

CHAPTER 5

SOURCES OF FINANCIAL INFORMATION

The major benefits of information are a reduction of uncertainty, improved decisions, and a better ability to plan and schedule activities.

(Romney & Steinbart 2009:27)

5.1 INTRODUCTION

An organisational environment in which the right information is provided to the right people at the right time in an understandable format is conducive to sound decision making. Prickett (2007:23) concurs that individuals need more than simple access to information, “they need to be able to make sense of it, focus on the relevant areas, prioritise sources, grasp key facts and, above all, reduce the time needed to do it”. This implies that for information to be useful, it must have certain qualitative characteristics (see ch 4), such as being understandable, relevant and concise. However, current means of disclosing financial information may provide users (eg investors, creditors, customers, employees, board members and management) with information that is not wanted or needed, or that may not provide them with the timely, relevant, understandable and cost-effective information they need.

This chapter endeavours to consider the challenges for current financial information, including annual financial statements, to satisfy the needs of both sophisticated and unsophisticated decision makers. The status of financial information as a basis for sound decision making will be contextualised by taking into account the complex nature of financial information processing. Information inductance and asymmetry will also be explained. The various information sources, including financial statements based on accounting standards, will also be discussed. Although chapter 4 investigated the communication of financial information, this chapter specifically looks at the array of financial information sources and the challenges for communicating it

to the less-informed users. Some of the controversies and complexities in the financial information milieu will be unpacked in order to explain the occurrence of an information expectations gap. The way forward for financial information to act as part of the interface in order to shrink the expectation gap between the information system, on the one hand, and the decision makers, on the other, will also be contemplated.

The chapter commences by referring to the crisis of the meaning of financial information to alleviate uncertainty. In this regard, information inductance is explained from the perspective of the sender of the information. This is followed by a discussion of information asymmetry in which there is a lack of symmetry in different parties' possession of information. The different credible information providers are also mentioned. The financial reporting paradigm focusing on the intricate accounting standard-setting system, introduces some of the financial reporting controversies. Of special interest is financial reporting's growing complexity and the effective communication of financial information. The chapter concludes with a discussion of the financial information expectation gap.

5.2 THE CRISIS OF MEANING

Information has meaning only if it is able to reduce uncertainty when a decision maker has to choose between different alternatives. Financial information presumably has to alleviate decision makers' levels of uncertainty or the clouds of vagueness surrounding an organisation's financial matters. According to Sayre (1976:23), information signifies "the positive difference between two uncertainty levels". Information has to lessen the risk when one has to choose between alternatives. Even though every decision involves a certain amount of risk, information is supposed to evoke the choice with the lowest risk factor. One of the characteristics of information is to continuously "inform" users and

to provide energy for decision making. The continuous flow of new information stimulates new decision-making possibilities.

Although information is constantly evolving, it should always be seen in context of the present decision to be made and the risks involved at that specific time. According to Bernstein (1998:280), “Ambiguity aversion means that people prefer to take risks on the basis of known rather than unknown probabilities. Information matters, in other words.” Probabilities refer to the chance that something might or might not happen. However, the ability of information to alleviate uncertainty is sometimes limited because of the users’ capacity to understand it, on the one hand, and the occurrence of information inductance and information asymmetry, on the other, as explained below.

5.2.1 Information inductance

It is imperative to keep in mind that the flow of information involves both senders and receivers of information. The term “information inductance” is used to refer to the intricate process through which the behaviour of an information sender is influenced by the information he or she is required to communicate (Prakash & Rappaport 1977:29). According to these authors (1977:30), information inductance occurs when “an individual’s anticipating the consequences of his communication might lead him – before any information is communicated and, hence, even before any consequences arise – to choose to alter the information, or his behaviour, or even his objectives”. In other words, the sender of the information anticipates the possible use and consequences of the disclosed information and is influenced by it. The quality of the information can be compromised by the inductance process and this will have an effect on the decisions based on this information. It could be argued that decision makers with a higher degree of financial literacy would be better equipped to verify whether the information might have been altered by its sender. While chapter 7 focuses primarily on how financial information affects the users’ decisional behaviour, it is also necessary to be concerned about the information inductance effect on the sender of the information. Because

information inductance could influence the sender of information it tends to complicate the information production process.

Information inductance can, for example, occur in internal reporting when an operational unit in the organisation chooses to report its performance in a certain way because it is concerned about and anticipates the feedback effects of the managers' use of the information. For instance, the unit's remuneration might depend on how their performance is reflected in the information. According to Drucker (1986:206), the flow of information in an organisation is circular from the bottom up and then down again and the information-based system can only function if each individual and each unit accept responsibility' "for their goals and their priorities, for their relationships, and for their communications". Goals can only be achieved if they are communicated to those who are responsible for achieving them and if they then report truthfully on how the goals were realised. Both the senders and receivers of the information have to derive meaning from it. If the senders of information are aware of the financial literacy levels of the recipients (managers or board members) they might want to either decode the information for better understanding or disguise certain information in order to avert negative feedback. This form of information inductance may impact positively or negatively on the quality and meaningfulness of information presented for internal decision making. For example, if information is decoded by way of self-explanatory graphs, tables or descriptions, managers or board members will be able to make more enlightened decisions.

Although senders of information need to take cognisance of the positive and negative feedback given by the receivers of information, they are not supposed to be influenced by their own anticipation of the information's impact on the users. For example, their anticipation of the effect that the information may have on share prices, is not supposed to influence the way the information is reported. Positive feedback usually does not influence senders to alter the information to the same extent as negative feedback does. For example, if

salary incentives are jeopardised by negative feedback, managers may want to paint a better picture than the real situation. Negative feedback, such as a drop in share prices, may be a reaction on poor financial results or performance reflected in the financial reports or even the financial media. Organisations need a well-orchestrated communication strategy, and all communication collateral (printed media, advertising, presentations, interviews, promotions, public relations and digital applications) should be integrated to achieve their communication objectives (Boshoff 2007:23). Notwithstanding the mentioned variety of communication channels, organisations annually disclose their operations and performance through financial reports to their stakeholders. Although the organisation's management may be concerned with the usefulness of the reported information for investor decision making, they will also be concerned with the feedback from other users, such as employees, creditors and customers. Employees' feedback could be in the form of new wage negotiations if they think the organisation is making unrealistic profits. Information inductance thus adds to the complexity of the dilemma between information, on the one hand, and decision makers, on the other.

5.2.2 Information asymmetry

The separation of ownership from the control of the organisation is referred to as agency theory. This abdication of control by the owners (principals) to managers (agents) is "potentially problematic as principals and agents may have different sets of goals, and agents typically possess much more information than principals" (Rutherford & Buchholtz 2007:577). Information asymmetry usually refers to this disproportion in the supply of information between principals and agents. Hendriksen and Van Breda (2001:246) define *information asymmetry* as the situation in which "one party to a transaction has more information than another". The fact that some users only receive certain financial information six months after the financial year end adds to the problem of information asymmetry. It is usually the preparers of the information who possess more information than the decision makers for whom it is prepared. It can be assumed that information asymmetry is even worse when

one party is more financially knowledgeable than the other with regard to the information at their disposal.

Regulation of the presentation of financial information is deemed necessary to prevent information asymmetry or the monopoly of information by the organisation itself. According to regulations, certain information must be publicly available to all the organisation's stakeholders thus to some extent decreasing information asymmetry. However, the regulation of financial information cannot always prohibit those with superior financial knowledge from exploiting that knowledge at the expense of the less knowledgeable. Information asymmetry therefore increases the gap between the information system and the decision makers.

5.3 CREDIBLE FINANCIAL INFORMATION PROVIDERS

If decision makers do not have access to the right information at the right time, potentially adverse financial decisions will be made. However, even if decision makers have the right information, they still need to be financially literate to understand and use it. The perception may exist that accounting information is the only major role player when one refers to financial information, but there are many other sources of financial information. In this regard Miller and Bahnson (2007a:16) claim that "capital market participants (investors and creditors) also have access to other sources of information in addition to the public financial statements". Although many financial information sources are used by individuals in making financial decisions, the media, financial markets and firm-oriented information releases and trustworthy annual financial statements play a crucial role in keeping users informed. Adams, Hill and Roberts (1998:4) contend that annual financial reports and accounts are still the single most important source of financial information. However, when these statements are incomplete or less than fully informative, the capital markets and other interested parties will obtain their information from any other

available source, including the financial press, analysts and intermediaries. The problem is not a lack of information, but rather that some decision makers do not understand the information presented to them or where to find alternative information sources.

Stakeholders need organisations to paint a complete picture of the organisation's value-building and value-protecting activities, to include, say, strategy, governance, risk management processes, and social, ethical and environmental issues (Everingham & Kana 2004:3). Even though some organisations provide information on, inter alia, strategy, governance, ethical and environmental issues, the stakeholders do not necessarily understand the information they so abundantly receive. Thus, to enhance transparency and increase stakeholder trust in an organisation, there should be a constant flow of information through a variety of communication channels to the different users of financial information. But to ensure a proper flow of information, there also needs to be a feedback flow from the stakeholders to the providers on the usefulness and understandability of the information. Feedback can be given by actively commenting on the quality of the information or passively by, say, not buying a company's shares if that company is not transparent about the information it provides. Although feedback may not alter the information already presented, it may well influence the way it is presented in future. To facilitate such a feedback process, information providers can request some form of response from the users. However, to be able to become part of a feedback process stakeholders firstly have to understand the information they receive. If they do not, they also have a responsibility to undergo some form of financial training to be able to interpret it.

5.3.1 The media

Financial information about business organisations become publicly available in a variety of ways, including news releases reported on television and the internet, as well as in the newspapers and other financial publications. Publicly available information as presented in the media, especially the financial media,

may be used by investors as a basis for forecasting either a business's success or failure. Although financial information as presented in the media is available to everyone, not everyone understands it. Consequently, those decision makers who lack financial knowledge may therefore not gain from publicly available information as presented by the media.

5.3.2 Financial market information

Financial markets are a valuable source of financial information. According to Rees (1995:295), although share prices are influenced by other factors, they reflect not only information on the market's assessment of the growth and investment risk attached to future dividends, but also on the possibility of bankruptcy. Financial information is incorporated into the market price and is available on a daily basis. Foster (1986:575) contends that capital market variables, such as security price movements, option price movements and trading volume statistics, can be especially useful for decision making because they may capture adverse developments before they are reflected in the financial reports. The financial market reacts quickly to developments or even rumours, while financial statements are presented in a fixed timeframe. However, some individuals might lack the financial literacy to understand the intricacies of financial markets and how to interpret the kind of information mentioned by Foster. With regard to the manner in which financial markets reflect publicly available information, Palepu et al (2007:376) points out the following: "A number of studies suggest that share prices reflect a rather sophisticated level of fundamental analysis." The problem is that some users may not be aware that the prices reflected were subject to sophisticated financial analysis. Specific training in the information incorporated into market prices may thus be necessary before it can be used for decision making by less financially sophisticated users.

5.3.3 Firm-oriented information releases

Effective communication of financial information is one of the ways to improve the relationship between an organisation and its stakeholders. In the broadest

sense, these stakeholders can be defined as “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (Freeman 1984:46). According to Preble (2005:413), ignoring or mismanaging stakeholders or acting irresponsibly can be costly for an organisation; it can damage their reputations, and subsequently reduce shareholder wealth. It is therefore imperative that organisations not only determine stakeholder expectations of their disclosed financial information but also their ability to use the information for decision making. Some stakeholders may be satisfied with prescribed minimum disclosure of financial information, while others may require additional voluntarily information, such as specification of the organisation’s long-term strategy, and forecasts of future performance. However, it is no easy task to discern the expectations of all relevant stakeholders who differ in their level of financial literacy to understand and use the disclosed information.

This array of stakeholders demands different ways of communication. Benston et al (2006:22) contend that performance measurement and investment decisions require information beyond accounting numbers, including current and expected changes in market conditions, the potential value of new products and processes, competitors’ products and performance, prospective changes in foreign exchange rates, customer relations, the quality of management, et cetera. The different information sources illustrates the involvedness of financial information. However, the decision makers and their cognitive abilities to use and understand the information complicate matters further. If the information is not communicated simplistically, a large section of the stakeholders may not understand it, and may require financial literacy training to use the information appropriately for decision making. Table 5.1 depicts some of the information releases that organisations can use to communicate financial information to their stakeholders. The coding of organisational-oriented information releases illustrated by Foster (1986:377) was used in figure 5.1 and adapted, by indicating a suggested level of thinking, according to Bloom’s taxonomy (see ch 6), needed for users to understand it.

This was done to indicate the difficulty of communicating diverse organisation-oriented financial information to users requiring different levels of thinking.

Table 5.1 Organisational-oriented information releases

Type of release	Level of thinking needed
1. <i>Earnings-related announcements.</i> (a) Preliminary annual figures, (b) annual report details, (c) preliminary interim figures, (d) interim report details, (e) accounting changes, (f) auditor qualifications or report, (g) other.	1. Knowledge Comprehension Analysis
2. <i>Forecast announcements by company officials.</i> (a) Earnings forecasts prior to fiscal year end, (b) earnings estimates after fiscal year end, (c) sales forecasts, (d) other.	2. Comprehension Synthesis Evaluation
3. <i>Dividend announcements.</i> (a) Cash distributions, (b) stock distributions, (c) other.	3. Application Analysis
4. <i>Financing announcements.</i> (a) Equity-related announcements, (b) debt-related announcements, (c) hybrid security announcements, (d) leasing, (e) standby credit agreements, (f) secondary issues, (g) stock splits, (h) stock repurchases, (i) joint venture announcements, (j) other.	4. Knowledge Comprehension Application Analysis
5. <i>Government-related announcements.</i> (a) Impact of (new) legislation, (b) investigations into firm's activities, (c) regulatory agency decisions, (d) other.	5. Comprehension Application
6. <i>Investment announcements.</i> (a) Exploration, (b) new ventures, (c) plant expansion/contraction, (d) plant shutdowns, (e) R&D developments, (f) other.	6. Comprehension Analysis Application
7. <i>Labour announcements.</i> (a) Negotiations, (b) new contracts, (c) strikes, (d) safety and health reports, (e) other.	7. Application
8. <i>Legal announcements.</i> (a) Lawsuits against the company or its officials, (b) lawsuits by company or its officials, (c) other.	8. Application Evaluation
9. <i>Marketing-production-sales announcements.</i> (a) Advertising, (b) contract details, (c) new products, (d) price changes, (e) product recalls, (f) production reports, (g) product safety reports, (h) sales reports, (i) warranty details, (j) other.	9. Application Analysis Synthesis
10. <i>Management board of director announcements.</i> (a) Board of directors, (b) management, (c) organisation structure details, (d) other.	10. Comprehension Evaluation

11. <i>Merger-takeover-divestiture announcements.</i> (a) Merger reports, (b) equity investment reports, (c) takeover reports-acquiror, (d) takeover reports - acquiree, (e) divestiture reports, (f) other.	11. Comprehension Synthesis Evaluation
12. <i>Securities industry announcements.</i> (a) Annual meeting reports, (b) changes in stockholdings, (c) "Heard on the street" item, (d) "insider" trading report, (e) price-trading volume report, (f) trading restriction or suspension, (g) other.	12. Comprehension Application Synthesis
13. <i>Corporate responsibility reports.</i> (a) Environmental reports, (b) social reports, (c) corporate governance reports.	13. Analysis Evaluation

Source: Adapted from Foster (1986:377) (including the levels of thinking required)

Table 5.1 shows that although annual financial statements are an important information channel, they are but one of many ways in which information is released to stakeholders. Some of the information releases referred to in table 5.1 require a high level of thinking and extensive knowledge of financial concepts. Because financial information from annual financial statements is readily available to stakeholders it sometimes seems as if stakeholders base their decisions entirely on financial information derived from the accounting process, which is not necessarily the case in view of all the other information releases by organisations. However, it is necessary to discuss this assumption in more detail.

5.3.4 Accounting information through financial statements

The term "financial reporting" based on accounting information is used in a broad sense to encompass the disclosure and communication of any financial information to both internal and external users. Financial reporting will include financial statements, as well as any other relevant financial information, whether or not it is in monetary terms. Brigham and Ehrhardt (2008:84) state the following: "Of the various reports companies issue to their shareholders, the annual report is probably the most important." The reason might be that the annual report gives the shareholders a holistic view of the company's performance and position during the previous financial year. However, users are also interested in assessing the organisation's future cash flow and require

information to help them assess various risks and uncertainties as well as management's responses to them (Young 2006:595). One should bear in mind, however, that the preparers of financial statements do not make predictions about the future, but that the users must make their own predictions, based on the information they received. The importance of providing financial statements useful for prediction is accentuated in most of the Trueblood's objectives of financial statements (Wolk et al 2004:173). Although the accounting profession endeavours to satisfy the needs of all the different user groups, it is evident that financial statements alone cannot meet all their needs for greater transparency and information symmetry. These statements also negate the fact that the financial literacy levels of the users to understand and interpret it, may also differ.

The annual financial statement usually consists of two sections: "First, there is a verbal section, often presented as a letter from the chairman that describes the firm's operating results during the past year and then discusses new developments that will affect future operations" (Brigham & Ehrhardt 2008:84). Because of the narrative nature of this section, it is usually not too difficult to understand, even by those who do not have a sound financial background. Second, the annual report consists of four basic statements – the *balance sheet*, the *income statement*, the *statement of retained earnings* and the *statement of cash flows*. This section is more complex and usually demands a high level of financial literacy especially with regard to understanding the numbers and calculations used in them. Both these sections are equally important, and give an accounting picture of the firm's operations and financial position - the one discloses how resources were allocated, while the other attempts to explain why resources were allocated in a certain way. However, according to Coghlan (2006:1), financial reporting is only a technical skill that quantifies the value created (or lost) in an organisation, yet it does not create value in itself. The value of the information depends on whether the users are able to interpret it for their specific purposes. Rees (1995:56) also argues that, taken together, the different sections as presented in the financial reports are

not an ideal solution to the information needs of various users, but that it is doubtful whether an ideal solution exists. Although an ideal solution may not exist, a financial literacy interface can be useful to link information from various sources and with different levels of complexity, to various users with different levels of financial knowledge and experience.

The above-mentioned financial reports are often referred to as “general purpose reports” for external use. However, accounting information to internal users is usually designed differently to meet their specific needs or to answer their particular questions. It is therefore rare to find reference to “general-purpose reports” or any equivalent expression with reference to internal financial reporting. However, according to Goldberg (2001:92), in the field of published reports to external users, “where the users cannot be identified so readily, assumptions have to be made by the preparers or on their behalf, and it is in this area of accounting that most reference is made to general purpose reports”. The compilation of these reports is also subject to strict rules and regulations, which may enhance their comparability, but also add to their complexity, especially if the users do not have the financial background relating to these rules and regulations. For those who are not that financially literate, the focus of financial reporting can be on the format and strict rules underlying financial reports and not so much on their understandability.

5.4 THE FINANCIAL REPORTING PARADIGM

As indicated above, financial reports are not the only source of financial information available to decision makers. However, they are a vital tool to assist users in making certain financial predictions. Conversely, in preparing these statements, the preparers are constrained to make some assumptions about the audience to which they can address their reports, and have, at least in the case of published corporate reports, “been guided or directed by the issuing of ‘standards’ to which they are required to conform and which have

been developed by some authoritarian body of people, whether recognised as community legislators or not” (Goldberg 2001:92). Although these standards dictate the format and content of financial statements, they are also limited in their ability to address the interests of the broader range of stakeholders in the so-called “triple bottom-line” information. Triple bottom-line information suggests that organisations report on their performance against economic, social and environmental parameters. As noted in the King Code (King Report 2002:40), financial reporting should also address material matters of significant interest to all stakeholders (including customers, employees, government and the public) and should be made in the context of greater transparency and accountability, taking into account the circumstances of the communities in which they operate. Organisations’ actions impact on the social and environmental circumstances of the communities and this should be reflected in the organisation’s financial reports. This aspect of corporate governance can improve if organisations take into account that communities may consist of individuals who do not necessarily have the financial knowledge to evaluate the impact of the organisation’s actions as reflected in their reports on the community.

Of late there has been an accelerated global move towards the adoption of International Financial Reporting Standards (IFRS). The downside of this adoption is that some of these standards are quite difficult to understand. Even Sir David Tweedie, International Accounting Standards Board (IASB) chairperson, expressed concern when he stated the following: “Many people are bemused by the standards, so we need to explain what the accounting effects mean” (Pickard 2007b:38). Whether these standards will contribute to the bewilderment of financial statement readers or enhance the usefulness of financial statements for different stakeholders in the future, remains to be seen and will presumably also depend on the enhancement of some of the stakeholders’ financial literacy levels.

5.4.1 The drive behind accounting standards

Although it will take some time before accounting standards conform worldwide, the IASB and the American Financial Accounting Standards Board (FASB) have pledged to work together to harmonise global financial reporting. Apart from comparability, the reason why there is a need for high international standards of reporting is because transparency for and accountability to investors is critical, and in guiding the actions of all in the financial reporting chain it is important that an investment climate of trust is built (Ward 2005:7). However, Young (2006:595) holds that the standard-setting process becomes less about the information wants of particular readers of financial statements, and more about the standard-setters' ideas about the information that users should find useful in their decision-making process. However, it is difficult to envisage that the global standard-setters can and will take cognisance of the circumstances of the stakeholders to which the various organisations in the different countries must report as well as their knowledge of financial matters.

The different standard-setting bodies have to place greater emphasis on the understandability of financial statements for various users. However, their "understanding of the external users' level of sophistication in financial reporting usage appears imperceptibly different" (Ewer 2007:20). Table 5.2 depicts the key terms used by some of the standard-setting bodies to characterise users' financial capability to understand financial information.

Table 5.2: Key terms used by standard-setters to characterise users of financial information

Standard-setter	Year Issued	User focus	Characteristics referred to or described in the literature
FASB	1978	Investors and creditors	Understanding of business and economic ... willing to study ... with diligence
IASB	1989	Investors and creditors	Understanding of business and economic and accounting ... willing to study ... with ... diligence
FASB and IASB	2006	Investors and creditors	Knowledge of business and economic activities ... able to read a financial report ... will review and analyse ... with ... diligence
*GASB	2005	Citizenry	Understanding of government and public finance ... and ... fundamentals of governmental financial reporting ... study ... with ... diligence, and ... apply relevant analytical skills
**FASAB	2003	Average citizen	Easily understandable to the “average citizen” ... understanding of Federal Government activities ... willing to study ... with ... diligence

*GASB – Government Accounting Standards Board **FASAB – Federal Accounting Standards Advisory Board

Source: Ewer (2007:20-22).

From table 5.2, one can infer that both the FASB and the IASB explain that understandability can only be accomplished by presumptions of a user’s knowledge and willingness, which is willingness to study the information with diligence in order to comprehend its meaning. Because the user focus of the FASB and IASB is on investors and creditors, it follows that they have a vested financial interest in the organisation and will be willing to study the financial information with diligence. The FASAB, on the other hand, focuses on “average citizens”, thus implying that the financial information must be

understandable to the general public. According to Ewer (2007:21), the FASB might take more than passing notice of the FASAB's effort to make financial information more understandable to the average citizen, who may also represent novices participating in the capital market. In this instance, the term "novices" may be interpreted as individuals who are not financially literate but are willing to learn. The broader stakeholder concept as mentioned, inter alia, in the King Report will probably necessitate standard-setters to take into account the financial knowledge possessed by the "average citizen", which encompasses the public, environmentalists, et cetera, when defining their user focus as seen in figure 5.2. However, the average citizen can also strive to enhance his or her level of financial literacy in order to better understand the financial information.

5.4.2 Accounting standard-setting

South African Accounting Standards are fully harmonised with international standards as issued by the IASB. South Africa, however, comprises a Rainbow Nation speaking and understanding different languages as well as having diverse financial backgrounds. According to Coppin (2006:20), "the IASB has issued a large number of new and revised standards in a relatively short time period and with users coming from different countries and languages, they can interpret the same words in various ways". Care must be taken that the same information is not interpreted differently by users because their background, language proficiencies and financial literacy status were not taken into account in preparing the financial reports.

Notwithstanding the above-mentioned language, cultural and financial background issues, according to Gill (2007:70), International Financial Reporting Standards (IFRS) are destined to be the lingua franca of the international world. Because financial statements prepared according to IFRS are a given in the South African business environment, it is advantageous for users of financial statements based on these standards to acquire the financial knowledge necessary to understand and use them for decision making.

In view of the significance of corporate governance in South Africa, accounting standards also need to take into account the social issues in financial reporting. Rees (1995:381) comments that “where accounting rules can affect the distribution of wealth and income in society, it is unclear that the accounting profession has a mandate to make social decisions”. From the accountants mandate to report on the organisation’s activities, it is difficult to simultaneously serve the client’s interests, the legislators and society at large. To ensure good corporate governance, the financial information of organisations has to be understood by all the relevant stakeholders and not only by a privileged few. If some stakeholders do not have the financial knowledge to understand the information, skills development needs to be implemented.

5.5 THE FINANCIAL REPORTING CONTROVERSY

Although there might be many other financial controversies, the financial reporting controversies impact greatly on the financially illiterate users of it. Many investors and other financially knowledgeable users of financial information expressed concern about the reliability and completeness of the accounting numbers, and as a result many companies expanded their financial disclosures in their annual reports (Kieso, Weygandt & Wakefield 2004:1). Reports therefore became lengthier and more comprehensive. Companies also had to deal with more complex business issues, which required new accounting standards. New business challenges led to changes in terminology, and new terms were often coined to represent these innovations. Consequently all of these led to longer and more complex financial statements that probably became less accessible to the layperson (Coppin 2007:14). The controversy is therefore between insufficient information and adequate disclosure for certain users, on the one hand, and an overload of complex information for other users, on the other. This problem is aggravated by the

fact that certain users have the ability to understand the information while others lack it.

5.5.1 Inherent constraints in providing financial information

There are many constraints in providing financial information, for example, its readability, the lack of proper disclosure of the organisation's intellectual capital and management capabilities, an emphasis on profit instead of performance measurement and a trust gap between the information preparers and its readers, especially those who do not fully understand it. Financial information, consisting of figures and calculations as depicted in, say, financial statements, can influence the readability and understandability of the information. According to Kieso et al (2004:16), there is also an expectations gap between what stakeholders think accountants should be doing and what accountants think they can do. For example, stakeholders may expect preparers of financial information to predict certain future happenings, while the preparers are not in a position to do so. Classification in accounting, although necessary to find relationships, also places constraints on how users interpret the characteristics recorded about occurrences. Goldberg (2001:42) regards classification merely as an "expression of a human attitude; it is a human invention, an artefact as much as any physical tool or instrument, but an artefact of and for the mind". Thus the classifications used in the capturing of events and their communication in financial statements, may mean more to the preparers than the users of these reports, and even less to the financially illiterate users. They may not understand why certain items are classified under certain headings or what items are included under a specific heading.

Another limitation in financial reporting is a perception that the level of readability of the risk disclosures is difficult, or in some instances, extremely difficult. Linsley and Lawrence (2007:625) confirmed this hypothesis in a study conducted on risk disclosure of the 25 largest nonfinancial companies listed in the UK's FT-SE 100. Although this study indicated that directors do not deliberately obfuscate less favourable risk news, they may well require

guidance on how a narrative can be constructed to communicate the company's risks more effectively - in other words, how these risks can be spelt out by the preparers of financial information. However, unfortunately some users who lack financial knowledge might not even realise the risks involved. This also implies that some investors or potential investors will need to use financial analysts or intermediaries to assist them in determining the risk factor.

To counter some of these limitations in financial reporting, organisations can at least supplement their financial statements with narrative, nonfinancial information. Cronje (2007:106) confirms that pictures, graphs and narratives play a significant role in disclosing discretionary information in financial reporting. These additional ways of disclosing will enhance the understandability of financial information. Coppin (2006:20) reiterates that the strength of corporate reporting relates in these explanatory notes to financial statements and comments by management, and these are equally necessary to understand the organisation as the numbers presented in the financial statements. These narratives are also useful in helping those users who are not comfortable with the amounts and calculations used in the other sections of the financial statements.

5.5.2 Trustworthy financial figures

Recipients of financial information place a certain amount of trust on the honesty and competence of the preparers of financial reports. Rayman (2006:190) argues that although decision makers need to trust financial reports, "truth in accounting is not some sort of Holy Grail; nor is it a variety of Philosopher's Stone. It is simply a question of being honest about the well-known characteristics of the existing accounting system." Decision makers must keep in mind that financial information produced by the accounting system is the product of generally accepted accounting practices and procedures. Benston et al (2006:20) believe that different users have one thing in common - they want numbers they can trust. Regarding the trustworthiness of financial figures, the attestation function performed by

independent auditors, although not infallible, plays a major role in ensuring that figures are reliable.

The many corporate failures over the past decade surely had to result in an increased awareness of fraud and misstatements in financial reporting. Some individuals advocate that financial figures will be more trustworthy when they are based on accounting standards that faithfully represent what they purport to represent and that can be independently verified (Benston et al 2006:20). However, although the ever-increasing complexity of business transactions has for the most part necessitated newer and admittedly complex accounting requirements, some individuals debate that “detailed financial reporting guidance, containing a plethora of mechanical rules, actually offered more, not fewer, opportunities for financial reporting shenanigans” (Epstein 2007:9). The many rules and regulations did not rule out the occurrence of corporate scandals, such as Enron and Fidentia. This demonstrates that rules and standards on their own cannot ensure ethical conduct. Christopher Cox, chairman of the USA Securities and Exchange Commission (SEC) concurs that “If the rules become a thicket in which fraudsters can hide instead of a means to achieve truth, then we can’t achieve our goals of protecting investors” (Pickard 2007a:29). On the strength of these opinions, one could presume that rules alone cannot guarantee trustworthy reporting - there is also a call for incorporating sound ethical principles into the minds of the preparers of financial information.

5.6 FINANCIAL REPORTING’S GROWING COMPLEXITY

It is evident from the above that the global business economy resulted in financial information becoming more complex and difficult to understand. Pickard (2007a:29) concurs that there is a growing concern in the financial literature over the increasing complexity of financial reporting. Some believe that the complexity of modern financial accounting requirements exceeds the

ability of preparers and auditors to fully comprehend it, which arguably serves to make financial statements and the accompanying footnote disclosures incomprehensible to management and outside users (Epstein 2007:6). Hence the complexity of the information will affect the financially illiterate users even more. Coppin (2006:20) contends that the growing number of standards issued is becoming longer and more complex, which makes financial statements less accessible to the layperson who does not understand the challenges of using international standards. It is therefore necessary to bridge the gap between the intricate financial information and the users' ability to understand and use it for decision making.

In an attempt to make financial information more accessible for users not playing in the global business field, there is a movement towards issuing a unique set of reporting standards for small and medium-sized (SME) entities. According to Epstein (2007:6), this unique set of standards or even an attempt to extract a refined set of SME requirements from existing GAAP or IFRS, is based on the perceived complexity of modern financial accounting requirements. In some instances the financial literacy levels of decision makers in SME organisations may differ from excellent to poor, depending on the kind of organisation – hence the need for financial information to be comprehensible to the whole range of decision makers.

Apart from the complexity of financial statements, it is also a challenge to acquire other financial information from the vast number of available sources. Paul Stoddart, marketing manager at Microsoft, states that about three-quarters of the information one seeks is “in semistructured or unstructured formats, such as document files, share sites, subscription services and web sites”, and this information is “often inefficiently dispersed in many locations” (Prickett 2007:23). This implies that apart from becoming more financially literate, users also have to acquire a certain level of information literacy. Information literacy means that they will need to know where to find the information they require and how to delineate it for their specific use.

5.7 THE EFFECTIVE COMMUNICATION OF FINANCIAL INFORMATION

At the dawn of the 21st century, much reliance is placed on information that is stored in large quantities on different storing devices, communicated via cables or satellite and printed and displayed on sophisticated computers. One of the fundamental problems that decision makers face is therefore not the lack of information, but rather how effectively it is communicated. However, communication is a two-way process and, according to Morsing and Schultz (2006:325), builds on processes of *sensemaking* and *sensegiving*. These authors describe sensemaking as “trying to figure out what the others want and ascribing meaning to it”, and sensegiving as an attempt “to influence the way another party understands or makes sense”. If users of financial information do not make sense of the information, there was no communication. In order to understand, Laszlo (2006:42) states in no uncertain terms that “communication also involves *consciousness*”. In other words, sensemaking and sensegiving will be decidedly dependent on the consciousness of both the sender and receiver of a message. Effective communication is thus not only dependent on the availability of the information, but on the receivers’ conscious assimilation and interpretation of it.

In chapter 4 it was stated that communication of information is only effective when individuals understand it, and this in turn, is only possible if there is some commonality of experience between the sender and receiver of the information. In other words they have to assign a common meaning to the same symbol or term. However, of particular interest in this chapter is the way in which the communication of financial information can be enhanced by its preparers in order to promote its decision-usefulness for both financially literate and financially illiterate users.

5.7.1 Decoding of financial information

The preparers of financial information usually encode their message by way of a “financial language” which may include nonfinancial information, numbers,

percentages and ratios. It is important to note that there is more to numbers than meets the eye - they represent a set of abstract symbols subject to operational rules, arithmetic calculations and sometimes manipulation (Dantzig 2005: 27&101). Financially illiterate users will find the use of such a financial language difficult to understand. The point, however, is to encode the message in such a way that the receiver can understand and use it, especially where a receiver has difficulty grasping an intended meaning clearly or precisely. When encoding the message, the sender has to try to overcome this difficulty by using alternative symbols more appropriate to the receiver's range of experience (Goldberg 2001:73). In other words, a certain degree of responsibility rests on the transferor of the information to not only encode it, but also to some extent decode the message on the receiver's behalf. But, the receiver also has a responsibility to learn the "language" used in the conveyance of the messages used for his or her particular level of decision making - in other words, the learner needs to become more financially inclined.

Decision makers at strategic level usually use many other sources such as the organisation's financial statements as a basis for certain financial decisions. Because these particular decision makers' financial acumen may differ vastly, organisations should consider how they can make their financial statements more accessible and understandable to their less sophisticated users (Coppin 2006:20). Again, one option is that the preparers of these reports decode the information by way of, inter alia, explanatory notes, graphs or illustrations, in a format more understandable to these users. However, even if the information is unpacked in an understandable and digestible format, the user will at least require basic financial literacy to comprehend it.

5.7.2 Information overload

One tends to believe that abundant information will shield one from risky decision making. Yet, according to Bernstein (1998:278), "psychologists report circumstances in which additional information gets in the way and distorts decisions, leading to failures of invariance and offering opportunities for people

in authority to manipulate the kinds of risk that people are willing to take”. Lengthy reports can become complex and confusing, and it is sometimes preferable to receive more concise information, without additional irrelevant information that may confuse the user. Thus, without saying that additional information does not result in effective communication, it is also true that effective communication does not necessarily imply that more information is better - it may rather be a case of “less is more”.

As stated in chapter 4, the scarce commodity in modern organisations is not information but the time needed to decipher all the available information and discard the information not needed for the decision at hand. According to Prickett (2007:23), the time spent in eliminating pointless information results in unnecessary high costs for the organisation, not to mention the added risk that decisions may be based on obsolete data or incomplete drafts of vital data. Effective communication therefore also depends on the decision maker’s ability to refine the search for timely, relevant and trustworthy information. It can be assumed that financial literate individuals may find it easier to discern the essential from the irrelevant information, because they have a better idea of what they are looking for in a particular decision-making situation.

A case of information overload may well be brought against the more complex and lengthy financial statements, which is a direct result of increased demands for transparency through rigid accounting standards. Mammatt (2007:29) states that because of the recent move to IFRS, changes in financial statements are “no longer one or two pages of bedside reading but instead extensive books and courses, and they are coming at our financial community fast and furious”. According to him, decision makers, especially board members need to be aware of the effect of these statements on their financial results and the only way they can address this problem is with training and the help of other experts. Hence, Mammatt’s statement places the onus on the members to become more financially literate, but does not demand that the information be presented in a more simplistic format.

5.8 THE FINANCIAL INFORMATION EXPECTATIONS GAP

From the previous sections it can be deduced that in many instances there is an expectations gap between the preparers and users of financial information. Goldberg (2001:92) confirms that there is still a gulf between the requirements of the users of “general purpose reports” and the capacity or willingness of the preparers to meet these requirements, and that intricate and lengthy accounting standards do nothing to solve the dilemma. Although this dilemma cannot be overcome, it is important to find a way to narrow the gap to such an extent that sound financial decisions are possible.

To reduce the expectations gap between users and preparers, it is necessary that the preparers of financial information acquire not only thorough technical financial knowledge, but also a sound knowledge of the business world and well-established communicational skills. Research by Pierce and O’Dea (2003:9) showed that managers contrasted their own focus on the future with accountants’ preoccupation with analysing the past and that these accountants are perceived to see accounting information as an end in itself. Users may instead wish to focus on information that can be used to portray the organisation’s future operating, financing and investment activities. By contrast, accounting information is only a basic part, albeit an important one, of a great deal of other information needed to make sound financial decisions. From the same research it is evident that users need more timely and flexible broad-based information, especially on key nonfinancial performance drivers, than that currently included in financial reports. They also need to acquire a financial sense or awareness in context with the broader business environment and not fixate only on the financial results of the business. Information on past events and performance drivers can thus be used as a basis to evaluate the organisation’s expectations for future earnings in the context of the broader business environment.

5.8.1 Forward-looking financial information

Forward-looking information or *future-oriented* information, “entails the reporting, supplementary to traditional historical financial information, of any information relating to the future of a company to facilitate external users’ assessment and evaluation of the future prospects of a company” (Saenger 1991:70). The problem with information pertaining to future expectations is that the future has not yet happened but consists of those who base their decisions on these expectations. In particular, those users who lack financial capabilities are more likely to find some kind of future-oriented information helpful for decision making. There are numerous accounts in the literature on the need for financial information on which predictions or forward-looking information can be based. The following serve as examples:

- Data about the future – predictions – are commonly the weakest points in our armour of fact (Simon 1996:147).
- From the uncertainty angle, the major criticism against financial reports has been that while risk and uncertainty are forward-looking concepts, annual reports by and large carry ex-post information (Negash 2001:51).
- From a 2020 perspective, one might look back and read that financial reports failed to provide forward-looking information needed by present and potential investors and creditors (Kieso et al 2004:4).

However, Brigham and Ehrhardt (2008:122) hold that “many companies are providing other types of forward-looking information, including key operating ratios plus qualitative information about the company and its industry”. Forward-looking information can, inter alia, be presented in the form of prospected financial statements or as a 12-month profit forecast or cash-flow forecast. Organisations may, however, be concerned with the risk of releasing sensitive forward-looking information, especially if it will be used by less financially knowledgeable individuals who are unable to view it in the context of the economy as a whole.

Although forward-looking information may have several applications and benefits, unfavourable forward-looking information can become a self-fulfilling prophecy and have a negative influence on the national economy and the stock market. Laszlo (2006:ix) also points out that “the future is not to be forecast, but created”. Decisions based on past events, will influence future activities, thus creating the future. This implies that forward-looking information can have inherent inaccuracies and this could be misleading, especially to users with a limited understanding of financial reports in general, and future-oriented information in particular. According to De Jager (2007), users need at least some economic knowledge combined with “street-smarts” towards getting to grips with the harder part of finance – preparing them for an unknown future. This implies that they also need to become financially literate to be able to anticipate future events.

5.8.2 The predictive ability of financial information

It can be contested that the real value of financial information lies in the fact that it can be used to help predict future earnings, dividends and free cash flow. In this regard, Brigham and Ehrhardt (2008:123), state that “predicting the future is what financial statement analysis is all about, while from management’s standpoint, financial statement analysis is useful both to help anticipate future conditions and more important, as a starting point for planning actions that will improve the firm’s future performance”. Riahi-Belkaoui (2004:407) confirms that earnings forecasts based on available financial information are becoming “increasingly popular to an efficient functioning of capital markets”. Predicting these future values and conditions greatly depends on the analyst’s ability to understand and interpret the financial and nonfinancial information as well as on the relevance and reliability of the information. Decision makers can use the services of professional information intermediaries to analyse financial information for the purposes of prediction (called *prospective analysis*) (Beaver 1989: 165). It can therefore be assumed that a certain level of financial expertise is needed to make financial

predictions, and if users are not equipped to do so they will need financial analysts to predict for them.

Presumably it is not really possible to predict future events on the basis of information on past and present activities. Goldberg (2001:85) feels strongly that “prediction is a major problem: how do users know what data are needed for decisions to be made in the future?” Simon (1977:130) states that “the objective in making predictions and projections into the future should be to provide a basis for the decisions that are to be taken today; tomorrow’s decisions can and should be made on the basis of the information available tomorrow”. Negash (2001:50) also regards uncertainty as a problem of prediction. Gouws (1997:68), however, explains that correct prediction is essential for objectively rational choice and that one way of handling uncertainty is by estimating the probabilities of the alternative future outcomes. Prediction measures can be used that may be indicative of future conditions - for example, net income of a current period might be used to predict dividends for the following period (Wolk et al 2004:7). Notwithstanding the critique against prediction, financial information is used as basis to predict certain future outcomes and many businesspeople use these predictions to make financial decisions. However, it is advisable that financially illiterate individuals should use financial experts for predicting future outcomes instead.

It can be difficult to develop probabilities from limited amounts of real-life information. In Bernstein (1998:121) Bernoulli suggested as a solution to the problem of developing probabilities that one must “assume that under similar conditions, the occurrence (or non-occurrence) of an event in the future will follow the same pattern as was observed in the past”. Although this may sound too simple a solution to the above-mentioned problems, Negash (2001:50) states that “sound prediction depends on the correct identification of the present state of the object and the recognition of the principle of indeterminacy”. The principle of indeterminacy implies that an extent of uncertainty prevails in the present state of the object. Again, prediction is not

as easy as it sounds; it will also depend on what is regarded as the “correct identification” of the object’s present state as well as on the predictor’s ability to foresee its future state. Consequently, sound predictions are usually done by financial intermediaries who are supposedly financially literate, but these predictions are not always used by individuals with the same level of financial acumen.

5.9 THE FUTURE OF THE FINANCIAL INFORMATION AGE

The rapidly increasing volume, complexity and pace at which financial information bombards decision makers, call for new and innovative ways of presenting and using financial information. According to Boshoff (2007:22-23), ongoing changes in the business environment mean that there will always be “gaps in reporting, gaps in information and gaps in perception”, which in turn means that companies need a “properly planned and well-orchestrated communication strategy in which key messages and audiences are identified” in order to bridge these gaps. In future, changes in technology, global integration and the need for sustainability will challenge decision makers’ ability to make sound financial decisions in many ways. In turn, it seems that if decision makers are financially illiterate, financial sustainability in the organisation might be more difficult to achieve.

It is envisaged that in the near future, financial information will be available in virtual real time and delivered to people in what today would be considered innovative ways. Information may, for example, be streamed to users in an already-processed form over wireless devices they carry in their hip pockets (Pickard 2007a:30). This means that users will not only be required to be financially literate, but also familiar with new and innovative information technologies. Because of the real-time, on-line nature of the available information, understanding and communicating information in different languages or formats can create problems and global confusion. One of the

ways to alleviate this problem was the development of the eXtensible Business Reporting Language (XBRL). According to Charles Garthwaite (2000:18) of PricewaterhouseCoopers, XBRL is a standard format for existing financial (and nonfinancial) information to be presented using the rules set out by eXtensible Markup Language (XML), to be read, communicated and analysed by any XML-compliant program. In Pickard's (2007a:30) opinion, "XBRL is revolutionising the efficiency of the reporting process and the usability of reported information". However, the usability pertains to those who already have the financial knowledge to understand regular or standard financial information, and will be of no help to those without this knowledge. The main benefits of using XBRL will be that XML-compliant systems will be able to communicate with each other and that data can be custom compiled to meet the needs of users and researchers. Although it is foreseen that using XBRL-published information will save time and provide more reliable up-to-date information, the decision maker now requires to not only understand the information, but also to master the Internet and be able to download the information in a common format ready for analysis.

The advent of personal computers and information networks linking everyone in the organisation to the information chain resulted in bringing financial information from the top echelon down to the shop floor. This, according to Peters and Waterman (2004: 267), is "a major step in bridging the gap between management and labour". This means that from the executives to the ordinary labourers will have access to financial information if the organisation so wishes. In future, global competition will demand that decision makers on every level of the organisation will not only have access to financial information, but also be empowered to use it for sound decision making. In this regard, Drucker (1986:x) emphasises that an organisation's tomorrow is being shaped today and will depend heavily on the knowledge, insight, foresight and competence of the current executives. It will thus be to the organisation's advantage if the executives are at least financially knowledgeable. Nonaka (1991:96), however, argues that "... successful

companies are those that constantly create new knowledge, disseminate it widely throughout the organisation, and quickly embody it in new technologies and products”. Everyone in the organisation has to be empowered to be part of the financial knowledge creation process. Thus, although executives will set the strategic path for the organisation’s future and need to be knowledgeable, the decisions made at grass-root levels, according to Nonaka, are just as important. It follows that to set the pace and give direction to the lower levels of decision making, the executives need to at least have a high level of financial competency in the organisation’s financial matters.

Financial information today is no longer only about making a profit, but concerns an organisation’s impact on society and the environment. The move towards sustainability reporting will in future become even more important. “The principles of corporate citizenship and sustainable business have permeated strategic and operational thinking and have become an important part of company reporting” (Special report: Accountability rating 2006:128). Individuals’ financial literacy skills therefore also need to encompass a financial consciousness towards the environment and society at large. This means that their financial decisions should not impact negatively on the environment or society. Preparers of financial reports now need to address wider issues, and they should start to ask what kind of information is needed for a serious approach to the problems facing the global society (Goldberg 2004:23). The onus is also on the decision makers in an organisation to adopt a holistic approach when they make financial decisions and to take into account the impact of their decisions on society as a whole.

Apart from focusing on the sustainability of society and the environment, organisations also have to address their own quest for sustainability. Where the focus up to now was more on the acquisition of fixed assets, many executives believe that intangible assets have replaced fixed assets as the key to a company’s competitive sustainability and that innovation and related intangible assets represent the principal basis for growth (Olsen & Halliwell

2007:66). Accurately assigning a value to intangible assets, (eg franchises, trademarks, patents, copyrights and goodwill) is currently a controversial issue and will probably remain so in future. This might be difficult for the accountants and analysts, but might even be more difficult for the less financially skilled users to delineate between the appropriateness of the values assigned to these assets and this will hinder them in making these kinds of sustainable financial decisions.

With reference to the increased complexity of financial information, in future, decision makers have to rely even more on the integrity and ethics of the providers of financial information. Ward (2005:8) states that preparers of financial information are ideally placed to drive ethics through financial reporting and that the accounting profession is therefore one of the main conduits to fight financial corruption. One should also bear in mind that all the leaders in organisations will no longer be able to claim ignorance of material aspects of the organisation they represent and will be called to account for their actions (Mammatt 2005/6:9). The controversy, however, is that some of these leaders do not understand the financial information properly, but are still accountable for its accuracy and reliability. There can only be a future for financial reporting if the executives are trustworthy and the information reported is reliable, based on ethical principles and understandable for those who use it.

5.10 SUMMARY

As South African business expands further into the global financial arena, the supply of financial information increases in volume and complexity. The oversupply of financial information often distracts the user from demarcating what is useful for the decision at hand. The quest to find meaning in the abundance of financial information presented by the media, financial markets and the organisation places huge pressure on the faculties of the average

decision maker who needs to make decisions on the basis of the intricate information provided.

Annual financial reports, albeit not the only source of financial information, still sets the tone for most other information sources such as media releases and capital market reactions. Consequently IFRS has impacted considerably on the way these reports are presented to the stakeholders and their ability to use the information therein. The dilemma in many organisations is that only a few key players understand these financial reports. This contradicts the idea that to attain a competitive advantage all levels of decision makers should be able to use the financial information presented to them for decision making.

Inherent limitations in financial reporting, such as the lack of reporting on the organisation's performance, the nondisclosure of crucial human resource issues and creative manipulation of certain figures, impact negatively on the reliance stakeholders place on financial reports. Stakeholders also need to recognise in the financial reports the organisation's commitment to corporate governance, the environment and society as a whole. They wish to be part of an ethical, socially responsible and sustainable organisation and the only place they can actually see this is in the financial reports. If organisations fail to communicate this kind of information they may damage their relationship with their stakeholders.

The preparers of financial information need to adhere to certain strict standards and can only do so much in accommodating the users' diverse needs. The users, however, can bridge the gap by empowering themselves with financial knowledge, financial skills and a financial consciousness – they need to become financially literate when it comes to the decisions they make. Where chapter 4 and 5 focussed on the financial information system, chapter 6 and 7 explain concepts relating to the human behaviour system.

CHAPTER 6

THE LEARNING FOR CERTAINTY VERSUS LEARNING FOR UNCERTAINTY PARADOX AS THE BASIS FOR FINANCIAL LITERACY

Stability is dead. Education must therefore prepare young people for an unknowable, ambiguous, rapidly changing future. Which means that “learning to learn” is far more important than mastering a static body of “facts”.

(Peters 2003: 284)

6.1 INTRODUCTION

When confronted with financial information, which may be highly complex and difficult to understand, as discussed in chapters 4 and 5, some individuals who are financially illiterate might feel overwhelmed and uncertain. Bernstein (1998:133) refers to uncertainty as “unknown probabilities”. Unknown probability means that one does not know for certain whether or not something is going to happen or how someone or something will behave or react in certain situations. Few people, if any, are comfortable with uncertainty. Not knowing how to respond to a certain problem, how to act in a situation or not knowing what the future holds usually leaves people feeling ignorant or bewildered. According to Herman and Mandell (2006:6), while ignorance, on the one hand, can be overcome through collaboration, bewilderment, on the other, is a combination of not knowing and being helpless. However, the experience of bewilderment or ignorance can be valuable if it inspires people to further learning. But this is not necessarily the case – instead, financial ignorance or bewilderment may leave people feeling helpless, disconcerted and resistant.

Since financial information might in some instances contribute more to users’ uncertainty than certainty in decisions they have to make, this chapter aims to reflect on certainty versus uncertainty in the knowledge creating process of the users of financial information. The need to establish a powerful learning

environment in which individuals can acquire financial knowledge will be discussed, as well as the key concepts in the financial literacy model. Uncertainty as an untapped source of evoking the need to find out, learn more, continuously change uncertainty to certainty, and vice versa, is highlighted. While Herman and Mandell (2006:7) call this state of uncertainty “wonderful bewilderment”, Barnett (2004:247) refers to the paradox as constructing learning for an unknown future. *Uncertainty* and *an unknown future* are usually familiar concepts to financially illiterate people. The challenge will be to use both these concepts to encourage people to embark on a path of lifelong learning and empowerment to become financially literate.

This chapter commences with an explanation of key concepts pertaining to the financial literacy domain. The terms *financial knowledge*, *financial intelligence*, *financial consciousness* and *other numeral literacy* concepts are delineated and then integrated to develop a financial literacy construct. The learning domain of Bloom’s taxonomy and Beard’s teaching model are then used to explain the levels of intellectual behaviour important in learning. This is followed by the depiction of financial literacy according to Bloom’s six levels of thinking, leading to an explanation of the levels of learning necessary for financial literacy. Where Bloom’s levels of thinking lead to certainty, a new mode of thinking is to make an ontological turn and aim rather to prepare learners to facilitate uncertainty.

6.2 DEFINING KEY CONCEPTS IN THE FINANCIAL LITERACY MODEL

While the complex financial literacy concept was defined in chapter 3 as the ability to understand financial terms and concepts and to translate that knowledge skilfully into behaviour, this section briefly explains, a number of phrases frequently used in the same sense as the concept “financial literacy”. Although these phrases are not synonymous to the “financial literacy” construct, they form an integral part of it. The fact that there might be different

levels of financial literacy necessary for different applications also adds to the complexity of the concept.

6.2.1 Financial knowledge

Knowledgeable individuals have the ability to understand things in context and the perception to recognise connections and significance when assimilating information. Knowledge empowers people to know what to do, how to do it, why they are doing it or why not. In summary, Abell and Oxbrow (2001:73) simply define knowledge as what people know - it is the expertise, experience and capability of people, integrated with processes and corporate memory. Financial knowledge therefore implies that an individual, inter alia, understands the rules of the financial game. Financially knowledgeable individuals understand financial information in context and have the ability to use it for financial decision making.

Gaining knowledge is grounded in systems thinking as described in chapter 3. Capra (1999:6) recognises “the active construction of knowledge, in which all new information is related to past experience in a constant search for patterns and meaning; the importance of experiential learning; of diverse learning styles involving multiple intelligences; and of the emotional and social context in which learning takes place”. This demonstrates that learning occurs when different systems interact with one another. It follows that knowledge acquisition is not only dependent on the individual’s cognitive abilities, but is also influenced by the environment in which the individual functions. In order to relate information to past experiences or to recognise patterns and meaning, learners in, say, the financial discipline still needs to acquire certain “core concepts”. These concepts can also be seen as “threshold concepts”. Threshold concepts relate to the minimum or inception financial concepts necessary to ultimately form a basic financial literacy interface. According to Meyer and Land (2003:4), threshold concepts act as a conceptual “building block” that improves understanding of the subject; and it opens up a new and previously inaccessible way of thinking about something. It also leads one to

believe that there are different levels of financial literacy and that one cannot advance to a higher level before the threshold concepts of the preceding level have been mastered. Understanding the meaning of certain financial terms or calculations can be regarded as a conceptual building block or threshold concept upon which more intricate concepts can be mastered.

As the individual acquires more knowledge of financial concepts, the gap between the information system (matter) and the human behaviour system (mind) will decrease. Hence financial knowledge can only be acquired if certain core concepts or threshold concepts are in place, to enable learners to progress in their quest to perceive, apprehend or experience particular financial phenomena in order to become more financially literate. One may infer that these threshold concepts will form a basis when a financial literacy interface between the financial information and decision makers is contemplated.

6.2.2 Financial intelligence

Financial intelligence can be regarded as being situated higher up in the hierarchy of becoming financially literate. The intelligence construct refers to a person's ability to do mental activities, apply his or her mind and intelligibly apply the knowledge he or she has acquired. *Nous*, the Greek word for intelligence or deemed means, inter alia, to think, suppose or be thoughtful. It means to be sensible - to have one's mind directed to something. The term also embraces a "capacity for intellectual apprehension" (De Beer 2006:61). According to Gregory (2004:138), the definition of intelligence remains elusive, despite the fact that it is one of the most highly researched topics in psychology. Yet, from a myriad of definitions on intelligence, two themes frequently recur: (1) the capacity to learn from experience, and (2) the capacity to adapt to one's environment (Gregory 2004:156). One could infer that financial intelligence at least refers to the ability to learn from acquired financial knowledge and experience, and to adapt to the business environment in which one operates. It is more than knowing what the concepts mean - it is about

applying and integrating these concepts into the complex world of reality, by taking cognisance of the economic environment in which a decision is taken.

In the early part of the 20th century, people were classified into degrees of intelligence by testing their intelligence quotient or IQ. However, during the mid-1990s, neuroscientists and psychologists popularised the importance of emotional intelligence or EQ as a basic requirement for the effective use of IQ (Zohar & Marshall 2000:3). However, according to Zohar and Marshall (2000:5), neither IQ nor EQ, separately or combined, is enough to explain the full complexity of human intelligence. Human beings also need spiritual intelligence (SQ) to be creative, to give them moral sense, and to enable them to change rigid rules with understanding and compassion. One may presume that to become successful in business, financially intelligent managers and other decision makers need to possess a satisfactory combination of IQ, EQ and SQ. For example, a financial decision to retrench workers may be taken on purely rational grounds (IQ), but if the emotional (EQ) or moral (SQ) impact of such a decision is not taken into consideration it may ultimately be to the company's detriment.

Financial intelligence can also be further aligned with the notion of acquiring *multiple intelligence*. Robbins (2003:41-42), in turn, suggests that intelligence contains four subparts: cognitive, social, emotional and cultural, which can be related to financial intelligence in the following ways:

- (1) *Cognitive intelligence* encompasses the brain's aptitudes to perform certain mental activities and logical and rational reasoning. Regarding financial activities, it may, for example, refer to having number aptitude, meaning among other competencies, that the individual can do speedy and accurate arithmetic calculations. These basic competencies are some of the building blocks necessary in becoming financially literacy.
- (2) *Social intelligence* is a person's ability to relate effectively to others, morally and ethically. Social intelligence in the business environment may, inter alia, refer to the individual's ability to assemble financial

information from various people and, in turn, communicate financial information or results to others who need it for decision making. The ability to function in a social environment and consider other people when making financial decisions should preferably form part of a financially literate person's make-up.

- (3) *Emotional intelligence* is a person's ability to successfully handle his or her emotions and the emotions of others. It is presumed that emotional intelligence greatly influences the performance of managers. Financially intelligent managers might, for example, base their decisions on facts and figures and not so much on emotional feelings. If managers are financially literate they will probably be more inclined to base their decisions on facts and figures.
- (4) *Cultural intelligence* depicts awareness of cross-cultural differences and the ability to function successfully in a cross-cultural environment. Because South Africa has a culturally diverse workforce, there is a need for cultural intelligent managers. For example, financially intelligent managers need to take cognisance of the values and financial perceptions of different cultural groups in an organisation.

Berman and Knight (2006:xii-xiii) contend that financial intelligence boils down to the following four distinct skill sets:

- (1) *Understanding the foundation.* Financially intelligent decision makers are not intimidated by the numbers in financial statements. They understand the basics of financial measurement and can, inter alia, read the different reports presented in the AFSs.
- (2) *Understanding the art.* Decision makers who are financially intelligent are able to distinguish when numbers are based on assumptions or estimates and when not. They will know when the artful aspects of finance have been applied to the numbers and then to question or challenge these numbers when appropriate.
- (3) *Understanding analysis.* Managers and other decision makers need to be knowledgeable enough to analyse the financial information supplied

to them in order to interpret and use it for decision making. They are, for example, not intimidated by ratios such as operating return on assets (ROA) or return on equity (ROE).

- (4) *Understanding the big picture.* Financially intelligent individuals see the organisation's financial results in the context of the economy and environment as a whole.

Although Berman and Knight (2006) refer to financial intelligence, the skill sets mentioned may also apply to financial literacy. However, to become financially literate, the acquired knowledge or skills described above have to be practised and applied. If managers and other employees use the accepted financial terminology used in the organisation, the chances are that they will be taken more seriously when discussing these matters. They need to gain confidence in using financial jargon. A financially literate person will further have to look at financial reports and analyse them with a questioning eye. This is in accordance with De Bono's (1999:155) opinion that "asking the right question may be the most important part of thinking". By asking the right questions and if they have the financial knowledge, employees, managers and executives can apply their minds to assess the organisation's performance and support their decisions.

With specific reference to financial intelligence, the concept of *number intelligence* can be added to the subparts discussed above. Because financial information is either based on amounts or relates to the results of calculations, number intelligence or the understanding of financial symbols becomes an essential building block towards financial intelligence. Financially intelligent decision makers also have the ability to use numbers or amounts and financial tools to analyse financial information and make better financial decisions. According to Berman and Knight (2006:9): "Financial intelligence means understanding where the numbers are 'hard' – well supported and relatively uncontroversial – and where they are 'soft' – that is, highly dependent on judgement calls." Hence financial intelligence implies that managers have at

least a sound working understanding of the financial side of the business and they will at least know when and if the numbers should be questioned. Financial intelligence can thus be regarded as a causal ingredient in the quest to become financially literate.

6.2.3 Financial consciousness

A financial consciousness refers to being financially aware or familiar with the financial state of affairs of the individual or the organisation. Teilhard, in Capra (1982:331) “uses the term ‘consciousness’ in the sense of awareness and defines it as ‘the specific effect of organised complexity’, which is perfectly compatible with the systems view of mind”. Decision makers need a financial mindset. They need to take the financial implications of every decision into consideration. If an individual lacks financial consciousness it may contribute to a state of ignorance. It can also be assumed that having a financial consciousness implies that the individual has a *number sense*. According to Dantzig (2005:1), a *number sense* should not to be confused with counting – it is an intricate mental process. It refers to the contemplation of numbers as opposed to the mere use of them. A sense of numbers means that the individual has the mental ability to conceptualise the numbers in context and to deduce meaningful relations from them.

Having a financial consciousness, however, is not enough to become financially literate. Financial literacy can rather be seen as a combination of financial knowledge, financial intelligence and having a financial consciousness. Financial literacy further means that the individual has to apply his or her mind to obtain and use financial information in creating value for the organisation. Abell and Oxbrow (2001:12) emphasise the importance of individuals and information in the knowledge-creating process by stating the following: “The recognition of knowledge as a primary competitive advantage focuses attention on both people and information.” Harrison and Sullivan (2006:30) confirm that “people’s brains have a never-ending capacity to create knowledge, but, our corporations and public organisations are only able to

exploit a fraction of it". The onus therefore lies not only on the individual to become financially literate, but also on the organisation to trust him or her with relevant financial information in order to use it to the organisation's benefit. It follows that financial literacy depicts not a passive state of mind, but an active involvement in financial matters. Figure 6.1 in section 6.2.4 illustrates financial literacy as the intersection between financial knowledge, financial intelligence and financial consciousness applied in the organisation.

6.2.4 Other numeral literacy concepts

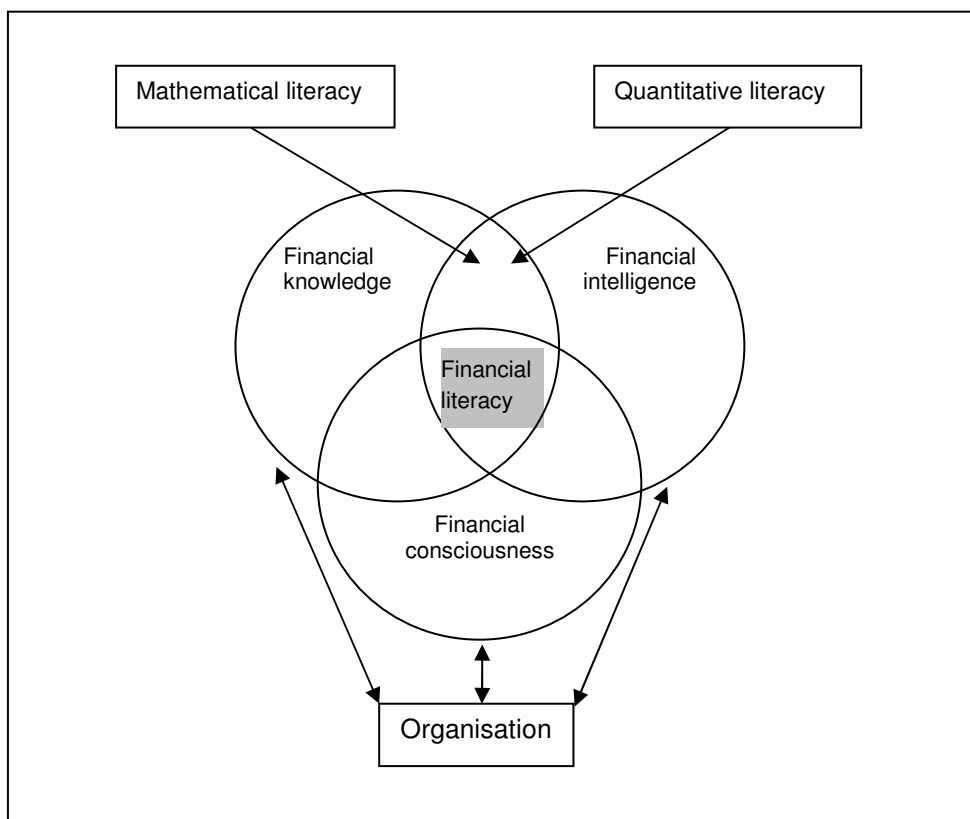
It is also important that the financial literacy concept as delineated in this study should not be confused with the more general concepts of "qualitative literacy", "numeracy" or "mathematical literacy". Nevertheless, these concepts are fundamental in the process of becoming a financially literate individual (see fig 6.1). According to Chapman and Lee (1990:277), quantitative literacy involves many competencies such as reading, writing and mathematics which are inextricably interrelated in the ways in which they are used in communication and hence learning. However, according to Frith and Prince (2006:28) "quantitative literacy cannot be seen as a set of identifiable mathematical skills that can be taught and learned without reference to the social contexts where they might be applied". Thus, quantitative literacy, more so than mathematical literacy, is a step closer to financial literacy because it is always embedded in context. Hughes-Hallett (2001:94) summarises the difference between quantitative literacy and mathematics: "Mathematics is about general principles that can be applied in a range of contexts; quantitative literacy is about seeing every context through a quantitative lens." Although financial figures may be calculated mathematically, they are used for decision making in a quantitative way by seeing it in context with the bigger economic picture.

Notwithstanding the differences between these two concepts, both are crucial building blocks of the financial literacy concept. The ability to do basic mathematical calculations, for example, determining the interest on a loan or the value-added tax included in the price of a product, is necessary. But to

reach a certain level of financial literacy, the results of these calculations must be seen in the context of the financial situation at hand.

Hence to become financially literate, individuals need a great deal more than mathematical and quantitative skills (see fig 6.1). They will also need to be able to contextualise financial information presented either verbally, numerically, graphically or in any other symbolic form.

Figure 6.1: The financial literacy intersection



Source: Own observation

One may infer from figure 6.1 that financially literate individuals have to acquire financial knowledge, financial intelligence and a financial consciousness, and at the same time, take cognisance of the organisational context in which they participate. The cultural diversity, vision and mission of the organisation also impact on the individual's financial literacy learning experience. They also have to possess a good measure of mathematical literacy and quantitative literacy.

The integration of these elements towards a more financially literate status is explained in the next section.

6.3 INTEGRATING FINANCIAL KNOWLEDGE, FINANCIAL INTELLIGENCE AND FINANCIAL CONSCIOUSNESS TOWARDS FINANCIAL LITERACY

The integration of financial knowledge, financial consciousness and financial intelligence, based on a basic sense of numbers (see fig 6.1), contributes to becoming a financially literate individual. However, because there are different levels of financial knowledge, consciousness and intelligence to be learnt, different levels of financial literacy will be gained. Exposure to financial education programmes, whether during one's school education, or as an adult, can lay the foundation for acquiring financial knowledge. However, it is important to note that a process of continuous learning and experience in financial matters is necessary to ultimately acquire financial intelligence and a financial consciousness. According to Piprek et al (2004:39), financial literacy is "a multi-dimensional concept, and is a function of various influences such as previous learning; an individual's financial and economic environment; and their associated financial literacy needs". All these factors should be taken into consideration to contemplate what the financial literacy concept in actual fact entails.

Apart from being a multi-dimensional concept, there can also be different levels of financial literacy. The financial literacy of individuals operating on the lowest decision-making level in the organisation will differ from that of decision makers on executive level. Ironically, the lower socioeconomic group who acutely require some form of financial literacy education do not always have the opportunity to receive it. Apart from managing their own personal finances, they could also do with an understanding of financial information provided to them by, inter alia, employers, pension schemes and other businesses.

According to Dolezalek (2006:1), employees, even in the lowest ranks of an organisation, should not be seen as cogs in an organisation's machinery, but as people assumed to have brains who want to use them. However, individuals in the higher income groups may be in need of a deeper understanding of financial information, especially if they are investors, creditors, executives or employees. It is clear that although everyone needs to become financially literate, there may be different levels of financial literacy in an organisation. For example, the sweeper of the factory floor will operate on a different financial literacy level than the senior managers involved in intricate financial decisions.

If decision makers use the numbers presented in, for example financial statements and if they are unaware of the assumptions and estimates underlying these numbers, their decisions may be totally wrong. A company or organisation thus needs individuals who have a number sense or are financially conscious minded in order to understand the numbers presented to them by the finance department. As explained by Karen Berman in an interview with Elmhirst (2006), managers and other employees usually do not have a sense of how to contribute to the organisation's financial success. If they know what impact their actions will have on the organisation's profit, they may be more careful in making decisions. Success can only be measured if the managers are financially literate to interpret the financial information presented to them, by, say, analysing it and comparing the results to set goals or previous achievements.

Employees, such as the sales manager, the engineer and the human resource officer, all need financial information to either measure their department's performance or, say, budget for capital expenditures. The board members require financial information to formulate a strategic plan for the organisation. If all these role players are at least financially literate they will know that there is more to the numbers than meets the eye and will feel intimidated if they do not have enough financial savvy to ask the right questions.

From the above it is clear that financial literacy is a complex construct and comprises different features (see fig 6.1 in sec 6.2.4). To view financial literacy as an interface between financial information (see ch 4), on the one hand, and the users (see ch 7) of it, on the other, it is necessary to first contextualise the learning process necessary for decision makers to ultimately acquire financial knowledge, skills and understanding. Because learning is the foundation for becoming financially literate it is necessary to discuss the learning process in more detail.

6.4 THE BLOOM AND BEARD HERITAGE: A FINANCIAL PERSPECTIVE

Becoming more financially literate is considered to be a learning process. It can be regarded as a step-by-step approach where achieved learning outcomes are used as “building blocks” or “stepping stones” before advancing to the following stage. To identify the rich dimensions that would make the different financial literacy levels visible the cognitive processes depicted in Bloom’s taxonomy for learning and Beard’s teaching model are used. Bloom’s taxonomy and Beard’s teaching model are also used to explain financial literacy from an educational viewpoint.

Between 1948 and 1956, Benjamin Bloom and his colleagues developed a basis for a competency-based education model known as Bloom’s taxonomy. Although the taxonomy was revised in subsequent years, the objectives of the original taxonomy, as stated by Krathwohl (2002), can be related to the need for an educational model for financial literacy:

- *Common language about learning goals to facilitate communication across persons, subject matter and grade levels.* A common learning goal and language also need to be established for financial literacy education across persons, subject matter and grade levels. For instance, if the same financial terminology as used in practice is also taught at school level as well as in tertiary education, financial communication will improve.

- *Basis for determining for a particular course or curriculum the specific meaning of broad educational goals, such as those found in the currently prevalent national, state, and local standards.* Although broad educational goals for financial literacy education may be envisioned, it might be difficult to suggest a common curriculum for financial literacy. The problem is that decision makers have different financial decision-making responsibilities in organisations, which require different levels of financial literacy.
- *Means for determining the congruence of educational objectives, activities and assessments in a unit, course or curriculum.* The means for determining the congruence of financial literacy educational objectives and assessments will probably depend on the level of financial literacy required for a specific purpose. Financial literacy curriculums could be designed for specific levels of decision makers in organisations.
- *Panorama of the range of educational possibilities against which the limited breadth and depth of any particular educational course or curriculum could be contrasted.* The wide ranges of educational possibilities of financial literacy need to be contrasted with other subjects and disciplines. For example, subjects such as Business Economics, Economics, Accounting and Mathematics can be related to financial literacy education. Applicable topics from these subjects can be incorporated in a curriculum for financial literacy.

In the process of classifying educational goals and objectives, a group of educators, led by Bloom, identified three overlapping educational domains:

- (1) cognitive: mental skills (knowledge)
- (2) affective: growth in feelings or emotional areas (attitude)
- (3) psychomotor: manual or physical skills (skills)

Beard, another well-known educationist, also emphasised knowledge, attitude and skills in his teaching model. According to Gouws and Bosua (1997:87), learners need to know the levels of knowledge, skills and attitude they require to prepare them for their careers. Based on Beard's teaching model (Beard &

Hartley 1984:36-37), educational objectives adapted to identify characteristics of the financial literacy teaching domain can be outlined as follow:

- (1) *Knowledge*. Learners need to know the terminology, principles and applications used in their particular subject. For example, in acquiring financial knowledge, learners ideally need to know the financial terminology, the basic rules and concepts used to capture financial information and the application of the knowledge in analysing the information for decision making.
- (2) *Skills*. Financially literate individuals can judge the information or situation, acquire more information if needed, and think critically and creatively before taking a decision. The financial literacy process requires that decision makers use financial information and financial knowledge to adapt to change and become skilful in solving financial problems.
- (3) *Attitudes*. Some of the key aims in teaching individuals to become financially literate are to cultivate their knowledge, enthusiasm and preciseness in the day-to-day application of their skills. Acquiring a financial attitude implies that decision makers are motivated, have a social and moral awareness and take ownership of their own financial education and capacity building.

The above-mentioned ideals will now be explained in more detail with reference to the different educational domains.

6.4.1 The cognitive domain

The cognitive domain encompasses activities of the mind, in other words, mental skills. Financial intelligence can be categorised as falling into the cognitive domain. According to Emsley, Nevicky and Harrison (2006:246&259), cognitive style reflects how individuals organise and process information and that individuals with different cognitive styles bring different strengths and perspectives to innovation. Apart from different styles, individuals may also be

on different levels of cognitive education, and this also impacts on the way they acquire and interpret financial information.

Four general types of knowledge have been identified since the original creation of Bloom's taxonomy. According to Anderson and Krathwohl (2001:27), these four major types of knowledge are: *factual*, *conceptual*, *procedural* and *metacognitive* and will be used to explicate financial literacy. These four are explained with specific reference to financial knowledge:

- (1) *Factual knowledge* depicts the basic elements that learners must know about the subject to be able to solve problems in it. In the financial discipline, the learner must, for example, be knowledgeable about the financial terminology and basic calculations, in order to determine elements such as capital, reserves, assets, liabilities and costs. Examples of basic calculations include the computation of monthly instalments, value-added tax amounts and budget variances.
- (2) *Conceptual knowledge* describes the "interrelationships among the basic elements within a larger structure that enable them to function together" (Anderson & Krathwohl 2001:29). Apart from interrelationships between elements in a specific subject field in the financial domain, there can also be interrelationships between different subjects, for instance Economics, Business Economics, Accounting and Taxation. Conceptual knowledge also implies that one has a sound relationship with the environment and broader community. However, to be knowledgeable on the interrelationships between certain financial elements, for example: to classify or categorise financial information and be knowledgeable about the underlying financial theories, principles and assumptions, may require a higher level of financial literacy.
- (3) *Procedural knowledge* refers to the knowledge of subject-specific skills, algorithms and subject-specific techniques. Although many complex subject-specific techniques are used in the financial domain, in becoming financially literate, individuals will benefit from obtaining financial skills such as budgeting and the use of ratio analysis.

- (4) *Metacognitive knowledge* encompasses strategic knowledge, knowledge of cognition in general and awareness about one's own cognition. Cognition in its basic form means acquiring knowledge. As explained by Claxton (1999:195): "The activity of thinking about our own thinking and learning has become known as *metacognition*." - in other words, acquiring knowledge of one's own knowledge-creating process. Financially illiterate individuals need to become aware of their lack of financial knowledge or level of financial knowledge and become responsible for acquiring the knowledge necessary for financial decision making.

Six levels of learning were identified in the cognitive domain of Bloom's taxonomy. These ranged from the simple recall or recognition of financial facts as the lowest level, to the highest level classified as evaluation or creation where new financial information can be generated or rearranged in a new format. With reference to financial literacy, Bloom's six cognitive domain levels will be discussed in more detail in section 6.5.

6.4.2 The affective domain

The affective domain describes the growth in feelings or the emotional segment of an attitude. It also includes the emotional manner in which people deal with things. For instance, the affective domain comes to the fore when people feel uncertain in a certain situation or when risks are involved. Affect can usually be reflected in statements that may lead to behavioural outcomes (Robbins 2003:71). Statements such as "I don't understand financial jargon", can lead to negative behaviour when the person is confronted with any kind of financial information. Thus financially illiterate individuals will usually react negatively or avoid situations in which financial decisions need to be taken.

On the positive side, if an organisation can cultivate a positive enthusiasm towards acquiring financial skills or some level of financial astuteness, this would presumably lead to a more competent workforce and sound financial

management. If the organisation can succeed in changing *number-scared* people to *number-brave* people who have a questioning attitude towards the financials presented to them, the financial risks in the organisation will most probably decrease. The moment individuals can make an informed financial choice, the financial risks in the company will presumably diminish.

The affective domain also refers to an awareness of moral, social and ethical problems. Recent corporate and public entity scandals have placed a question mark behind the ethics and values of some decision makers in executive positions. However, according to Robbins (2003:144), unethical practices can be minimised by providing individuals with a supportive work climate. For instance, individuals who take financial decisions have to understand the information on which they base their decisions and the financial implications. This would include a culture that encourages individuals to openly challenge questionable financial practices. However, when it comes to financial mismanagement or fraudulent practices, financially illiterate individuals will not be able to question these practices even if they are ethically inclined.

6.4.3 The psychomotor domain

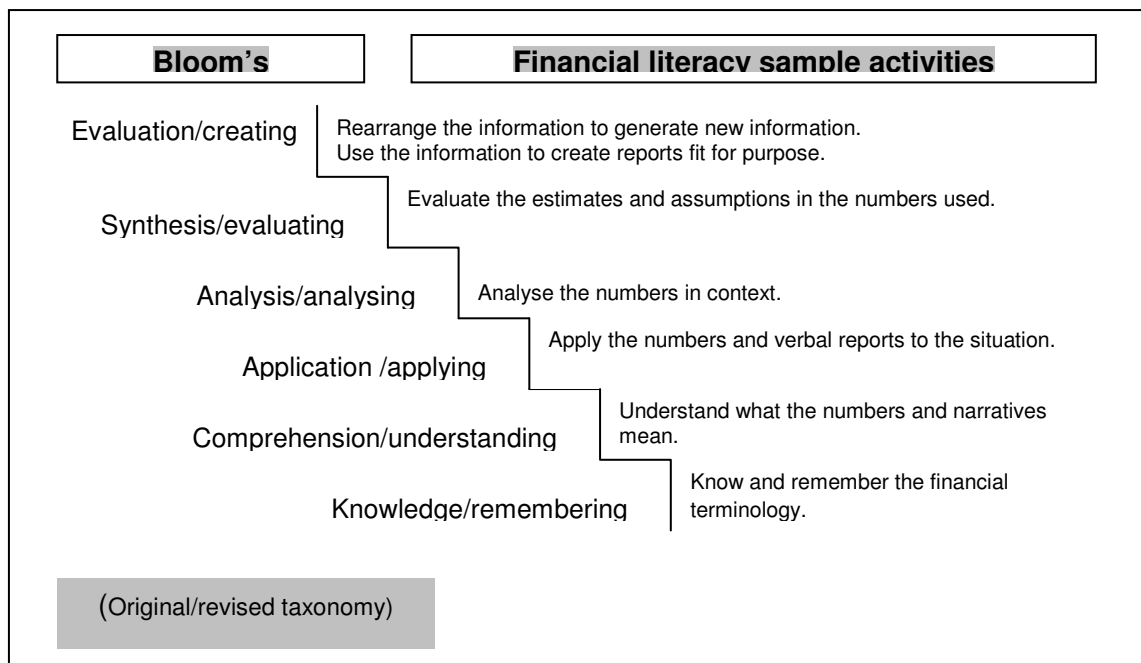
This domain includes the physical movement, coordination and use of the motor skill areas. Development of these skills is measured in terms of precision, speed, procedures or techniques in execution. Perception, which is the ability to use sensory cues to guide motor activity, falls into the psychomotor domain (Clark 1999). The precision with which financial information should be presented and the proficiency in calculating and compiling accurate financial information in a required technical format can be regarded as a psychomotor or manual skill. The further manipulation or restating of this information requires adaptive skills which demand a profound measure of financial literacy.

All the above-mentioned educational domains impact on the educational objective of becoming financially literate.

6.5 FINANCIAL LITERACY ACCORDING TO BLOOM'S SIX LEVELS OF THINKING

Six levels of intellectual activity were identified in the cognitive domain of Bloom's taxonomy. Listed from the lowest level, the simple recall of facts to the highest level, the evaluation of information, the activities are knowledge, comprehension, application, analysis, synthesis and evaluation. The revised taxonomy changed the names of these six categories from noun to verb form, namely: remembering, understanding, applying, analysing, evaluating and creating. The reason for this change is simply because the verb form provides a more active perspective on learning than the more passive one given by the noun. The taxonomy was revised to become a more authentic tool for curriculum planning, instructional delivery and assessment (Pohl 2000). All six levels in both the original and the revised taxonomy influence financial literacy education, as depicted in figure 6.2.

Figure 6.2: The six levels in the cognitive domain



Source: Own interpretation

With reference to financial education, the different levels of learning as illustrated in figure 6.2 will be explained in the subsections below.

6.5.1 Knowledge

Knowledge can be regarded as the recall from memory of previously learnt data or information and represents the lowest level of learning in the cognitive domain as depicted in figure 6.2. Beinhocker (2005:317) states that knowledge is information that is useful and fit for some purpose. Knowledge creation is therefore dependent on the interaction between individuals and useful information. According to Abell and Oxbrow (2001:71) “knowledge is about the ability to understand context, see connections and spot significance when dealing with information”. If financial information is not seen in context to the larger economic situation, knowledge creation has not occurred. One may infer that knowledge and information are not the same, but that the value of information depends on the recipient’s ability to use it meaningfully.

Lorin Anderson’s revised taxonomy (1990) substituted the noun “knowledge” for the verb “remembering”. This is because the taxonomy is presumed to reflect different forms of thinking and thinking, is an active process (Pohl 2000). Knowledge may involve recognising and recalling facts from memory which are consistent with present facts or information.

In the financial literacy domain, arranging, listing or duplicating financial information according to previously learnt formats falls into the knowledge level. Users of financial information also have to recognise and recall from memory and experience the meaning of different aspects of financial reports or statements and even have to relate it to previously presented financial information. Knowledge of financial terminology, its classifications and categories therefore forms a crucial basis in the quest to become financial literate.

6.5.2 Comprehension

Comprehension can be described as the ability to understand the meaning of information. The revised taxonomy justly uses the verb *understanding* to define the second level of the cognitive domain (see fig 6.2). Although this learning outcome is one step beyond the basic remembering of facts, it represents the lowest level of comprehension or understanding. Examples of applicable verbs used at this level are interpret, classify, identify, report and restate. Understanding the meaning of information entails that individuals can see the significance in the information, by either classifying or identifying the relevant issues, interpreting it and ultimately communicating it.

Financial literacy implies that individuals will at least be able to classify financial information into different categories and identify, for example, whether an item is an asset, liability or part of owner's equity. Understanding financial information further entails that the individual can translate it from one form to another (eg words to numbers), restate, explain or summarise it and infer basic estimates of future trends or predict certain consequences. At this level, financially literate individuals will be able to compare and contrast financial information and construct a cause-and-effect model of it.

6.5.3 Application

Application, or according to the revised Taxonomy, applying, involves the use of previously acquired knowledge in new and concrete practical situations. As seen in figure 6.2, it is apparent that learning outcomes in this area require a higher level of understanding than in the comprehension level. The application of rules, methods, standards, principles, theories and concepts falls into this level of the cognitive domain. The financial domain has many standards, principles, practices and legislation, for example different Acts, such as Credit Acts and Companies Acts in different countries or accounting statements as laid down by the accounting professions or the rules set for good corporate governance. At this level, individuals know how to apply previously acquired knowledge to adhere to the rules laid down by different authorities.

In a financial literacy context, the application of learnt techniques or methods, for example, the use of financial principles or practices to prepare financial reports and to act on financial information compiled according to certain methods refers to this learning area. From a user's decision-making perspective, the basic interpretation of financial information requires a financially literate individual to have reached at least the application level of the cognitive domain.

6.5.4 Analysis

As depicted in figure 6.2, the analysis or analysing level's learning outcomes constitutes a higher intellectual level than the previously mentioned ones.

Analysis is the breaking down of information into its component parts for study and interpretation. Analysing is the ability to distinguish between relevant and irrelevant parts of the whole. It constitutes the identification of motives or cause, the relationships between parts and finding coherence between them.

The analysis level is critical for financial information. It includes verbs such as appraise, calculate, compare, contrast, question and differentiate. Financially literate individuals will presumably be able to do calculations on financial information, contrast or compare it with other such information, question its accuracy, etc. For example, financial ratios can be used to appraise and compare the organisation's performance with that of other entities or periods. One may infer that financial decision makers will have to progress to at least this level of the cognitive domain to enable them to base their decisions on properly analysed information.

6.5.5 Synthesis

Synthesis refers to the creative ability to put parts together to form a new or original whole. Anderson's revised taxonomy uses the verb *evaluate* to identify this level (Anderson & Krathwohl 2001:5). Where the noun *synthesis* emphasises the set of a plan of operations or the formulation of new patterns and structures, the term *evaluate* is more concerned with detecting

inconsistencies or fallacies in the process or product. An individual with a basic financial literacy level of thinking may find it difficult to advance to this level where he or she is expected to formulate or create new or original financial information. It is clear that the revised taxonomy's *evaluate* refers to a more critical approach, with synonyms such as testing, detecting and monitoring. For instance, the attest function of auditors is typical of the synthesis level of learning.

Synthesis is applicable to assembling, compiling, reconstructing and creating financial information in different financial reporting formats. For example, the same information source can be used to compile internal management reports or external financial statements. Parkinson and Sorgman (1997:421) found in an experimental project to produce an intense team-taught economics course, that economic education should be moved to the evaluation and higher levels of synthesis instead of remaining at the comprehensive level where it typically remains. More advanced financial literacy learning may fall into this level, but it surpasses the scope of basic financial literacy teaching. Determining whether financial information has inconsistencies and judging its authenticity is an example of the need to master financial evaluation at this higher cognitive level. With regard to both the original and the revised taxonomy, users and preparers of financial information will benefit if they can function at this higher level of the cognitive domain.

6.5.6 Evaluation

The highest order of the cognitive domain is classified as evaluation (see fig 6.2). Evaluation is concerned with judging the value of information for a given purpose, on the basis of personal opinions or values. Judging information encompasses the appraisal of its reliability and value. The learning outcomes in this area contain elements of all the other categories, plus a person's own conscious value judgements, based on clearly defined criteria. However, the revised taxonomy refers to a more complex form of thinking and defines this level by means of the verb, *create*. Pohl (2000) explains that, according to the

original taxonomy, one can be critical without being creative. The verbs applicable to this level range from appraise, criticise, defend, interpret, justify and judge in the original taxonomy and to generating, hypothesising, planning, designing and inventing in the revised taxonomy. This level of learning will require the learner in the financial domain to become quite an expert, for example, the attest function of auditors relates to the criticising and judging of the value of the information. On the contrary, it would be difficult for the lower level to average financially literate person to operate on this more complex level of thinking.

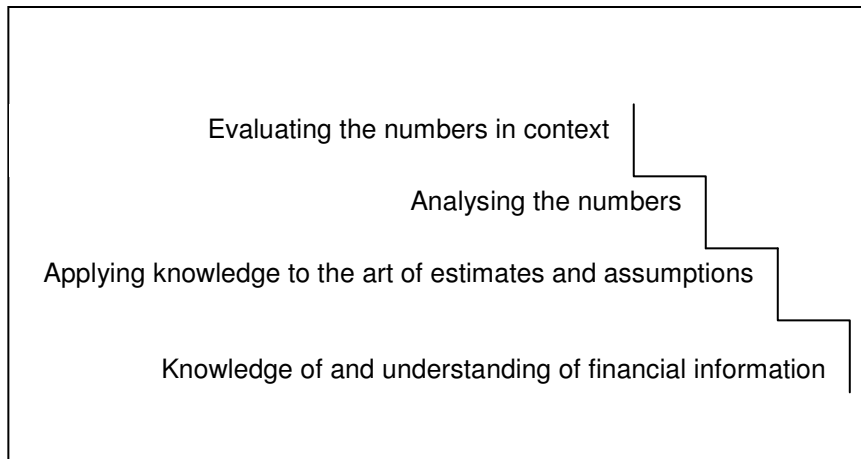
Evaluation on this level overlaps with the verb “evaluate”, according to the revised taxonomy on the previous level. Its applicability to financial information and financial literacy has already been explained. However, the verb “create”, as used in the revised taxonomy, has a definite impact on creating and using financial information. Producing, say, financial statements based on fixed criteria and the ability to create different ways of presenting financial information fall into this category. Creative ways of presenting financial information might, for instance, include graphs, pictures or tables. Users of financial information need to know on what basis the financial reports were created, before they can use the information for decision making or even create their own reports for their own purposes. Financial literacy at this level will mean that decision makers can integrate all the previous levels of their cognitive ability to ultimately create their own reports or at least evaluate those created by others. Although this may be beyond the abilities of the lower to average financially literate individual, it would be to the organisation’s competitive advantage if more decision makers could advance to this level of financial learning.

6.6 LEVELS OF LEARNING NECESSARY FOR FINANCIAL LITERACY

In keeping with Bloom’s taxonomy and Beard’s teaching model, teaching non-financial individuals basic financial literacy can also be structured at different

levels of learning. Berman and Knight's (2006:xii-xiii) four basic prerequisites for acquiring financial intelligence as explained in section 6.3 above can also be presented as four levels of learning. In figure 6.3 these prerequisites are adapted to illustrate levels of learning towards becoming financially literate individuals.

Figure 6.3: Basic financial literacy levels of learning



Source: Adapted from Berman & Knight (2006:xii-xiii)

As seen in figure 6.3, these levels range from the fundamental level, which consists of acquiring knowledge on basic financial information and the understanding thereof, to the more complex and abstract level of seeing the big picture of the financial information in the context of the business environment. In teaching financial literacy, it is therefore imperative that employees are given the basic knowledge on how to measure the business's financial success, how to analyse and interpret financial information and how to ultimately make an impact on the organisation's bottom line figures. It is necessary for learners to go through all the steps from learning the language of finance to understanding it in the context of the business environment. Becoming financially literate can thus be regarded as a step-by-step process.

6.7 LEARNING FOR UNCERTAINTY: A FINANCIAL LITERACY APPROACH

While the classification of learning domains by Bloom and others was focused on teaching learners to reach certainty, there is currently a notion to guide learners to embrace uncertainty. This means that learners are not only comfortable with uncertainty, but that they will also prosper amidst uncertainty (Slabbert, De Kock & Hattingh 2009: in press). The paradox of learning for certainty versus learning for uncertainty should be understood against the backdrop of an evidently present unknown future and its effect on the way learning takes place. As Barnett (2004:247) puts it: “learning for an unknown future has to be a learning understood neither in terms of knowledge or skills but of human qualities and dispositions”. It entails a holistic approach to learning, which goes beyond the mere accumulation of knowledge and skills, but endeavours to teach individuals to become problem solvers. In the same sense, Herman and Mandell (2006:7) acknowledge that the experience of not knowing, of acknowledging one’s ignorance or uncertainty, is necessary to lead to further learning, that is, learning beyond expectations. It follows that learners’ boundaries are shifted beyond experiences already encountered and they now have to create new experiences. In the business world, the unknown future plays a major part in any form of decision making and decision makers therefore need to be equipped to operate amid this ever-present and growing uncertainty and complexity.

However, *uncertainty* as portrayed above should not be confused with *ambiguity*. Peters (2003:23) explains the difference between the two terms: “Uncertainty means that you don’t know everything, but you know something, and you know how what you know relates to what you *don’t* know.” However, he describes ambiguity as “you don’t know enough even to know if you’re asking the right questions”. In the same sense as that of ambiguity, De Bono (1999:11) states the following: “Confusion is the biggest enemy of good thinking.” Confused individuals do not even know that they do not know. This

leads one to believe that financially literate individuals will, in many instances, still feel uncertain, but they will at least know something and know how it relates to what they do not know. Ambiguity, however, implies that financially illiterate people will feel confused most of the time and will not even know what questions to ask.

The ever-changing global business environment and the unknown future of business organisations have resulted in a need for innovative changes in the learning model required by financial decision makers. De Lange, Jackling and Gut (2006:366) contend that university accounting courses can “no longer be entirely content-driven and limited to specific technical skills”. Rossouw (2006:2 & 3) corroborates that a philosophical or, in other words, an inquisitive, exploring and reflective mind, should be cultivated in all disciplines when teaching students. If this cultivation is neglected, Rossouw foresees that disciplines will be likely to produce “technocrats with knowledge and skills of limited shelf life”. These “technocrats” will encounter many difficulties in functioning properly in the ever-changing business environment in which the future is an unknown variable. Preparing decision makers for the uncertain and changing business world, requires more than financial knowledge and skills - it will also require qualities such as financial awareness and thoughtfulness, business ethics and a social consciousness. This therefore means that individuals have to become better human beings.

Decision makers will depend on more than only technical financial education if they wish to make sound financial decisions about the future of an organisation. They will need a financial consciousness with which they can address and solve problems of meaning and value and with which they can assess that one course of action is more meaningful than another. According to Zohar and Marshall (2000:3-5), this kind of intelligence is spiritual intelligence (SQ), which allows human beings to be creative, to change the rules and have a moral sense when making those decisions. Zohar and Marshall (2000:200) also hold that SQ gives one the ability to live creatively

under uncertainty, and that uncertainty can inspire one because it creates conditions in which one must make a choice. It is questionable whether financial education currently prepares learners to also use their SQ when making financial decisions for an unknown future. One could argue that if SQ is included in both formal and informal financial education, financial decision makers will make decisions that are more meaningful and sustainable not only for the organisation but also for the wider society. Subjects relating to ethical, moral and environmental issues could form part of the financial education syllabi.

Preparing learners for uncertainty demands a new approach to financial literacy education. However, the reorienting of financial education is not a new phenomenon. For instance, as early as 1986, the Bedford Committee Report provided broad guidelines on redesigning accounting education (French & Tipgoss 1995:71). Slabbert and Gouws (2006:336) concur that "introductory accounting education has been a subject of contention for a very long time amongst practitioners, educators, researchers and professional bodies". These authors (2006:338) observed that accounting education seems to focus only on transferring knowledge and technical skills, while neglecting generic features such as critical thinking, vital decision making and creative problem solving. Goldberg (2001:319) asks if the accounting educational experience could be used to develop in students a capacity for independent thought and expression. This approach to financial education will only be possible if learners can relate to real business situations and real-life experiences instead of only learning prescriptive financial and accounting rules and techniques. Learners need to be guided to use their cognitive, emotional and spiritual faculties to become financially literate. The ideal would be for this holistic approach to financial education to be introduced in the primary and secondary school education system.

6.8 SUMMARY

As uncertainty increases in the business environment, it is imperative for individuals to become better equipped to deal with situations in which they may feel ignorant or bewildered. In this ever-changing global environment, people, even so-called “experts”, often find themselves out of their depth when confronted with financial issues. One may therefore assume that in a quest to survive turbulent and uncertain situations, individuals will benefit from obtaining financial knowledge, from becoming financially literate and from ultimately attaining a financial consciousness. In other words, if they are at least financially literate, attempting to make financial decisions for an unknown future may not be that overwhelming.

Because this chapter also focuses on financial learning, Bloom’s taxonomy and Beard’s teaching model were used to describe the different levels of intellectual behaviour important in learning. The understanding and use of knowledge, as depicted in the higher categories of the taxonomy, can be regarded as relevant when teaching learners how to approach difficult and complex financial problems. Learners have to transform their learning process from the basic level of acquiring and understanding knowledge to the stages where they can apply, analyse, synthesise and create new knowledge.

While the kind of learning, as illustrated in Bloom’s taxonomy, is crucial to guide learners in dealing with known or predictable situations, the uncertainty present in the business world demands a new approach that will prepare them to make decisions in uncertain circumstances. Claxton (1999:58) states that “learners need to be *resourceful* in the face of uncertainty” and that “they need to know what to do when they don’t know what to do”. A presumed teaching model for individuals to become financially literate would have to include a more holistic approach towards learning. This implies that the financially literate person would require self-awareness, be able to use his or her imagination, think in more than one way and learn through experience. Hence,

to not only achieve financial literacy status, but also to remain at such a level financial information users will require resourcefulness and a culture of lifelong learning. Chapter 7, identify various financial information users and discusses the fact that decision makers need to obtain an evolving consciousness when making financial decisions.