analysts' ratings of firms' voluntary disclosure levels and found that firms with higher ratings have lower bid-ask spreads and, therefore, lower cost of equity capital. He argued that a well-regarded disclosure policy reduces information asymmetry and, hence, increases liquidity in the equity market. Through an analysis of disclosure of earnings forecasts and information asymmetry to insiders selling through secondary capital-raising, Marquardt and Wiedman (1998) found a positive association between managerial participation and voluntary disclosure prior to the registration of the offering. Also, they found a negative association between managerial participation and information asymmetry proxies and, therefore, supported the notion that voluntary disclosure reduces the information asymmetry level.

Myer and Majluf (1984) indicate that entrepreneurs looking for external financing have incentives to provide more voluntary information to reduce the information asymmetry problem. Lang and Lundholm (1993) also support the view that firms issuing securities disclose more information. Thus, it can be argued that firms make use of voluntary disclosure to mitigate the information asymmetry problem by signalling incremental information to the capital market. Similarly, Healy and Palepu (1993) argue that managers consider that favourable perceptions of the issuer are important, especially, in capital-raising activity. With regard to capital-raising, Lang and Lundholm (2000) report that firms involved in capital-raising increase their voluntary disclosure from six months before the issue. This empirical evidence provides an impression that increased disclosure plays a significant role in reducing the cost of equity capital of the firm.

Williams (2008) argues that the relationship between specific managerial decisions and disclosure strategies has not been a well-researched area. Reflecting on this argument, it is argued that financing intentions have driven firms to utilise voluntary disclosure in order to signal more information about intangibles. Since voluntary disclosure makes good business sense because additional information is useful in

valuing a firm's future prospects (Williams, 2008), it is the purpose of the study to determine whether financing decisions provide a strong incentive for firms to signal intangibles information to the capital market. It can also be argued that the adoption of the AIFRS in Australia, which has resulted in intangibles information being less visible in the financial statements, could also be one of the reasons for increased voluntary disclosure of intangibles.

It has been discussed that firms' voluntary disclosure behaviour is motivated by various factors such as to appear legitimate in the eyes of the society or to meet the expectations of diverse stakeholder groups. However, for the purpose of the study, voluntary disclosure of intangibles can be explained by signalling theory because voluntary disclosure is taken as a signal to capital market participants, especially investors. Therefore, greater insight can be gained into why firms voluntarily disclose intangibles information if they are driven by the financing motive.

### **3.6 Reporting Intangibles in the Capital Market**

With respect to intangibles, prior literature suggests that firms investing heavily in internally developed intangibles tend to experience significant information asymmetry (Aboody and Lev, 2000; Gu and Lev, 2004; Liao, 2008; Singh and Zahn, 2008) because lack of information on intangibles may impose real costs on investors through an increase in volatility. This is because the increased volatility increases the degree of uncertainty in valuing a firm (Chan et al., 2001). As previously discussed in Chapter 2, intangibles-intensive industries exhibit more volatile market values because information in the financial statements is insufficient to convey information about a firm's business and future prospects. It can be argued that a high level of information asymmetry is evident because investors find it difficult to predict how firms will get the benefits from a particular investment in intangibles.

For example, Tasker (1998) reports that intangibles-intensive companies conduct more conference calls to convey information about their performance. This is because, according to Gelb (2002), intangibles-intensive firms perceive accounting disclosure as inadequate so these firms prefer additional disclosure. Abdolmohammadi (2005) finds a positive relationship between intangibles reporting practice and market capitalisation in the US. He reports that intangibles information

such as brands and proprietary processes is relevant in the stock market valuation. Also, Jones (2007) reports that managers of intangibles-intensive firms tend to disclose more detailed information about their R&D activities to alleviate the fact that the basic financial statements are less informative about a firm's market value. This is further supported by Gerpott et al. (2008) who report that firms include information about customers and investors' relationships to bridge the information asymmetry. Thus, it can be argued that voluntary disclosure is an important channel for firms with significant levels of intangibles to disseminate intangibles information (Gelb, 2002).

More recently, Singh and Zahn (2008) argue that even though managers may incur high proprietary costs in signalling information on intangibles, they still make use of voluntary disclosure when seeking external financing because the disclosure of intangibles can be used to improve analysts' and investors' valuations of a company. Reflecting on the volatility of intangibles-intensive industries, Singh and Zahn (2008) further argue that lack of disclosure increases investors' risk perceptions towards these companies. As the volatility increases, firms must then issue capital at a discount which results in lower proceeds, thus driving up the cost of capital.

Bukh et al. (2005) argue that intangibles-intensive companies disclose more information on intangibles in their IPO prospectuses to reduce the cost of capital. They also argue that since these companies rely on intangibles such as human resources and R&D, they need to disclose more information on intangibles to facilitate the capital market's valuation analyses. Other studies also find evidence that companies competing for funds in the capital market provide a wide variety of voluntary disclosure beyond requirements (Hossain et al., 1994; Gray et al., 1995b; Gelb and Siegel, 2000; Stanton and Stanton, 2002).

The empirical evidence on the increased disclosure of information during capital-raising supports the notion that firms enjoy the benefits of the reduced information asymmetry component of cost of capital. Therefore, the evidence supports the capital market transaction hypothesis that the intention to raise funds is one of the factors that explain managers' decision voluntarily to disclose information. Therefore, it could be argued that firms proactively signal incremental information about

intangibles to enhance their perceived value when they intend to raise capital and this could be done through communication of how management intends to create value so that investors are equipped with enough information to assess a firm's performance (Snidal, 2007).

The growth of research to capture intangibles disclosure in the early 2000s as discussed in the earlier section provides valuable examples in understanding the concept of intangibles. It also provides examples of corporate disclosure behaviour in overcoming the deficiency of traditional financial statements. Reflecting on the importance of intangibles to firms, Holland (2003) claims that information such as management qualities, business strategies and performance management systems is important in creating value in terms of growing a firm's current business. As a result of criticisms about the financial reporting framework as discussed in Chapter 2, more companies are disclosing information about their intangibles such as information on R&D, human resources, customers and business strategies in annual reports and other accounting-related documents such as prospectuses.

In reporting their intangibles, Steenkamp (2007) observes that overall, firms take a narrative approach to describe the value-creation process. Firms also tell holistic stories through a network of visualisations such as graphs, charts, pictures and texts. In Australia, the investigation and evaluation of the disclosure of intangibles particularly among firms with capital-raising motive is, therefore, appropriate, especially after the adoption of the AIFRS that changes the accounting treatment of intangibles substantially (Wyatt et al., 2001).

### **3.7 Summary**

This chapter discussed firms' disclosure behaviour with regard to disclosure of intangibles. Since firms with high levels of intangibles are experiencing high information asymmetry, voluntary disclosure of intangibles information may reduce the information gap between these firms and the investors. The empirical evidence presented in this chapter suggests that managers perceive that more disclosures could enhance a firm's value and they are more likely to signal additional information if they intend to access the capital market. In this respect, market forces appear to

provide incentives for more disclosure as it reduces the cost of capital, increases followings by analysts and improves stock liquidity.

Chapter 4 integrates the disclosure behaviour of firms with regard to their intangibles information to form a basis for intangibles disclosure in terms of what and how intangibles information is signalled when firms are motivated by an intention to engage in capital-raising activity. The conceptual model and the development of hypotheses are also presented in the next chapter.

# **CHAPTER 4**

## **SIGNALLING OF INFORMATION IN DISCLOSURE**

### **DOCUMENTS: A CONCEPTUAL MODEL AND HYPOTHESES**

#### **DEVELOPMENT**

#### **4.1 Introduction**

The previous chapter discussed voluntary disclosure and its consequences for the capital market. It was argued that information on intangibles is valuable to investors and, therefore, companies disclose this information to reduce investors' uncertainty, thereby lowering the cost of capital. The cost of capital can be lowered because more information about intangibles serves as a signal that indicates a company's value (Meer-Kooistra and Zijlstra, 2001). In this case, when managers have significant intangibles information compared to outside investors, they will voluntarily signal the information as a reaction to information asymmetry in the capital market.

As previously discussed in Chapter 2, the rise of intangibles and the emergence of intangibles-intensive companies in the new economy have contributed to the debate on the inadequacy of the accounting treatment of intangibles. As the new economy places more reliance on intangible value drivers such as knowledge and human capital, the current financial reporting framework has been criticised for not being able to capture all value drivers. Despite the fact that these intangible value drivers are value-relevant, current financial reporting frameworks limit their recognition as assets in the financial statements. According to the review of research into voluntary disclosure presented in Chapter 3, additional information is needed to complement the financial statements.

Drawing on signalling theory, the next section discusses the utilisation of annual reports and prospectuses as signalling mechanisms by firms to disseminate information. Section 4.3 discusses the concepts of variety and extent of intangibles information utilised in this study. As well as variety and extent of disclosure, four aspects of intensity of disclosure are introduced in Section 4.4. These are: (1) type of information; (2) nature of information; (3) emphasis through presentation effects;



and (4) emphasis through repetition of information. The conceptual model and hypotheses are developed in Section 4.5.

## **4.2 The Use of Annual Reports and Prospectuses as Signalling Devices**

The studies reviewed in Chapter 3 show that empirical work has examined company disclosure documents such as annual reports and prospectuses, employing methods including content analysis, case studies, experiments and interviews to capture and understand intangibles disclosure behaviour among companies. As discussed earlier, capital-raising activity could provide a strong incentive to disclose intangibles information in order to reduce the information asymmetry problem arising from a lack of intangibles information in the financial statements. One way to signal such information is through narrative sections in annual reports immediately *prior* to the capital-raising. Firms might also signal their intangibles information in their prospectuses *during* the registration of their offerings to reduce the risk associated with investors' decision-making. The use of these documents to disseminate information is discussed next.

### **4.2.1 Annual reports**

Guthrie and Petty (2000) argue that annual reports are regarded as highly useful sources of information because managers of companies commonly signal what is important through this reporting mechanism. The annual report is a vital instrument designed to tell the story of a company, its objectives, where the company succeeded or failed and what the company intends to do in the future (Simpson, 1997). Toms (2002, p.262) argues that the annual report is the obvious place for signalling disclosures. In Australia, Section 299A of the *Corporations Act 2001* requires firms to disclose a review of operations, details of significant changes to the company's business and any developments in the operations relevant to future years. Therefore, it could be argued that the annual report contains a comprehensive up-date and it provides managers with an opportunity to articulate current and future strategies to investors.

An annual report generally comprises quantitative information, narratives, photographs and graphs (Stanton and Stanton, 2002). As regularly practised, the

statutorily required financial statements are usually placed in a rear section, and a larger up-front section normally contains non-statutory matters (Stanton and Stanton, 2002). As discussed in Chapter 3, annual reports provide an opportunity for firms to disclose voluntary information such as strategic, non-financial and financial information, which can also include information about intangibles. Firms generally utilise narrative or unaudited sections such as the Chairman's statement, CEO Review and other additional sections such as sections devoted to employees, customers and stakeholders to disclose voluntary information (Meek et al., 1995).

Narrative reporting is defined as critical contextual and non-financial information that is reported alongside financial information so as to provide a broader and more meaningful understanding of a company's business, its market strategy, performance and future prospects, including quantified metrics (Clatworthy and Jones, 2003; PriceWaterhouseCoopers, 2007). Once prepared to corroborate financial statements, narrative disclosures are now viewed by many influential organisations and groups as worthy of sharing the leading role in business reporting (Beattie et al., 2004). Research also suggests that narrative disclosures are widely used and considered important in investment decisions (Clatworthy and Jones, 2003). The importance of narrative reporting is well documented. These studies document that narrative disclosures such as those in the Chairman's statement and the Management Discussion and Analysis (MDA) section and equivalents are among the most important parts in annual reports (Epstein and Pava, 1993; Smith and Taffler, 2000). For instance, Smith and Taffler (2000) find that the Chairman's statement contains important information associated with a firm's future performance while Epstein and Pava (1993) state that the MDA is the most widely read section in the annual report.

Annual reports of listed companies, which have often become a source of raw data for voluntary disclosure studies, have also served as an instrument for observing managerial disclosure behaviour (Guthrie and Abeysekera, 2006). As narrative sections are largely unregulated and unaudited, firms may exercise their discretion in deciding what information to disclose voluntarily. Companies are using narrative presentations to provide a view through the 'eyes of management' (Snidal, 2007; Nielsen and Madsen, 2009). Wide discretion also allows managers to feature

important issues whereas less important issues are excluded from the disclosure in the annual reports (Gibson and Guthrie, 1996).

As previously discussed in Chapter 3, the reporting of intangibles in annual reports is not systematic because there is no generally accepted framework on how to report internally generated intangibles that do not meet the criteria to be recognised as an asset in the financial report. However, as argued earlier, firms indeed disclose intangibles information to overcome the deficiency of traditional financial statements and the disclosure behaviour can be explained by various motives such as the intention to issue additional shares. Therefore, annual reports are used in the present study to investigate how listed companies that intend to raise additional capital signal intangibles information in those reports.

#### **4.2.2 Prospectuses**

In Australia, the *Corporations Act 2001 (Chapter 6D Fundraising)* and Australian Securities and Investments Commission (*Regulatory Guide 56 Prospectuses*) govern the information disclosure in disclosure documents. The fundraising provisions of the *Corporations Act* aim to balance the need for investor protection against the need to facilitate an efficient and credible capital market by requiring full and accurate disclosure of relevant information by the company issuing securities<sup>2</sup> (Lipton et al., 2010). Thus, capital-raising activity offers a unique opportunity to study the manner in which firms behave with regard to voluntary information disclosed to the capital market. There are four different types of disclosure documents which are: (1) a prospectus; (2) a short-form prospectus; (3) a profile statement and (4) an offer information statement. A full prospectus is a full disclosure document and contains more detailed information than the other types of disclosure documents (Lipton et al., 2010).

A prospectus, which is a legal document, is a joint product of several parties including the company, underwriters, lawyers and auditors. Underwriters act as intermediaries between the company and investors, auditors provide assurance of the

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<sup>2</sup> Chapter 6D Fundraising of the *Corporations Act 2001* defines 'securities' as shares, debentures, options and legal rights in relation to them. For the purpose of the study, only equity issues such as shares, options and rights issue are included as capital-raising, and this excludes debentures.

financial statements and lawyers advise the company on the disclosures required in the narrative sections (Deumes, 2008). As a general rule outlined in Section 710 of the *Corporations Act*, a prospectus requires disclosure of all information that investors and their professional advisers would reasonably require to make an informed investment decision. This general requirement affords managers wide discretion in featuring information relevant to investment decisions.

According to Cumby and Conrod (2001), a prospectus is most likely to contain comprehensive and current information on intangibles such as patents, project developments and information on employees. Reflecting on the information in prospectuses, Bukh (2003) and Bukh et al. (2005) argue that they contain information about future expectations regarding market development and earnings, strategic direction and intentions of a firm. The authors go on to argue that information in prospectuses indicates what companies and their advisers believe is important in the capital market assessment of the value of the company. Their views are supported by Cordazzo (2007) who claims that prospectuses contain both financial and non-financial information on items such as mission and strategy, human resources, customers and supplier relationships.

Further, information on a company's achievements, skills and growth potential allows companies to demonstrate to investors that investing in the company will be most likely to generate a positive return (Bukh et al., 2005). A prospectus is generally more forward-orientated than an annual report and it gives companies opportunities to include current information such as investment in intangibles. Despite the broad latitude enjoyed by firms in providing information in the prospectus, the *Corporations Act* also requires that information is presented in a clear, concise manner and that a prospectus does not contain misleading or deceptive information. Criminal liability and personal liability are imposed on the various people involved in preparing a disclosure document to pay compensation should the *Corporations Act's* requirements be breached.

With regard to capital-raising, the Australian Securities Exchange (ASX) categorises it into three structures: (1) initial equity capital-raising; (2) secondary equity capital-raising; and (3) debt capital-raising. The initial equity capital-raising or the initial

public offering (IPO) is concerned with capital-raising of companies applying for new listings. In contrast, the secondary equity capital-raising is concerned with listed companies that raise additional capital to stabilise and strengthen their financial position. The third category is debt capital-raising which is concerned with corporate debt issuance and/or business loans. The secondary equity capital-raising is one of the most important activities of companies listed on the stock exchange. This is because these companies have a mechanism for pooling funds from many investors who wish to participate in a particular business venture (Lipton et al., 2010). In Australia, particularly, listed companies raise capital basically to restore their balance sheets which, in turn, facilitates capital market growth and promotes credit growth through the banking sector (Gibson, 2009). According to statistics issued by the Australian Securities and Investments Commission (ASIC), Australian companies raised AU\$119.9 billion by equity issues between July 2008 and September 2009 (Gibson, 2009).

In attending to the research questions posed in Chapter 1, there is a need to compare the disclosure of intangibles in the annual reports and prospectuses. Therefore, in order to compare the disclosure behaviour of firms, this study focuses only on secondary equity capital-raising by listed companies because of the availability of their annual reports. Firms applying for an IPO do not have publicly available annual reports to be compared with their prospectuses in terms of their voluntary disclosure of information. Thus, secondary issues are appropriate in addressing the research questions.

With regard to secondary issues, there are five major types of equity capital-raising which are: (1) public placements; (2) private placements; (3) rights issues; (4) share purchase plans; and (5) dividend reinvestment plans, each of which requires different disclosure to the market. Public placements involve raising capital by making public offerings, subsequent to the initial listing of a company. In contrast, private placements involve raising capital by issuing shares to specific investors that include large institutional investors or an experienced and financially sophisticated group of existing investors (Ross et al., 2008). A rights issue is a capital-raising activity where all existing shareholders are offered an opportunity to subscribe for further shares in proportion to their holding, usually at a discount to the current market price of the

shares. A share purchase plan (SPP) is an offer of securities up to a set dollar value to existing shareholders. A SPP is often linked to an institutional placement, in which case, the offer is only made to those shareholders who were not offered shares through the placement. The fifth type of capital-raising is dividend reinvestment plan, in which shareholders are permitted to reinvest all or part of their dividend payments in new shares. The opportunity to participate is available to all shareholders.

Recall, there are four different types of disclosure documents to facilitate the capital-raising in disseminating relevant and useful information to investors with a full prospectus containing more detailed information compared to the other types of documents. The extent of the disclosure depends on the type of capital-raising and the type of disclosure documents. For example, private placements to financially sophisticated investors do not require a disclosure document and no disclosure documents are needed if the amount of a SPP issued to an individual investor is below AU\$15,000 in a 12-month period (Lipton et al., 2010). However, a full prospectus must be used for offers such as: public offerings; rights issues that do not meet conditions set out in Section 708; large scale SPPs; and dividend reinvestment plans for shares that are not fully paid.

To date, with few exceptions (Bukh et al., 2005; Cordazzo, 2007; Singh and Zahn, 2008), there is little empirical evidence on the intangibles disclosures in the prospectuses. Even though some studies have examined the disclosure level of intangibles in prospectuses, they were mainly concerned with the disclosure during initial listing of a company, rather than secondary capital-raising by already established companies. That is, despite wide acknowledgement that the level of information asymmetry is high between issuing firms and potential investors (see Chapter 3.5), very few studies have addressed the intangibles disclosure practices of listed firms during capital-raising.

In this study, a full prospectus is considered as one of the signalling tools because it contains more detailed information. Further, since a prospectus must satisfy a general disclosure test as well as contain specified information, it is expected that a full prospectus is more likely to contain additional relevant information such as

information on intangibles. It is expected that firms will signal intangibles information in prospectuses with the disclosure not being limited solely to annual reports. Similar to the Section 299A disclosure requirements for annual reports, Section 710 of the *Corporations Act* requires a prospectus to contain information on the operations of the entity, its financial position and the entity's business strategies and its prospects for future years. In this regard, only issues of securities that require a full prospectus such as public offerings, rights issues, SPPs and dividend reinvestment plans are considered in this analysis. Private placements are excluded from the analysis because they do not require a disclosure document.

### **4.3 Variety and Extent of Disclosure of Intangibles**

Prior research indicates that there is a variety of intangibles information disclosed by companies to signal important information and it has been captured and measured through various intangibles items. In relation to intangibles information, there is a variety of conceptual frameworks that has been used to describe and capture various types of intangibles information. A framework developed by Brooking (1996) classifies intangibles into four categories; market assets, intellectual property assets, human-centred assets and infrastructure assets and these assets are represented by various indicators. Examples of indicators as discussed by Brooking (1996) are: in the market assets category - brand, reputation, repeat business, distribution channel and favourable licensing; in the intellectual property assets category - patents, copyrights, trademarks and trade secrets; in the human-centred assets category- leadership, entrepreneurial and managerial skills; and in the infrastructure assets category- corporate culture, risk assessment and management and information systems.

In addition to the scheme put forward by Brooking (1996), another widely used classification is Sveiby's (1997a) Intangible Asset Monitor with three elements: internal structure - examples are intellectual property, patents, and networking systems; external structure - examples are customers and distribution channels; and employee competence - examples are education and work-related knowledge. Guthrie and Petty (2000) modified Brooking's (1996) and Sveiby's (1997a) frameworks and came up with 24 elements through three categories; internal capital, external capital and human capital and subsequently modified it again (Guthrie et al.,

2004) to 18 elements through the same three main categories. Examples of Guthrie et al.'s (2004) framework are: internal capital - intellectual property, management philosophy and corporate culture; external capital - brands, customers and distribution channel; and human capital - employees, education and training.

In this study, the 'variety' of disclosure is defined and represented by different categories of intangibles items to indicate the number of unique categories of intangibles information identified in annual reports and prospectuses.

The extent of intangibles disclosure is concerned with the total amount of disclosure by firms. For instance, Guthrie and Petty's (2000) and Guthrie et al.'s (2004) frameworks have been used extensively in the intangibles disclosure literature to measure the amount of disclosure in annual reports and other accounting-related documents. This was done by quantifying the breadth of annual report disclosures by counting each intangibles item that appears in a company's annual report.

In this study, the 'extent' of disclosure refers to the total number of disclosures obtained by counting the frequency of each occurrence of each intangible item. The utilisation and construction of the categories of intangibles, together with the measurement of the extent of disclosure is explained in detail in Chapter 5.

The next section discusses the concept of intensity of disclosure; that is the degree of intensity or the strength of the information signalled by firms in their corporate reports to stakeholders.

#### **4.4 Intensity of Disclosure of Intangibles**

Reviewing prior research on voluntary disclosure, Merkl-Davies and Brennan (2007) claim that voluntary disclosures either: (1) contribute to useful decision-making by overcoming information asymmetry between managers and investors; or (2) constitute opportunistic behaviour whereby managers exploit the information asymmetry situation through biased reporting or impression management. The arguments on voluntary disclosure presented in Chapter 3 are associated with the first motive which is to contribute to useful decision-making by overcoming information asymmetry between managers and investors. By having more detailed



information and explanation regarding the business and operations, firms provide investors with incremental information that will consequently assist investors' decision-making. However, Merkl-Davies and Brennan (2007) argue that voluntary disclosure by way of narrative reporting to complement financial statements, provides managers with the opportunity to present a company's performance and prospects in the best possible light because corporate narratives are largely unregulated, and have become longer and more sophisticated over time. It has also been argued that sometimes managers use accounting narratives in a self-serving manner, rather than reporting performance objectively (Clatworthy and Jones, 2003).

Impression management, as defined by Hooghiemstra (2000, p.60) is 'a field of study within social psychology studying how individuals present themselves to others to be perceived favourably by others' and this phenomenon has been extensively documented in the psychology literature, human behaviour and also politics (Clatworthy and Jones, 2003). It is a concept that underpins the idea that people actively form impressions of others (Schneider, 1981). Most impression management studies present evidence that some impression management tools give a favourable impression of a firm's performance. Therefore, the evidence suggests that managers utilise impression management tools when engaging in opportunistic behaviour.

In a corporate reporting context, firms may manipulate the content and presentation of information in corporate documents with the purpose of distorting readers' perceptions of corporate achievements (Godfrey et al., 2003). Companies seek to find ways of capturing the attention of their corporate report readers. Corporate reports contain illustrations, diagrams and graphical presentations (Marston and Shrides, 1991). Campbell et al. (2010) claim that annual reports have moved from simple accounting numbers to narrative, graphical, pictorial and broader aesthetic content. In this regard, a range of impression management tools are utilised by managers such as selectivity in graph choice (Beattie and Jones, 1992; Courtis, 1997), presentation emphasis (Bowen et al., 2005) and thematic manipulation (Lang and Lundholm, 2000; Smith and Taffler, 2000; Rutherford, 2005) to draw a reader's attention.

For instance, Courtis (1997) argues that visual effects may enhance a reader's perceptions of company performance. This is because visuals such as graphs capture and retain the attention of readers (Beattie and Jones, 1992; Courtis, 1997). In addition to visual effects, companies might also use presentation emphasis to make a piece of information stand out from the rest so that it captures a reader's attention. Bowen et al. (2005) find that companies emphasised figures that portray more favourable firm performance in headlines. Their results suggest that presentation emphasis increases the likelihood that a piece of information is noticed because it is placed in the most obvious location which is the headline.

However, it is argued here that managers might also use impression management tools to overcome information asymmetry problem by facilitating investors to make better informed decision. That is, in improving readers' understanding of some aspects of the corporate reports, managers might choose some impression management tools to draw a reader's attention. As some impression management tools such as visual effects and presentation emphasis have the capability to capture and retain attention, the use of these tools might facilitate investors' understanding of information. As previously discussed in Chapter 3, signalling theory posits that firms signal various important messages to improve investors' decision-making. In the event of capital-raising, firms are expected to signal incremental information such as on their intangibles to meet investors' information needs. Drawing ideas from impression management literature which provides evidence that some impression management tools create a favourable impression, it is expected that some impression management tools would also have a role in signalling information. That is, managers can utilise techniques such as visual effects and presentation emphasis when signalling important information to draw a reader's attention and, thus, create a stronger signal. Therefore, readers of corporate reports are more able to perceive, absorb and retain information signalled in obvious and strong ways which, in turn, facilitates their decision-making.

Thus, it can be argued that some impression management tools might be selected responsibly by managers in disseminating information to provide stronger signals. That is, managers may contribute to useful decision-making by overcoming the information asymmetry by making disclosure of information more noticeable. In this

study, particularly, capital-raising activity might motivate managers to provide stronger signals so that the readers are better informed and more engaged with the information presented. By integrating both impression management and signalling theory literature, not only can the amount of intangibles disclosure be analysed but also the strength of each intangibles disclosure made by firms.

In this study, it is argued that firms utilise various techniques to communicate information to the users of corporate reports presumably to make crucial information clear and obvious. This way, the likelihood that the readers notice the information can be increased. Therefore, the ‘intensity of disclosure’ is defined as the degree of intensity or the strength of intangibles information presented in annual reports and prospectuses. To assess the degree of intensity of intangibles disclosure, the intensity of disclosure is captured using four dimensions which are: (1) type of disclosure; (2) nature of disclosure; (3) emphasis through presentation effects; and (4) emphasis through repetition. These four dimensions are chosen to represent the strength or intensity of intangibles information presented in both annual reports and prospectuses. The presence of any one of these four dimensions in the reports represents more intense intangibles disclosures and these dimensions are discussed in turn in the next sub-sections.

#### **4.4.1 Type of disclosure: Textual and visual disclosures**

Unerman (2000) claims that pictures are sometimes a more influential tool than narrative disclosures for stakeholders who do not have the time or inclination to read every word because they sometimes just flick through the annual reports, looking only at the pictures. This view is supported by Hooper and Low (2001) who claim that big pictorial spreads are eye-catching items in annual reports. Also, Davison (2008) claims that firms sometimes use pictures to add flesh to corporate identity and emphasise markets, products and other aspects of a company’s life. More recently, Campbell et al. (2010) observe the use of human faces in annual reports and find that the use of faces has risen significantly over the last 15 years. From their sample, they find that more than 70 per cent of the photographs in the annual reports contain humans. Therefore, they suggest that with the proliferation of design, there has been an increase in the use of visualisation in annual reports. Further, they suggest that

images are powerful in the sense that they position the audience to engage with the organisation.

In addition to pictures, graphical presentations of quantitative data have become one of the techniques used by management to disclose information. Graphs are currently being used extensively (Beattie and Jones, 1992; Beattie and Jones, 2008). Within the context of corporate reporting, graphs are often an integral part of the communication package presented to investors (Beattie and Jones, 1992; Courtis, 1997). Courtis (1997) argues that the visual nature of graphs reduces the likelihood of information overload as readers may capture and retain the information in graphic form. Further, graphs are 'eye-catching' and are 'excellent in summarising, distilling and communicating information' (Beattie and Jones, 2008, p.72).

Thus, as a communication tool, graphs, just like pictures, may capture the attention of a reader who might not pay attention to textual disclosures and, therefore, are regarded as more intense signals. With regard to intangibles disclosure, Abeysekera and Guthrie (2004) and Steenkamp (2007) find that charts, tables and photographs are used to communicate information on intangibles such as information about employees. Therefore, companies arguably feature intangibles information through pictures and 'powerful images' to convey powerful messages or signals to readers (Steenkamp, 2007, p. 233). In the present study, consistent with Beattie and Jones (1992), Unerman (2000) and Davison and Skerrat (2007), visual representations are regarded as more intense communication tools compared to textual disclosures. Thus, any disclosures in visual forms such as graphs, diagrams, tables, pictures and photographs are regarded as superior to information presented in textual form and, therefore, considered to convey stronger and more intense signals.

#### **4.4.2 Nature of disclosure: Qualitative and quantitative disclosures**

Most studies distinguish the nature of disclosures as either quantitative or qualitative (Guthrie et al., 2004; Kang, 2007). Quantitative disclosures provide information of both a non-financial nature but with a numerical value (non-financial quantitative) and disclosures which are monetary that relate to actual financial numbers (financial quantitative). On the other hand, qualitative disclosures relate to narrative information expressed in terms other than quantitative terms, with no numerical

value attached (Kang, 2007; Steenkamp, 2007). Guthrie and Petty (2000) find that companies report intangibles information such as human resources and organisational infrastructure qualitatively. Similarly, Steenkamp (2007) finds that New Zealand firms disclose intangibles information qualitatively in their annual reports. Studies in Australia, Hong Kong and the UK also indicate that the disclosure of intangibles information is made qualitatively (Guthrie et al., 2006; Beattie and Thomson, 2007; Sujan and Abeysekera, 2007). There is also evidence that information is disclosed quantitatively, being both financial and non-financial in nature. For instance, Steenkamp (2007) reports that 50 per cent of the New Zealand firms in her study made voluntary disclosure of intangibles information quantitatively. In another study, Sujan and Abeysekera (2007) report that the top Australian companies voluntarily disclosed intangibles information in quantitative terms, in both financial and non-financial terms, as well as qualitative information.

There is a long-standing argument about whether quantitative disclosures are superior to qualitative disclosures. It could be argued that numerical disclosures indicate higher quality and value to a company (Hasseldine et al., 2005) and, consequently, carry stronger signals (Toms, 2002). In contrast, Marston and Shrive (1991) indicate that quantitative disclosures, such as numbers, cannot be viewed in isolation as having any informational content and they need to be accompanied by explanatory words. However, even though Cormier and Gordon (2001) argue that qualitative disclosures are more easily related to a company's effectiveness, it can be argued that quantitative disclosures represent important and distinguishing differences between firms and their competitors. Particularly, Hasseldine et al. (2005) argue that intangibles-intensive firms are more likely to gain reputation if they disclose quantitative intangibles information. This is because when firms have made genuine and significant investments in intangibles such as R&D, they are more likely to offer the strongest possible signal to gain the interest of investors because quantitative disclosures are more likely to represent actual activities (Toms, 2002) and the disclosure of intangibles information serves as a signal to the market. In a study of emerging capital markets, Kang (2007) finds that most firms voluntarily report intangibles information quantitatively, with monetary values in their annual reports. Therefore, it can be argued that the benefits of intangibles can be expressed in quantitative information (Kang, 2007).

In the event of capital-raising, it can be argued that firms might provide stronger signals through quantitative disclosures of intangibles information. According to Al-Tuwaijri et al. (2004), quantitative disclosures are more objective and informative to stakeholders than qualitative information and, therefore, are superior to qualitative disclosures. Thus, in the present study, quantitative disclosures represent more intense signals compared to qualitative disclosures.

#### **4.4.3 Emphasis through presentation effects: Location/positioning of information, special characters and type of font**

As an impression management tool, emphasis assumes that the reader notices the information emphasised more (Brennan et al., 2009). It was argued that signalling of information can be expected to be accompanied by similar techniques. Consistent with Brennan et al. (2009, p.811) emphasis through presentation effects is defined as the emphasis provided by prominent location/positioning of information, use of special characters and/or more emphatic types of font. Prominent location includes information positioned in headlines and sub-headings. Headlines can be used to attract a reader's attention, emphasise key points and summarise a message (Jameson, 2000; Somerick, 2000). Special characters are defined as information presented in bullet points or numbered lists. Emphatic types of font present information in bold text, italics and with other special effects such as underlining.

In the context of intangibles information, it is argued that emphasis through presentation effects of information is important especially in the event of capital-raising due to a high information asymmetry level between managers and investors. Firms may use emphasis through presentation effects as a communication tool in signalling intangibles information to increase the likelihood that the reader notices crucial information that is emphasised more.

#### **4.4.4 Emphasis through repetition**

According to Beattie et al. (2004), multiple disclosures or repetitive disclosures can be interpreted as an important communication strategy for management to signal information to investors. By stating the same piece of information more than once, firms are putting more emphasis on that particular information. Investigating the

concept of repetition in annual reports, Davison (2008) argues that repetition exists to emphasise and to aid the memory of readers in building a corporate identity. Therefore, based on this evidence, it is acknowledged that firms signal certain information to investors many times. Thus, repetitive disclosure is considered to be a stronger signal compared to information that is mentioned only once.

Even though multiple disclosures can be interpreted as an important communication technique, there is little evidence on multiple disclosures in the accounting literature and most studies on intangibles disclosure are quite unclear when dealing with repetition of information. For instance, Bozzolan et al. (2003), Guthrie et al. (2006), Oliveira et al. (2006) and Sujana and Abeysekera (2007) ignore repetition of information in their analysis of annual reports. However, Kang (2007) and Steenkamp (2007) include multiple disclosures of intangibles in their analyses on the basis that companies recognise that certain information is important and choose to repeat it in the annual reports so that readers do not miss the message.

#### **4.4.5 The concept of information intensity**

The previous sub-sections discussed in detail how companies might present information in their corporate reports. It was argued that more intense signals can be communicated through various techniques. In the present study, four intensity dimensions are chosen to represent the degree of intensity of information. First, visual disclosures are considered more intense than textual disclosures. Second, the nature of disclosure separates disclosures in terms of qualitative and quantitative information with quantitative disclosures being regarded as more intense than qualitative disclosures. The present study also incorporates the impression management technique of emphasis through presentation effects to assess the degree of intensity of particular information. Particularly, information positioned in headlines and presented in the sub-headings and in bold text/underlining is more intense information compared to information in plain text. Further, repeated information is regarded as a more intense signal than information that is featured only once.

## 4.5 Conceptual Model and Hypotheses Development

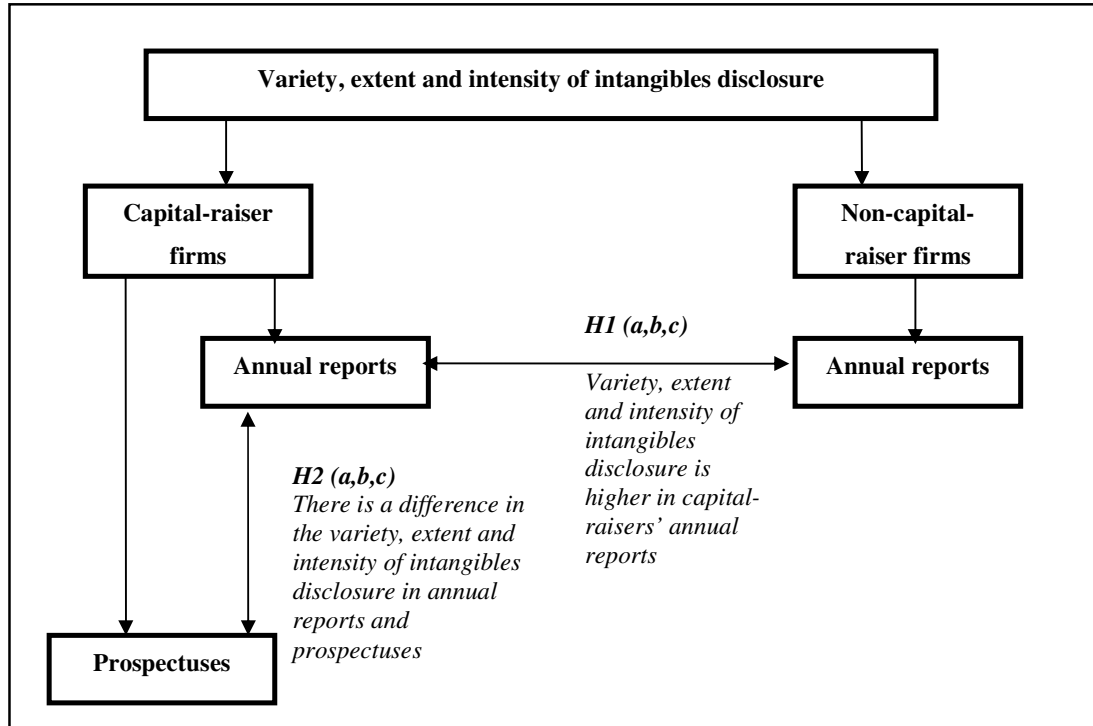
Research has documented that firms are more forthcoming in disclosing additional information prior to the registration of capital-raising (see Chapter 3.5). Therefore, the positive association between a firm's tendency to access the capital market and to disclose additional information suggests that firms attempt to mitigate the potential consequences of information asymmetry through disclosure. As there is evidence that firms disclose additional information in the event of capital-raising, further investigation is needed to assess whether firms signal intangibles information when they intend to raise additional capital. This is in response to calls that effort is still needed in researching how companies report intangibles information since there is a limited understanding on how firms report their value drivers (Mouritsen et al., 2004; Boedker et al., 2005; Yongvanich and Guthrie, 2005). Further investigation will consequently provide more evidence on what firms are reporting, particularly when they are driven by capital-market motives.

It was argued that firms have incentives to signal relevant information when they intend to raise additional capital. Relevant information such as that on intangibles items can be communicated through relevant disclosure documents such as annual reports and prospectuses. In order to reduce the information asymmetry, capital-raiser firms may communicate a greater variety and a higher extent of disclosures. Also, these firms may communicate information by increasing the degree of intensity of messages so that the capital market picks up and interprets the information and reacts accordingly.

Capital-raiser firms are expected to disclose a wide variety of intangibles information, a greater extent of disclosure and more intense disclosures in their annual reports *prior* to capital-raising. In addition to annual reports, it is also expected that these firms would signal their intangibles in their prospectuses *during* the capital-raising. Drawing from these expectations, a conceptual model is developed and shown in Figure 4.1



**Figure 4.1: Conceptual Model**



Based on the developed model, the expectations concerning voluntary disclosure of intangibles information and financing activity are posited next.

*Variety, extent and intensity of disclosure of intangibles information in annual reports*

It was argued in the previous chapter that disclosure of additional information gives firms various advantages such as a lower cost of capital and an increase in stock-market liquidity. Thus, the basic expectation is that capital-raiser firms provide a greater variety of intangibles information and a higher extent of disclosure in their annual reports prior to capital-raising compared to their non-capital-raiser counterparts. It is also expected that the capital-raiser firms would provide stronger and more intense information compared to non-capital-raiser firms.

Consistent with Figure 4.1, the following directional hypothesis is developed:

H1: The:

- a) variety;

b) extent; and

c) intensity

of voluntary disclosure of intangibles information in annual reports is higher in capital-raiser firms compared to non-capital-raiser firms.

*Variety, extent and intensity of voluntary disclosure of intangibles information in prospectuses*

The difference in the variety, extent and intensity of intangibles disclosure in annual reports and prospectuses of capital-raiser firms can be considered from two opposing view-points. On the one hand, as previously discussed in Section 4.2.2, a prospectus, which is a forward-orientated document, can be used to disclose current intangibles information. That is, capital-raiser firms may feature additional intangibles information in prospectuses as a consequence of information that has already been disclosed in the annual reports prior to capital-raising. Firms may also engage in a higher extent of intangibles disclosure in their prospectuses and communicate more intense signals through prospectuses. That is, there may be more disclosures, with more intense information in the prospectuses compared to prior year's annual reports.

On the other hand, as a prospectus is a regulated document, firms are liable for any misleading disclosures. Capital-raiser firms might have less incentive to disclose more information for fear of legal action. That is, there may be fewer disclosures in the prospectuses. Based on these two opposing propositions, and since there appears to be no literature that compares the disclosure of information in capital-raiser firms' annual reports and their prospectuses, no specific expectation is formed on the difference between the two documents. However, it is expected that there would be some differences or patterns with regard to disclosures in annual reports and prospectuses.

Therefore, the following non-directional hypothesis is developed:

H2: There is a difference in the:

a) variety;

b) extent; and

c) intensity

of voluntary disclosure of intangibles information of capital-raiser firms' annual reports and their prospectuses.

#### **4.6 Summary**

This chapter has drawn together a discussion on the importance of intangibles information and its relevance to the capital market. Despite compelling evidence on voluntary disclosure of intangibles among firms, to date there appears to be no empirical study that examines the relationship between intangibles disclosure in annual reports and prospectuses prior to and during capital-raising. From a review of the literature, it is expected that firms will signal intangibles information especially when they intend to raise additional capital. Two relevant and comprehensive documents are discussed, namely annual reports and prospectuses and these documents are considered to be the most obvious place to signal intangibles information. Based on the review, two hypotheses were developed to test the relationships between intangibles disclosure and financing activity. The relationships will be analysed through content analysis and statistical tests. The next chapter deals with the research method that will be used to conduct the tests of the hypotheses.

## **CHAPTER 5**

### **RESEARCH METHOD**

#### **5.1 Introduction**

This chapter is constructed to address the hypotheses developed in Chapter 4. It is hypothesised that the variety, extent and intensity of voluntary disclosure of intangibles information in the annual reports of capital-raiser firms are higher compared to non-capital-raiser firms. It is also expected that there is a difference in the variety, extent and intensity of voluntary disclosure of intangibles information in capital-raiser firms' annual reports and their prospectuses.

To address the hypotheses, Section 5.2 deals with the selection of the sample companies. Section 5.3 discusses content analysis as the research method chosen for the study. Section 5.4 explains in detail the measurement of voluntary disclosure of intangibles information. The classification of intangibles categories is discussed in this section, together with the coding, recording and scoring rules. Section 5.5 discusses the statistical tests and this chapter is summarised in Section 5.6.

#### **5.2 Selection of the Sample Companies**

##### **5.2.1 Capital-raising activity**

The hypothesised explanatory variable for this study is a firm's intention to raise additional share capital. It was argued previously that signalling of information is important for firms raising additional capital in order to reduce the information asymmetry problem, thus lowering the cost of capital. As previously discussed in Chapter 4, there is a variety of means to raise capital in the Australian market, each with different disclosure document requirements. In this study, the independent variable is any issue of securities that requires a full prospectus to be lodged with ASIC (See Chapter 4.2.2). A dummy variable is used to identify the firms, set equal to one if a firm has capital-raising activity in the year following disclosure and zero otherwise.

### **5.2.2 Capital-raiser sample**

In the selection process, firms listed on the Australian Securities Exchange (ASX) were first narrowed down to the largest firms (based on market capitalisation). In the Australian market, the largest 200 firms represent 78 per cent of Australian equity market capitalisation and serve as the primary gauge of the capital market (ASIC, 2009). The selection of largest firms is consistent with prior intangibles disclosure studies (Guthrie and Petty, 2000; Abeysekera and Guthrie, 2005; Guthrie et al., 2006). It is argued that large firms possess more intangible resources such as a large number of staff and other forms of intangibles (Abeysekera and Guthrie, 2005; Guthrie et al., 2006). Therefore, large companies are likely to disclose more information about their intangibles. Guthrie and Petty's (2000) Australian study found that large companies, apparently, are active in intangibles reporting. This is consistent with the view that the size of firms is an important factor in determining the extent of voluntary reporting because bigger firms are more likely to disclose more information (Guthrie and Mathews, 1985; Chow and Wong-Boren, 1987; Lang and Lundholm, 1993; Gray et al., 1995a; Bozzolan et al., 2003; Kent and Ung, 2003; Garcia-Meca et al., 2005). Therefore, it is expected that large Australian firms might possess more intangible resources and for that reason, they are more inclined to disclose a wide variety of intangibles information.

As discussed in Chapter 2, the adoption of AIFRS in 2005 has resulted in a widespread concern of its impact on financial statements. Therefore, in order to compare accurately firms' disclosure behaviour, the top 200 Australian firms in 2006, 2007 and 2008 were selected based on their market capitalisation as at 31 December each year and these are the reporting periods after the adoption of the AIFRS. Market capitalisation is the market value of a company's equity capital. It is calculated by multiplying the number of common shares by the current price as at 31 December each year.

The lists of the top 200 companies were obtained from Standard and Poor's website. Based on the lists, the search facility in the Aspect Huntley DatAnalysis was used to identify any full prospectuses issued by these firms. The Aspect Huntley DatAnalysis website provides extensive disclosure documents issued by companies such as annual reports, prospectuses, product disclosure documents, cleansing statements and

other announcements to the shareholders and public. A keyword search was used to search for 'prospectus' for every company in the list. Based on the prospectus search, the list of the top 200 companies in 2006 was narrowed down to those raising capital with the issuance of a full prospectus in 2007 which consisted of 14 companies<sup>3</sup>. Next, the list of the top 200 companies in 2007 was used to search for full prospectus issued by these firms in 2008 and seven companies were selected based on their disclosures through a full prospectus. Following the same keyword search procedure, the top 200 companies in 2008 were narrowed down to those raising capital in 2009 with 11 companies selected. Out of the 32 initial sample companies for the three-year period, two companies were eliminated because they had been delisted from the stock exchange. The companies have to be eliminated because there were no data on their market capitalisation to be matched with the non-capital-raiser firm. Therefore, the final sample for capital-raiser firms is 30.

It is acknowledged that the period selected for capital-raising (2007-2009) coincides with the global financial crisis which had created severe impacts on the global credit market, particularly securities of financial companies and other companies with highly leveraged balance sheet (ASX, 2010). Therefore, companies might have taken advantage to increase their capital-raising activity to stabilise and strengthen their financial position. Even though companies might raise significant amount of capital, this activity does not fundamentally changed the direction of the thesis.

### **5.2.3 Non-capital-raiser sample**

To test the hypotheses developed in Chapter 4, there is a need to compare the disclosure behaviour of the capital-raisers with non-capital-raiser firms. A number of variables may potentially affect the relationship between variety, extent and intensity of intangibles disclosures among capital-raiser and non-capital-raiser firms and, therefore, there is a need to control for the differences in their disclosure behaviour. Since voluntary disclosure is discretionary, corporations vary widely in their disclosure practices and various studies have investigated the association between disclosure and corporate characteristics (Ahmed and Courtis, 1999). For example, studies on corporate disclosure have found that disclosure level is positively

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<sup>3</sup> All but one company is a non-December reporter. This means 2006 was their first financial reports prepared using AIFRS.

associated with firm size (Meek et al., 1995; Hackston and Milne, 1996; Oliveira et al., 2006; Cordazzo, 2007).

As larger firms are more likely to operate in different markets, they are required to provide more information to stakeholders (Lang and Lundholm, 1993; Depoers, 2000). Further, as larger firms tend to have a higher proportion of outside capital (Jensen and Meckling, 1976) and make extensive use of the capital market for external financing (Singhvi and Desai, 1971), they disclose more information to reduce the information asymmetry which, in turn, reduces the cost of capital. Large companies are more progressive and innovative in the area of intangibles reporting because they have sufficient resources to engage in voluntary disclosure. It was argued that large companies are likely to possess more intangibles and have more resources which, therefore, result in more voluntary disclosure (Abeysekera and Guthrie, 2005; Guthrie et al., 2006). Therefore, the selection of large companies controls the size effect because the extent of voluntary disclosure of large firms is likely to be significantly higher than that of smaller companies (Guthrie and Petty, 2000).

Besides firm size, industry type may also explain a firm's voluntary disclosure behaviour. It has been argued that different industries have different competitive advantages. For instance, intangibles-intensive firms disclose more information than firms in other industries (Bozzolan et al., 2003; Oliveira et al., 2006). This is due to the fact that the financial statements of these companies are insufficient to convey intangibles information and they tend to overcome the problem through voluntary disclosure (Tasker, 1998). Bukh et al. (2005) argue that intangibles-intensive firms utilise more voluntary disclosure because of the growing gap between their book values and market values. Besides, some industries might face much more stringent regulatory environments than others and firms in such industries may consider it necessary to reassure existing and potential investors that all is well by way of voluntary disclosure (Hackston and Milne, 1996).

Thus, this study incorporates firm size and industry type as control variables because similar-sized companies in the same industry should typically have similar disclosure (Buhr and Freedman, 2001).

The matched-pair process began with the remaining top 200 firms for 2006, 2007 and 2008 who were not capital-raisers. Further, any remaining top 200 companies that have capital-raising in the following years were also eliminated to avoid bias in assessing their disclosures. For each year, the capital-raiser firms selected earlier were matched with the non-capital-raiser firms based on the industry type. The industry type is classified according to the Global Industry Classification Standard (GICS) sectors which are: (1) energy; (2) materials; (3) industrials; (4) consumer discretionary; (5) consumer staples; (6) health care; (7) financials; (8) information technology; (9) telecommunication services; and (10) utilities. Next, the non-capital-raiser firms were matched based on their market capitalisation. The industry type and market capitalisation figures were also obtained from the DatAnalysis website. As a result of the matched-pair process, the capital-raiser and non-capital-raiser firms had the same GICS code in all cases. An independent t-test (reported in Chapter 6) showed that there is no significant difference in the matched-pair samples. Thus, the selection process has resulted in matched pairs of capital-raiser and non-capital-raiser companies with a comparable market capitalisation and industry.

### **5.3 Content Analysis**

Content analysis is an empirically grounded method, exploratory in process and predictive or inferential in intent (Krippendorff, 2004). It is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use. As a technique, this methodology seeks to determine patterns in the presentation of data and their meanings in a systematic, objective and reliable analysis (Krippendorff, 2004). In other words, content analysis involves codifying text units into much fewer content categories (Weber, 1990).

Krippendorff (2004) suggests that content analysts have to consider four elements in the analysis. These are: (1) unitising; (2) sampling; (3) coding and recording; and (4) reducing data to manageable representations. Unitising relies on a unitising scheme, particularly the unit of analysis and measurement, whereas sampling relies on the sampling plan and how data are drawn. The coding and recording rely on coding instructions to execute the analysis whereas established statistical techniques or other methods are needed to summarise and simplify the data to ease the interpretation. All four elements are discussed and dealt with in detail throughout the chapter.



According to Gray et al. (1995a), the use of content analysis either demands or, at a minimum, implies strongly, that the categories of analysis are derived by reference to shared meanings. They argue that the categories of classification must be clearly and operationally defined and the framework and methods must conform as closely as possible to the mainstream literature. Therefore, the selection of items to be included in the classification scheme is important in ensuring that the intended information can be captured. Gray et al. (1995a) further argue that the research instrument, method and methodology must be as transparent and replicable as possible. There is no simple right way to do content analysis (Weber, 1990) and researchers must justify what methods are most appropriate in addressing their research questions. Beattie et al. (2004) argue that content analysis is a one-dimensional approach to study a complex, multi-faceted concept. However, Guthrie et al. (2004) argue that content analysis is a fruitful avenue to pursue business reporting research.

Beattie and Thomson (2007) and Steenkamp and Northcott (2007) outline several methodological issues associated with the use of content analysis in investigating voluntary disclosure. They argue that the methodological issues such as coding reliability, the unit of analysis and the unit of measurement hinder the interpretation and comparisons across studies. Since there is a wide variety of alternatives in analysing and measuring disclosure of intangibles there is a need for transparency in the selection of the best possible alternative (Beattie and Thomson, 2007; Steenkamp and Northcott, 2007). The methodological issues relating to the application of content analysis in examining voluntary disclosure of information, namely: (1) reliability of analysis; and (2) unit of analysis and unit of measurement are discussed in the next sub-sections.

### **5.3.1 Reliability of analysis**

The reliability of analysis is concerned with the replication of results obtained (Marston and Shrives, 1991) and the demonstration that valid inferences can be drawn from content analysis (Milne and Adler, 1999). This methodological requirement, even though not unique to content analysis, still demands particular attention (Krippendorff, 2004). In conducting content analysis, the reliability of an analysis can be demonstrated by having both a reliable coding instrument and reliable coders (Milne and Adler, 1999; Unerman, 2000; Beattie and Thomson,

2007). With regard to the coding instrument, well-specified decision categories and decision rules are important to demonstrate rigorous reliability. Therefore, content analysis of corporate reports requires a classification scheme to classify the information based on, for example, environmental disclosure, financial disclosure or whether the disclosure is mandatory or voluntary (Gray et al., 1995b; Milne and Adler, 1999). Content analysis also requires a set of coding rules specifying what and how to code, and how to measure and record the data to be classified (Milne and Adler, 1999).

The second issue relates to the consistency and accuracy with which the coders have applied the definitions of the classification scheme. This can be established by having multiple coders and any discrepancies between coders must be resolved by way of re-analysis or by having a single coder but with a period of training before coding a full data set (Milne and Adler, 1999). According to Krippendorff (2004, p.215-216), there are three types of reliability for content analysis, as follows.

1. *Stability* - is measured as the extent to which a coding procedure yields the same results on repeated trials by the same coder. The stability can be assessed using the test-retest procedure of coding the same data by a single coder, after an intervening time interval. This is the weakest form of reliability test but is the easiest to obtain. Measuring stability is the first step in establishing the reliability of data.
2. *Reproducibility* - or inter-coder reliability (Weber, 1990), is measured by the extent to which the classification scheme produces the same result when the same data are coded by more than one coder. The differences between coders are usually due to the differences in the interpretation, coding instructions or random recording error and should be resolved by re-analysing the data. Reproducibility is a stronger measure of reliability than the stability test.
3. *Accuracy* - it is the extent to which the classification of data corresponds to a standard or norm. Even though accuracy is the strongest reliability test, it is least utilised because of the subjectivity of a pre-determined standard.

A review of the literature on intangibles disclosure shows that only a few studies have explicitly demonstrated rigorous reliability. For instance, Guthrie and Petty (2000) mention that one researcher codes the corporate report and another researcher

ensures consistency by confirming the coding independently. Alternatively, Bozzolan et al. (2003) ensure consistency by having multiple coders, coding at interval periods and by reporting and resolving inconsistencies by re-analysing the data. Kang (2007) undertakes two reliability tests, which are stability and reproducibility to demonstrate rigorous reliability and these are done by utilising a test-retest design and multiple coders.

In this study, the reliability of the coding instrument and the reliability of the coder have been considered and dealt with carefully. A test-retest of the coding was done by the author from ten randomly selected annual reports and two prospectuses. An independent coder was appointed to code six randomly selected annual reports and three prospectuses which were then compared with the original coding for inter-coder reliability. Any discrepancies were resolved by analysing the document further. A detailed discussion on the reliability test is provided in Chapter 6.2. For the coding instrument, extra care has been taken in constructing and classifying intangibles categories, together with their operational definitions (See Section 5.4.1 for details).

### **5.3.2 Unit of analysis and unit of measurement**

One of the elements that has to be considered in content analysis as suggested by Krippendorff (2004) is unitising. Generally, units are wholes that analysts distinguish and treat as independent elements (Krippendorff, 2004). Further, Krippendorff (2004, p.83) claims that “content analysts must justify their methods of unitising, and to do so, they must show that the information they need for their analyses is represented in the collection of units”. The process of unitising involves deciding what should form the basis for coding (unit of analysis) and what should form the basis for measuring or counting the amount of disclosure (unit of measurement), because, according to Milne and Adler (1999), the two are not the same. Milne and Adler (1999) further report that while many studies are quite explicit about how data are measured and counted, others are less clear about what unit forms the basis for coding the data.

The decision regarding the unit of analysis is important in order for the researcher to measure what information is disclosed in annual reports and other documents. Despite this claim, much published literature on intangibles is silent about which

units of analysis were selected and applied (Guthrie and Petty, 2000; Brennan, 2001). Reviewing the literature on intangibles disclosure, Steenkamp (2007) argues that some authors do not justify their methods and do not explicitly define the recording units used in their studies.

Weber (1990) suggests the use of word, phrase, theme or paragraph as the unit of analysis. Constructing a database for social and environmental reporting, Gray et al. (1995b) suggest that the preferred units of analysis in written communications tend to be words, sentences and pages. Milne and Adler (1999) suggest that sentences are the most reliable unit of analysis because the use of sentences for recording provides complete and meaningful data for further analysis. The use of sentences suggests that each sentence in annual reports, prospectuses or other documents would be analysed to determine if it provides information on intangibles (or not).

Further, Gray et al. (1995b) argue that the use of different units depends on the meaning and the extent to which each unit can be used to infer meaning. They further argue that sentences are to be preferred if one is seeking to infer meaning. This view is supported by Milne and Adler (1999) who claim that understanding the meaning of each disclosure is best achieved by considering whole sentences. They, therefore, dismiss the use of words as recording units as single words are unlikely to convey much meaning. However, for pragmatic reasons, words have the advantage because they can be categorised easily and databases may be scanned for specified words (Gray et al., 1995b).

Another unit of analysis is the paragraph. Guthrie et al. (2004) claim that the paragraph is more appropriate in drawing inferences from narrative statements as readers tend to establish meaning with paragraphs rather than through words or sentences. Further, Abeysekera and Guthrie (2005) regard the paragraph as the more appropriate unit of analysis than word or sentence because meaning is commonly established with paragraphs.

Besides unit of analysis, another important issue is the unit of measurement which is concerned with the unit that forms the basis for counting and measuring the extent of disclosure. Milne and Adler (1999) argue that the unit of analysis is the unit that

forms the basis for coding and the unit of measurement is the unit that forms the basis for measuring or counting the extent of disclosure. There are various measures utilised in the literature to measure the extent of disclosure (Weber, 1990; Milne and Adler, 1999; Unerman, 2000; Beattie and Thomson, 2007) and each of the methods is discussed next. They are: (1) number of words; (2) number of sentences; (3) number of lines; (4) proportion of pages and (5) proportion of volume of total disclosure.

1. *Number of words*

This measure is concerned with measuring the volume of disclosure by counting the number of words in the disclosure. The advantage of this method of measurement is that the volume of disclosure can be recorded in greater detail.

2. *Number of sentences*

Unerman (2000) disapproves of this method on the basis of grammatical differences between sentences, sentences vary in length and that it ignores non-narrative disclosure such as pictures. Even though this method has been criticised, the use of sentences, according to Milne and Adler (1999), provides complete, reliable and meaningful data for further analysis.

3. *Number of lines*

Counting the number of lines of disclosure, according to Abeysekera and Guthrie (2005) provides a starting point from which to convert charts, tables and photographs into equivalents lines so that the text, charts, tables and photographs can be compared on a common basis. However, this method ignores differences in column and a print size and, therefore, hinders comparison.

4. *Proportion of pages*

Gray et al. (1995b) and Unerman (2000) utilise proportion of pages to measure the amount of disclosure. This is done by measuring a grid across each voluntary disclosure and the volume of disclosure is counted as the number of cells on the grid taken up by a disclosure. This method, according to Unerman (2000) enables both visuals and their captions to be included in the analysis, unlike other methods that ignore graphical presentations in the corporate reports. Proportion of pages also solves grammatical differences in counting sentences (Unerman, 2000). However, Hackston and Milne (1996)

and Haniffa and Cooke (2005) dismiss this method of counting on the basis that there are still differences in print sizes, column sizes and page sizes among companies and that it would result in meaningless measures.

5. *Proportion of volume of total disclosure*

According to Kang (2007), the portion of total disclosure is measured in the number of words or lines used to disclose information on intangibles over the total disclosure, which is measured by the total number of words or lines devoted by a corporation to narrative sections in its annual report. This method negates the problems of subjectivity in terms of grammatical and sentences differences because the volume of disclosure is the percentage of the total discussion. However, this method is not suitable for a large sample size because it is time-consuming in terms of coding and collecting information.

In this study, the sentence was chosen as the basis for coding and counting intangibles information presented in textual form. This is consistent with Bozzolan et al. (2003), Abeysekera and Guthrie (2005), Vandemaele et al. (2005) and Guthrie et al. (2006). However, Unerman (2000) argues that the use of sentences ignores the non-narrative disclosures. This is because non-narrative disclosures such as pictures, graphs, charts, figures and diagrams are not typically and exclusively presented as written material (Steenkamp, 2007). Therefore, Steenkamp (2007) proposes that the surroundings and the captions of the visual materials can be regarded as the basis for coding and measuring visual images.

In this study, visual images such as charts, tables, pictures and photographs that contain intangibles information were captured based on their captions and titles<sup>4</sup>. For example, captions or titles provided for graphs, charts, figures and diagrams were coded per sentence. That is, one caption was coded as one disclosure. If one visual item had two captions, then two disclosures were coded. However, visual materials without any captions were excluded from the coding process. For example, a picture or a chart without any captions was not coded and counted. This is because visuals

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<sup>4</sup> A detailed discussion on the coding and measurement of visual images is provided in Section 5.4.3.

without explanations would be meaningless because they can be interpreted differently by different readers.

A table can convey information about single intangible item or multiple items and, therefore, one row is regarded as one disclosure and is chosen as the basis for coding and counting, in which case if the table has five rows, five disclosures are coded. By including caption/title/row for visual materials, there is no longer an issue of ignoring the non-narrative formats.

### **5.3.3 Coding, recording and scoring rules**

As well as having a clear definition of the unit of analysis and measurement, well-documented coding rules are also needed to increase the reliability of the analysis (Guthrie et al., 2004). According to Milne and Adler (1999) and Krippendorff (2004), it is important to have a set of rules about what and how to code, record and score the data so that the coding process can be executed reliably. In this study, coding rules are needed in order to measure the variety, extent and intensity of voluntary disclosure of intangibles information. Detailed coding rules are needed to capture the relevant information in annual reports and prospectuses. As the present study is interested in both textual information and visual materials, specific coding rules increase the transparency of the intangibles categories which, therefore, results in a more reliable data analysis.

Beattie and Thomson (2007) suggest that coding decisions must be made straightforward to identify the information needed from the corporate reports. They also suggest that comprehensive coding rules substantially reduce the problems of understanding the nature of information which, therefore, eases the interpretation of results. The coding, recording and scoring rules utilised in this study are discussed in detail in Sections 5.4.3 and 5.4.4.

### **5.3.4 Location of disclosure**

As discussed in Chapter 4, annual reports and prospectuses are signalling devices that can be used to communicate relevant intangibles information to investors. Therefore, in this study, annual reports and prospectuses were used to collect data about intangibles information voluntarily disclosed by sample firms. Based on the

list of the capital-raiser and non-capital-raiser firms, copies of the PDF version of their annual reports and prospectuses were downloaded from the Aspect Huntley DatAnalysis database for the purpose of content analysis.

For the purpose of analysing the content of annual reports, this study limits the analysis only to voluntary information in narrative sections. Accounting narratives, according to Brennan et al. (2009) are less regulated and are expected to contain performance comparators and benchmarks that portray the company most favourably. This is especially relevant for companies with intangibles information because they can signal the information through narrative reporting. Although Beattie et al. (2004) regard examination of selected sections or particular issues as a limitation, it is not the case in the present study. The focus of this study is to capture only voluntary intangibles information disclosed by listed companies.

With regard to annual reports, with some exceptions (Guthrie et al., 2004; Kang, 2007; Steenkamp, 2007) prior studies are generally silent or vague about exactly which parts of annual report are analysed. It may include the entire sections of annual reports, including notes to the accounts, chairman's statement and CEO review or equivalents. According to Gray et al. (1995b), there is no single, unique choice as to why one location should be preferred because different sections in annual reports may be useful and informative. For the purpose of the study, the analysis of annual reports focuses on the narrative sections that are most likely to contain voluntary intangibles information such as:

1. cover and back pages
2. company highlights
3. chairman's statement and/or letter to shareholders
4. CEO review, Management Discussion and Analysis or similar; and
5. community and other social responsibility sections (for example, sections devoted to the community and employees)

Since this study is interested only in voluntary information, information reported to comply with the regulatory requirements such as the accounting standards, the *Corporations Act* and the ASX Listing Rules is excluded from the analysis. Therefore, the information below is excluded from the analysis:



1. audited financial statements and notes to the accounts<sup>5</sup>;
2. auditors' report;
3. directors' report;
4. directors' declaration and remuneration report;
5. corporate governance statement; and
6. information for shareholders on the annual general meeting.

It is acknowledged that under Section 298 of the *Corporations Act 2001*, a company is required to prepare a directors' report which includes general and specific information about operations and activities of the business. The disclosure of information is governed by Sections 299 and 300 of the *Corporations Act*, which may also contain voluntary information. For the purpose of the study, any attempts to reclassify information in the directors' report as mandatory and voluntary is considered ineffective and inefficient. It is also acknowledged that information about the financial position of the entity and the entity's business strategies and its prospects for future years as required in the directors' report is likely to be in the voluntary sections such as CEO review and, therefore, is included in the analysis.

Besides information about an entity's business, Section 300 of the *Corporations Act* requires a company to disclose information about directors' qualifications, experience and their special responsibilities. Usually, most companies disclose this information together with the photographs of the directors. The information about qualifications and experience of the directors can be considered as intangibles information about human resources. However, as the information is mandatory, it is not regarded as voluntary disclosure of intangibles information.

For the prospectuses, only voluntary information is considered and information that is subject to regulation is excluded from the analysis. Therefore, the analysis of prospectuses covers information about:

1. the company;
2. investment highlights;
3. effects of the offerings;

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<sup>5</sup> Notes to the accounts are excluded from the analysis on the basis that it mainly discusses information about the financial statements.

4. Operating and Financial Review, Management Discussion and Analysis or similar; and
5. Chairman's letter.

While reviewing prior studies regarding disclosure in prospectuses, it was noted that most of the authors implicitly indicate that they considered all sections in the prospectuses. For instance, Bukh et al. (2005) analysed all sections in the prospectus and looked for only voluntary information. Alternatively, Cumby and Conrod (2001) looked for relevant information in specific sections such as the chairman's letter to shareholders. Cordazzo (2007) and Singh and Zahn (2008) studied information disclosure in prospectus, but they did not mention whether they coded certain sections or all sections in the prospectus. For the purpose of this study, information in sections such as (1) risk factors, (2) auditor's report and (3) tax implications are excluded from the analysis as these sections are required by the *Corporations Act 2001*, Chapter 6D *Fundraising* and Regulatory Guide 56 *Prospectus*; and, therefore, the disclosures in these sections are considered mandatory. In addition, a thorough examination of the prospectuses has resulted in the exclusion of certain sections from the analysis such as details of the offer, financial information or financial statements, additional information, actions required by eligible shareholders and glossary because these sections contain technical information about the offers and are unlikely to contain any intangibles information.

#### **5.4 Voluntary Disclosure of Intangibles Information**

Voluntary disclosure, as explained in Chapter 3, refers to information in excess of requirements that represents free choices on the part of company management to provide accounting and other information deemed relevant to the decision needs of users of corporate reports (Meek et al., 1995). As defined earlier in Chapter 2, intangibles refer to claims to future benefits that do not have physical or financial embodiment and that intangibles are non-physical sources or value generated by innovation, unique organisational design or human resources practices (Lev, 2001). Therefore, voluntary disclosure of intangibles information refers to voluntary disclosure of information on these intangibles. Corporate disclosure, according to Marston and Shrives (1991), is not easily measured in a precise scientific way because it does not possess inherent characteristics to determine its intensity or

quality. In this study, voluntary disclosure of intangibles information is measured using three constructs, which are: (1) variety of disclosure; (2) extent of disclosure and (3) intensity of disclosure and these are discussed next.

#### **5.4.1 Variety of disclosure**

The variety of disclosure is concerned with the different types of intangibles information disclosed which can be captured through various categories of intangibles developed for the study. A review of relevant literature was conducted to ensure that the categories selected for the study are able to capture intangibles information in both annual reports and prospectuses. This way, according to Li et al. (2008), allows for a greater variation and understanding of intangibles disclosure. Prior studies have generally utilised 22-25 items in their intangibles classification indices (Guthrie and Petty, 2000) and some studies constructed as much as 78 items (Bukh et al., 2005). Milne and Adler (1999) argue that too few coding categories might increase the likelihood of random agreement in coding decisions. This might well result in an over-estimation of the measures, which might also increase coding errors. Similarly, too many items might also increase coding complexity (Beattie and Thomson, 2007).

As a result of the review, frameworks based on Lev's (2001) Value Chain Scoreboard and Guthrie and Petty's (2000) were utilised to capture intangibles information. The reasons for adopting Lev's (2001) and Guthrie and Petty's (2000) classifications are: first, the Value Chain Scoreboard is designed to reflect the impact of and value of intangibles within the context of a firm's performance. This framework allows managers to look at the business from the three phases of the value-chain process; which are: the discovery and learning; the implementation; and the commercialisation. This model, according to Lev (2001), is a fundamental business process to ensure the survival and success of a firm and the classification, therefore, represents the value drivers of firms.

Second, most studies on intangibles disclosure have examined the disclosure behaviour by classifying the disclosure into internal structure; external structure and employee competence (see Chapter 3.5.1) according to Guthrie and Petty's (2000) framework. Thus, the framework of Guthrie and Petty (2000) has been widely used

in the intangibles disclosure literature to report the disclosure behaviour of companies. In this study, the utilisation of a widely recognised framework helps to identify consistently various items disclosed by companies as reported by previous research. Therefore, by capturing various items already recognised in the literature and incorporating them into Lev's (2001) framework, a greater variation of intangibles information can be captured, in which case would result in a more rigorous and robust index.

Table 5.1 presents Lev's (2001) framework and Table 5.2 presents Guthrie and Petty's (2000) framework. The final version of the intangibles classification index as shown in Table 5.3 comprises 24 items across three categories which are the discovery and learning, the implementation and the commercialisation stages. This scheme of classification is a result of reclassifying and combining intangibles items from Guthrie and Petty's (2000) and incorporating them into Lev's (2001) three stages of value-chain which are: the discovery and learning; the implementation; and the commercialisation stages.

In general, the intangibles items shown in Table 5.3 result from mapping out intangibles items from both Table 5.1 and 5.2. In particular, 'employees', 'training and development of employees', 'work-related knowledge and competencies', 'education' and 'entrepreneurial spirit' from Table 5.2 (under employee competence) were classified under the discovery and learning phase, replacing 'work-force training and development' in Table 5.1. 'Organisational capital and process' in Table 5.1 (under discovery and learning) were renamed 'organisational infrastructure and processes'. 'Management philosophy and corporate culture' from Table 5.2 (under internal structures) were added to the framework to reflect the shared values between management and employees. 'R&D alliances and joint ventures' in Table 5.1 were renamed 'business alliances and joint ventures'. 'Capital expenditure' in Table 5.1 was excluded from the framework and 'supplier and customer integration' was renamed 'supplier integration'.

Technology feasibility items in Table 5.1 were combined into 'clinical test, beta test and pilot test' to ease the analysis and included in Table 5.3 under the implementation stage. Internet items were combined into 'internet and online

activities’ to reflect all the internet activities undertaken by companies. The four items under ‘customers’ in Table 5.1 were reclassified into ‘distribution channels and marketing’, ‘brand values and reputation’ and ‘customer and customer satisfaction’ to reflect the relationship with customers. ‘Market share’ reflects the financial performance of a firm and was included in the list. The growth prospect was combined with planned initiatives under ‘growth prospects and planned initiatives’ and expected break-even and cash-burn rate were excluded from the framework.

**Table 5.1: Lev’s (2001) Value Chain Scoreboard**

Discovery and learning	Implementation	Commercialisation
Internal renewal 1. R&D 2. Workforce training and development 3. Organisational capital, processes	Intellectual property 10. Patents, trademarks, copyright 11. Licensing agreement 12. Know- how	Customers 19. Marketing alliances 20. Brand values 21. Customer churn and value 22. On-line sales
Acquired capabilities 4. Technology purchase 5. Spill over utilisation 6. Capital expenditure	Technological feasibility 13. Clinical tests, food and drug administration 14. Beta tests, working pilot 15. First mover	Performance 23. Revenues, earnings, market share 24. Innovation revenues 25. Patent and know-how royalty 26. Intangible based earnings
Networking 7. R&D alliances and joint ventures 8. Supplier and customer integration 9. Communities of practice	Internet 16. Threshold traffic 17. On-line purchase 18. Major internet alliances	Growth prospect 27. Product pipelines dates 28. Expected efficiency savings 29. Planned initiatives 30. Expected break even and cash burn rate

**Table 5.2: Guthrie and Petty's (2000) framework**

<b>Internal Structures (Organisational Capital)</b>	<b>External Structures (Customer/Relational Capital)</b>	<b>Employee Competence (Human Capital)</b>
Intellectual property 1. Patents 2. Copyrights 3. Trademarks Infrastructure assets 4. Management philosophy 5. Corporate culture 6. Management process 7. Information systems 8. Networking systems 9. Financial relations	10. Brands 11. Customers 12. Customers loyalty 13. Company names 14. Distribution channels 15. Business collaborations 16. Licensing agreements 17. Favourable contracts 18. Franchising agreements	19. Know-how 20. Education 21. Vocational qualification 22. Work-related knowledge 23. Work-related competencies 24. Entrepreneurial spirit

**Table 5.3: Intangibles categories and items for the study**

<b>Discovery and learning</b>	<b>Implementation</b>	<b>Commercialisation</b>
1. Research and development 2. Organisational infrastructure/processes 3. Management philosophy and corporate culture 4. Business alliances and joint ventures 5. Supplier integration 6. Communities of practice 7. Spill-over utilisation 8. Employees 9. Training and development of employees 10. Education of employees 11. Work-related knowledge and competencies of employees 12. Entrepreneurial spirit	13. Intellectual property 13.1 Patents 13.2 Trademarks 13.3 Copyrights 14. Licensing agreements and contracts 15. Know-how 16. Internet and on-line activities 17. Clinical test, beta test and pilot test	18. Brand values and reputation 19. Distribution channels and marketing 20. Customer and customer satisfaction 21. Market shares 22. Growth prospects and planned initiatives 23. Product pipelines dates 24. Expected efficiency and savings

For the purpose of the study, each sentence and caption/title/row of charts, figures, diagrams, pictures and tables in annual reports and prospectuses is analysed to determine if there is any disclosure on intangibles and, if so, to which category and

item it belongs. The operational definition of each of the intangibles items together with their search words is provided in Appendix 1. In this study, items are coded using a dichotomous scale, with a company receiving a score of '1' if it voluntarily disclosed intangibles information based on the classification and '0' if the item is not disclosed. Consistent with Haniffa and Cooke (2005), Oliveira et al. (2006) and Kang (2007), this coding method captures the variety of disclosure. The overall score indicates the variety of items mentioned in the reports and the maximum possible score for each company is 24. This approach is appropriate because the purpose of coding the variety of disclosure is to capture the number of different types of intangibles information signalled by companies.

#### **5.4.2 Extent of disclosure**

The extent of disclosure is concerned with the number of disclosures obtained by measuring the absolute frequency of occurrence of each intangibles item. In this study, the extent of disclosures is measured by counting the number of sentences for textual disclosures and captions/titles/rows for visual and tabular disclosures for each intangibles disclosure found in annual reports and prospectuses. By considering both variety and extent of disclosure, not only can different types of intangibles information be captured but also the frequency of each intangibles item. One of the concerns is that by looking at only the variety of disclosure, the extent of disclosure on a particular issue in one sentence by one company is considered as the same with the whole section devoted to the same issue by another company as both are scored 1 because the variety of disclosure score does not indicate the quantity of disclosure. Therefore, by counting the number of disclosures, the frequency of occurrence of each intangible item is captured and counted (Abeysekera and Guthrie, 2005). To arrive at the extent or amount of disclosure for each company, the frequencies of occurrence of intangibles item are coded and aggregated. Therefore, a higher number of disclosures mean a higher extent of disclosure.

#### **5.4.3 Intensity of disclosure**

As previously discussed in Chapter 4, the variety of information might be presented by firms in many ways to make a piece of information obvious so that it attracts the reader's attention. It was argued that the more intense the information is, the more powerful signal it gives. For the purpose of the study, the intensity of disclosure is

measured on four dimensions: (1) type of disclosure; (2) nature of disclosure; (3) emphasis through presentation effects; and (4) emphasis through repetition of information. Each of the intensity measures is discussed next.

#### **5.4.3.1 Text and visual disclosures**

As previously discussed in Chapter 4, intangibles disclosures can be categorised as text and visual disclosures. Text refers to information presented in textual form. Visuals are categorised as graphs and charts, tables, figures and diagrams and pictures, which include photographs, paintings and drawings. Table 5.4 presents type of disclosure, its sub-categories, its unit of measurement and the definition.

As previously argued in Chapter 4, visual images are regarded as more intense than information presented in text, hence, represent more powerful signals. Since visuals do not have natural grammatical sentences like written text, the intangible information presented is captured based on the captions/titles of the visual images. Particularly, as discussed earlier, for graphs, charts, figures and diagrams, their titles, per sentence were chosen as the basis for coding and measurement. For tables, one row was regarded as one sentence and was chosen as the basis for coding. Since a table can convey information about single intangible item or multiple items, one row was regarded as independent of another and deserved separate counts. For pictures, captions adjacent to the pictures were regarded as the basis for coding, per sentence.

In this study, charts, graphs, tables, figures, diagrams and pictures are weighted equally and there is no attempt to rank visual representations in terms of their relative intensity. Further, one cannot be certain that graphs are better than other types of visual or otherwise and, therefore, equal weighting is considered appropriate. In this study, textual disclosures are coded and scored 0 and visual disclosures (graphs, tables, figures, diagrams and pictures) are scored 1.



**Table 5.4: Type of disclosure: Text and visual disclosures**

Type of disclosure	Sub-category	Definition	Unit of measurement
Text		Information presented in textual form.	Sentence
Visual	Graphs and charts	Information presented in graphs and charts.	Title, per sentence
	Tables	Information presented in tables.	One row is equivalent to one sentence
	Figures and diagrams	Information presented in figures and diagrams.	Title or caption, per sentence
	Pictures	Information presented in pictures and photos.	Caption, per sentence

#### 5.4.3.2 Qualitative and quantitative disclosures

The nature of disclosure is categorised as qualitative or quantitative disclosure. Quantitative disclosures provide information of a non-financial nature but that has numerical value (non-financial quantitative) and disclosures which are monetary that relate to actual financial numbers (financial quantitative). On the other hand, qualitative disclosures relate to information expressed in terms other than quantitative terms, with no numerical value attached (Kang, 2007; Steenkamp, 2007). Table 5.5 presents the nature of information, its sub-categories as well as its definition.

As previously argued in Chapter 4, quantitative disclosures are regarded as superior to qualitative information. However, non-financial and financial quantitative disclosures are weighted equally and there is no attempt to rank financial and non-financial quantitative disclosures in terms of their relative intensity. Therefore, in this study, both financial and non-financial quantitative disclosures are regarded as quantitative disclosures, which are superior to qualitative disclosure. For each intangibles information item identified, qualitative disclosures are scored 0 and quantitative disclosures, both non-financial and financial quantitative are scored 1.

**Table 5.5: Nature of disclosure: Qualitative and quantitative**

Nature of disclosure	Sub-category	Definition
Qualitative		Information with no numerical data and purely narrative.
Quantitative	Non-financial	Information that has non-monetary numerical data.
	Financial	Information that has monetary data.

#### **5.4.3.3 Emphasis through presentation effects: Location/positioning of information, special character and type of font**

Emphasis through presentation effects is defined as the emphasis provided by prominent location/positioning of information, special character use and/or type of font to indicate the degree of prominence. Table 5.6 presents different degrees of prominence of information, its sub-categories and its definition. Location/positioning of information is concerned with the position of intangibles information found in the annual reports and the prospectuses. It can either be in the headlines, sub-headings or in the body of text. Special character information includes information in bullet points and numbered lists. Information presented in bullet points and numbered lists is considered as independent ideas and, therefore, one bullet point or item in a numbered list is considered as one sentence. Type of font represents information in bold text, italic or underlining. Information presented in the headline and sub-headings indicates a higher degree of prominence compared to information located in the body of a text and, therefore, represents stronger signals. This type of information is scored 2. Information presented in bullet points/ numbered lists and/or presented in bold text, italic or with any special effects indicates a higher degree of prominence compared to information presented in a plain text and, therefore, represents more intense signals. In this study, information presented in bullet points/numbered lists and bold text/italic is given the same score of 1, and intangibles information presented in a body of a text and in plain text is scored 0.

**Table 5.6: Emphasis through presentation effects: Location/positioning of information, special characters and type of font**

Presentation effects	Sub-category	Definition
Headline and sub-headings		Information placed in the headline and the sub-headings. This type of information represents the most emphasised information compared to information positioned in the body of a text.
Special characters	Bullet points and numbered lists	Information presented in bullet points and numbered lists.
Type of font	Bold text, italic, underlining	Information presented in bold text, italic, underlining or with other special effects. This type of information represents the most emphasised information compared to information presented in plain text.

#### 5.4.3.4 Emphasis through repetition

The final intensity measure is captured through repetition of information. Repetitive messages are considered more powerful than information featured only once. In the present study, consistent with Brennan et al. (2009), a statement is considered to be repeated even where there is a slight variation in one or two words in the two statements. For instance, a statement that appears in the headline can be repeated in the body of text. By reiterating the same information, firms are utilising emphasis as a communication tool to present important information. In this study, intangibles information that appears once is scored 0 and each intangibles information identified as repetitive disclosure is scored 1. Each consecutive repetition is also scored 1. For example, if the same intangibles information appears five times, the total score for that piece of intangibles information is four.

The scores for the individual intensity dimension for each company are then totalled to arrive at the overall intensity score. However, a high intensity score does not necessarily indicate strong signals are conveyed to investors. This is because the intensity scores might be associated with the extent of disclosure where firms with a higher amount of disclosure might receive a higher intensity score. For example, a company with 10 disclosures might have their intangibles information in four special characters and, therefore, scored four for intensity. In another instance, a company that recorded 100 disclosures might have 10 disclosures in special characters and score 10 for the intensity. By looking at only the absolute intensity score, it appears

that a company that scored 10 has a higher intensity score where it has emphasised only 10 per cent of its disclosures in comparison to 40 per cent in the first example. Therefore, to bring analytical rigour and to control for the difference in the extent of disclosure, the intensity score for each company is measured in proportion with its extent of disclosure. In this case, a company that scored four for intensity out of 10 disclosures may have a relative score of 0.4 which is higher than a relative score for a company that scored 10 for intensity out of 100 disclosures (0.1). This is perhaps the most reliable way of measuring the intensity of disclosure. Thus, for the purpose of the study, the intensity of disclosure is calculated using both absolute intensity scores as well as its relative intensity scores in proportion to extent of disclosure. Table 5.7 summarises the intensity of disclosure and its measurement used in the study.

**Table 5.7: Intensity of disclosure and its measurement**

<b>Intensity of disclosure</b>	<b>Measurement</b>
Type of disclosure	0 = Text 1 = Visual
Nature of disclosure	0 = Qualitative disclosure 1 = Quantitative disclosure
Emphasis through presentation effects: location/positioning, special character and type of font	0 = Information in a body of text /plain text 1 = Bullet points, numbered lists, bold text, italic, underlining 2 = Headlines and sub-headings
Emphasis through repetition	0 = No 1 = Yes for each instance of repetition
<b><i>Total intensity of disclosure</i></b>	<b><i>Visual + Quantitative + Special characters + Headlines + Repetition</i></b>

#### **5.4.4 Coding and recording rules**

Based on the definition and measurement of variety, extent and intensity of disclosure presented in the previous sections, this section presents and summarises the detailed coding and recording rules to identify and collect the data from annual reports and prospectuses. These rules delineate the steps taken in identifying intangibles disclosure in annual reports and prospectuses of the sample companies, followed by how these intangibles items are coded and measured to arrive at the total variety, extent and intensity scores. Each sentence and visual that contains intangibles information is identified in annual reports and prospectuses of the sample companies. Each identified item is coded and scored in a coding sheet provided in Appendix 2 using dichotomous scale with a company receiving a score of 1 if it

voluntarily disclosed intangibles item based on the 24-items intangibles classification index and 0 if the item is not disclosed. To arrive at variety of disclosure, the number of categories coded for each company is totalled where a maximum possible score is 24; which represents at least one disclosure of each of the 24 intangibles item. The extent of disclosure, which represents the number of disclosures, is measured by counting the number of sentences coded for textual disclosures and captions/titles/rows for visual and tabular disclosures for each intangibles disclosure identified in annual reports and prospectuses. Finally, for each coded disclosure, the intensity of information is assessed based on its type, nature and emphasis through presentation effects and repetition. In particular, 12 coding rules were developed based on prior studies (Buhr and Freedman, 2001; Guthrie and Abeysekera, 2006; Kang, 2007; Steenkamp, 2007) to bring analytical rigour to the study. The rules are presented in Table 5.8, together with relevant examples.

**Table 5.8: Coding rules for the study**

Rule	Description
1.	Read the documents in their entirety to establish understanding of the disclosure.
2.	<p><b><i>For annual reports:</i></b></p> <p>Code only information in the:</p> <ul style="list-style-type: none"> <li>▪ cover and back pages</li> <li>▪ company highlights</li> <li>▪ chairman’s statement and/or letter to shareholders</li> <li>▪ CEO review, Management Discussion and Analysis or similar</li> <li>▪ community and other social responsibility sections (for example sections devoted to the community and employees)</li> </ul> <p>Do not code information in the:</p> <ul style="list-style-type: none"> <li>• Directors’ Report, and the photos and information about the Board of Directors</li> <li>• Audited financial statements and notes to the account</li> <li>• Directors’ Declaration and Remuneration Report</li> </ul>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description
	<ul style="list-style-type: none"> <li>• Corporate Governance Statement</li> <li>• Information for shareholders on annual general meeting</li> </ul> <p><b>For prospectuses:</b></p> <p>Code only information in the:</p> <ul style="list-style-type: none"> <li>▪ information about the company</li> <li>▪ investment highlights</li> <li>▪ effects of the offerings</li> <li>▪ operating and financial review, management and discussion analysis or similar</li> <li>▪ chairman’s letter</li> </ul> <p>Do not code information in the:</p> <ul style="list-style-type: none"> <li>• details of the offer</li> <li>• risk factors</li> <li>• Auditor’s Report and Accountant’s Report</li> <li>• financial statements</li> <li>• taxation implications</li> <li>• additional information (in relation to rights attaching to shares and other offer details)</li> <li>• glossary</li> <li>• actions required by eligible shareholders</li> </ul>
3.	<p><b>Recording rule for variety of disclosure:</b></p> <p>With reference to Appendix 1, where the operational definition of each of the intangible tem together with its search word is provided, each sentence and caption/title/row of charts, figures, diagrams, pictures and tables is analysed to determine if there is any disclosure on intangibles and, if so, to which category and item it belongs based on the 24-item intangibles classification. To arrive at variety of disclosure, the number of categories for each company is aggregated where the maximum possible score is 24.</p> <p><b>Example 1</b></p> <p>With reference to Appendix 1, the following sentence would be categorised as information relating to business alliances and joint ventures (item 4 in the intangibles classification) and counted as one sentence.</p> <div data-bbox="500 1629 1409 1808" style="border: 1px solid black; padding: 10px;"> <p><i>‘Sunstate Cement Limited, a joint venture between Adelaide Brighton and Blue Circle Southern Cement, is a cement milling, storage and distribution facility at Fisherman Islands, Port Brisbane’.</i></p> <p><i>(Source: Adelaide Brighton Limited Annual Report 2008, p. 15)</i></p> </div>

**Table 5.8: Coding rules for the study (continued)**



Rule	Description																						
4.	<p><b>Recording rule for extent of disclosure:</b></p> <p>To get the extent of disclosure, the number of disclosures is counted for each company.</p>																						
5.	<p><b>Recording rule for intensity of disclosure:</b></p> <p>The recording rule for intensity of disclosure is presented based on its type (text or visual), nature (qualitative or quantitative) and presentation effects. The scores for type of disclosure, nature of disclosure, and presentation effects are totalled to arrive at intensity of disclosure.</p>																						
6.	<p><b>Graphs/charts</b></p> <p>Intangibles information in graph/chart identified based on Appendix 1, is recorded per sentence.</p> <p><i>Example 2</i></p> <p>The following chart would be categorised as information relating to employees (item 8 in the intangibles classification). This chart recorded the title ‘employee turnover’ as one count.</p> <p><i>Employee Turnover (12 month rolling average)</i></p> <div data-bbox="506 1062 1237 1514"> <table border="1"> <caption>Employee Turnover (12 month rolling average)</caption> <thead> <tr> <th>Month</th> <th>Annual Turnover %</th> </tr> </thead> <tbody> <tr> <td>Sep-05</td> <td>22</td> </tr> <tr> <td>Oct-05</td> <td>21</td> </tr> <tr> <td>Nov-05</td> <td>20</td> </tr> <tr> <td>Dec-05</td> <td>20</td> </tr> <tr> <td>Jan-06</td> <td>21</td> </tr> <tr> <td>Feb-06</td> <td>20</td> </tr> <tr> <td>Mar-06</td> <td>18</td> </tr> <tr> <td>Apr-06</td> <td>17</td> </tr> <tr> <td>May-06</td> <td>16</td> </tr> <tr> <td>Jun-06</td> <td>18</td> </tr> </tbody> </table> </div> <p><i>(Source: Newcrest Mining Limited Annual Report 2006, p. 42)</i></p>	Month	Annual Turnover %	Sep-05	22	Oct-05	21	Nov-05	20	Dec-05	20	Jan-06	21	Feb-06	20	Mar-06	18	Apr-06	17	May-06	16	Jun-06	18
Month	Annual Turnover %																						
Sep-05	22																						
Oct-05	21																						
Nov-05	20																						
Dec-05	20																						
Jan-06	21																						
Feb-06	20																						
Mar-06	18																						
Apr-06	17																						
May-06	16																						
Jun-06	18																						

**Table 5.8: Coding rules for the study (continued)**

Rule	Description																																																																
7.	<p><b>Tables</b></p> <p>For tables, one row is regarded as equivalent to one sentence. Since a table can convey information about one intangible item or multiple items, one row is regarded as one sentence.</p> <p><b>Example 3</b></p> <p>The following table would be categorised as information relating to market shares (item 21 in the intangibles classification):</p> <table><tr><th>Market Share Percentage</th><th>30/06/06</th><th>31/12/05</th><th>30/06/05</th></tr><tr><td>Business Lending</td><td>13.1</td><td>13.5</td><td>13.2</td></tr><tr><td>Asset finance</td><td>14.5</td><td>15.1</td><td>15.4</td></tr><tr><td>Equities trading</td><td>4.3</td><td>4.3</td><td>3.6</td></tr></table> <p><i>(Source: Commonwealth Bank of Australia Annual Report 2006, p.16)</i></p> <p>As one row is regarded as one sentence, this table recorded three counts; 1) business lending; 2) asset finance and 3) equities trading.</p> <p><b>Example 4</b></p> <p>The following table with five rows would be categorised as information relating to employees (item 8 in the intangibles classification) and recorded five counts.</p> <p><b>Number of employees and contractors</b></p> <table><tr><th rowspan="2"></th><th colspan="3">FY 2008</th><th colspan="3">FY 2007</th></tr><tr><th>Employees</th><th>Contractors</th><th>Total</th><th>Employees</th><th>Contractors</th><th>Total</th></tr><tr><td>Kroondal</td><td>18</td><td>3873</td><td>3891</td><td>22</td><td>3763</td><td>3785</td></tr><tr><td>Marikana</td><td>9</td><td>1889</td><td>1897</td><td>14</td><td>1916</td><td>1930</td></tr><tr><td>Everest</td><td>9</td><td>2548</td><td>2557</td><td>1958</td><td>777</td><td>2735</td></tr><tr><td>Mimosa</td><td>1503</td><td>130</td><td>1633</td><td>1543</td><td>253</td><td>1796</td></tr><tr><td><b>Total</b></td><td><b>1539</b></td><td><b>8440</b></td><td><b>8978</b></td><td><b>3537</b></td><td><b>6709</b></td><td><b>10246</b></td></tr></table> <p><i>(Source: Aquarius Platinum Limited Annual Report 2008, p. 64)</i></p>	Market Share Percentage	30/06/06	31/12/05	30/06/05	Business Lending	13.1	13.5	13.2	Asset finance	14.5	15.1	15.4	Equities trading	4.3	4.3	3.6		FY 2008			FY 2007			Employees	Contractors	Total	Employees	Contractors	Total	Kroondal	18	3873	3891	22	3763	3785	Marikana	9	1889	1897	14	1916	1930	Everest	9	2548	2557	1958	777	2735	Mimosa	1503	130	1633	1543	253	1796	<b>Total</b>	<b>1539</b>	<b>8440</b>	<b>8978</b>	<b>3537</b>	<b>6709</b>	<b>10246</b>
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8.	<p><b>Figures/diagrams</b></p> <p>For figures/diagrams, the title or caption is recorded per sentence.</p> <p><b>Example 5</b></p> <p>The following diagram would be categorised as information relating to customers (item 20 in the intangibles classification). This diagram recorded the caption ‘consumers’ as one count.</p>																																																																



**Table 5.8: Coding rules for the study (continued)**

Rule	Description
8.	<p><b>CONSUMERS</b></p> <p>498,098</p> <p>Victoria</p> <div data-bbox="500 323 1036 590">  </div> <p><i>(Source: Envestra Limited Annual Report 2006, p. 7)</i></p>
9.	<p><b>Pictures and photographs</b></p> <p>For pictures and photographs, caption adjacent to the picture is recorded per sentence, regardless of the size or the number of individuals in the pictures.</p> <p><i>Example 6</i></p> <div data-bbox="505 921 1235 1272">  </div> <p><i>Mark Osborne taking a process sample for density measurement</i></p> <p><i>(Source: Newcrest Mining Limited Annual Report 2006, p. 10)</i></p> <p>For this photograph, the caption ‘Mark Osborne taking a process sample for density measurement’ would be categorised as information relating to employees (item 8 in the intangibles classification), per sentence.</p>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description
	<p><i>Example 7</i></p>  <p><i>Dave Coates, Mine Services Engineer and Peter Morgan, CVO Senior Mine Geotechnician.</i></p> <p><i>(Source: Newcrest Mining Limited Annual Report 2006, p. 13)</i></p> <p>For this photograph, the caption is counted as one sentence even though the picture featured two employees (item 8 of the intangibles classification).</p> <p><i>Example 8</i></p>  <p><i>Left to Right Jeffery Chau Managing Director, CPG FM Kok King Min Managing Director, CPG Consultants Lionel Tseng Chief Financial Officer, CPG Corporation Yip Kim Seng Managing Director, PM Link</i></p> <p><i>(Source: Downer EDI Limited Annual Report 2006, p. 20)</i></p> <p>For this photograph, even though it represents four separate individuals, the caption is counted as one sentence and categorised as employees (item 8 in the intangibles classification).</p>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description
	<div data-bbox="500 306 1409 527" style="border: 1px solid black; padding: 5px;"> <p><b>Recording rule for visual disclosures:</b></p> <p>Captions from graphs/charts are identified as ‘1’; captions from tables are labelled ‘2’; captions for figures/diagrams are labelled ‘3’ and captions for pictures are labelled ‘4’. To arrive at intensity score, all captions from graphs/charts, tables, figures/diagram and pictures are scored ‘1’.</p> </div>
10.	<p><b>Qualitative narrative information</b></p> <p><i>Example 9</i></p> <p>The following sentence would be categorised as qualitative in nature because there is no numerical value attached to it. This information relates to management philosophy/corporate culture (item 3 in the intangibles classification).</p> <div data-bbox="500 869 1409 999" style="border: 1px solid black; padding: 5px;"> <p><i>‘There is a greater focus on customers and a more disciplined approach across all aspects of the operations’.</i></p> <p style="text-align: right;"><i>(Source: AMCOR Limited Annual Report 2008, p. 3)</i></p> </div> <p><b>Non-financial quantitative information</b></p> <p><i>Example 10</i></p> <p>The following sentence would be categorised as non-financial quantitative as it contains numerical value. This information relates to growth prospects and planned initiatives (item 23 in the intangibles classification).</p> <div data-bbox="500 1304 1409 1434" style="border: 1px solid black; padding: 5px;"> <p><i>‘There was a strong volume growth of 24% in the high value add custom container segment and ongoing improvement’</i></p> <p style="text-align: right;"><i>(Source: AMCOR Limited Annual Report 2008, p. 3)</i></p> </div> <p><b>Financial quantitative information</b></p> <p><i>Example 11</i></p> <p>The following sentence could be categorised as financial quantitative in nature as it contains monetary value. This information relates to expected efficiency and savings (item 24 in the intangibles classification).</p>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description
	<p><i>Example 11</i></p> <p>The following sentence could be categorised as financial quantitative in nature as it contains monetary value. This information relates to expected efficiency and savings (item 24 in the intangibles classification).</p> <div data-bbox="500 464 1409 596" style="border: 1px solid black; padding: 5px;"> <p><i>‘Following the commissioning period, the initial cost reductions from the new mill are expected to be \$40 million per annum’.</i></p> <p style="text-align: right;"><i>(Source: AMCOR Limited Annual Report 2008, p. 2)</i></p> </div> <div data-bbox="500 722 1395 898" style="border: 1px solid black; padding: 5px;"> <p><b>Recording rule for qualitative and quantitative disclosures:</b></p> <p>Qualitative information is coded ‘0; non-financial quantitative information is coded ‘1’ and financial quantitative information is coded ‘2’. To arrive at total score, non-financial and financial quantitative information is scored ‘1’.</p> </div>
11.	<p><b>Emphasis through presentation effects: Location/positioning of information, special characters and types of font</b></p> <p>The intangibles information can be positioned at the headline, sub-headings or in the body of a text. Also, information can be featured as bullet points or numbered list and/or in bold text, italic or underlining.</p> <div data-bbox="565 1234 1104 1793" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Headline</b></p> <p><b>Sub-headings</b></p> <ul style="list-style-type: none"> <li>❖ Bullet points 1</li> <li>❖ Bullet points 2</li> <li>❖ Bullet points 3</li> </ul> <p><b>Bold text, <i>italic</i>, <u>underlining</u></b></p> <p>Plain text</p> </div>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description
	<div data-bbox="505 296 1411 516" style="border: 1px solid black; padding: 5px;"> <p><b>Recording rule for emphasis through presentation effects:</b></p> <p>Information presented in plain text is coded ‘0’ and information presented in bullet points, numbered lists, bold text and/or underlining is scored ‘1’. A score of ‘2’ is awarded to information presented in headline and sub-headings. To arrive at the total score for emphasis, both scores for special characters and headlines are added.</p> </div>
12.	<p><b>Emphasis through repetition</b></p> <p><b>Example 12</b></p> <p>Information presented in the headline can be repeated in the body of a text.</p> <p>The following sentence (item 8 employees in the intangibles classification) has been featured in the headline on page 14 and is repeated word-by-word in the body of text in page 15.</p> <div data-bbox="505 957 1411 1089" style="border: 1px solid black; padding: 5px;"> <p><i>‘Nexus’s success to date is due to the hard work, dedication and commitment of its people’.</i></p> <p style="text-align: right;"><i>(Source: Nexus Energy Limited Annual Report 2008, p. 14 &amp; 15)</i></p> </div> <p><b>Example 13</b></p> <p>A statement is considered to be repeated even when there is a slight variation in one or two words in the two statements.</p> <p>The following sentence (item 1 research and development in the intangibles classification) has been featured on the table of content page of the annual report:</p> <div data-bbox="505 1360 1411 1535" style="border: 1px solid black; padding: 5px;"> <p><i>‘GWA International Limited invests significantly in research and new product development which has enabled the businesses to maximise opportunities in a competitive marketplace.’</i></p> <p style="text-align: right;"><i>(Source: GWA International Annual Report 2008, table of content page)</i></p> </div> <p>The sentence has been featured again in page 2 with a slight variation.</p> <div data-bbox="505 1633 1411 1766" style="border: 1px solid black; padding: 5px;"> <p><i>‘The Group has invested significantly in research and new product development to maintain competitive advantage and develop new market opportunities.’</i></p> <p style="text-align: right;"><i>(Source: GWA International Annual Report 2008, p.2)</i></p> </div>

**Table 5.8: Coding rules for the study (continued)**

Rule	Description		
	<table><tr><td><b>Recording rule for repetition of information:</b></td></tr><tr><td>A repeated sentence is scored ‘1’ each time it is repeated.</td></tr></table>	<b>Recording rule for repetition of information:</b>	A repeated sentence is scored ‘1’ each time it is repeated.
	<b>Recording rule for repetition of information:</b>		
	A repeated sentence is scored ‘1’ each time it is repeated.		

In summary, the process of coding and recording voluntary disclosure of intangibles information is done as follows.

1. Read the down-loaded document in its entirety to establish understanding about what is disclosed in the document.
2. Initial coding is recorded on-screen. This involves the identification of intangibles item in each sentence or visual representations in the annual reports and prospectuses with reference to Appendix 1.
3. Each disclosure is transferred to Microsoft Excel and was coded to a specific category from 24 items with 1 refers to item 1 and so on.
4. Intangibles information identified in textual form is coded '0'. A caption for a graph is coded '1'; each row for table is coded '2'; caption for figures and diagrams is coded '3' and caption from pictures is coded '4'.
5. For each coded disclosure, the nature of information is assessed, whether it is qualitative, non-financial quantitative or financial quantitative. Qualitative information is coded '0', non-financial quantitative is coded '1' and financial quantitative is coded '2'.
6. For each coded disclosure, the degree of prominence of information is assessed. Information presented in plain text is coded '0' and information presented in bullet points, numbered lists or bold text is scored '1'. A score of '2' is awarded for information presented in the headlines and sub-headings.
7. Also, for each coded disclosure, the information is assessed whether it is a repetitive message or not. Even if there is a slight variation in one or two words, a disclosure is considered to be repeated. A repeated sentence is scored '1' each time it is repeated.

8. For type of disclosure, captions for visual materials coded during initial coding, i.e. graph, figure and diagram and pictures/photographs are scored '1'. For nature of disclosure, non-financial and financial quantitative disclosures are scored '1' to arrive at total intensity score.
9. The scores for type of disclosure, nature of disclosure, and emphasis are then totalled to arrive at intensity of disclosure.
10. To arrive at variety of disclosure, the number of categories recorded for each company is totalled where a maximum possible score is 24; which represents at least one disclosure on each of the 24 intangibles categories.
11. To get the extent of disclosure, the number of disclosures is counted for each company.

The order of coding annual reports was random between capital-raiser firms and non-capital-raiser firms to reduce bias in terms of the preliminary expectation that capital-raiser firms would have disclosed more intangibles information in their annual reports.

## **5.5 Statistical Tests**

An independent sample t-test was conducted to see if there is any significant difference in the pair-matched samples based on their size (market capitalisation). Firm size is measured by the log of market capitalisation and since the data are measured on continuous scale, an independent sample t-test is used to test for equality of means.

For the purpose of the study, descriptive analyses are used to describe the variety, extent and intensity of intangibles disclosure in annual reports of capital-raiser and non-capital-raiser firms. Tests of means differences are used to assess the difference in terms of variety, extent and intensity of disclosure of both groups of firms. Mann-Whitney U tests are used to test the hypotheses because the data are measured on nominal scale. Further, the sample companies of 30 capital-raiser firms selected for this study is considered small and, therefore, the use of non-parametric test is appropriate (Pallant, 2007). The significance level for testing hypotheses in this study is at the 5 per cent. In addition, a directional hypothesis is tested using a one-tailed statistical test whereas a non-directional hypothesis is tested using a two-tailed test.

## **5.6 Summary**

This chapter explains the sample selection and the method adopted for the study, which is content analysis. Issues relating to content analysis as a research method have been dealt with thoroughly throughout the chapter. To address the hypotheses posited in Chapter 4, the variety of disclosure is captured using 24 intangibles items drawn from Lev (2001) and Guthrie and Petty (2000). The intangibles disclosures identified in annual reports and prospectuses are measured using sentences and captions/titles/rows of visual and tabular materials to arrive at the extent of disclosure. Finally, the intensity of disclosure is captured through type of disclosure, nature of disclosure and the degree of prominence of information through presentation effects. The data analysis and the results of the hypotheses testing are presented and discussed in the next chapter.



## **CHAPTER 6**

### **DATA ANALYSIS AND DISCUSSION OF FINDINGS**

#### **6.1 Introduction**

The research design, the data collection process, the sample selection and the variables adopted for the study were discussed in detail in the previous chapter. This chapter presents results and discusses the findings from analysing the content of 60 annual reports of the Australia's largest firms listed on the ASX, together with 30 prospectuses of those firms raising capital. Also, this chapter presents results for the tests of the hypotheses developed in Chapter 4. Section 6.2 presents the sample companies and Section 6.3 provides a descriptive analysis of disclosure practices. The results of testing Hypotheses 1 and 2 are presented in Sections 6.4 to 6.6.

#### **6.2 The Sample**

The sample companies for this study were drawn from Australia's 200 largest listed companies which had equity capital-raising in 2007-2009. The final sample for this study consists of 30 capital-raiser firms with their matching non-capital-raiser counterparts and is summarised in Table 6.1a and 6.1b. As previously discussed in Chapter 5 (Section 5.2), the capital-raiser firms were matched with non-capital-raiser firms based on size, proxied by market capitalisation and industry type. The capital-raiser firms and non-capital-raiser firms had the same GICS code in all cases. Capital-raiser firms had an average of \$175 million in market capitalisation, compared to \$164 million in market capitalisation for the matched non-capital-raiser firms. An independent sample t-test showed that there was no significant difference in the size of the matched-pair samples ( $t=0.636$ ,  $p=0.528$ ) and, therefore, both groups of companies had comparable size and operated in the same industry.

One of the concerns relating to this sample selection is that there is a limited industry spread in the sample with only five industries; namely materials, financials, energy, utilities and industrials represented. Nonetheless, except for two firms that were eliminated because of the unavailability of market capitalisation data, the capital-raiser firms from the period (2007-2009) represent the population of capital-raisers from the top 200 firms during that period and the sample is large enough to test the

hypotheses. Table 6.1a shows the list of the companies and Table 6.1b shows the final sample of reports from years that were analysed. In total, there were 60 annual reports and 30 prospectuses, which were drawn from 2006 to 2009. It can be seen from Table 6.1b that the financial industry dominates the sample with 45 reports (50%). This is followed by the materials industry with 24 reports (27%) and industrials with 12 reports (13%).

**Table 6.1a Final sample for the study**

Capital-raiser firm	Sector	Non-capital-raiser firm match
Amcor Limited	Materials	Lihir Gold Limited
ANZ Banking Group Limited	Financials	QBE Insurance Group Limited
Aquarius Platinum Limited	Materials	Adelaide Brighton Limited
Alumina Limited	Materials	Oz Minerals Limited
AXA Asia Pacific Holdings Limited	Financials	Insurance Australia Group Limited
Bendigo and Adelaide Bank Limited	Financials	Lend Lease Group
Bluescope Steel Limited	Materials	Sims Metal Management Limited
Commonwealth Bank of Australia	Financials	National Australia Bank Limited
Nexus Energy Limited	Energy	Gloucester Coal Limited
Seek Limited	Industrials	Asciano Group
Transpacific Industries Group Limited	Industrials	GWA International Limited
Bendigo and Adelaide Bank Limited	Financials	Challenger Financial Services Group Limited
FKP Property Group	Financials	ING Office Fund
GPT Group	Financials	ASX Limited
Iluka Resources Limited	Materials	Consolidated Minerals Limited
Incitec Pivot Limited	Materials	OneSteel Limited
Paperlinx Limited	Materials	Aquarius Platinum Limited
Westpac Banking Corporation	Financials	ANZ Banking Group Limited
Alesco Corporation Limited	Industrials	Emeco Holdings Limited
Bank of Queensland Limited	Financials	Australian Wealth Management Limited
Commonwealth Bank of Australia	Financials	National Australia Bank Limited
Centro Retail Group	Financials	IOOF Holdings Limited
Downer EDI Limited	Industrials	ConnectEast Group
DUET Group	Utilities	Envestra Limited
Newcrest Mining Limited	Materials	Alumina Limited
St George Bank Limited	Financials	AMP Limited
Suncorp-Metway Limited	Financials	ASX Limited
Valad Property Group	Financials	EDT Retail Trust
Westfield Group	Financials	QBE Insurance Group Limited
WorleyParsons Limited	Energy	Energy Resources of Australia Limited

**Table 6.1b: Final reports for the study**

Sector/Year	Number of annual reports (capital-raisers and non-capital-raisers)				
	2006	2007	2008	2009	Total
Materials	2	6	8	<i>N/A</i>	<i>16</i>
Industrials	4	-	4	<i>N/A</i>	<i>8</i>
Financials	14	8	8	<i>N/A</i>	<i>30</i>
Energy	2	-	2	<i>N/A</i>	<i>4</i>
Utilities	2	-	-	<i>N/A</i>	<i>2</i>
<b>Total annual reports</b>	<i>24</i>	<i>14</i>	<i>22</i>	<i>N/A</i>	<i>60</i>
	Number of prospectus (capital-raisers)				
	2006	2007	2008	2009	Total
Materials	<i>N/A</i>	1	3	4	8
Industrials	<i>N/A</i>	2	-	2	4
Financials	<i>N/A</i>	7	4	4	15
Energy	<i>N/A</i>	1	-	1	2
Utilities	<i>N/A</i>	1	-	-	1
<b>Total prospectuses</b>	<i>N/A</i>	<i>12</i>	<i>7</i>	<i>11</i>	<i>30</i>
<b>Total annual reports and prospectuses</b>	<b>24</b>	<b>26</b>	<b>29</b>	<b>11</b>	<b>90</b>

The annual reports of capital-raisers prior to capital-raising activity were compared to their non-capital-raiser counterparts. Then, the prospectuses of these capital-raiser firms were analysed and were then compared to their prior year's annual reports.

### 6.3 Summary of Intangibles Disclosure

#### 6.3.1 Content analysis: Reliability test

For the purpose of the study, content analysis of annual reports and prospectuses was conducted using the set of coding rules described in Chapter 5 (Section 5.5.4) to ensure reliability and validity of the data. As previously discussed in Chapter 5 (Section 5.3.1), the reliability of the coding instrument and reliability of coders have been considered and dealt with carefully. A test-retest of the coding was done by the author from ten randomly selected annual reports and two prospectuses. The dates on which the documents had been coded had been recorded so it was an easy matter to ensure that the documents to be recoded were drawn from different dates within the initial coding period. In addition to that, to ensure reliability of the coder, an

independent coder was appointed to code ten per cent of the sample. The training session for the independent coder involved three hours of studying the definitions of categories of intangibles and the coding rules. Six annual reports and three prospectuses, which is equivalent to 10 per cent of each group, were then recoded. On completion of the recoding, the results were considered in detail; for each item coded, whether by the author or the independent coder, the categories of classification and the several intangible items were discussed. The recoding and discussion of the results took about thirty hours.

The discrepancies in the recoding process were resolved by adding one sentence to one annual report (0.83% of 119) and reclassifying one category of classification. For prospectuses, the recoding process resulted in the addition of one sentence (1.33% of 75). It was agreed that it was not necessary to make any changes to the coding of the other characteristics. This reliability test has, therefore, indicated a very high order of consistency in the original coding and, thus, results in a reliable analysis.

### **6.3.2 Voluntary disclosure of intangibles in annual reports**

Voluntary disclosure of intangibles was extracted from the non-statutory sections of the annual report such as the cover and back pages, company highlights, Chairman's statement, CEO review and community and other social responsibility sections. The examples of each of the intangibles items are provided in Appendix 3. The intangibles disclosure in annual reports was captured through content analysis and in order to get the frequencies of the items disclosed, every sentence and visual that contains intangibles information was identified, counted and coded following the procedures delineated in Chapter 5. Table 6.2 shows the frequency with which intangibles information was disclosed by the sample firms in annual reports.

Table 6.2 shows that the discovery and learning phase recorded the highest number of disclosures (1,323) and information about *employees* dominates the category with 490 disclosures. For the purpose of the study, employees consist of directors and other employees of the firm and information disclosed includes employees thanked or featured, number of employees, work-force statistics and profile information of employees.

**Table 6.2: Number of disclosures of intangibles item in annual reports**

<b>Intangible item</b>	<b>Number of disclosures</b>
<b>Discovery and learning</b>	
Research and development	16
Organisational infrastructure/process	135
Management philosophy and corporate culture	347
Business alliances and joint venture	88
Supplier integration	6
Communities of practice	95
Spill-over utilisation	4
Employees	490
Training and development of employees	80
Education of employees	11
Work-related knowledge and competencies	41
Entrepreneurial spirit	10
<b>Total for discovery and learning</b>	<b>1,323</b>
<b>Implementation</b>	
Intellectual property (Patents, Trademarks and Copyrights)	9
Licensing agreements and contracts	45
Know-how	9
Internet and online activities	18
Clinical tests, beta tests and pilot tests	11
<b>Total for implementation</b>	<b>92</b>
<b>Commercialisation</b>	
Brand values and reputation	171
Distribution channel and marketing	15
Customer and customer satisfaction	78
Market shares	63
Growth prospects and planned initiatives	130
Product pipeline dates	32
Expected efficiency and savings	23
<b>Total for commercialisation</b>	<b>512</b>
<b>Total</b>	<b>1,927</b>

This study's results (not reported) show that the financial sector was at the fore-front in disclosing information about employees with 236 disclosures (48%). This is followed by the materials and industrials sector with 227 disclosures (46%). This particular trend shows no surprise because these sectors are, by their very nature, either providing services or mainly engaged in construction and mining activities. These companies value their employees by featuring them in the annual reports. For example, Downer EDI Limited, an industrial firm, disclosed the following sentence about its employees.

<i>"We have over 21,000 skilled employees who have a driving passion to be the best they can be."</i>
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<i>Downer EDI Limited Annual Report 2006, p. 2</i>
--

Besides information about *employees*, Table 6.2 indicates that information about *management philosophy and corporate culture* is also among the most reported intangible items in annual reports. Management philosophy and corporate culture is defined as 'the way leaders in the firm think about their firm and its employees and the management philosophy has a dominant effect in the organisational culture' (Brooking, 1996, p. 62). It also includes 'values, heroes, rites and rituals that are recognised and shared by the staff' (Brooking, 1996, p.66). The high level of reporting of management philosophy and corporate culture might indicate that firms believe that their shared values are influential in determining their performance. Therefore, they signal information about their vision, mission, corporate goals and their work environment. Another possible explanation is that firms want investors to know what their shared values are in realising and meeting stakeholders' expectations. For example, Lend Lease Group, a real-estate company, shared the following vision with the public.

<i>"Our vision is to be the leading global property company."</i>
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<i>Lend Lease Group Annual Report 2008 p.4</i>
--

Besides information about employees and management philosophy, the sample companies also disclosed information about *organisational infrastructure and processes* in their annual reports. This information is concerned with organisational infrastructure such as business process, managerial process or organisational design which includes safety measures and systems, networking systems and environmental management systems. For example, Consolidated Minerals Limited, a mining company, disclosed the following information about its health and safety measures.

<i>"The Company has applied a risk-based approach to health and safety management, and is currently updating its safety management system to address the expanding nature of the Company's business."</i>
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<i>Consolidated Minerals Annual Report 2007, p. 12</i>
--

Lev (2001) argues that the discovery and learning phase constitutes the most intangibles-intensive phase. This phase is generally concerned about the discovery of ideas for products, services or processes through knowledge sharing, organisational values shared by the employees and also through alliances with other organisations. This study's results show that firms signal information about their intangible resources such as employees, corporate goals and managerial processes to indicate that these are the most valuable resources and are important in creating value for the firms. As previously discussed in Chapter 5, the discovery and learning phase is crucial in determining the survival and success of a firm. Thus, the high disclosure reported in this phase can be associated with Narayanan et al.'s (2000) claim that the information asymmetry between investors and managers is higher during the innovation stage and, therefore, firms disclose more information presumably to reduce the information asymmetry problem.

The next most disclosed category is the commercialisation phase with 512 disclosures. This phase indicates the viability of products and services in the market. The results show that this category is dominated by *brand values and reputations*. Brand values and reputation represent the company name and its favourable position in the market. For example, St. George Bank disclosed this particular sentence about awards received.

<p><i>"SGB is recognised as 'Business Bank of the Year' in Money Magazine's Consumer Finance Awards in June 2006."</i></p>
<p><b><i>St. George Bank Annual Report 2006, p.31</i></b></p>

In addition to brand values, the commercialisation phase also features information about *growth prospects and planned initiatives*. This is information about the firm's future prospects. The following examples were extracted from Newcrest Mining Limited and Envestra Limited regarding their *growth prospects and planned initiatives*.

<p><i>“Key initiatives planned for 2006-07 include reaffirming the Target Zero message and program under the leadership of the new Managing Director and Chief Executive Officer.”</i></p>
--

<p><b><i>Newcrest Mining Limited Annual Report 2006, p.37</i></b></p>
---

<p><i>“We are beginning to see growth in overseas markets-particularly Europe and South America in natural gas vehicles and the first product trials for combined heat and power appliance in domestic homes.”</i></p>
--

<p><b><i>Envestra Limited Annual Report 2006, p. 8</i></b></p>
--

Disclosures under the commercialisation phase suggest that firms recognised the intangible items under this category as relevant and as having an impact on their positions. This is supported by Steenkamp (2007) who argues that disclosures about brand values and reputation might indicate that firms are promoting their brands and company names to the public.

The least disclosed category was implementation. This stage suggests the transformation of ideas into working products and this provides investors with important risk gauges of products under development (Lev, 2001). This stage also indicates the feasibility of ideas and their readiness for commercialisation. The most disclosed item under this category was *licensing agreements and contracts*, which comprise wide ranging agreements and favourable contracts that a firm received. The example provided next was extracted from WorleyParsons Limited, an energy company, about a contract that it received.

<p><i>“In February 2006 WorleyParsons announced it had won a US\$69 million contract to provide services to Al-Khafji Joint Operations oil and gas production facilities in Saudi Arabia and Kuwait.”</i></p>
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<p><b><i>WorleyParsons Limited Annual Report 2006, p. 7</i></b></p>
---

The overall findings from the analysis of annual reports indicate that the high levels of reporting about employees are consistent with the literature that many companies regard their employees as their most important asset (Abeysekera and Guthrie, 2004). In addition, the findings also suggest that the types of intangibles information disclosed are driven by industry. As previously mentioned, financials and materials industries either provide services or are primarily engaged in mining and



construction activities and, therefore, put the highest value on their employees by reporting information about them. Further, the disclosure of information about brands, organisational processes and licensing agreements suggests that management probably believes that these intangible items are relevant and have an impact on the firm's position and, consequently, are signalled in the annual reports.

A further analysis based on the number of disclosures revealed that the disclosures were made overwhelmingly in textual form (78%). It was also found that 77 per cent of the total disclosures were made in qualitative forms with no numerical or monetary values attached to the disclosures. Therefore, those results agree with prior studies on intangibles reporting that most disclosures are made in qualitative terms (Brennan, 2001; Abeysekera and Guthrie, 2004; Goh and Lim, 2004; Guthrie et al., 2006; Campbell and Rahman, 2010). For instance, Goh and Lim (2004) observe that firms disclosed information about management philosophy and corporate culture qualitatively because this information is not easily quantified. In the present study, information such as *licensing agreements*, *on-line activities* and *expected efficiency and savings* was disclosed quantitatively because this information can be quantified either in numerical or financial terms. For instance, firms may report the expected savings from the new operating system in dollar terms, whereas information about *management philosophy* is best conveyed in qualitative form because it could not be associated with any dollar values.

In summary, in the absence of any mandatory requirement, the sample companies disclosed at least one voluntary intangible item in their annual reports. This could be the result of less visibility of intangibles information in the financial statements after the adoption of the AIFRS. Therefore, the disclosure of intangibles among Australia's largest listed companies most probably indicates that these firms are taking proactive action to signal relevant important intangibles information to their stakeholders, especially investors.

### **6.3.3 Voluntary disclosure of intangibles in prospectuses**

With regard to disclosure in prospectuses, only one company did not disclose any intangibles information in its prospectus. All other companies were found to report a variety of intangibles information with different ranges of extent and intensity. The

analysis of prospectuses was limited to only voluntary information and excluded mandatory information such as risk factors and technical information about the equity-offering. It was expected that firms would exercise their wide discretion in disclosing intangibles information in the prospectuses because the types of information that could be included in the prospectuses as stated in the *Corporations Act* (Section 710) are rather general. However, the fund-raising provisions have also been formulated to ensure a prospectus does not omit material information and does not contain misleading or deceptive statements that could result in criminal and personal liability.

Table 6.3 shows the frequencies of intangibles disclosure in the prospectuses by the sample firms. The highest frequency was recorded under the discovery and learning phase, followed by the commercialisation and implementation phases. Similar to the annual reports, the most reported intangible item in prospectuses was also *employees*. This trend, as previously mentioned, could be due to the fact that firms value their employees and regard them as assets.

Unlike annual report disclosures, the second most reported intangible in the prospectuses was *brand values and reputation*. One possible explanation of the high level of reporting of this item is that firms like to remind their investors of the performance and reputation of the firm. Another reason could be that corporate brand and favourable reputation is one of the important factors in influencing investors when making investment decisions. By disclosing information such as favourable market position and awards received, firms are presumably signalling their favourable performance in order to obtain favourable investment decisions from potential investors. This is because, according to Cordazzo (2007), intangibles information is important in the capital market's assessment of a firm's value. However, not all 24 intangible items were found in the prospectuses because none of the sample companies disclosed information regarding supplier integration (item 5), spill-over utilisation (item 7) and internet and on-line activities (item 16).

**Table 6.3: Number of disclosures of intangibles item in prospectuses**

<b>Intangible item</b>	<b>Number of disclosures</b>
<b>Discovery and learning</b>	
Research and development	8
Organisational infrastructure/process	16
Management philosophy and corporate culture	49
Business alliances and joint venture	14
Supplier integration	0
Communities of practice	2
Spill-over utilisation	0
Employees	140
Training and development of employees	3
Education of employees	10
Work-related knowledge and competencies	22
Entrepreneurial spirit	1
<b>Total for discovery and learning</b>	<b>265</b>
<b>Implementation</b>	
Intellectual property (Patents, Trademarks and Copyrights)	4
Licensing agreements	21
Know-how	4
Internet and online activities	0
Clinical tests, beta tests and pilot tests	5
<b>Total for implementation</b>	<b>34</b>
<b>Commercialisation</b>	
Brand values and reputation	63
Distribution channel and marketing	9
Customer and customer satisfaction	30
Market shares	12
Growth prospects and planned initiatives	16
Product pipeline dates	4
Expected efficiency and savings	1
<b>Total for commercialisation</b>	<b>135</b>
<b>Total</b>	<b>434</b>

The next section presents the descriptive statistics and the results of testing whether the variety, extent and intensity of voluntary disclosure of intangibles information is higher in capital-raiser firms in line with the hypotheses developed in Chapter 4.

## **6.4 Tests of Hypotheses Concerning Disclosure in Annual Reports**

### **6.4.1 Variety of intangibles disclosure in annual reports (H1a)**

This section presents the results of the test of the hypothesis about whether the variety of disclosure of intangibles information is *higher* in capital-raiser firms. Variety of disclosure is represented by the number of intangible items disclosed by

firms in the annual reports based on the intangibles classification index drawn in Chapter 5, with a maximum score of 24 for each annual report. Hypothesis 1a predicted that:

H1a: The variety of voluntary disclosure of intangibles information in annual reports is higher in capital-raiser firms compared to non-capital-raiser firms.

Table 6.4 presents the descriptive statistics for the variety of intangible items disclosed in annual reports. As expected, Table 6.4 shows that capital-raiser firms disclose a greater variety of information with an average disclosure score of 8.80 as compared to their non-capital-raiser counterparts with a score of 6.93. This means that out of 24 items, capital-raiser firms disclosed an average of almost nine items while non-capital-raisers disclosed an average of nearly seven items in their annual reports. A Mann-Whitney U test indicates that the difference between capital-raiser and non-capital-raiser firms in terms of their variety of disclosure of intangibles is statistically significant.

**Table 6.4: Variety of intangible items disclosed per annual report**

<b>Descriptive Statistics</b>	<b>Capital-raiser firms</b>	<b>Non-capital-raiser firms</b>
Mean of intangible items disclosed	8.80	6.93*
Standard deviation	3.089	2.959
Minimum number of intangible items disclosed	4	2
Maximum number of intangible items disclosed	14	11

*\*Difference is significant at  $p < 0.05$  ( $p = 0.018$ ), one-tailed*

Based on the intangibles classification index constructed to capture a wide variety of intangibles information, it was found that Australia's largest firms provide a wide variety of intangibles information in their annual reports. It was found that a greater variety of intangibles information was evident in the capital-raiser firms' annual reports compared to non-capital-raisers' annual reports. Therefore, the findings provide evidence that capital-raiser firms disclose a greater variety of voluntary

intangibles information in their annual reports immediately prior to capital-raising activity compared to non-capital-raiser firms. This result provides strong support for H1a that the variety of intangibles disclosure is higher in capital-raiser firms compared to non-capital-raiser firms. Thus, this evidence strongly supports the notions of prior studies that firms competing for funds not only make use of voluntary disclosure (Singh and Zahn, 2008) but also provide a wide variety of voluntary information (Clarkson et al., 1994; Frankel et al., 1995; Lang and Lundholm, 2000; Healy and Palepu, 2001).

#### **6.4.2 Extent of intangibles disclosure in annual reports (H1b)**

This section presents result of the hypothesis testing whether the extent of intangibles disclosure is higher in capital-raiser firms, as posited in Hypothesis 1b. Extent of disclosure refers to the number of disclosures found in annual reports. The higher the number of disclosures, the higher the extent of disclosure is. Hypothesis 1b predicted that:

- H1b: The extent of voluntary disclosure of intangibles information in annual reports is higher in capital-raiser firms compared to non-capital-raiser firms.

Table 6.5 summarises the descriptive statistics for the extent of voluntary disclosure of intangibles. The extent of disclosure was measured by counting the intangibles information that appears both in textual and visual forms (See Chapter 5.5 for a detailed discussion on the measurement). For visual representations, intangibles information in graphs, charts, figures and diagrams were counted based on their title; information in tables was counted per row and pictures and photographs were counted based on their captions surrounding the pictures. The result of counting is represented by the absolute score for each sample company. Table 6.5 presents the means of the extent of intangibles disclosure of capital-raiser firms and non-capital-raiser firms. As expected, capital-raiser firms made a greater number of intangibles disclosures. On average, capital-raiser firms recorded 40 disclosures per annual report whereas non-capital-raiser firms recorded 25 disclosures. Among capital-raisers, the highest disclosure of 114 was reported by Downer EDI Limited. For non-capital-raisers, QBE Insurance Group reported the highest score of 65 disclosures. A Mann-Whitney U test indicates that the difference between capital-raiser and non-

capital-raiser firms in terms of their extent of intangibles disclosure is statistically significant with a p value of 0.005.

**Table 6.5: Number of disclosures per annual report (Extent)**

Descriptive statistics	Capital-raiser firms	Non-capital-raiser firms
Mean of extent of disclosure	39.70	24.53*
Standard deviation	24.80	15.88
Minimum extent of disclosure	7	3
Maximum extent of disclosure	114	65

*\*Difference is significant at  $p < 0.05$  ( $p = 0.005$ ), one-tailed*

As hypothesised, capital-raiser firms provide more intangibles information in their annual reports prior to equity offering activity compared to firms with no equity offering motive. The Mann-Whitney U test indicates that the difference between these groups is statistically significant. Thus, the findings strongly support H1b that the extent of voluntary disclosure of intangibles information in the annual reports is higher in capital-raiser firms compared to non-capital-raiser firms. This evidence, therefore, strengthens the argument that firms issuing securities tend to disclose more information (Lang and Lundholm, 1993; Marquardt and Wiedman, 1998).

#### **6.4.3 Intensity of intangibles disclosure in annual reports (H1c)**

This section presents the results of testing Hypothesis 1, regarding whether the intensity of voluntary disclosure is higher in capital-raiser firms. The intensity of disclosure was measured on four dimensions: type of disclosure; nature of disclosure; emphasis through presentation effects; and emphasis through repetition of information. As previously discussed in Chapter 5, “type of disclosure” distinguished disclosures in terms of textual form and visual, where visuals were categorised as graphs and charts, tables, figures and diagrams and pictures and photographs. It has been argued in Chapter 4 that visuals can be used strategically to signal intangibles better than textual disclosure and, therefore, represent more intense signals.

The “nature of disclosure” captured the disclosure in terms of qualitative and quantitative forms. Quantitative disclosures were awarded a score of ‘1’ whereas qualitative disclosures did not receive any intensity score. This is because quantitative disclosures are more objective, represent actual activities and are more informative than qualitative disclosures (Toms, 2002; Al-Tuwaijri et al., 2004) and, therefore, represent more intense signal.

The “emphasis through presentation effects” portrayed the presentation emphasis of the information whether in the headlines, sub-headings, in special characters (more intense) or in plain text (less intense). Finally, the intensity of disclosure was measured based on presentation emphasis through “repetition”. Repetition was considered to be a more powerful signal and received a higher score compared to information that was featured once. Thus, Hypothesis 1c predicted that:

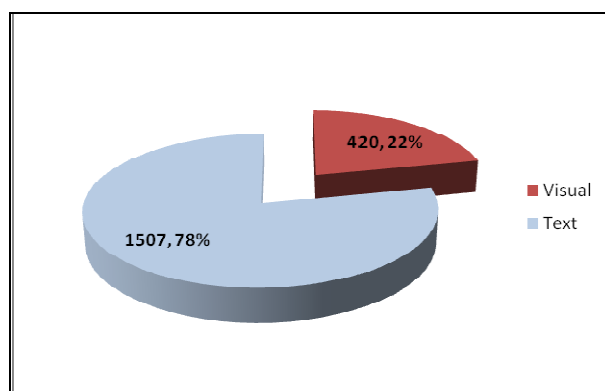
H1c: The intensity of voluntary disclosure of intangibles information in annual reports is higher in capital-raiser firms compared to non-capital-raiser firms.

Table 6.6 presents a summary of the intensity measures both in absolute frequency and relative frequency to total disclosure (1,927 disclosures). It can be seen from the Table that 15 per cent of the disclosures were made in pictures and photographs. In conjunction with Table 6.6, Figures 6.1 shows that 78 per cent of the total disclosures were made in textual form. Firms also disclosed some of their intangibles information quantitatively, with quantitative disclosures representing 23 per cent of total disclosure. Also, firms utilised emphasis of information in signalling intangibles information with 26 per cent of the intangibles information were presented in headlines and in special characters such as bullet points and bold text. Out of 1,927 disclosures three per cent were repeated disclosures. The numbers of disclosures for each of the intensity measure are also shown in Figures 6.2, 6.3 and 6.4 respectively.

**Table 6.6: Number of disclosures based on intensity measures (Total)**

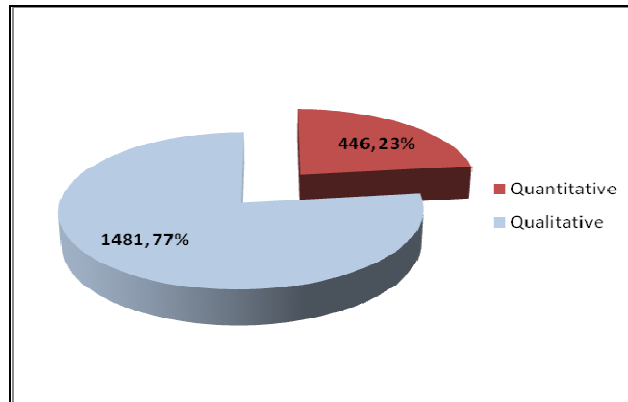
Intensity of disclosure	Number of disclosures	Relative frequency to total disclosure
<i>Type of disclosure: Visual</i>		
Titles in graphs/charts	15	1%
Number of rows in tables	105	5%
Titles in figures/diagrams	10	1%
Captions in pictures/photographs	290	15%
<i>Nature of disclosure: Quantitative</i>		
Quantitative disclosures (non-financial and financial)	446	23%
<i>Emphasis through presentation effects</i>		
Positioning, special characters and type of font	492	26%
<i>Emphasis through repetition</i>	62	3%

**Figure 6.1: Type of disclosure in annual reports: Text and visual**

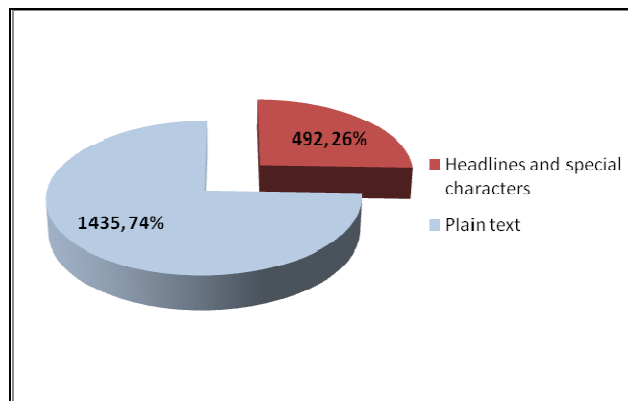




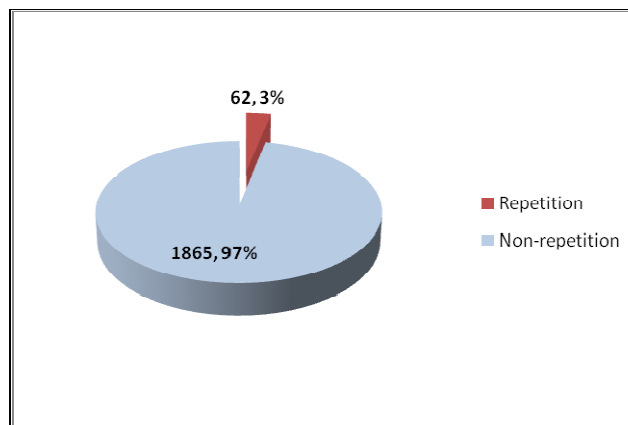
**Figure 6.2: Nature of disclosure in annual reports: Qualitative and quantitative**



**Figure 6.3: Emphasis through presentation effects in annual reports: Location/positioning of information, special characters and types of font**



**Figure 6.4: Emphasis through repetition of information in annual reports**



Featured below are some of the examples of intangibles information presented by firms in their annual reports using various intensity measures. Examples 1 and 2 present information about *employees*; example 3 presents information about *communities of practice* and example 4 features information about *brand values and reputation*; which are all presented in photographs. Example 5 is concerned with information presented quantitatively. Examples 6, 7 and 8 present the utilisation of emphasis through presentation effects and repetition of information.

**Example 1: Photograph (employees)**



*Richie O'Callaghan controlling the underground drill rigs.*

*Newcrest Mining Limited Annual Report 2006, p. 15*

**Example 2: Photograph (employees)**



*David Gall*

*Group Executive Retail Business*

*St George Bank Limited Annual Report 2006, p. 27*

**Example 3: Photograph (Communities of practice)**



*St George is proud to sponsor the Taronga Park Zoo 'S. George Zoomobile' which helps educate the community about Australian wildlife by providing hands-on experiences to over 16,000 people each year.*

*St. George Bank Limited Annual Report 2006, p.36*

**Example 4: Photograph (brand values and reputation)**



*We are the leading producer of office, printing and packaging papers in Australia.*

*Paperlinx Limited Annual Report 2007, p. 26*

**Example 5: Quantitative information (training and development of employees)**

*“A total of 2,800 training hours involving 460 employees have been completed covering topics including leadership, coaching, managing performance and communication.”*

*Sims Metal Management Annual Report 2008, p.20*

**Example 6: Emphasis through headline (management philosophy and corporate culture)**

**Vision**

Our vision is to be the preferred comprehensive supplier of engineering services, provided either directly or through strategic alliances, with the intellectual capacity to capitalise on the worldwide trend towards

*Downer EDI Limited Annual Report 2006, p.3*

**Example 7: Emphasis through bold text (management philosophy and corporate culture)**



*Incitec Pivot Limited Annual Report 2007, Inside cover*

<b>Example 8: Repetition (management philosophy and corporate culture)</b>
<p>This information was featured in the headline:</p> <p><i>“Over the coming year we are determined to further re-focus our attention on creating shareholder wealth”.</i></p> <p>The same piece of information was repeated again in the body of the text:</p> <p><i>“Over the coming year we are determined to further re-focus our attention on creating shareholder wealth”.</i></p>
<i>(Downer EDI Limited Annual Report 2006, p.6)</i>

Table 6.7 presents the frequency of disclosure based on intensity measures for both capital-raiser and non-capital-raiser firms and it can be seen from the Table that capital-raiser firms disclosed a higher number of visual disclosures, a higher number quantitative disclosures and a higher amount of emphasis of information compared to non-capital-raiser firms.

**Table 6.7: Number of disclosures in annual reports based on intensity measures for capital-raiser and non-capital-raiser firms**

Intensity of disclosure	Number of disclosures		
	Capital-raisers	Non-capital-raisers	Total ( <i>as per Table 6.6</i> )
<b><i>Type of disclosure: Visual</i></b>			
Titles in graphs/charts	11	4	15
Number of rows in tables	73	32	105
Titles in figures/diagrams	5	5	10
Captions in pictures/photographs	204	86	290
<b><i>Nature of disclosure: Quantitative</i></b>			
Quantitative disclosures (non-financial and financial)	276	170	446
<b><i>Emphasis through presentation effects</i></b>			
Positioning, special characters and type of font	296	196	492
<b><i>Emphasis though repetition</i></b>	38	24	62

To determine the significance of the difference in terms of the strength of the signals, Table 6.8 presents the descriptive statistics and the result of testing H1c based on the total absolute and relative intensity scores. H1c predicted that the intensity of disclosure is higher in capital-raiser firms compared to the non-capital-raisers. On average, capital-raiser firms scored 33.60 for the strength of their signals as compared to non-capital-raiser firms with an average score of 20.77. A Mann-Whitney U test indicates that the difference between capital-raiser and non-capital-raiser firms in terms of their intensity of signalling intangibles information is statistically significant.

However, great care should be exercised in interpreting the result for the intensity measures. One of the concerns is that absolute scores alone do not necessarily give a true picture of the strength of the signals provided by firms. To attend to this issue, as previously discussed in Chapter 5.4.3, the intensity score for each company was measured in proportion to its extent of disclosure to control for differences in the amount of disclosures each company has to obtain the relative score. This is because two companies with the same absolute intensity score may have vastly different amounts of disclosure. For example, a company that recorded 40 counts in the extent of disclosure and scored 10 for its intensity may have its relative intensity score of 0.25. In contrast, a company that recorded 10 counts in the extent of disclosure and also scored 10 for its intensity may receive a relative score of one, which is higher. Therefore, another set of tests was conducted based on relative scores of intensity and the results are presented together in Table 6.8. However, based on the relative intensity scores, a Mann-Whitney U test indicates that the difference between capital-raiser and non-capital-raiser firms is not statistically significant.

A further analysis was conducted to determine which of the intensity measures, i.e., type, nature, positioning or repetition contributes to the difference between the two groups of firms. Tables 6.8a, b, c and d present the descriptive statistics and statistical tests for each of the measures for both groups. Based on Mann-Whitney U tests, the difference between capital-raiser and non-capital-raiser firms in terms both absolute visual scores as seen in Table 6.8a are statistically significant. In terms of relative scores, the difference is marginally significant at 10 per cent level.

**Table 6.8: Intensity of intangibles disclosure: Absolute and relative scores (Total for all four measures)**

Descriptive statistics	Absolute score		Relative score	
	Capital-raiser firms	Non-capital-raiser firms	Capital-raiser firms	Non-capital-raiser firms
Mean of intensity scores	33.60	20.77*	0.81	0.85^
Standard deviation	31.27	16.06	0.28	0.34
Minimum intensity scores	5	0	0.37	0.00
Maximum intensity scores	165	76	1.66	1.60

\*Difference is significant at  $p < 0.05$  ( $p=0.019$ ), one-tailed

^Difference is not significant at  $p < 0.05$  ( $p=0.21$ ), one-tailed

In terms of quantitative disclosures, Table 6.8b shows that the difference between the capital-raiser and non-capital-raiser firms is also statistically significant. In contrast, when measuring the intensity scores in proportion to the extent of disclosure, quantitative disclosures scores lose their significance.

It can be seen from Table 6.8c that the difference between the two groups of firms in terms of emphasis through presentation effects is marginally significant at 10 per cent level based on absolute scores and loses its significance in terms of relative scores. Finally, in terms of repetition of information, based on Table 6.8d, on average, capital-raiser firms tend to repeat their intangibles information throughout the annual reports which results in a significant difference from their non-capital-raiser counterparts based on absolute scores. However, in terms of relative scores, the difference is only marginally significant. From the results, it can be seen that visual disclosures and repetition of information remain significant which means capital-raiser firms disclose a significantly greater relative amount of visual disclosures than non-capital-raiser firms and repeat information relatively more when signalling intangibles information in their annual reports.

**Table 6.8a: Visual disclosures in annual reports: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Capital-raiser firms	Non-capital-raiser firms	Capital-raiser firms	Non-capital-raiser firms
Mean of visual scores	9.77	4.30*	0.21	0.18**
Standard deviation	13.03	4.55	0.16	0.19
Minimum visual scores	0	0	0.00	0.00
Maximum visual scores	70	16	0.61	0.63

\*Difference is significant at  $p < 0.05$  ( $p=0.014$ ), one-tailed

\*\*Difference is significant at  $p < 0.10$  ( $p=0.07$ ), one-tailed

**Table 6.8b: Quantitative disclosures in annual reports: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Capital-raiser firms	Non-capital-raiser firms	Capital-raiser firms	Non-capital-raiser firms
Mean of quantitative scores	11.30	5.66*	0.26	0.25^
Standard deviation	13.64	5.05	0.20	0.17
Minimum quantitative scores	0	0	0.00	0.00
Maximum quantitative scores	67	20	1.00	0.63

\*Difference is significant at  $p < 0.05$  ( $p=0.019$ ), one-tailed

^ Difference is not significant at  $p < 0.05$  ( $p=0.39$ ), one-tailed



**Table 6.8c: Emphasis through presentation effects in annual reports: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Capital-raiser firms	Non-capital-raiser firms	Capital-raiser firms	Non-capital-raiser firms
Mean of emphasis scores	9.86	6.53*	0.25	0.28^
Standard deviation	9.43	6.07	0.15	0.25
Minimum emphasis scores	0	0	0.00	0.00
Maximum emphasis scores	38	21	0.68	1.00

\*Difference is significant at  $p < 0.10$  ( $p=0.073$ ), one-tailed

^Difference is not significant at  $p < 0.05$  ( $p=0.49$ ), one-tailed

**Table 6.8d: Emphasis through repetition of information in annual reports: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Capital-raiser firms	Non-capital-raiser firms	Capital-raiser firms	Non-capital-raiser firms
Mean of repetition scores	1.50	1.13*	0.04	0.03**
Standard deviation	1.48	1.98	0.04	0.06
Minimum repetition scores	0	0	0.00	0.00
Maximum repetition scores	4	7	0.14	0.30

\*Difference is significant at  $p < 0.05$  ( $p=0.042$ ), one-tailed

\*\*Difference is significant at  $p < 0.10$  ( $p=0.07$ ), one-tailed

In summary, for intensity of disclosures, two set of tests were conducted to determine the difference between capital-raiser and non-capital-raiser scores; first, with absolute frequency scores, and followed by relative frequency scores. Based on the absolute frequency scores, the difference between capital-raiser and non-capital-raiser firms in terms of intensity of disclosure was statistically significant. A further analysis indicates that this significant difference was contributed by all of the four measures which are visual disclosures, quantitative disclosures, emphasis through

presentation effects and emphasis through repetition. This means that based on absolute frequency alone, the findings strongly support H1c.

The second set of tests was conducted to provide more conclusive evidence on the disclosure behaviour of both groups of firms by controlling for the difference in the amount of disclosure recorded by each firms. When intensity scores were analysed in proportion to the extent of disclosure, visual disclosures were significant whilst repetition was marginally significant. Although results were slightly different, the findings still indicate that capital-raiser firms provide more intense intangibles information than non-capital-raiser firms and, thus, support H1c.

As previously argued in Chapter 4, this particular disclosure behaviour indicates that firms with capital-raising motive do utilise intensity measures in presenting intangibles information and, consequently, are giving more powerful signal to potential investors.

The next section presents descriptive statistics and results of testing Hypothesis 2, which is the disclosure of intangibles in the prospectuses.

## **6.5 Tests of Hypothesis Concerning Disclosure in Prospectuses**

### **6.5.1 Variety of intangibles disclosure in prospectus (H2a)**

Hypothesis 2 is concerned with the difference in the variety, extent and intensity of intangibles disclosure in the annual reports and prospectuses of capital-raiser firms. As previously discussed in Chapter 4, there are two opposing propositions for the potential difference. On the one hand, it is expected that capital-raiser firms are more likely to feature additional intangibles information in the prospectus as an addition to information previously disclosed in their annual reports prior to capital-raising activity. This is further supported by the fact that there is a wide discretion in disclosing information in the prospectus because a general requirement for disclosure in prospectuses is rather broad as it is mainly concerned with information that investors and their professional advisers would reasonably require to make an informed investment decision. Thus, firms may engage in a greater variety and a higher level of intangibles disclosure. On the other hand, a wide discretion in disclosing information in the prospectus may result in a detrimental position because

firms are liable for any misleading information due to stringent reporting regulations. That is, there may be less incentive for firms to disclose more information in their prospectuses.

This section presents results of testing Hypothesis 2. It was posited in Chapter 4 that there is a difference in the variety of voluntary disclosure of intangibles in capital-raisers' annual reports and their prospectuses. Hypothesis 2a predicted that:

H2a: There is a difference in the variety of voluntary disclosure of intangibles information of capital-raiser firms' annual reports and their prospectuses.

Table 6.9 presents the descriptive statistics for variety of disclosure in the annual reports and prospectuses of capital-raiser firms. As expected, the Table shows that there is a difference in the means for the variety of disclosure. It can be seen that the mean for prospectuses was lower (4.17) than annual reports (8.80). This indicates that out of 24 intangibles items, these capital-raiser firms disclosed an average of four items in their prospectuses. To assess the significance of this difference, a Mann-Whitney U test was performed. The statistical test indicates that at 5 per cent level, the difference between the two documents is significant and, thus, supports H2a.

**Table 6.9: Variety of intangible items disclosed by capital-raiser firms in annual reports and prospectuses**

<b>Descriptive Statistics</b>	<b>Annual report</b>	<b>Prospectus</b>
Mean of intangible item disclosed	8.80	4.17*
Standard deviation	3.089	2.925
Minimum number of intangible item disclosed	4	0
Maximum number of intangible item disclosed	14	10

*\*Difference is significant at  $p < 0.05$  ( $p = 0.000$ ), two-tailed*

### 6.5.2 Extent of intangibles disclosure in prospectus (H2b)

This section presents results of testing whether there is a difference in the amount of intangibles disclosure in annual reports and prospectuses of capital-raiser firms. H2b predicted that there is a difference in the extent of intangibles disclosure in the capital-raiser firms' annual reports and their prospectuses.

Table 6.10 presents the descriptive statistics for the extent of disclosure in annual reports and prospectuses of capital-raiser firms. As expected, Table 6.10 shows a difference in the means of disclosure for both groups. The difference exhibits a similar result to the variety of disclosure whereby disclosure in prospectuses was lower than annual reports. The significance of this difference was tested using the Mann-Whitney U test and the result indicates that the difference is statistically significant with a p-value of 0.000 and, therefore, supports H2b.

**Table 6.10: Number of disclosures per annual report and prospectus of capital-raiser firms (Extent)**

<b>Descriptive statistics</b>	<b>Annual report</b>	<b>Prospectus</b>
Mean of extent of disclosure	39.70	14.43*
Standard deviation	24.80	15.69
Minimum extent of disclosure	7	0
Maximum extent of disclosure	114	57

*\*Difference is significant at  $p < 0.05$  ( $p = 0.000$ ), two-tailed*

### 6.5.3 Intensity of intangibles disclosure in prospectus (H2c)

Besides variety and extent of disclosure, it was also predicted in H2c that there is a difference in the intensity of disclosure in annual reports and prospectuses of capital-raiser firms.

As previously discussed, intensity of disclosure was measured on four dimensions: type of disclosure, nature of disclosure, emphasis through presentation effects and emphasis through repetition of information. Table 6.11 presents a summary of the intensity measures for prospectus disclosures, both in absolute and relative frequency to total disclosure (434 disclosures). This table shows that capital-raiser firms presented intangibles information using all of the intensity measures. Relatively, 14

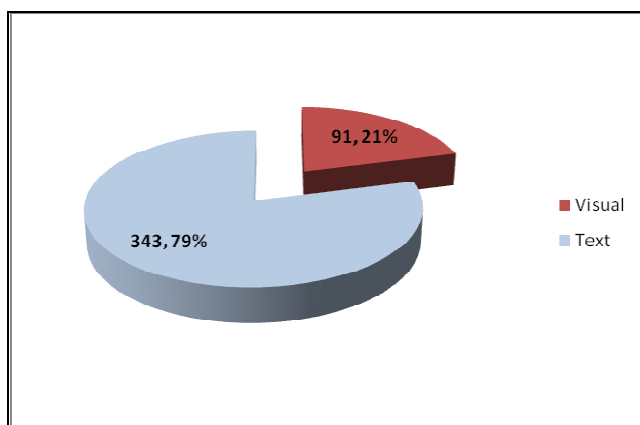
per cent of the disclosures were made through pictures and photographs and 27 per cent were made quantitatively. Besides, intangibles information was also featured in the headlines and through special characters which indicate emphasis of information.

In relation to Table 6.11, Figures 6.5 to 6.8 also show the proportionate disclosure for each of the intensity measures in relation to their counterparts. Figure 6.5 shows that 79 per cent of the total disclosure was made in textual form. It is also shown in Figure 6.6 that 73 per cent of the total disclosures were made in qualitative forms with no numerical or monetary values attached. Figure 6.7 shows that 66 per cent of the total disclosures were presented in plain text. Figure 6.8 shows that six per cent of the total disclosures were repeated disclosures.

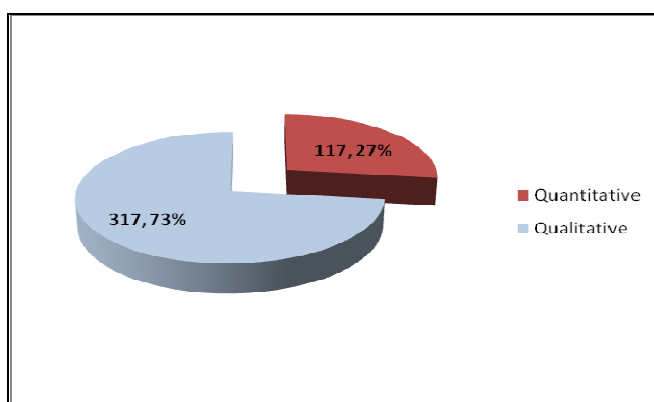
**Table 6.11: Number of disclosures in prospectuses based on intensity measures**

<b>Intensity of disclosure</b>	<b>Frequency (number of disclosure)</b>	<b>Relative frequency to total disclosure</b>
<i><b>Type of disclosure (Visual)</b></i>		
Titles in graphs/charts	1	0.2%
Number of rows in tables	22	5%
Titles in figures/diagrams	6	1%
Captions in pictures/photographs	62	14%
<i><b>Nature of disclosure (Quantitative)</b></i>		
Quantitative disclosures (non-financial and financial)	117	27%
<i><b>Emphasis through presentation effects</b></i>		
Positioning, special characters and type of font	146	34%
<i><b>Emphasis through repetition</b></i>	24	6%

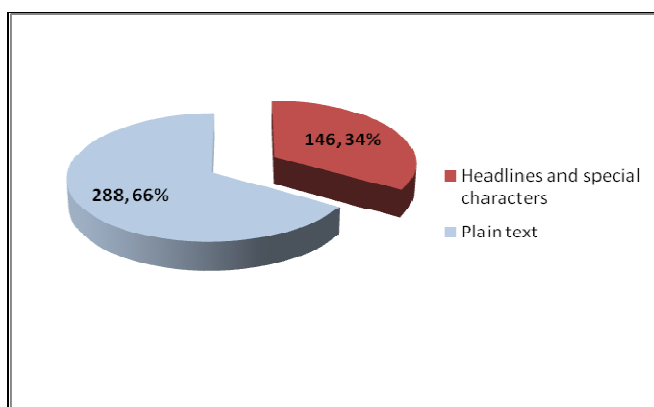
**Figure 6.5: Type of disclosure in prospectuses: Text and visual**



**Figure 6.6: Nature of disclosure in prospectuses: Qualitative and quantitative**



**Figure 6.7: Emphasis through presentation effects in prospectuses: Location/positioning of information, special characters and type of font**



**Figure 6.8: Emphasis through repetition of information in prospectuses**

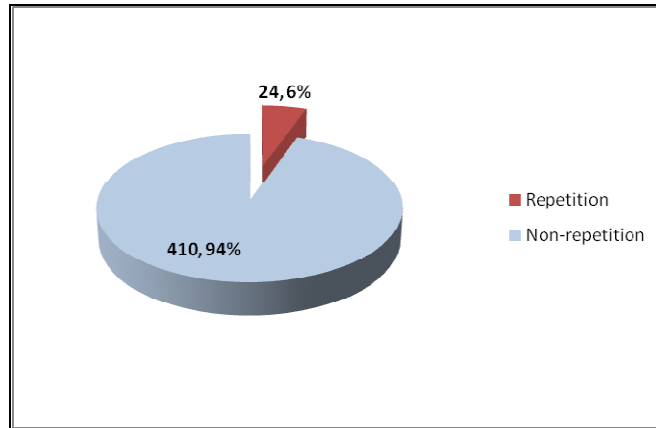


Table 6.12 presents the descriptive statistics and the result of testing H2c. The result presented is based on absolute and relative frequency scores. Similar to H2a and H2b, a difference is also observed in the intensity of disclosure measure. Annual reports received an average of 33.60 for their intensity scores whereas prospectuses received only 12.60. This shows that messages presented in annual reports were more intense than messages presented in prospectuses. A Mann-Whitney U test indicates that the difference in terms of intensity of disclosure between annual reports and prospectuses of capital-raiser firms based on their absolute scores is statistically significant and, therefore, supports H2c.

As mentioned in the discussion of H1c, the difference in the intensity scores was also analysed based on its proportion to the extent of disclosure as the results based on absolute frequencies alone do not necessarily represent the strength of the messages. Based on the relative frequency scores, the result in Table 6.12 shows that there is no significant difference in the relative intensity of disclosure of annual reports and prospectuses.

**Table 6.12: Intensity of intangibles disclosure in annual reports and prospectuses: Absolute and relative scores (Total for all four measures)**

Descriptive statistics	Absolute score		Relative score	
	Annual reports	Prospectuses	Annual reports	Prospectuses
Mean of intensity scores	33.60	12.60*	0.81	0.72^
Standard deviation	31.27	16.04	0.28	0.61
Minimum intensity scores	5	0	0.37	0.00
Maximum intensity scores	165	58	1.66	3.00

\*Difference is significant at  $p < 0.05$  ( $p=0.000$ ), two-tailed

^Difference is not significant at  $p < 0.05$  ( $p=0.156$ ), two-tailed

To ascertain which intensity measure contributes to the difference between the two documents, a further analysis was conducted. Tables 6.12a, b, c and d present the descriptive statistics for each of the intensity dimensions. By analysing each of the intensity measures, it can be seen from the tables that with relative scores, some intensity measures are significant while others remain insignificant. For visual disclosures and emphasis through repetition, the difference between prospectuses and annual reports in terms of relative intensity scores remains statistically significant and, thus, provides support for H2c.

**Table 6.12a: Visual disclosures in annual reports and prospectuses: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Annual reports	Prospectuses	Annual reports	Prospectuses
Mean of visual scores	9.77	3.00*	0.21	0.14**
Standard deviation	13.03	6.28	0.16	0.20
Minimum visual scores	0	0	0.00	0.00
Maximum visual scores	70	31	0.61	0.63

\*Difference is significant at  $p < 0.05$  ( $p=0.000$ ), two-tailed

\*\*Difference is significant at  $p < 0.05$  ( $p=0.016$ ), two-tailed



**Table 6.12b: Quantitative disclosures in annual reports and prospectuses:  
Absolute and relative scores**

<b>Descriptive statistics</b>	<b>Absolute score</b>		<b>Relative score</b>	
	<b>Annual reports</b>	<b>Prospectuses</b>	<b>Annual reports</b>	<b>Prospectuses</b>
Mean of quantitative scores	11.30	3.77*	0.26	0.26^
Standard deviation	13.64	4.59	0.20	0.23
Minimum quantitative scores	0	0	0.00	0.00
Maximum quantitative scores	67	16	1.00	1.00

*\*Difference is significant at  $p < 0.05$  ( $p=0.000$ ), two-tailed*

*^Difference is not significant at  $p < 0.05$  ( $p= 0.882$ ), two-tailed*

**Table 6.12c: Emphasis through presentation effects in annual reports and prospectuses: Absolute and relative scores**

<b>Descriptive statistics</b>	<b>Absolute score</b>		<b>Relative score</b>	
	<b>Annual reports</b>	<b>Prospectuses</b>	<b>Annual reports</b>	<b>Prospectuses</b>
Mean of emphasis scores	9.86	4.8*	0.25	0.24^
Standard deviation	9.43	6.85	0.15	0.28
Minimum emphasis scores	0	0	0.00	0.00
Maximum emphasis scores	38	21	0.68	1.00

*\*Difference is significant at  $p < 0.05$  ( $p=0.003$ ), two-tailed*

*^Difference is not significant at  $p < 0.05$  ( $p=0.321$ ), two-tailed*

**Table 6.12d: Emphasis through repetition of information in annual reports and prospectuses: Absolute and relative scores**

Descriptive statistics	Absolute score		Relative score	
	Annual reports	Prospectuses	Annual reports	Prospectuses
Mean of repetition scores	1.50	0.80*	0.04	0.03**
Standard deviation	1.48	1.67	0.04	0.07
Minimum repetition scores	0	0	0.00	0.00
Maximum repetition scores	4	6	0.14	0.24

\*Difference is significant at  $p < 0.05$  ( $p = 0.009$ ), two-tailed

\*\*Difference is significant at  $p < 0.05$  ( $p = 0.023$ ), two-tailed

This section provides findings on how capital-raiser firms behave when signalling intangibles information in their prospectuses. The results from this section indicate that there is a significant difference in terms of intensity of information in annual reports and prospectuses and that the intensity of disclosures in prospectuses is lower than in annual reports.

The next section provides a discussion in relation to findings from both Hypotheses 1 and 2.

## **6.6 Discussion of the Results of Hypothesis Testing**

The analysis of annual reports and prospectuses revealed that Australia's largest listed firms utilised annual reports and prospectuses to disclose voluntarily information about intangibles. With respect to annual reports, narrative sections provide an opportunity for managers to exercise their discretion in featuring relevant and important information. It has been argued that information released voluntarily can be a powerful signal to indicate favourable attributes of a firm. For the purpose of the study, the analysis of annual reports permits a further investigation on how Australia's largest listed firms utilise annual reports to signal intangibles information when they intend to raise additional capital.

To date, there appears to have been no direct comparison made in the literature between the actual disclosure behaviour of firms about intangibles and specific managerial motives behind the disclosure strategy. Based on the descriptive analysis and statistical tests, the findings presented in the earlier sections strongly support the hypotheses that the variety, extent and intensity of intangibles disclosure are *higher* in capital-raiser firms as compared to non-capital-raiser firms. As noted by Lang and Lundholm (2000), voluntary disclosure of information reflects conscious decisions of managers. That is, the need to disclose additional information is even stronger when firms require a positive valuation from investors. In the case of Australia's largest listed firms, capital-raising activity motivates firms to report a wider variety and a higher level of intangibles of information. This particular disclosure behaviour gives an indication that companies provide a greater variety and a larger amount of intangibles information to compensate for the inadequacy of the financial reporting standards and that they want investors to be aware of the existence of intangibles.

Further, the extensive content analysis revealed that when firms have the intention to raise capital, not only they do signal a greater variety and a higher amount of intangibles, but they also signal more intense intangibles information in their annual reports presumably to capture the attention of potential investors. Reflecting on the proposition that pictures and photographs are more effective than narrative disclosures when it comes to capturing a reader's attention (Unerman, 2000; Hooper and Low, 2001; Davison and Skerrat, 2007), the analysis of annual reports revealed that capital-raiser firms use more pictures and photographs when signalling intangibles information. It could be argued that information about employees, brands and communities of practice gives firms the opportunity to portray themselves through visuals, particularly pictures and photographs. This finding agrees with Steenkamp's (2007) claim that pictures are a favoured medium in communicating intangibles information. The utilisation of more pictures and photographs suggests that Australia's capital-raiser firms understand the effectiveness of pictures in communicating important messages because as Steenkamp (2007) proposed, pictures convey powerful messages to readers.

The results of testing Hypothesis 1 also show that capital-raiser firms tend to put more emphasis on particular intangibles information by repeating the same piece of

information throughout their annual reports compared to non-capital-raiser firms which, therefore, represents a stronger signal. According to Davison (2008), repetition helps to emphasise and to aid the memory. Thus, a significant presence of repetition in capital-raiser firms' annual reports indicates that these firms understand the purpose of emphasis and they want to emphasise the existence and potential of their intangibles. It appears that not only do these firms want investors to realise the existence of intangibles but they also want to increase the likelihood that investors receive the message, retain the information and recall the information when they make investment decisions. Thus, the results of increased voluntary disclosure and the disclosure of more intense messages could be associated with the adoption of AIFRS because after the AIFRS intangibles are less visible in the financial statements due to greater restriction imposed on the capitalisation of intangibles.

As previously discussed in Chapter 4, it was expected that firms would also disclose intangibles in their prospectuses during capital-raising activity to reduce the information asymmetry between the firms and investors. It was also argued that prospectuses are one of the signalling tools and, therefore, any offer of securities needs disclosure of relevant accurate information. For the purpose of the study, prospectuses of capital-raiser firms were analysed to determine whether there is a difference in the variety, extent and intensity of intangibles disclosure in capital-raiser firms' annual reports and their prospectuses.

Even though the overall level of disclosure in prospectuses is rather low as compared to annual reports, new information disclosed in the prospectuses seems to agree with Cordazzo's (2007) proposition that a prospectus offers additional information on the firm's future strategy and profitability and that a prospectus is generally more forward-orientated. For example, ANZ Banking Group did not disclose anything about their *business alliances and joint ventures* in the 2008 Annual Report but mentioned the following information about joint ventures in the 2009 Prospectus.

"ING Australia Limited (INGA) is a joint venture between ANZ and the ING Group"
<i>ANZ Banking Group Prospectus 2009, p.35</i>

The analysis of prospectuses also revealed that firms sometimes repeat similar intangibles information that was previously disclosed in prior year's annual report. For example, ANZ Banking Group Limited disclosed the following sentence about *management philosophy and corporate culture* in its 2008 Annual Report and disclosed the information again in the 2009 Prospectus.

<i>"ANZ has the aspiration to become a super regional bank through expanding in Asia."</i>
<b><i>ANZ Banking Group Annual Report 2008, p.2</i></b>
<i>"The Group's strategy is to become super regional bank in the Asia Pacific region"</i>
<b><i>ANZ Banking Group Prospectus 2009, p.34</i></b>

There were also other incidences of repetition of information already reported in annual reports as demonstrated by the next examples. In these instances, Iluka Resources and AMCOR Limited disclosed information about *market share* and *brand values and reputation* in their annual reports and prospectuses.

<i>"Iluka is a clear market leader in terms of zircon production, with a 37 per cent market share and a production of over half a million tonnes of zircon in 2007."</i>
<b><i>Iluka Resources Annual Report 2007, p.1</i></b>
<i>"Iluka is a global leader in the mineral sands industry, #1 global producer of zircon, with a market share of 37% in 2007."</i>
<b><i>Iluka Resources Prospectus 2008, p.6</i></b>

<i>"Amcor Flexibles is a market leader and one of the world's largest suppliers of flexible and tobacco packaging."</i>
<b><i>Amcor Limited Annual Report 2008, p.9</i></b>
<i>"Flexibles is one of the world's largest suppliers of flexible packaging."</i>
<b><i>Amcor Limited Prospectus 2009, p.33</i></b>

The results of the analysis strongly support the hypothesis that there is a significant difference in the variety, extent and intensity of intangibles disclosure in capital-raiser firms' annual reports and their prospectuses. A further analysis indicates that the variety, extent and intensity of intangibles disclosure is significantly lower in the prospectuses. As far as the present study is concerned, there appears to be no literature that compares the disclosure of information of capital-raiser firms' annual reports and their prospectuses. Clearly, the analysis revealed that the variety, extent

and intensity of disclosure is lower in the prospectuses. Even though this study only analysed voluntary information in sections that were likely to contain intangibles information<sup>6</sup>, perhaps firms strive to adhere to the requirements of the *Corporations Act* that no material information is omitted and that there is no misleading information is present in the prospectus.

That is, firms would have taken extra care in deciding what information should be disclosed in their prospectuses. For instance, Section 727 and 728 of the *Corporations Act* prohibit the disclosure of misleading or deceptive statements in prospectuses. In addition, with regard to forecasts and forward-looking statements, Section 728 also limits the disclosure if a firm does not have reasonable grounds for making forecasts or forward-looking statements. Therefore, it can be argued that disclosure in prospectuses is subject to more stringent reporting and disclosure obligations as compared to narrative sections in annual reports. With respect to narrative sections in annual reports, managers enjoy wider discretion in disclosing voluntary information because narrative sections in annual reports are largely unregulated and unaudited. As a result, more intangibles information could be observed in annual reports than in the prospectuses and this could explain the significant difference of intangibles disclosure in both reports.

From the analysis, in general, the disclosure in narrative sections of annual reports contains pictures, coloured images and information in special characters besides information in plain text. One interesting observation is that even though the variety and extent of disclosure is lower in the prospectuses, some firms disclose voluntary intangibles information by featuring the information in visual forms, full of coloured images and presented in special characters such as numbered lists and bullet points, resembling the narrative sections in annual reports. Only a few firms prepare their prospectuses featuring only mandatory information, in just plain text.

The findings from this study support the proposition that firms are more communicative when they are driven by the capital-raising motive (Lang and Lundholm, 2000). It appears that market forces provide incentives for voluntary

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<sup>6</sup> The location of disclosure in prospectuses is discussed in Chapter 5.3.

disclosure of intangibles in that intangibles information may reduce the information asymmetry and, consequently, reduce the cost of capital. That is, capital-raiser firms provide significantly more and a greater variety of intangibles information in their annual reports prior to capital-raising activity. Further, the information is portrayed in more intense forms such as pictures and photographs and was repeated throughout the documents. These differences were significantly stronger compared to firms without the capital-raising event.

## **6.7 Summary**

This chapter presents the results of testing the hypotheses proposed in Chapter 4. It has been argued that signalling of information is done to reduce the information asymmetry problem arising from a lack of intangibles information in the financial statements. It was also argued in Chapter 4 that capital-raising activity provides a strong motive for listed firms to disclose intangibles information to reduce information asymmetry. The content analyses of both annual reports and prospectuses revealed that Australia's capital-raiser firms utilised both annual reports and prospectuses to signal intangibles information prior and during capital-raising activity. In addition, these firms emphasised intangibles information by way of repetition and pictorial representation, which indicate more intense information signals.

The next and final chapter concludes the research by drawing together its implications and contributions both in theory and practice. The limitations of the study and suggestions for future research are also discussed in the final chapter.

## **CHAPTER 7**

### **SUMMARY, CONTRIBUTIONS AND IMPLICATIONS**

#### **7.1 Research Objectives**

The aim of this study was to determine the variety, extent and intensity of voluntary disclosure of intangibles information in the annual reports and prospectuses of Australia's largest listed firms by investigating the following research questions:

1. What is the variety, extent and intensity of voluntary disclosure of intangibles information in annual reports of capital-raiser and non-capital-raiser firms?
2. Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms and non-capital-raiser firms?
3. What is the variety, extent and intensity of voluntary disclosure of intangibles information in the prospectuses of capital-raiser firms?
4. Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms' annual reports and their prospectuses?

Summaries of the key findings, contributions and implications of the study are presented in the next sections. Considerations of the limitations of the study and directions for future research are also discussed.

#### **7.2 Summary of Key Findings**

##### **7.2.1 Research Question 1: Variety, extent and intensity of intangibles disclosure in annual reports**

Research Question 1 examined voluntary disclosure behaviour of 60 companies from the top 200 companies in Australia. In particular, the variety, extent and intensity of intangibles disclosure in annual reports were examined. The variety of disclosure was determined using a 24-item disclosure index across three categories derived from Lev (2001) and Guthrie and Petty (2000). In particular, all 60 sample companies disclosed at least one intangible item in their annual reports. Further, Research Question 1 also examined the extent of disclosure of these sample companies. To obtain the extent of disclosure, the frequencies of disclosures, both in text and visual, were counted. The analysis revealed that the *discovery and learning*



phase recorded the highest number of disclosures (1,323) followed by the *commercialisation* phase (512) and the *implementation* phase (92). Particularly, these findings support the proposition that the *discovery and learning* phase constitutes the most intangibles-intensive phase. Since the information asymmetry is higher at this stage, the findings support the proposition that firms presumably disclose more information to indicate that these are the most valuable resources in creating a firm's value which, in turn, could reduce the information asymmetry level between firms and potential investors. Therefore, the results are consistent with the proposition that large companies disclose a wide variety of voluntary information which includes intangibles information.

Further, this study innovatively explored the concept of intensity of disclosure, which reflects the strength of messages presented. In particular, the intensity measures developed for this study consist of visual representations; quantitative information; emphasis through presentation effects such as positioning of information, special characters and types of font; and emphasis through repetition. By utilising these measures, firms are signalling stronger and more intense messages about their intangibles. The findings indicate that the sample companies utilise intensity measures such as visual representations by presenting intangibles information in graphs, charts, pictures and photographs, which indicate stronger signalling of information compared to information presented in a plain text. The analysis also shows that the sample companies disclose quantitative information, indicating both non-financial and monetary values. Further, firms also employ emphasis of information to indicate important intangibles information.

### **7.2.2 Research Question 2: Variety, extent and intensity of intangibles disclosure in annual reports of capital-raiser and non-capital-raiser firms**

Research Question 2 examined the difference in intangibles disclosure between capital-raiser and non-capital-raiser firms in terms of their variety, extent and intensity of disclosure. The content analysis shows that on average, capital-raiser firms disclose 8.80 intangible items in the narrative sections of their annual reports compared to an average of 6.93 items disclosed by non-capital-raiser firms. Capital-raiser firms also provide a significantly higher amount of intangibles information compared to their matched non-capital-raiser firms. Further, the content analysis also

shows that as well as utilising more pictures and photographs to indicate more intense information, capital-raiser firms tend to put emphasis on certain information by repeating it more throughout the report compared to non-capital-raiser firms.

Consistent with signalling theory, the results demonstrate that firms address problems of information asymmetry by reporting intangibles information in the narrative sections in annual reports. The findings from Research Question 2 provide support to the proposition that when firms are driven by financing motive they tend to provide a wide variety of voluntary information (Myers and Majluf, 1984; Lang and Lundholm, 1993; Lang and Lundholm, 2000; Healy and Palepu, 2001). Further, in signalling intangibles information, Australia's capital-raiser firms utilise techniques such as visual representations and repetition to emphasise the existence and the potential of their intangibles. These findings show that capital-raiser firms tend to mitigate the potential consequences of information asymmetry by signalling additional relevant intangibles information in their annual reports because lack of disclosure might result in unnecessary increases in costs of capital which, in turn, could lead to higher transaction costs for investors because of the decrease in the liquidity of their shares.

### **7.2.3 Research Question 3: Variety, extent and intensity of intangibles disclosure in prospectuses**

Research Question 3 examined the voluntary disclosure of firms in their prospectuses. In particular, in terms of variety of disclosure, only one company did not disclose any intangibles information in its prospectus. The results indicate that in addition to disclosure in annual reports, firms also utilise prospectuses to disseminate information about intangibles. Similar to annual reports, the extent of disclosure was measured by counting the number of disclosure both in text and visual, where the *discovery and learning* phase again recorded the highest score. Also, firms utilise intensity measures in presenting intangibles information in their prospectuses. The findings suggest that firms not only signal additional relevant information in their annual reports but also in the prospectuses presumably to mitigate the information asymmetry problem which, consequently, reduces the cost of capital (Bukh et al., 2005; Cordazzo, 2007). The results also support the proposition that the prospectus can be considered as a 'role model' for future reporting because it contains current

intangibles information (Bukh, 2003). The variety, extent and intensity of intangibles disclosure were further explored by examining the difference between annual reports and prospectuses of capital-raisers in Research Question 4, which is discussed next.

#### **7.2.4 Research Question 4: Variety, extent and intensity of intangibles disclosure in annual reports and prospectuses of capital-raiser firms**

The difference between the disclosure in annual reports and prospectuses is significant and the variety of information disclosed in prospectuses is significantly lower with an average of 4.17 items compared to 8.80 items recorded in the annual reports. The extent of disclosure in prospectuses is also significantly lower with 14.43 disclosures compared to annual reports with 39.70 disclosures. Further, the intangibles information in the prospectuses is less intense compared to the disclosure in annual reports. The overall results suggest that since the prospectus is a regulated document, perhaps capital-raiser firms are limiting the amount of disclosure to prevent the disclosure of misleading information. These firms might disclose a greater variety and a higher amount of disclosure in the narrative sections in annual reports because narrative sections are largely unregulated and unaudited. As a result, more intangibles information is observed in annual reports than in the prospectuses and this could explain the significant difference in intangibles disclosure in annual reports and prospectuses. Table 7.1 summarises the findings for Research Questions 1-4.

**Table 7.1: Summary of key findings - Research questions 1-4**

<b>Research Question</b>	<b>Findings</b>
<b>Research Question 1:</b> What is the variety, extent and intensity of voluntary disclosure of intangibles information in annual reports of capital-raiser and non-capital-raiser firms?	<b>Variety:</b> Capital-raiser firms disclosed an average of almost nine intangibles item while non-capital-raisers disclosed an average of nearly seven intangibles item in their annual reports. <b>Extent:</b> The highest disclosure is recorded under the discovery and learning phase (1,323), followed by the commercialisation phase (512). <b>Intensity:</b> Capital-raiser firms utilised techniques such as visual representation and repetition to emphasise their intangibles.

**Table 7.1: Summary of key findings - Research questions 1-4 (continued)**

Research Question	Findings
<p><b>Research Question 2:</b> Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms and non-capital-raiser firms?</p>	<p><b>Variety:</b> Yes and the difference is significant at the 5 % level. Capital-raiser firms disclosed a greater variety of information with an average of 8.80 items compared to 6.93 for the non-capital-raisers. This supports the proposition that the financing motive provides strong incentive for firms to signal wide variety of intangibles information.</p> <p><b>Extent:</b> Yes and the difference is significant at the 5% level. Capital-raiser firms disclosed a higher number of disclosure with 39.70 compared to non-capital-raiser firms with 24.53 disclosures. This supports the proposition that the financing motive provides strong incentive to signal more voluntary information.</p> <p><b>Intensity:</b> Yes and the difference is statistically significant at the 5% level. Capital-raiser firms disclosed more intense messages in their annual reports compared to non-capital-raiser firms. These firms utilised more pictures and more repetition in their disclosures, which represent more intense signals. This suggests that the financing motive provides strong incentive to signal more intense messages.</p>
<p><b>Research Question 3:</b> What is the variety, extent and intensity of voluntary disclosure of intangibles information in the prospectuses of capital-raiser firms?</p>	<p><b>Variety:</b> The sample companies utilised prospectuses in addition to annual reports to report intangibles information. On average, firms disclosed 4.17 items in their prospectuses.</p> <p><b>Extent:</b> On average, capital-raiser firms recorded nearly 40 disclosures in their annual reports but their prospectuses only recorded an average of 15 disclosures.</p> <p><b>Intensity:</b> Firms utilised intensity measures in presenting intangibles information in prospectuses.</p>
<p><b>Research Question 4:</b> Does the variety, extent and intensity of voluntary disclosure of intangibles information differ between capital-raiser firms' annual reports and their prospectuses?</p>	<p><b>Variety:</b> Yes and the difference is statistically significant at the 5% level. Capital-raiser firms disclosed greater variety of intangibles in their annual reports compared to their prospectuses.</p> <p><b>Extent:</b> Yes and the difference is statistically significant. Capital-raiser firms disclosed more intangible information in their annual reports compared to prospectuses.</p>

**Table 7.1: Summary of Key Findings - Research Questions 1-4 (continued)**

Research Question	Findings
	<b>Intensity:</b> Yes and the difference is statistically significant. Messages in annual reports are more intense compared to messages in prospectuses and, therefore, indicate that more intense signals are conveyed through annual reports compared to prospectuses.

### 7.3 Contributions and Implications of the Study

This study has made several unique contributions and implications regarding voluntary disclosure of intangibles among Australia's largest listed firms. As previously argued, more restrictive rules imposed by the standard on the measurement and reporting of intangibles has resulted in intangibles disclosure becoming less visible in the financial statements which, in turn, could lead to a decline in the usefulness of the financial statements. One implication from this situation is that presumably, firms voluntarily disclose intangibles information outside their financial statements, particularly in the narrative sections of annual reports because they have less opportunity to recognise and capitalise their intangibles in the financial statements. Therefore, the disclosure behaviour of firms observed in this study suggests that in the absence of adequate financial reporting standards for intangibles, firms have expanded their disclosure by way of voluntary reporting so that information needs of investors can be satisfied.

Further demonstrated is the manner in which firms behave with regard to intangibles when they are driven by a capital-raising motive. As previously discussed in Chapter 2, intangible resources are important value drivers in ensuring a firm's future viability. The rise of intangibles as a dominant factor in improving competitiveness and future growth of a firm is perhaps an indication of why companies are more focused on developing their intangible resources. Since firms have put a significant amount of investment in intangibles, it seems, based on the evidence from this study, that firms probably find it important to communicate the information to investors which can be done through voluntary disclosure of information.

The findings from this study also have implications for various parties. For instance, capital-raiser firms could be at a greater disadvantage if voluntary disclosure is not

used for any strategic objectives. For example, they may be exposed to additional costs of capital. However, if capital-raiser firms utilise voluntary disclosure strategically, it could reduce the information asymmetry between firms and their potential investors and improve investors' and analysts' valuations. That is, by having intangibles information, investors are better equipped to estimate applicable risks associated with a firm. This is because investors will have evidence on the true value of a firm and its wealth creation capabilities in the long run. Therefore, voluntary disclosure of intangibles observed in this study is an indication that firms employ voluntary disclosure strategically to meet their specific needs.

The findings from this study indicate that capital-raiser firms disclose more variety and a greater number of disclosures compared to non-capital-raiser firms. Further, capital-raiser firms utilise more pictures and emphasis through repetition to highlight certain aspects of investment in intangibles. These findings support the proposition that intangibles are indeed important value drivers in creating a firm's value and, therefore, capital-raiser firms signal more intangibles information. For these firms, lack of intangibles information implies an unnecessary increase in the cost of capital. Lack of intangibles information could also increase the opportunity for moral hazard, adverse selection and opportunistic behaviours which, in the worst case, could result in a market failure. Capital-raiser firms might want to avoid these negative implications and, therefore, they voluntarily disclose intangibles information when they intend to raise capital. Besides, capital-raiser firms can publicly provide disclosure of intangibles information such as long-term strategy, business alliances and marketing strategy which could presumably enhance a company's reputation (Bruggen et al., 2009). This in turn, could result in more efficient share prices, greater share liquidity and an increase in demand for shares.

Even though this study provides evidence on voluntary disclosure of intangibles among firms, it is important to note that voluntary disclosure itself is subject to consistency and comparability issues. One implication arising from these issues is that the depth and breadth of intangibles information provided by different firms cannot be easily compared. Currently there are no specific guidelines concerning the reporting of intangibles except for intangibles that qualify as assets and can be recognised in the balance sheet. Based on the evidence from this study, it seems that

firms employ their own strategies in reporting intangibles information to accommodate their specific needs. This particular disclosure behaviour could, perhaps, explain the findings of this study regarding the intensity of information presented. For instance, signalling through pictures and repetition of information are among strategies used by firms presumably to make intangibles noticeable and obvious.

Therefore, the findings from this study may have implications for policy makers in understanding how a lack of intangibles information in the financial statements can be associated with voluntary disclosure, particularly among listed firms with a capital-raising motive. Intangibles disclosure is currently regarded as a supplementary disclosure issue because it is unlikely that intangibles other than those prescribed by the standard will be incorporated into traditional financial reporting in the near future (Mouritsen et al., 2004; Yongvanich and Guthrie, 2005; Bradbury, 2009; Walker, 2009). Perhaps the identification of best practices among the existing approaches should be a starting point in prescribing guidelines for voluntary disclosure of intangibles information and this can be done through adopting and regulating an approach such as the Intellectual Capital Statement. Even though Guimon (2009) argues that full standardisation might not be desirable because of industry-specific characteristics, perhaps some agreement on a minimal set of indicators would be sufficient to enhance consistency and comparability of the disclosure of intangibles in the capital market.

Another important observation from the study is that the level of disclosure in prospectuses is much lower than in the annual reports. For the purpose of the study, the disclosure in prospectuses was compared with the disclosure in the narrative sections in annual reports. A prospectus is a regulated report as compared to narrative sections in annual reports which are unaudited and less regulated. The findings from this study indicate that firms utilise narrative sections in annual reports to disclose more voluntary information as compared to prospectuses. The utilisation of narrative sections in annual reports is consistent with findings from prior studies that annual reports give firms an opportunity to articulate forward strategy to investors in a comprehensive manner.

With respect to prospectuses, prior studies claim that prospectuses seem to address more directly the role of intangibles as a basis for competitive advantage because it contains more current information. However, this study observes less disclosure in prospectuses as compared to annual reports. This could probably due to constraints imposed by firms in disclosing additional information for fear of litigation should they disclose misleading and inaccurate information. Perhaps less information in prospectuses could also explain why the prospectus is not the most popular source of information for investors when making an investment decision (Ramsay, 2003). Based on an investors' survey conducted on how prospectuses are used Ramsay (2003) found that respondents choose newspapers over the prospectus as the most important source of information before making investment decisions. One implication arising from this situation is that if firms limit their intangibles disclosure, the quality of the information, to some extent, can be questioned. Besides, if voluntary disclosure, which is supposed to be a managerial discretionary choice has to be restricted because of stringent regulations, the quality of the prospectus is questionable. Thus, one important question to be addressed is that "If firms limit the disclosure for fear of litigation, will it reduce the quality of the report?" To address this issue, again, perhaps one important implication for policy makers is to adopt and regulate at least how and what intangibles information to be disclosed in corporate reports such as prospectuses and annual reports in order to address the issue of inconsistencies in reporting.

In addition to making a contribution in understanding firms' disclosure behaviour with regard to their intangibles, this study also provides several theoretical contributions. Particularly, this study provides an extension of prior literature on signalling theory. As signalling theory predicts, the results support the assertion that firms signal intangibles information to reduce information asymmetry. Therefore, as intangibles information is less visible in the financial statements, the voluntary disclosure of intangibles among Australia's capital-raiser firms may be interpreted as a signal to the market to reduce the information asymmetry level which, in turn, could assist the decision-making processes of the market actors.

Second, this study develops a 24-item intangibles classification index to capture individual intangible items disclosed in the annual reports and prospectuses. To bring



analytical rigour to the index, widely recognised indices developed by Guthrie and Petty (2000) and Lev (2001) were utilised with some modifications. In particular, this study retains the three phases classified by Lev (2001) which are: the discovery and learning, the implementation and the commercialisation phase. These categories give firms more precise impression regarding the value-chain process, particularly in highlighting certain aspects of their investments in intangibles. Further, the utilisation of widely used disclosure indices helps to identify consistently various items disclosed by firms as reported by previous research. The amendments were made by reclassifying and combining intangible items in both frameworks into Lev's (2001) Value Chain Scoreboard. As a result, the disclosure index utilised in this study looks at the disclosure in terms of the value-chain process by incorporating various items already recognised in the literature. Thus, by having a more rigorous and robust index, this study contributes to the literature because greater variation of information can be captured and explained according to its value-creation process.

Third, this study differs from previous studies on intangibles disclosure because it offers an addition to knowledge by establishing, exploring and demonstrating the concept of intensity of disclosure. The intensity of disclosure is defined as the strength of intangibles information which is represented by various components such as the use of pictures, the disclosure of quantitative information, placement of information and repetition of information. The findings indicate that firms present information through visual representations such as pictures and photographs. Also, this study provides evidence that firms utilise emphasis techniques by way of repetition. These strategies were employed by capital-raiser firms to represent intense and powerful messages presumably to emphasise the existence and importance of intangibles. This way, intangibles information is more likely to be visible to investors. Prior studies have investigated the content of annual reports including the use of pictures and the readability of the report but what has been contributed by the present study is considered as a new area. In particular, based on the intensity index constructed, this study provides evidence that not only firms signal wide variety and higher intangibles disclosure, but also more intense messages such as through pictures and repetition when they intend to raise additional capital. Therefore, these findings support the proposition that financing decisions provide strong incentives

for firms to signal intangibles information which, in turn, could mitigate the information asymmetry problem and, therefore, prevent unnecessary market failures.

#### **7.4 Limitations of the Study**

There are several limitations inherent in the study that have been identified. First, there is a small sample size and industry spread. As previously discussed in Chapter 6.2, the sample was drawn from Australia's top 200 companies which resulted in 30 capital-raiser firms from five different industries. Even though the sample is small, the selection of the top 200 companies as the sample companies represents 78 per cent of Australian equity market capitalisation and is likely to be indicative of the disclosure behaviour of the companies listed on the ASX. Nonetheless, the sample companies for this study consist of all capital-raiser firms among Australia's top 200 firms during the three-year period (2007-2009) except for two companies that had to be eliminated.

Second, this study only focused on annual reports and prospectuses, ignoring other ways of information release such as press releases, conference meetings, websites and newspaper reports. Third, the present study did not include private placements due to lack of available data and that the private placements might include other specific information to specific target groups such as institutional investors and, therefore, might be irrelevant to this study. Fourth, the use of content analysis is subject to subjectivity and reliability issues. As far as this study is concerned, the reliability of the instrument and the reliability of the coder have been considered and dealt with carefully to reduce the possibility of errors.

Fifth, the use of content analysis alone does not necessarily indicate the quality or importance of the disclosure. A disclosure index devised for this study contains 24 individual intangible items, which can be considered as small compared to some studies with 70-90 individual items. Since this index is first introduced in this study, it is not empirically tested yet. Nonetheless, it adopts widely recognised index such as Guthrie and Petty's (2000), which permits the identification of items consistently reported in the literature. Further, this study does not attempt to consider the importance of each individual item by giving it 'weighted scoring' based on

importance. Therefore, this study weighted all the 24 items equally and acknowledges that the items could be weighted differently based on importance.

Further, with regard to intensity measures, only four dimensions are included in the measurement to determine the strength of messages presented by firms. These four dimensions (type, nature, emphasis through presentation effects and emphasis through repetition) are considered as equal signal and no weight is attached as to whether one criterion is superior to the others. However, under emphasis through presentation effects, headlines and sub-headings are weighted more than the others. Since this intensity measure is first introduced in this study, it is not empirically tested yet. Finally, this study was not a longitudinal study that has the ability to generate more stable relationships and stronger conclusions with respect to disclosure behaviour and financing decisions.

## **7.5 Suggestions for Future Research**

The findings and limitations of this study highlight several points for future research. First, future research could address the limitations of the present study. While the present study was concerned with only annual reports and prospectuses, future studies could investigate the disclosure behaviour of firms through other mediums such as press releases, web sites and conference meetings. Given the availability of internet which can be used by firms to disseminate information, corporate websites could be one of the most potentially important media for firms to disclose more current information. Thus, future studies could explore the use of corporate websites in disclosing voluntary information. Second, future studies could consider the quality of disclosure by assigning different weights to each intangible item to indicate the importance of each item. Third, future studies could be conducted from the users' perspectives. Future research could consider whether users such as investors utilise annual reports, particularly immediately prior to capital-raising activity in making their investment decisions. This could then provide more support for signalling theory. Fourth, future research could refine the components in the intensity of disclosure by including other components such as the use of colours, the use of different font types the placement of pictures and photographs, typography and page layout.

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## Appendix 1

### Intangibles Classification Index Used for the Study and Operational Definition of the Intangibles Item

Discovery and learning	Implementation	Commercialisation
<ol style="list-style-type: none"> <li>1. Research and development</li> <li>2. Organisational infrastructure/processes</li> <li>3. Management philosophy and corporate culture</li> <li>4. Business alliances and joint ventures</li> <li>5. Supplier integration</li> <li>6. Communities of practice</li> <li>7. Spill-over utilisation</li> <li>8. Employees</li> <li>9. Training and development of employees</li> <li>10. Education of employees</li> <li>11. Work-related knowledge and competencies of employees</li> <li>12. Entrepreneurial spirit</li> </ol>	<ol style="list-style-type: none"> <li>13. Intellectual property               <ol style="list-style-type: none"> <li>13.1 Patents</li> <li>13.2 Trademarks</li> <li>13.3 Copyrights</li> </ol> </li> <li>14. Licensing agreements and contracts</li> <li>15. Know-how</li> <li>16. Internet and on-line activities</li> <li>17. Clinical test, beta test and pilot test</li> </ol>	<ol style="list-style-type: none"> <li>18. Brand values and reputation</li> <li>19. Distribution channels and marketing</li> <li>20. Customer and customer satisfaction</li> <li>21. Market shares</li> <li>22. Growth prospects and planned initiatives</li> <li>23. Product pipelines dates</li> <li>24. Expected efficiency and savings</li> </ol>

Intangibles item	Definition	Search words
<b>DISCOVERY AND LEARNING</b>	<p>First phase that initiates the corporate value chain. Requires significant and consistent allocation of resources. It is the most intangibles-intensive phase of the value chain.</p> <p>Discovery of new ideas for products, services or processes that emanate from internal operations.</p> <p>Knowledge and ideas obtained from outside sources and resources.</p> <p>Networking sources of information and ideas.</p>	

	Discovery of ideas and knowledge through active and formal networking.	
1. Research & development	Internal research and development operations of the company.	Research and development, service and product development, investment in R&D, new product development
2. Organisational infrastructure/processes	Organisational infrastructure such as business process, managerial process, organisational design, (Lev, 2002b)	Organisational capital, risk assessment and management, safety measures and systems, information system, networking system, environmental management system
3. Management philosophy and corporate culture	The way leaders in the firm think about their firm and its employees and the management philosophy has a dominant effect on the organisational culture (Brooking, 1996, p. 62). Also comprises values, heroes, rites and rituals that are recognised and shared by the staff (Brooking, 1996, p. 66).	Business strategy, proactive, customer-orientated enterprise, management philosophy, corporate culture, vision statement, mission statement, objectives, code of ethics, work environment, corporate goals
4. Business alliances and joint ventures	Business alliances and joint ventures with other corporations	Business alliances, joint ventures, joint venture business, partnerships, business partners, business collaboration
5. Supplier integration	Integration of supplier into the firm's operations	Supplier integration to improve operation process, information on key suppliers
6. Communities of practice	Employees network, informal networking with communities, building up rapport with society in general (Kang, 2007). Employees involvement in the community (Beattie and	Employees involvement in the community, company involvement with the community

	Thomson, 2007).	
7. Spill-over utilisation	Acquisition of knowledge through learning from and imitation of others' innovation	Spill-over utilisation Example: scientist liaising with universities and research institutes
8. Employees	Consists of directors and other employees (Beattie and Thomson, 2007). Employees featured or thanked. Also includes employee's profile information and position held in the company.	Employees thanked or featured, profile information of employees, positions held in the company, number of employees, workforce statistics, employee turnover, increase in number of employees
9. Training and development of employees	Planning of employee's career with organisation (Guthrie and Petty, 2000).	Training, training sessions, development programs for staff
10. Education of employees	Education received by an employee for a particular vocation that proves the skill, knowledge and understanding the employee has to do a job well (Brookings, 1996,p.48-50)	Education, study, qualification, abbreviations of qualification
11. Work-related knowledge and competencies of employees	Knowledge which frequently comes as a function of understanding and doing a job in a particular field (Brooking, 1996, p.51). The exposure to new knowledge, concepts and ideas in a structured way to increase knowledge or modify attitudes and beliefs (Mayo and Lank 1994, p.51)	Knowledge, know-how, skills, competencies, capability, work experience
12. Entrepreneurial spirit	Pertains to entrepreneurial spirit, innovativeness, proactive and reactive abilities, changeability (Guthrie and Petty, 2000).	Entrepreneur, innovations, entrepreneurial spirit, entrepreneurial skill, innovative

<b>IMPLEMENTATION</b>	<p>Transformation of ideas into working products by achieving technological feasibility of the products, services or processes under development.</p> <p>Technology feasibility is marked by numerous milestones such as intellectual property.</p> <p>To signal feasible products, services or processes. It brings a substantial reduction in the risk associated with products and services under development. It also provides investors and managers with important risk estimate.</p>	
13. Intellectual property 13.1 Patents 13.2 Trademarks 13.3 Copyrights	Property which is derived from the mind is protected in law (Brooking, 1996, p. 36). Legal mechanism for protecting the assets.	A list of patents, trademarks or copyrights
14. Licensing agreement and favourable contracts	Encompasses wide ranging agreements which give one party the right to sell the products, services or technology to other parties in accordance with the conditions as set out in the agreement (Brooking, 1996, p. 33). Includes favourable contracts obtained.	Licensing agreement, licence, franchising agreement, favourable contracts
15. Know-how	Body of knowledge an organisation possesses about a particular topic	Know-how, internal expertise, technology possessed by the company
16. Internet and on-line activities	Activities or on-line trading that includes internet alliances	On-line trading, on-line sales, on-line purchases, internet traffic.

17. Clinical test, beta test, pilot test	Clinical test, food and drug administration	Beta tests, working pilots, government approvals, new product testing, feasibility tests of products and projects
<b>COMMERCIALISATION</b>	Signifies the successful realisation of the innovation process that enables the company to generate sales and earnings	
18. Brand values and reputation	Powerful reminders to customers to buy the products and services of one company in preference to another. It consists of product or service brands that distinguish one brand from another in terms of quality and reliability; and corporate brands, which indicate where the company name has a presence, meaning and value in the market (Brooking 1996, p. 20-22).	Brand, company name, favourable market position, reputation, company position, awards received, favourable credit ratings.
19. Distribution channels, marketing	Distribution channels and marketing strategies	Marketing alliances, distribution channels, marketing strategies
20. Customer and customer satisfaction	Relates to customer loyalty that leads to repeat business. Customer's after-purchase judgment or evaluation of a specific product or service.	Customer satisfaction, repeat business, customer values, customer relations, customer feedback, additional customer, new customer, repeat customers, satisfied customers, percentage of customer base.
21. Market shares	Quantitative measures of market share the company achieved.  Indicators of economic profitability of an organisation (Lev 2001, p. 114)	Market share of the company

22. Growth prospects and planned initiatives	Consists of forward-looking information to estimate the growth of the organisation and future plans	Growth, outlook, future prospects, planned activities for future years, future investments.
23. Product pipeline dates	Expected launch dates and introduction of new products	Launch dates, new product launch dates
24. Expected efficiencies and savings	Expected efficiencies from business operations	Expected efficiencies and savings from operations, from new products and services



## Appendix 2

### Coding Sheet

**Company:**

**Date coded:**

**Document (Annual report/Prospectus):**

**Number of pages:**

**Year:**

No.	Sentence/captions/ titles/ rows	Page	1-24 items	Types	Recode	Nature	Recode	Location	Repeat	<i>Total Intensity (types + nature + location + repeat)</i>
				0=text 1=graph/ chart 2=table 3=figure 4=picture	0=text 1,2,3,4 = 1= visual	0=qual 1=non- fin 2=fin	0=qual 1,2 =1= quant	0=plain 1=spec chars 2=headli nes	0=no 1=yes	

<i>Total number of disclosure (Extent)</i>			<i>Total variety</i>							

## Appendix 3

### Examples of Intangibles Item

Intangibles item	Example
<b>Discovery and learning</b>	
1. Research and development	The company is committed to the research and development of innovative environmental products which provide sustainable solutions for reducing domestic and commercial water consumption, and greenhouse gas emissions. (GWA International Annual Report 2008,inside cover)
2. Organisational infrastructure/processes	...the company-wide adoptions of an online safety reporting system that will help identify major safety risk areas across our entire business activities. (Lend Lease Group Annual Report 2008, p.16)
3. Management philosophy and corporate culture	Our vision is to be the preferred comprehensive supplier of engineering services, provided either directly or through strategic alliances, with the intellectual capacity to capitalise on the worldwide trend towards outsourcing. (Downer Edi Limited Annual Report, p. 3)
4. Business alliances and joint ventures	Elders Rural Bank Ltd is a joint venture between Bendigo and Adelaide Bank Limited and Futuris Corporation which provides specialist banking services to Australia's farming sector. (Bendigo and Adelaide Bank Annual Report, 2008, p.14)

5. Supplier integration	<p>We have benefited from our preferred supplier arrangements which bring significant savings to the business particularly in the fields of communications, safety consumables and fuel.</p> <p>(Transpacific Industries Annual Report 2008, p.12)</p>
6. Communities of practice	<p>As well as donations by the Group and the divisions to numerous local charitable and other community organisations, QBE employees also make contributions through payroll deductions and giving of their time to local community volunteer projects.</p> <p>(QBE Insurance Group Annual report 2008, p.21)</p>
7. Spill-over utilisation	<p>Cadia Valley, in collaboration with the University of Queensland, has initiated a research project on the development of innovative landform and closure designs for waste rock dumps.</p> <p>(Newcrest Mining Limited Annual Report 2006, p.41)</p>
8. Employees	<p>The Board thanks our twenty-eight thousand talented team members for their dedication and advocacy on behalf of our customers.</p> <p>(Westpac Banking Corporation Annual Report 2007, p.5)</p>
9. Training and development of employees	<p>Training and development programs are personally tailored with individual staff in annual performance and development plans.</p> <p>(FKP Property Group Annual Report 2007, p. 17)</p>

10. Education of employees	He (Pang Toh Kang) is a trained Electrical Engineer, holds a Master of Science (Industrial Engineering) and completed the Stanford-National University of Singapore Executive Program in 1997 and INSEAD's Advanced Management Program in 2002. (Downer EdI Limited Annual Report 2006, p. 20)
11. Work-related knowledge and competencies of employees	Mr O'Halloran is a chartered accountant and has had extensive experience in professional accountancy for 14 years and insurance management for 32 years. (QBE Insurance Group Annual Report 2008, p. 22)
12. Entrepreneurial spirit	The entrepreneurial spirit and extensive local community contacts they invariably bring to the new branches undoubtedly generates a far superior financial performance than under a traditional corporate branch model. (Bank of Queensland Annual Report 2006, p. 11)
<b>Implementation</b>	
13. Intellectual property	SuPerfect, Liquifert, Big N, GranAm and Nutrient Advantage are registered Australian trademarks of Incitec Pivot. (Incitec Pivot Limited Prospectus 2008, p.33)
14. Licensing agreements and favourable contracts	Bovis Lend Lease signs a £351 million management contract for development of the Media City scheme for Peel Property Group in Manchester, UK. (Lend Lease Group Annual Report 2008,

	p.5)
15. Know-how	As specialist in rangehood design, Robinhood has expertise in the dynamics airflow. (Alesco Corporation Limited Annual Report 2006, p. 17)
16. Internet and on-line activities	In a given month, over 200,000 jobs ads are posted on seel.com.au and approximately 2.89 million jobseekers visit the site. (Seek Limited Annual Report 2008 p, 8)
17. Clinical test, beta test and pilot test	The feasibility study and Environmental Impact Assessment for Kencana has been approved by the Indonesian central and provincial governments. (Newcrest Mining Limited Annual Report 2006, p. 41)
<b>Commercialisation</b>	
18. Brand values and reputation	..recognised as ‘Business Bank of the Year’ in Money Magazine’s Consumer Finance Awards in June 2006. (St George Bank Annual Report 2006, p. 31)
19. Distribution channels and marketing	In North America, Incitec Pivot sells its explosives products primarily through five distribution channels: Retail-operates its own retail outlets, including approximately 48 sites in North America , which sell directly to end-users; Wholesale-joint ventures; Wholesale-independents-sales to independent distributors not affiliated with any explosive manufacturers; Private label-product sold to other industry participants

	<p>who typically brand them with their own label; International-export sales to international customers.</p> <p>(Incitec Pivot Limited Prospectus 2008, p. 34)</p>
20. Distribution channels and marketing	<p>In North America, Incitec Pivot sells its explosives products primarily through five distribution channels: Retail-operates its own retail outlets, including approximately 48 sites in North America , which sell directly to end-users; Wholesale-joint ventures; Wholesale-independents-sales to independent distributors not affiliated with any explosive manufacturers; Private label-product sold to other industry participants who typically brand them with their own label; International-export sales to international customers.</p> <p>(Incitec Pivot Limited Prospectus 2008, p. 34)</p>
21. Customer and customer satisfaction	<p>In 2008, close to 2,500 clients were surveyed, and the majority said that they were very or extremely satisfied with AXA.</p> <p>(AXA Asia Pacific Annual Report 2008, p.32)</p>
22. Market shares	<p>Western Star continues to grow market share and at July 2008 held a market share of 10.3%.</p> <p>(Transpacific Industries Annual Report 2008, p. 13)</p>
23. Growth prospects and planned initiatives	<p>A new system which will provide a single view of our customers' relationship with the Bank will be implemented during the next</p>

	<p>few months, and will be rolled out progressively across our branch network and call centres.</p> <p>(Bendigo and Adelaide Bank Annual Report, 2008, p.14)</p>
24. Product pipelines dates	<p>Two new products are expected to be delivered in 2007/2008, with initial investor soundings being extremely positive.</p> <p>(FKP Property Group Annual Report 2007, p.15)</p>
25. Expected efficiency and savings	<p>There have also been significant savings emanating from consolidation of acquisitions through the co-location of sites and standardising of the information management system.</p> <p>(Transpacific Industries Annual Report 2008, p. 12)</p>