

CHAPTER 7

THE EVOLVING FINANCIAL CONSCIOUSNESS OF DECISION MAKERS

Thinking is the ultimate human resource.

(De Bono 1999:xi)

7.1 INTRODUCTION

Chapter 6 focused on the financial knowledge creation process and the significance of learning to deal with uncertainty. Economic growth brings unquestionable benefits, but also greater complexity and uncertainty. Decision makers' way of thinking about the economy and everyday financial matters needs to evolve and adapt to economic change. Beinhocker (2005:453) contends that "the economy is now evolving into a society of minds on a planetwide scale". The minds of financial decision makers therefore need to evolve. However, to begin to change their attitude towards financial matters and acquire an evolving financial consciousness, decision makers must first perceive a need for change. The noun *consciousness* encompasses attributes such as awareness, understanding, knowledge, recognition and sensibility (*Collins dictionary and thesaurus* 2005). Thus, obtaining a financial consciousness calls for an awareness of financial matters, understanding and recognising applicable business world concepts and becoming sensitive to the economy and its influence on socioeconomic and environmental elements.

The aim of this chapter is not only to look at different users and their financial information needs, but also to conduct a needs analysis of the informed decision makers versus the uninformed ones with regard to their interpretation and use of financial information. Users of financial information can be divided into two major categories, namely external and internal users. The information requirements of these two groups are dissimilar because of their different relationships with the organisation providing the financial information. External

users, for example, are actual and potential investors, creditors, customers, financial analysts, advisors, labour unions, regulatory authorities and the general public. However, internal users are the organisation's managers and other employees who are responsible for the internal management of the organisation. Apart from the users' different information needs, the levels of both internal and external users' financial consciousness most probably also differ vastly.

Chapter 7 first discusses the value school or user-need school and other decision-useful approaches to financial information. It then explains behavioural research of decision making at individual level, with specific reference to the lens model, probabilistic judgement, predecisional behaviour and the cognitive approach. Different decision-support systems are discussed before the different users of financial information are identified. The complexity of users' information needs and their disparate levels of financial literacy are also addressed. The last two sections explain the manufactured consciousness of financial information users and the user primacy principle.

7.2 THE VALUE SCHOOL OR USER-NEED SCHOOL AND OTHER DECISION-USEFULNESS APPROACHES

Contrary to the events approach, which suggests that financial information should be based only on relevant economic events, the value school or the user-need school approach considers that the focus should be more on the information needs of users (Riahi-Belkaoui 2004:364-365). If these needs are not known, it can be postulated that the potential exists for conflict between the preparers and users of financial information. Smith (1999:456) cites an example of the contrasting needs between users and preparers:

- Preparers may prefer the precise and specific numeric and narrative format of presenting financial information. Preparers are usually

restricted and bound by standards, legislation and generally accepted practices.

- Decision makers may prefer a more user-friendly format for receiving financial information, such as, the use of graphs to depict trends so that patterns of performance may emerge. They may also ask for narrative information explaining amounts and financial trends.

Because a variety of users, use financial information, each with their own personality, cognitive ability and decision-making style, the ideal would be to present financial information in a simple, user-friendly format. Users' financial cognitive ability may vary according to their experience, training and financial awareness, knowledge and attitude, which makes it extremely difficult to present financial information that will satisfy the needs of all users.

The user-need school approach can also be seen as a decision-usefulness approach to financial information. Saenger (1991:56) indicated that "the function of financial reporting changed in the course of time from a stewardship to an informational function as a result of criticism of the usefulness of financial reports". According to Watkins (2007:8), the decision-usefulness approach to financial information places a great deal of emphasis on the relevance of the information provided to users. Goldberg (2001:73) elaborates that "if the requirements of some users are not communicated effectively to those who decide on the data to be recorded, the intention of the users may not be fulfilled". In this approach the focus is on the users' requirements and not on those of the information providers. Although users are not supposed to totally dictate how information is presented, it is essential that they provide some form of feedback on their information requirements to the presenters of financial information. Thus, if providers of financial information consider doing a user needs analysis to determine which information will be relevant to which user, this could lead to better financial decision making.

Financial information originates from various sources of which accounting is one, albeit an important one, with regard to research on financial decision-making approaches (Deegan & Unerman 2006:10-11; Riahi-Belkaoui 2004:341-346). Accounting theorists have adopted a two-pronged strategy in studying the decisions made by users and their impact on the provision of information (Hendriksen & Van Breda 2001:199). The *normative* approach, on the one hand, refers to the phenomenon of how people should make decisions, while the *positive* approach, on the other, asks how people actually make decisions. Hendriksen and Van Breda (2001:200) suggest that the question of how people should make decisions can be answered by adopting a *prescriptive* approach. This approach includes, inter alia, the use of a variety of decision-making tools. Examples of such tools are cost-volume-profit analysis, linear programming and other cost allocation models. However, the above-mentioned decision-making tools, for example, decision-support systems (see sec 7.4) can be used to assist those decision makers with a limited grasp of financial knowledge.

The positive approach studies the way in which individuals make use of the financial information they receive. In this approach, a *descriptive* approach is employed in an attempt to understand how decisions are really made (Hendriksen & Van Breda 2001:211). One of the methods used to understand how individuals use information is broadly known as the behavioural approach, which will be discussed in more detail in the following section. The positive approach also draws on, inter alia, information economics and agency theory, and is more concerned with the way organisations make decisions rather than individuals. However, it is necessary for purposes of this study to examine the way in which individuals use information and understand it, before one can examine aggregate decision-making behaviour.

7.3 BEHAVIOURAL RESEARCH: DECISION MAKING AT THE INDIVIDUAL LEVEL

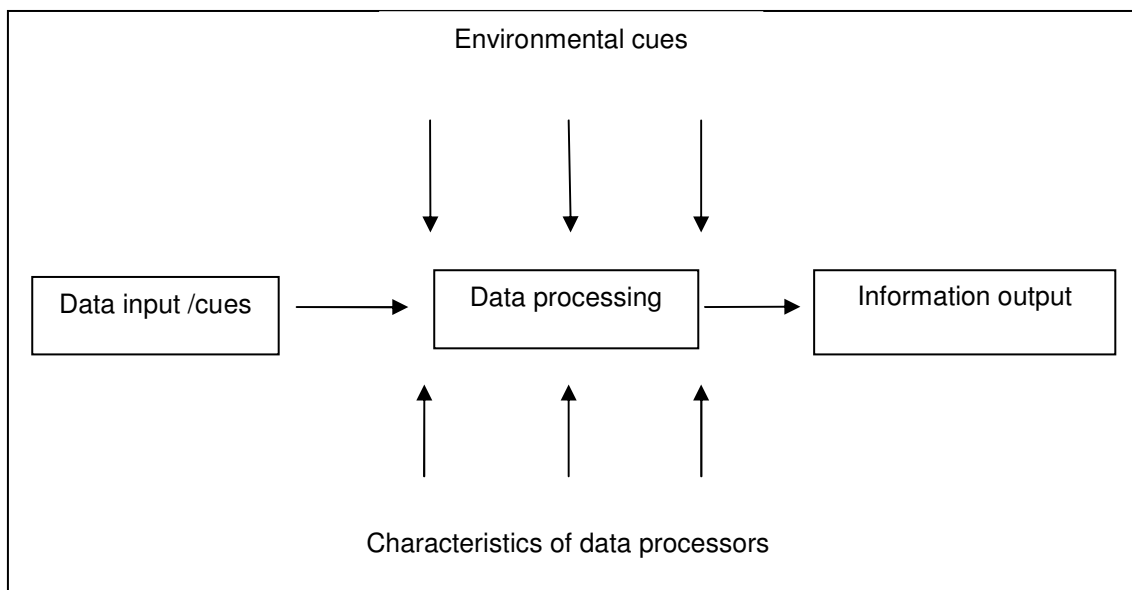
Two branches of the behavioural approach are of particular interest to this study – the *human information-processing* approach and *cognitive theory*. Deegan and Unerman (2006:410) classify “research which considers how *individuals* react or behave when provided with particular items of information”, as behavioural research. The ability of individuals to process information is closely related to their cognitive ability as described in chapter 6 of this thesis. The dissemination of financial information depends on the individual’s acquired knowledge levels. Smith (1999:453) clearly states the following: “The interaction of personality and cognitive style may impact on the influence that accounting information has on individuals and the confidence they have in the decisions made”. In this context, accounting information as mentioned in Smith’s statement, can also refer to any other financial or economic information, and one may assume that the individuals’ cognitive style and ability can also reflect on their level of financial literacy. The level of financial literacy will, in turn, determine how individuals react to the financial information presented to them.

Certain authors (Riahi-Belkaoui 2004; Hendriksen & Van Breda 2001) refer to the behavioural *accounting* approach while others (Deegan & Unerman 2006) refer only to behavioural research. This approach can therefore be applicable to the behaviour of individuals making any kind of financial decision, not only decisions relating to accounting information. Studies on the behavioural effects of financial information suggest avenues of research to improve the presentation of financial information and reporting systems (Riahi-Belkaoui 2004:368). Although these authors concentrated mainly on accounting issues, the behavioural effects of users are applicable to all forms of financial information and not only accounting information. The adequacy of disclosure and presentation of financial information have a huge impact on the decision making of individuals, and the producers of this information have to

contemplate the consequences when producing inadequate information. This reflects on, inter alia, the financial reporting practices and procedures, which will be examined in more detail in the following chapter.

The human information-processing approach has a specific bearing on the subject of this study. This approach was justified by the need to improve both the usefulness of the disclosed financial information and decision makers' ability to use it. Riahi-Belkaoui (2004:372), only described the main components of an information-processing model. However, these components, input, process and output, have been depicted as a diagram in figure 7.1.

Figure 7.1: An information processing model



Source: Own interpretation adapted from Riahi-Belkaoui (2004:372)

The data input (or cues) shown in figure 7.1 refers to the number of cues and the characteristics used to process the data. Figure 7.1 indicates that the characteristics of the persons making the judgement on how to process the data, for example, their level of prior experience, cognitive ability and demographic background, play a significant role at the processing level. The way individuals weigh the environmental cues, whether or not their judgements are stable over time and whether they use any simplifying heuristics when

presented with complex data are equally important (Deegan & Unerman 2006:415). The information output component relates to variables likely to affect the way the user processed the information. The varying emphasis on these three components led to the development of four different approaches: the lens model approach, probabilistic judgement, predecisional behaviour and the cognitive style approach.

7.3.1 The lens model

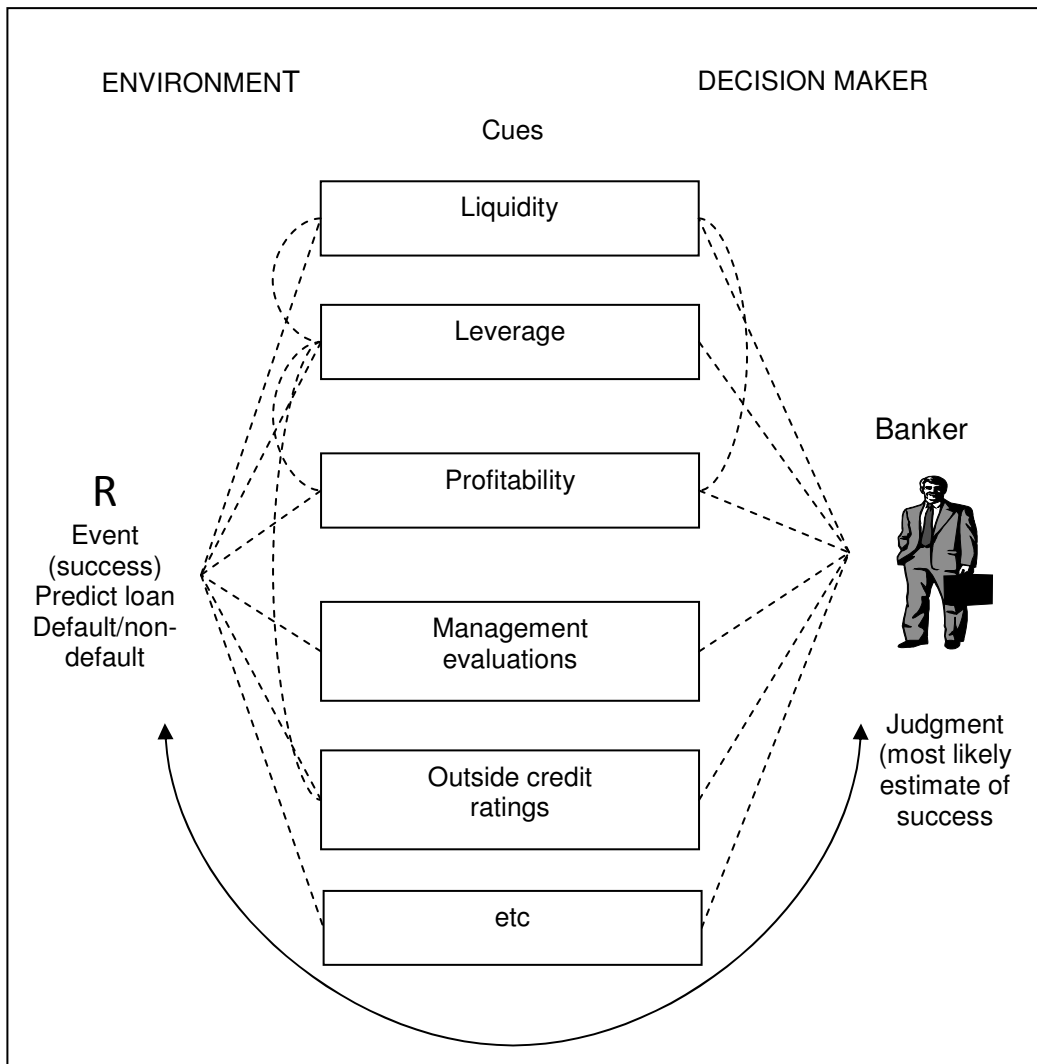
The lens model approach, also known as the Brunswik lens model, uses a set of explicit cues from the environment to assess the situations in which decision makers make judgements. This model can be used to emphasise the similarities between the environment and the subject response. According to Saenger (1991:49), there is a constant flow of information in this model and a relationship between the following:

- (1) *The environmental criteria and the information set.* Environmental changes impact on the way information is processed. For instance, changes in legislation (say, taxes and interest rates) will definitely alter the information set. Decision makers need to be aware of environmental changes and their effect on the information.
- (2) *The information set and subject responses.* The decision makers' response to the available information is dependent on their cognitive ability and knowledge of the subject matter. It can be assumed that the response of more financially literate decision makers will differ from the way that less financially literate decision makers will interpret the information set.
- (3) *Subject responses and environmental criteria.* Decision makers are influenced by cues from the environment. The way they perceive environmental criteria, however, will depend on their financial experience, knowledge and consciousness to contextualise the information in relation to the environment.

The impact of the information set on the predictive ability of the information as well as on the subject response is accentuated in the model. Predictive ability refers to “the capacity to provide information that is useful in the decision-making process pertaining to the future” (Wolk et al 2004:165). The ability of humans to simultaneously integrate information from different sources and process all the environmental criteria into the information set, influences their judgement and ability to predict certain outcomes. Where decision makers have limited financial capabilities it is even more difficult to integrate all available information and environmental cues. Hence the predictive ability of decision makers will depend on their level of financial literacy.

Although Libby (1981:6) and Deegan and Unerman (2006:412) used the lens model to illustrate the decisions by graduate schools to admit students, it is adapted in figure 7.2, to depict a commercial lending model. As portrayed in figure 7.2, the left-hand side of the model describes the predicted loan default or nondefault. The cue-set is given in the middle and the right-hand side describes the decisions made by the loan officer or banker, based on environmental cues (independent variables). In this example one may assume that the banker is at least financially literate or even a financial expert, whereas in other cases the decision maker may have limited or no financial capabilities. The decision maker who lacks financial knowledge may react differently to the cue-set compared to someone who is more financially literate; he or she may also need more information pertaining environmental indicators.

Figure 7.2: The simple lens model



Source: Adapted from Libby (1981:6)

While figure 7.2 depicts a simplified representation of the Brunswick lens model, this model is mostly used to build a mathematical research model that “represents the relative importance of different information cues, and by the need to measure the accuracy of judgement and its consistency, consensus, and predictability” (Riahi-Belkaoui 2004:373). According to Libby (1981:7), the simplified lens model merely portrays the individual’s interaction with the uncertain environment and the way the information-processing system can be improved to alleviate this uncertainty. The problem with such a prediction model is that it is inclined to assume that human beings have unlimited

computational powers, while many of the users of financial information may not have the computational powers or the financial acumen to make these judgements or predictions given the environmental cues. Computational powers suggest that individuals can apply their financial knowledge and experience to enumerate the information in order to improve their decision making and predictive ability.

7.3.2 Probabilistic judgement

The probabilistic judgement approach, like the lens model, is also relevant to this study in that it focuses on the actual judgements or predictions made by decision makers. This approach, sometimes known as the *Bayesian approach*, is based on a mathematical model known as Bayes's theorem and is used as the descriptive model of human information processing. According to Bernstein (1998:5), Bayes's theorem focuses on the numerous occasions when individuals have sound intuitive judgements about the probability of some event and want to comprehend how to alter those judgements as the actual events unfold. Therefore, one may assume that to have a sound intuitive judgement in financial matters, individuals will at least need financial knowledge and even acquire a financial consciousness to evaluate the probabilities. Libby (1981:52) contends that decision makers rely on a number of simple decision *heuristics* to solve complex problems using their limited cognitive abilities. Heuristic decision making refers to the use of common sense investigation by applying intuition to the total situation. According to Bergson (1965:32), intuition, first of all signifies consciousness. In a financial context, intuition can be seen as having more than only basic financial literacy but also demonstrating a financial consciousness or awareness when contemplating the different available options. Given some decision makers' limited ability to process complex information sets in a complex environment with uncertain future probabilities, they may wish to simplify the problem and reduce the uncertainty (Hendriksen & Van Breda 2001:216), by using heuristics or "rule-of-thumb" methods. By using rule-of-thumb methods,

decision makers usually select a known piece of information as a starting point and then use additional information to make a well-guessed prediction.

Heuristics can be useful to both recognise and refrain from making inappropriate decisions, or to encourage individuals, especially less financially literate ones, to use heuristics successfully employed by others. Heuristics as referred to above includes *representativeness*, *availability*, and *adjustment and anchoring* (Riahi-Belkaoui 2004:375). Decision makers who use the *representativeness heuristic* approach investigate the probability of an event on its degree of similarity or representativeness. The *availability heuristic* relates to the ease with which related occurrences come to mind. However, if the decision maker is not financially literate, financial occurrences will not be that easy to identify. *Anchoring and adjustment* heuristics indicates that decision makers often make an initial judgement or estimate (anchoring) and then adjust their view as a result of access to new or additional information (Deegan & Unerman 2006:418). In general, heuristics involves learning by investigation. In financial decision-making situations where the individual lacks financial skills or experience, heuristics such as anchoring can be used to make an initial judgement and then when acquiring more financial experience, they may learn to assimilate new or additional information, and ultimately improve on the original decision. Decision makers whose knowledge and competencies in financial matters may be limited, can be encouraged to adopt heuristics or to use simplified rules developed by experts to base certain decisions on.

7.3.3 Predecisional behaviour

While most of the experiments based on the lens model or on probabilistic judgement involve well-defined highly repetitive situations, these experiments fail to deal with the dynamics of problem solving in less structured environments. The predecisional approach, however, deals with more dynamic problem-solving techniques. Because financial decision-making activities clearly occur in a dynamic, constantly changing environment, techniques such as *verbal protocol* and *process-tracing* are required to explore predecisional

behaviour (Riahi-Belkaoui 2004:375-376). The verbal protocol technique is frequently used to analyse individuals' decision-making thought processes. This technique can to some extent be applied to study the difference in the thought processes of those decision makers who are competent in financial matters, versus those with limited financial competencies. For instance, the techniques used by financial analysts can be coded and then used by other decision makers in similar situations. The thought processes, if known, of the more informed users can then be applied to assist less-informed users to make financial decisions.

The process-tracing method is generally used to examine predecisional behaviour. This method evolved from the theory of problem solving developed by Newell and Simon. Newell and Simon argue that because humans have limited capacity to process information as well as limited capacity short-term memory and virtually unlimited long-term memory, they tend to display "satisficing" instead of optimal responses, leading them to be adaptive (Newell & Simon 1972:815&883). The capacity to process information must be included in financial decision makers' ambit. In general, if humans have limited capacity to process information, it follows that those with limited financial knowledge will have trouble processing financial information. Simon coined the word *satisficing* by combining *satisfactory* and *sufficient* and implies that the first satisfactory alternative instead of the best one is chosen (Harris 1998). Thus, financially literate individuals, who demonstrate a better capacity to understand and interpret financial information, will probably tend to make less adaptive or satisficing financial decisions but rather better ones, than those without financial acumen.

7.3.4 The cognitive style approach

Although much has already been written in chapter 6 of this thesis on the cognitive abilities of decision makers, Riahi-Belkaoui (2004:376) describes cognitive style as "a hypothetical construct that is used to explain the mediation process between stimuli and responses". Stimuli in this intervention or

intercession process can be seen as the information or other environmental cues (see sec 7.3.1) used to stimulate the decision maker's mind in order to elicit a response. This approach focuses on the variables that are likely to have an impact on the quality of decision makers' valuations and judgements.

Users need to simplify the complex information bombarding them daily. When individuals are unable to understand fully what they are dealing with, psychologists say that they experience cognitive difficulties (Bernstein 1998:271). According to Schoemaker (2004:278), humans use cognitive devices such as "associate networks, scripts, schemata, frames and mental models" to make sense of the complex patterns presented to them and to enable them to understand it better. Many users also experience financial information as complex and use certain devices to make sense of it. To simplify the presentation of financial information, cognitive devices such as graphs, ratios and tables can be used. These devices are used to lower the uncertainty levels during the decision-making or forecasting process. However, this is only possible if the user knows how to use these devices and interpret the results.

Information use is an intricate process and involves planning, decision making and control by both the sender and the recipient thereof. Prakash and Rappaport (1977:30) state that the use of information by the recipient depends, inter alia, on the following:

- (1) *Perceptive filters.* To use financial information the recipient needs financial literacy to filter or discern the valuable information from the less useful information.
- (2) *Cognitive structures.* It is necessary to apply ones mind to the financial information in order to understand it and base decisions upon it.
- (3) *Belief system.* Financial decisions are taken with certain objectives in mind. The consequences of these decisions can impact positively or

negatively on society, the environment and the decision makers' or their organisations' wealth.

- (4) *Information-processing capacity.* The capacity to process financial information will depend on the recipient's financial awareness, knowledge and belief system as well as the way the financial information is presented. It will also depend on the understandability of the information and the way the recipient thinks it might impact on society and the environment.

It is thus clear that the usefulness and understandability of information is governed by a combination of factors as described above. It is therefore equally important to study the way individuals process information and use their cognitive ability in doing so, as it is to study the characteristics of the information itself (see ch 4).

7.4 DECISION-SUPPORT SYSTEMS

A decision-support system (DSS) can be used in an organisation to support users without the necessary financial skills to simplify complex information and use it for decision-making purposes. A DSS uses computer technology to process data into a decision-making format for the end-user. Although this computer technology can assist decision makers with limited financial abilities when they make financial decisions, it cannot make the decisions for them. Where a management information systems (MIS) provides decision-oriented information to users, a DSS requires the use of decision models and specialised databases and is designed for specific types of decisions for specific users (Bodnar & Hopwood 2004:5). A DSS is oriented towards the processing of data into a decision-support format. Over time, the term "DSS" has become synonymous with financial modelling and ad hoc querying because of its interactive and "what if" capabilities (Gelinias et al 2005:174). At a basic level, spreadsheet software is an example of a DSS model and may be

used to support a variety of financial decisions. Decision makers, for example, can insert different amounts in the same model to contemplate various financial results and then choose the best scenario for the problem at hand.

Executive information system (EIS) or executive support system (ESS) software was developed to support the needs of managers in the top echelon of the organisation. Some of these executives or managers may be experts in fields other than finance and will therefore need all the help they can get to make financial decisions. The EIS affords management easy access to selective strategic internal and external information. To assist managers in their decision-making task, most EISs have graphical user interfaces (GUIs) and present output using text, graphics and colour, and can be tailored and customised to suit the needs of different executives (Gelinias et al 2005:174-175). Consequently, EISs can assist managers or executives with their financial decision making, although, in some instances, the increased complexity of some of these systems may be more confusing, especially for those users not accustomed to computers or those with an inability to search for the correct financial information applicable to the problem at hand. If decision makers can enhance their financial know-how and use these support systems, their financial decision-making capabilities will probably increase.

A highly developed DSS such as an expert system (ES) utilises knowledge, generally possessed by an expert, to support decision making. According to Bodnar and Hopwood (2001:573), “an expert system is designed to emulate the knowledge and problem-solving techniques of a human expert”. However, although expert systems are mainly used as a surrogate for a human consultant, the system still needs to communicate with the human expert in terms that the human can understand (Bouwman, Frishkoff & Frishkoff 1987:26). Expert systems exhibit human intelligence and behaviour commonly affiliated with artificial intelligence (AI) applications (Hollander et al 2000:560). The aim of these AI systems is to perform tasks normally performed by human intelligence, say, to help evaluate loan applications. With regard to the

assimilation of financial information, Watkins (2007:6) contends that innovative software has provided financial information in a format that facilitates, inter alia, financial statement analysis and enables individuals to make assessments of business performance in ways not previously available. These knowledge bases and AI-based decision support systems store the knowledge and procedural decision-making processes of its most valuable knowledge-intensive employees (Dunn et al 2005:386). This could imply that even decision makers with almost no knowledge of the specific financial problem can make decisions on the basis of the judgements of such a system. However, it is not that simple. Smith (1999:455) clearly states that the cognitive style, training, experience, intelligence and other organisational factors, will all impact on the use of different decision-support systems. This implies that even less financially literate decision makers can benefit from using these systems. It follows that these systems will definitely assist decision making, but will be more efficient if it matches the user's cognitive ability. Subsequently, decision makers with a higher degree of financial knowledge will be able to extract the most from these decision-support systems.

7.5 THE DIFFERENT USERS OF FINANCIAL INFORMATION

Financial information users are diverse and base their decisions on a variety of information sources of which financial statements are but one of them. According to Young (2006:596), various participants in the accounting standard-setting process have constructed a specific and fairly limited image of the financial statement user, namely that of a rational economic decision maker, being "primarily concerned with economic events and transactions and with predicting their impacts upon an entity's future cash flows, future profitability and future financial position". In Young's view, the standard-setters focus on users who have the financial acumen to be concerned with elements of financial information such as cash flows, future profitability, etc. It would therefore seem that standard-setters concentrate on the investor as being the

primary user of financial information. In contrast, the broader *stakeholder* concept has recently been chosen to call into question management's sole emphasis on *shareholders*, and suggests instead that the organisation should be responsible to a variety of stakeholders (Preble 2005:408). Thus, in Preble's (2005:410) opinion, organisations' survival do not only depend on their primary stakeholders (shareholder, investors, employees, customers and suppliers), but also on their *public* stakeholders (governments and communities) and *secondary* stakeholders (the media and special interest groups). It would therefore be to the advantage of organisations in releasing information, to take into consideration diverse information needs, on the one hand, and the different levels of financial literacy of all these stakeholders, on the other.

In line with the stakeholder approach, the financial media, market-related information or any other publicly available financial information can be used for decision making. Decision makers or users of financial information, specifically information contained in the financial statements of organisations, can be divided into external and internal users. Although the needs of the external and internal users of financial information differ because of their varied relationships with the organisation, there is also a difference between the mutual needs of the various external users. Each user group has different objectives with regard to financial information and there is no concurrence in which one of these groups can be defined as the primary one. While some argue that management is the primary user group, others favour employees, customers or the public. The preparers of financial information need to take into account the fact that although many of the shareholders, investors and creditors may be more financially inclined, some of them may still lack the necessary financial skills to use the financial information presented to them.

The significance of certain categories of users was also emphasised when the American Institute of Certified Public Accountants' (AICPA) Special Committee on Financial Reporting used a Users' Needs Subcommittee to conduct an

analysis of the information needs of professional investors and creditors (AICPA 1994:1). However, Stanton (1997:694) has the following to say in this regard: “Claims to corporate accountability by multiple users of published financial statements rest on those users having a legitimate interest in receiving and using those statements.” Stanton (1997) thus holds that financial statements are also applicable to other users and not only to professional investors and creditors. Hence for purposes of this study, not only the needs of investors and creditors, but also those of other external and internal decision makers will be discussed. The information needs of all these stakeholders can be vastly different and how to satisfy them all remains one of the dilemmas in the presentation of financial information. Hence all stakeholders are entitled to financial information, but it is also necessary for them to be sufficiently financially literate to use the information for sound decision making.

7.5.1 External users

Although in terms of the accounting paradigm there are many definitions of who exactly constitutes external users, the 1975 *Corporate Report* defined external users as those “having a reasonable right to information concerning the reporting entity arising from the public accountability of the entity” (McMonnies 1988:27). The different accounting standard-setting boards differ in their understanding of the external user’s sophistication in financial reporting usage. Although there are many external users of financial reports, the FASB serves firstly the investors and creditors. However, paragraph 36 of the FASB’s Statement of Financial Accounting Concepts (SFAC) 1 also recognises that financial information should be usable to both professional as well as nonprofessional users who are willing to learn to use it properly and that efforts may be needed to increase the understandability thereof. However, the understandability of the information can only increase so much – the fact remains that the users of such information also have some responsibility to increase their ability to understand and interpret the financial information.

With reference to financial information produced by accounting practices, the South African conceptual framework for corporate reporting (AC 000), which is based on that of the International Accounting Standards Board (IASB), has a narrow focus with regard to the stakeholders' information requirements as opposed to investors' requirements. Paragraph 10 of AC 000, states that "as investors are providers of risk capital to the entity, the provision of financial statements that meet their needs will also meet most of the needs of other users that financial statements can satisfy". The predicament is that the information needs of less financially sophisticated users differ substantially from those of the more financially literate investor. This framework also assumes that users have a reasonable knowledge of business and economic activities as well as accounting. In relation to the broader stakeholder concept there may be a variety of users who do not have this knowledge. However, although the boards recognise that information is supplied to a wide range of users with differing degrees of business knowledge, their emphasis is still on investors and creditors as the primary users. In view of users' (even investors' and creditors') varying degrees of financial perception and competence, the IASB dropped "knowledge of accounting" from its users' presumed knowledge base, but added "able to read a financial report" and it further expects users to "read and analyse" it (Ewer 2007:18). The problem is that users can only read and analyse these reports if they understand them. Hence to be able to read a financial report, users still have to have basic financial knowledge. This leads one to believe that, according to the above-mentioned standard-setting boards' perspectives, users need to be at least financially competent to understand and analyse financial reports.

As previously mentioned, one of the Trueblood Committee's objectives is to also provide financial information to those users with "limited authority, ability, or resources to obtain information and who rely on financial statements as their principal source of information about an organisation's activity" (AICPA 1973). This statement is a paradox; there are users with limited ability, on the one hand, and complex financial statements, on the other. It is therefore difficult to

rely on financial statements as a principal source of information if one does not have the financial capabilities to understand the information presented in them. According to this statement in the Trueblood Report, it would seem as if a set of financial reports contains all the relevant information necessary to make decisions. While this might satisfy some users, others might need more financial and nonfinancial information in order to make sound decisions. Their information needs and the way financial information is presented will also differ according to the different users' financial knowledge and their ability to assimilate the available financial information.

7.5.1.1 Investors

Investors require a substantial amount of information that goes beyond financial accounting numbers. They also require “current and expected changes in market conditions, competitors' products and performance, the potential value of new products and processes, prospective changes in foreign exchange rates and domestic inflation rates, government policies, employee and customer relations, and the quality of management” (Benston, Bromwich, Litan & Wagenhofer 2006:22). To integrate and assimilate this list of conditions and factors listed by Benston et al (2006) investors or potential investors will need a high level of financial knowledge and a good measure of financial awareness. They need to be aware of the total business environment and take all the external factors impacting on the organisation into account. In the light of the fact that there are not only professional but also unsophisticated investors, the above-mentioned information requirements are fairly extensive.

Beaver (1989:35) distinguishes between “more informed” versus “less informed” investors and he states further that in certain settings, “the more informed have incentives to engage in ‘active’ trading in order to reap expected abnormal returns from trading with the less informed”. This implies that investors with a higher level of financial knowledge and awareness will make more informed decisions and ultimately have higher financial returns than those with no or a lower level of financial literacy. However, although the

AICPA's Users' Needs Subcommittee considered whether nonprofessional users have a need for more summarised or condensed reporting compared to professionals, research indicated that nonprofessionals rejected the idea of summarised or condensed reporting (AICPA 1994:8). Thus, instead of providing nonprofessionals (those with a lower level of financial know-how) with less information, one can assume that it would be better to enhance their ability to aggregate all the information at their disposal.

Present and potential investors further need information on the risk and return on their investments. According to Nikolai and Bazley (2003:3), the potential investor decides to purchase a particular share and the actual investor decides to retain or sell a particular share, both on the basis of available financial information. If the available information is the same, the only difference can then be the variation in financial consciousness or experience with which the decision is made. Because of the importance of, say, accounting information for investment decisions, Miller and Bahnson (2007b:15) mention their frustration at the lack of attention given to the interests of financial statement users compared to the continual promotion of the interests of auditors and statement preparers. The interests of the preparers of financial information and standard setters were discussed in chapter 5.

The lack of feedback from the investors to the information preparers could be one of the reasons why their interests receive less attention than those of the auditors and preparers of the statements. Miller and Bahnson (2007b:15) also hold that "this imbalance simply does not work for the economy's good, because the capital markets are inefficient if users don't have ready access to the information they need for allocating capital to the right places at the right prices". Ready access does not only mean that the information is available, but also that users understand and interpret it correctly. Thus, it could well be to the benefit of the economy if not only the investors' information needs are taken into account when financial information is prepared, but also their ability to analyse and interpret it. More user-friendly financial information with

appropriate explanations is needed as well as a willingness and commitment by users to enhance their financial literacy levels.

Traditional finance theory assumes that most investors use an efficient market as the basis for making investment decisions (Palepu, Healy, Bernard & Peek 2007:375). According to Hendriksen and Van Breda (2001:165), investors, however, are “distinguished by the extent of their activity in the marketplace, the degree to which they are diversified, and the level of their sophistication, among other things”. It can be assumed that this level of sophistication also refers to their level of financial literacy. Some investors may be more active, while others may only invest from time to time. Investors may also differ in their knowledge of the markets and of financial matters per se. Although different forms of market efficiency exist because of the amount of information that is available, an efficient market is assumed to be a market in which prices always fully reflect available information (Glaser, Nöth & Weber 2004:528). However, behavioural finance theory incorporates findings from psychology and sociology into its theory and uses behavioural finance models to explain investor behaviour or market anomalies when rational models fail to provide sufficient explanations (Glaser et al 2004:527). It follows that market efficiency is relies on both the available information and the behaviour of the decision makers, which in turn are also influenced by their financial literacy levels to interpret the information. Although both the traditional finance and the behavioural finance theories explain the market’s and individual investors’ reactions to information, they fail to fully recognise the financial expertise and skills of individual investors when confronted with market information. To some extent, irrational investment decisions by uninformed investors may even affect market outcomes.

7.5.1.2 Creditors and suppliers

Creditors and suppliers need information on the organisation’s ability to meet its obligations towards current and future debt. They are also interested in the risks involved in doing business with the organisation. Creditors must determine the likelihood that they will be repaid if they advance funds to the

organisation and are well advised to monitor how these funds are being used (Benston et al 2006:18). For example, to assess risks, creditors have to at least understand the terminology used in the organisation's financial reports.

Creditors need information to estimate the probability that the organisation will be able to repay its debt and interest. Suppliers use information to evaluate the risk of a buyer not being able to pay for services and goods supplied. They are concerned about the risks and need, inter alia, financial information that is critical in evaluating the risk (Ingram et al 2005:F15). For instance, information on the organisation's cash-flow position can be effectively used to evaluate its ability to pay for services and goods supplied. Nikolai and Bazley (2003:4) concur that creditors do need accounting information for decisions to extend credit, to maintain the credit relationship or not to extend credit. The problem is that creditors and suppliers have diverse backgrounds that include different levels of financial experience and knowledge. Therefore, to be able to use the above approaches and also the financial information at hand, creditors who do not have financial knowledge will have to acquire some form of financial education or experience. According to Epstein (2007:10), if lenders cannot cope with the more challenging aspects of increasingly complex business structures and transactions, they should be educated in this regard. Such education could include formal financial education, financial short courses or informal industry-specific financial courses or workshops.

7.5.1.3 Customers

Customers' decisions to buy products from a certain company are often affected by their perception of both the quality and price of the product. However, the decision to buy may also depend on the seller's financial reputation (Ingram et al 2005:F19). Companies must take cognisance of the fact that these decisions on whether or not to purchase give customers tremendous economic power. Besides economic power, they also have "political power by filing complaints with consumer or government agencies" (Preble 2005:417). The customer also wants to be sure that the company will

be in business in the future for repair, maintenance and warranty purposes. Nowadays, some customers are also interested in the company's environmental and social involvement. The Draft Green Paper on Consumer Policy Framework (DTI 2004: 57) states that "more and more consumers are interested in the world behind the product, the production processes and the ethics of the company that produces the goods and services". Apart from advertisements, brochures and other campaigns, customers also use financial information to assess the risks or advantages of buying from specific companies. To learn more about the world behind the product or the way the company is managed, customers need to be educated in order to understand the financial information it presents.

With specific reference to customers or consumers of financial services, knowledgeable consumers who make informed choices are essential to an effective and efficient marketplace (Hilgert & Hogarth 2003:309). For instance, consumers have to seek information on the different products available in the financial services sector. In this regard, the financial services have to ensure that their customers are educated in the pros and cons of their products and services. Well-informed, financially educated consumers, who know, for example, the full range of mortgage interest rates and terms applicable in the market, will as a result make better decisions and increase their economic security. Toussaint-Comeau and Rhine (2000:4) state that changes in technology in the financial services sector have contributed substantially to the complexity associated with making sound financial decisions, which in turn challenges educators, community leaders and policy makers to bring financial literacy effectively to these individuals.

7.5.1.4 Financial analysts

Financial analysts and advisors are probably the main indirect users of financial information. Financial analysts have been characterised as both providers of private information and as information intermediaries who use financial information to prepare earnings' forecasts and buy-sell

recommendations (Stuerke 2005:9). Analysts have been assumed to serve both an information intermediary and an analysis function. Intermediaries such as security analysts and investment advisers can also act as “a pressure group on management and other bodies (eg regulatory agencies) that influences the timing or content information provided to external parties” (Foster 1986:3). In order to fulfil these different roles, financial analysts need to be highly skilled even to the extent of being financial experts in the field of financial analysis and forecasting. According to Riahi-Belkaoui (2004:135), the intermediary function, “assumes that the analysts convey to clients information gathered from the companies, such as earnings forecasts and other relevant information”. However, these forecasts and other analysed information comes at a price, intermediaries are paid for analysing and interpreting financial information for users. Presumably the analysts will have a high level of financial literacy and will thus be able to form an interface between the financial information and the decision makers. Although the analysis function requires the analyst to have the skills and knowledge to analyse companies’ financial information and provide clients, especially uninformed ones, with sound financial advice, it is still preferable that the client should also be financially literate enough to appraise the advice and act on it.

Hence, financial analysts are presumed to be informed and conversant in analysing and interpreting financial information. Benston et al (2006:40) concur that because some financial statement users may not be conversant with or understand the requirements of generally accepted accounting practices (GAAP), they can and should be able to rely on professional advisors or analysts who can analyse and interpret the financial information. This is not only true for information produced by accounting practices, but also for other market-related information. Users, even those who are financially literate, do not necessarily understand the requirements of, say, GAAP and stock exchange listing requirements. However, professional accountants are expected to be knowledgeable about the applicable requirements. In a study by Anderson (1988:444), it was established that professionals tend to treat

information differently from nonprofessionals - they are inclined to use different strategies, may attach different weights to the data and draw different conclusions. The less financially literate users of financial information may not be able to do these intricate calculations and may therefore base their decisions on the wrong interpretations of the information. One may infer that, in some instances, financial analysts form an interface or act as a bridge between the organisation and the non-professional or uninformed users of their financial information.

7.5.1.5 Employees

The recognition, especially in the UK, that employees (and their unions) may have a claim to financial information, indicated a change in the social approach to financial reporting. The *Corporate Report* and the Sandilands Report, published in the UK, both adopted the view that employees are among the most important users of company reports (ICAEW 1975:21-22). In South Africa, the King Committee identified three classes of stakeholders in an organisation. The class defined as “contractual stakeholders” includes the employees of the organisation (King Report 2002: 8). Employees are particularly interested in the company’s ability to continue as a going concern. They need to be sure that their salaries will be paid in the foreseeable future and that their pension fund and medical aid payments will be honoured. According to Blumberg (1996:7), employees and trade unions are specifically interested in information about “the stability and profitability of their employers, information which enables them to assess the ability of the enterprise to provide remuneration, retirement benefits and employment opportunities and the extent to which the company is investing in social and related issues”. It follows that besides any other information, employees need to at least understand the financial information presented by the company when they negotiate for wages, benefits and job security. Employees are also interested in the impact of their contributions, or lack of contributions, on the performance measures of the organisation.

Employees need information to determine whether the company is doing well or poorly when negotiating salary increases. Employees and labour unions therefore use financial information produced, inter alia, from the accounting process to evaluate the company's ability to compensate its employees (Ingram et al 2005:F19). For example, information on the overall company performance and the rewards that accrue to employees is essential to the successful implementation of employee share incentive schemes. Employees are usually totally reliant on the continued existence of the organisation for their livelihood. In this regard, Visser (1998:12) contends that employees often have more at stake than financial investors and therefore require financial reports tailored to their needs. In compiling these reports it would be sensible to take into account what the employees' level of understanding of financial information is. Financially uninformed employees will need more user-friendly, assimilated information on the organisation's performance and position as opposed to the information needs of the financially informed users. However, if this is not practical, employees as crucial users of financial information need to receive financial training in understanding the matters pertaining to their needs.

7.5.1.6 Regulators

In general, regulatory bodies (eg SAICA, FASB & IASB) fulfil a critical role in enforcing rules, imposing sanctions and managing crises in the public interest. However, certain interest groups demand regulation to protect the interests of their individual members. With regard to the regulation of financial information, specifically accounting information, the standard setters and legislators need to achieve certain desired public and private goals. According to Riahi-Belkaoui (2004:136), these goals include "fairness of reporting, information symmetry and the protection of investors, to name only a few". Deegan and Unerman (2006:34) explain that because financial reports are often used as a source of information for decision makers contemplating transferring resources to the reporting organisation, it is arguably essential that certain rules be put in place to govern how the information should be compiled. The problem is that more regulations tend to make financial reports more complex and difficult to

understand (see Ch 5, sec 5.6). It would contribute to the general usefulness of financial information if regulators were to make an effort to take the less financially literate users into account when they set the rules and regulations for the presentation of financial information.

The regulation of financial information, by way of releasing accounting standards began in the 1970s, and has increased since then. The standard-setting process and the arguments for or against the regulation of accounting information will be discussed in more detail in the next chapter. The focus in this section is on regulators as users of financial information as well as the impact of regulation on other users of financial information, especially those who lack the financial background to interpret it.

Although there are many other sources of financial information, the regulation of financial information impacts specifically on the numbers presented in annual financial statements. Deegan and Unerman (2006:32) state clearly that users of financial reports should have “a sound working knowledge of the various accounting standards and other regulations because, arguably, without such a knowledge it can be difficult (or perhaps near impossible) to interpret what the reports are actually reflecting”. Hence this idealistic statement could imply that users of financial reports are expected not only to be financially literate, but also to be knowledgeable on the myriad of reporting standards. The fact is that very few users have a working knowledge of the various accounting standards and other regulations. Users of financial statements are not necessarily in the financial or accounting business, and may therefore not have the time or inclination to study the reporting standards. In view of the diversity of financial information users, it seems almost impossible for financial regulators to cater for all the different decision makers’ information needs, but that individuals who use these statements need to become more financially informed about the way this information should be presented.

7.5.1.7 Government officials and agencies

Government officials and agencies receive financial information from many different organisations and, in turn, have to provide information on how they have utilised taxpayers' money. Because governments require businesses, inter alia, to purchase licences for selling goods and services and to pay taxes for various services, organisations are required to provide information to government and its agencies (Ingram et al 2005:F19). If the government officials and agencies do not know how to provide this information or understand the financial information supplied to them, taxpayers' money may be wasted and service delivery may deteriorate. Taxes, for example, can be determined, inter alia, by either the organisation's profitability or on the basis of its turnover or payroll. Consequently, government officials or agencies use financial information to make taxation and regulatory decisions, which demonstrates that these users need to have enough financial knowledge to be able to calculate the correct amounts payable to the state.

In addition to using financial information to raise taxes and make economic forecasts for planning at provincial and national levels, government also has a regulatory function with regard to financial information. Government has to ensure that the requirements of, for example, the Companies Act and PFMA are adhered to and that the interests of shareholders, creditors and the public are protected. To fulfil this regulatory role, government officials commissioned to this task will be better off if they have the financial background and experience to evaluate the financial reports of private and public organisations. In addition, government officials also have to prepare their own financial reports for their departments, compile budgets and compare actual income and expenditure with the budgeted amounts. Thus, the economy as a whole can benefit from having financially literate officials at different decision-making levels.

7.5.1.8 The public

The promotion of a sound relationship between the organisation and its social environment attracted a great deal of attention during the 1970s, especially in the USA and the UK. The philosophy of the *Corporate Report*, namely that of a social contract illustrates the vital relationship between the organisation and the public. According to Stanton (1997:694), “public accountability derives from a reporting entity’s existence being dependent on the approval of the community in which it operates, and from the legal and operational privileges extended to it by that community, and by its co-operative role in that community”. If there is supposed to be a social contract between the organisation and the public, the public has to at least understand the financial information pertaining to the specific organisation and how it impacts on the community. For this to happen, they require at least a basic level of financial literacy. This clearly indicates that the organisation cannot be seen in isolation, but rather as part of the social environment in which it operates and that the financial information presented to the public should enlighten them on the performance of the organisation.

With specific reference to accounting information, the Framework for the Preparation and Presentation of Financial Statement (AC 000) states that because organisations affect members of the public in many ways, financial statements may assist the public by providing information about trends, activities and recent developments in the organisation. If, for example, information on trends or developments reflected in the financial statements indicates future job losses or environmental changes, the community should be able to intervene if they are able to pick such information up from these statements. Benston and Bromwich (2006:20) concur that “the general public is affected by enterprises in a wide variety of ways, and accounting statements may help provide relevant information”. The usefulness of entity financial reports to the general public, however, depends on their understanding of the financial information presented in, inter alia, general purpose financial statements which, in turn, will depend on their level of financial literacy. To

bridge the gap between the public as users of financial information and the financial reports, the public need to increase their financial literacy levels, and the reports need to be presented in a more simplistic and understandable format.

7.5.2 Internal users

The internal users of financial information constitute managers (including owner-managers) and board members. Although employees can also be regarded as internal users, they were discussed under external users (sec 7.5.1.5) because of their contractual relationship with the organisation.

7.5.2.1 Managers

The information requirements of managers relate to their position in the organisation's hierarchy or to the particular function they perform. Top-level management responsible for the strategic planning of the organisation need summarised, processed and analysed internal and external information (Bodnar & Hopwood 2004:2-3). However, even if these managers have all the information at their disposal, but are not financially literate, they would be wise to either use the experience of financial experts or acquire financial knowledge through formal or informal education or training.

Top management usually need "information for evaluating performance, for establishing goals, and for devising plans to meet goals" (Ingram et al 2005:M4). Middle managers, however, are responsible for tactical planning and need information that is processed to indicate performance variances, trends in production or service delivery and the reasons thereof. Functional and divisional managers need "timely and detailed information for evaluating performance and implementing plans", and middle managers need "very timely and detailed information for day-to-day decisions to achieve company goals" (Ingram et al 2005: M4). Lower-level management, which is responsible for operational activities and control, need information on specific tasks and transactions. Thus, it is evident that annual financial statements will not fulfil

the information needs of managers; they also need information beyond that produced by the organisation's financial department. In the same way as the information needs at different levels of management vary, so too will the required levels of financial knowledge also differ. Financial training for managers in organisations can be designed to fit the specific management level and the decision-making responsibility at that level. An analysis of the financial literacy needs at these different levels may assist educators to compile in-house financial training courses.

Management also require information on the different functional areas in the organisation, such as marketing, manufacturing and human resource information. They can use a computer-based management information system (MIS) to provide them with decision-oriented information. The MIS can be complemented by a management reporting system (MRS), which provides the internal financial information needed by end-users to manage a business. According to Hall (2007:11), "system designers, including accountants, must balance the desires of internal users against legal and economic concerns such as adequate control and security, proper accountability, and the cost of providing alternative forms of information." The cost of providing these alternative forms of information, however, is not supposed to exceed the benefits managers derive from it. Apart from needing information to run the organisation, according to Rees (1995:56), managers are also "crucially concerned with accounting disclosures as it impinges on their remuneration and job security". For instance, some managers earn bonuses on the basis of the profits reflected in financial statements. Managers are major users of both external and internal information but may not always have the financial knowledge to assimilate the financial information needed for their purposes.

If managers are dissatisfied with the information produced by the finance department they may resort to producing their own information or requesting it from the information technology personnel, or a combination of both. This can be precarious, especially if they lack the necessary financial knowledge or

experience to make an informed opinion on the validity of the information produced by these other sources. Pierce and O'Dea (2003:8) state that managers tend to either recast the information into a more digestible or user-friendly format (eg transforming tables of figures into graphs or charts) or prepare extra analysis (such as quality cost or risk analysis). Where managers are compelled to turn to alternative sources of information, this could be because either repeated requests to the financial department have failed or a perceived accounting jargon barrier deters managers from asking. "In many cases, managers perceived that the information they are given is driven primarily by accounting rules and procedures, rather than a judgement of user needs ('you don't maximise profits by producing reports')" (Pierce & O'Dea 2003:8). The mere production of reports to adhere to certain standards or procedures may not necessarily satisfy the user's decision-making requirements. One could infer from the above that, in many instances, there is an expectation gap between the financial information prepared by the finance department and the requirements of managers at different levels of the organisation. In order to narrow this expectation gap, it would be beneficial if managers could communicate their information requirements to the finance department and if this department could provide them with the required information.

Managers need timely, flexible and more holistic financial information designed for decision making. They require more than the traditional bottom-line number produced by the financial statements. In addition, they need information on key performance drivers as well as information on social and environmental matters. They also require this information in an understandable and aggregated format. According to McMonnies (1988:27), one should keep in mind that although not all managers are equally numerate, they are responsible for running their entity and therefore need to understand what their information system is telling them. He further attests to the fact that many of them will find it helpful if the information on the financial position or outlook is presented descriptively or graphically rather than in columns of figures.

Descriptive information can be used to explain certain amounts or what the financial impact of certain activities has been, especially to those managers who are not that familiar with financial terminology and computations. Evidently, in many instances, there is a perceived gap between the quality of information presented to management and their level of understanding the information they do receive.

7.5.2.2 Board members

An organisation's board is essentially a collective decision-making body and board members or directors in the case of companies ultimately remain responsible for the organisation and any actions taken on its behalf. In explaining one of the complex roles of the board, Wilkinson (2006:5) states that "the board is required to be sufficiently knowledgeable about the workings of the company to be answerable for its actions, yet be able to stand back from the day-to-day management of the company and retain an objective and holistic view". Regarding financial matters, the board must approve the financial strategy, business plans, short-term and long-term budgets, investment policy, issue of shares, loan capital, financial controls, capital expenditure, etc. In a nutshell, "the key risk areas and the key performance indicators must be identified, as well as how those risks are to be managed" (King Report 2002:18). It is evident that in as far as good governance is concerned, boards must add value to the organisation and be accountable for their actions, not only to the shareholders, but to all the stakeholders too, including the broader society. Basically, they are responsible for ensuring that all the stakeholders' interests are taken care of. However, boards can only fulfil these responsibilities if they have the ability to understand and interpret the financial information supplied to them.

It is imperative for board members to receive both financial and nonfinancial indicators to be able to monitor the organisation's performance. In a survey by Deloitte & Touche Tohmatsu (2007:11), it was observed that (1) board members perceive the growing importance of nonfinancial performance

indicators; (2) there is a gap between their current needs and their capabilities related to nonfinancial indicators; and (3) they see room for improvement in both their nonfinancial and, to a lesser extent, their financial reporting performance indicator programmes. Board members ultimately seek information on the way the company has performed with their finances, but also their service delivery; and how they intend to perform in future. In the conclusion to this survey, boards as well as management teams concur that “the information they need is not the information they are receiving”. The reason for this response may be that they do not know how to interpret and use the available information or that the information received is too technical in nature. However, some board members may not even know what financial information they seek. The problem is that one needs to at least have some kind of financial consciousness to be able to assess the quality of the information one receives. According to Redelinghuys (2007:18), part of the problem in South African boards is the fact that many of the nonexecutive directors do not have much experience in managing an organisation, and lack the appropriate, practical insight into how corporate strategy works. In the light of their key strategic role in governing the organisation, it is imperative that board members not only receive relevant, timely and comprehensive financial information, but also have the expertise and know-how to use it. Where a scarcity of financial know-how is identified among board members a capacity-building programme could help to improve the board’s decision-making function.

Board members are not only users of financial information, but in terms of legislation, are also responsible for preparing the annual financial statements according to applicable accounting standards. According to Coppin (2007:15), the dilemma facing board members is that “as these standards have become more complex it becomes more difficult for directors to ensure that they have complied with all the requirements”. Board members differ in their background, work experience and expertise; and are not always up to speed on what financial standards or legislation require. Although board members can use the

expertise of, inter alia, their audit committee and financial department, ordinary board members need to realise that they have a responsibility and to some extent are liable for the financial reports they send out to their stakeholders. They are supposed to study these reports with due diligence and ask the right questions to try to ensure that the numbers are trustworthy and provide a sound basis for decision making for all the users of the information. If they lack a basic financial awareness, they will not even realise that there might be a problem and know what kind of questions to ask.

In view of numerous corporate accounting and reporting irregularities, it became imperative for board members and other decision makers on all levels of the organisation, to acquire the skills and know-how to understand and interpret basic financial information. Stuart (2004:16) contends that “regulators have made it clear that board members can no longer review financial reports casually and accept management’s explanations without question”. In her opinion (2004:16), board members who do not take steps to understand basic yet critical accounting principles run the risk of litigation by irate shareholders. As Pointer and Stillman (2004:24) aptly put it: “Gone are the days when a few board members could do all the financial heavy-lifting. Governance quality ultimately depends on the competence of everyone sitting at the boardroom table – all must be financially literate.” It follows that financial literacy also encompasses the fact that all members of a board are accountable for the board’s decisions. The renewed emphasis on corporate governance, with, inter alia, the introduction of the Sarbanes-Oxley (SOX) Act of 2002 in the USA and the second King Report (2002) in South Africa, accentuated the accountability of board members. Director competencies such as their knowledge, experience, education and training, are a major condition for board success and achieving company goals (Ali & Gregoriou 2006:509). The Blue Ribbon Commission’s Report on Director Professionalism (NACD 2001:24) lists financial literacy as one of the personal qualities sought in all directors. It would seem that financial literacy can be regarded as a basic competency needed to ensure the successful governance of a company or government institution.

There may be a perception among board members that only the audit committee members need to be financial literate. Section 407 of SOX (2002) even requires that at least one member of the audit committee should be a financial expert. Although the audit committee can scrutinise the financial statements and review the internal controls, risk management and the effectiveness of the internal audit function (Ali & Gregoriou 2006:310), the board members are still responsible for approving these systems and functions. Hence the audit committee requires the financial literacy to ensure that “the economic condition of the firm is understood by the board and accurately reflected in financial reports”, but the audit committee should only “aid the board by overseeing the firm’s risk and control environment and monitoring the financial reporting process” (Grace & Hauptert 2003). The audit committee assists the board with financial matters, but board members remain accountable for their decisions. According to Grace and Hauptert (2003) “a board that wakes up on Thursday and finds the corporation cannot make payroll on Friday is financially illiterate ...”. Board members can delegate some financial activities to the audit committee, but they cannot abdicate their financial responsibilities.

Board members, directors of companies, directors in government organisations and managers are not the only individuals making financial decisions. However, these decision makers are accountable for their actions to shareholders, employees and the public. They need to at least be financially literate to enable them to understand and interpret the financial information presented to them by accountants, auditors and the audit committee. If they are financially literate, their confidence to ask questions pertaining to the financial information presented to them is likely to improve. Information on the financial literacy challenges facing decision makers in South Africa was discussed in chapter 2 and will also form part of the empirical research in chapters 9 and 10.

7.6 THE MANUFACTURED CONSCIOUSNESS OF USERS

One could argue that the reason why some of the above-mentioned users of financial information may not ask for more and better information is because they might have acquired a *manufactured consciousness*, about the information they receive from management. A manufactured consciousness implies that individuals embrace the information they receive from their superiors without questioning its authenticity or meaning. According to Riahi-Belkaoui (2004:68), management manufacture the consciousness of users through the selective dissemination of information which may contribute to class brainwashing and collective hypnosis, or social conditioning. In this scenario, the selective dissemination of information by management can be regarded as an interface between the information prepared by management and the users thereof. Some professional investors believe that corporate managers tend to disclose their company's performance in the most favourable light and that they commonly defer from disclosing problems in the organisation (AICPA 1994:2). Hence, when management succeed in conveying their expectations and beliefs to shareholders and other users, these users tend not to question management's motives or methods of disseminating information. One may deduce that managers might think twice about trying to brainwash users if they know that these users are financially knowledgeable enough to query the financial information presented to them.

Management can use different methods, such as annual financial reports, management reports and press releases to propagate information useful for their own purposes. However, it is not that easy for management to succeed in this kind of obfuscation of information if the users are financially inclined and have a financial awareness. A manufactured consciousness may even be replaced by a "false consciousness" if management use methods such as income smoothing or even fraudulent financial reporting to brainwash their users. Decision makers therefore require at least minimal financial knowledge, as well as moral and empirical competencies to become fully informed. It

follows that the only way that financial information users can safeguard themselves against this kind of domination is to become more financially literate and to rather acquire a financial consciousness than a manufactured consciousness.

7.7 THE USER PRIMACY PRINCIPLE

Conceptual framework projects identify generic groups of users. The groups of users mainly constitute external users (see sec 7.5.1) and internal users (sec 7.5.2). But, even if the decision-usefulness objective of financial information is taken into account, these projects generally fail to identify the users concerned, to analyse their right to information and to develop an understanding of the dimensions of information they may require (Stanton 1997:684). Although the user primacy principle acknowledges that the interests of noninvestors are outweighed by the interests of investors (FASB 1978:par 34), the conceptual framework projects contain claims to rights by noninvestor users to published financial information. According to Riahi-Belkaoui (2004:263), two versions of the user primacy principle have been advocated in the accounting literature, namely the *basic user primacy principle* and the *extended user primacy principle*.

The *basic user primacy principle* focuses on the needs of users with limited abilities, that is: “those who have limited authority, ability, or resources to obtain information and who rely on financial statements as their principal source of information about an enterprise’s economic activities” (FASB 1978). The limited abilities referred to include the limited ability of users to understand and use financial information. However, the *extended user primacy principle* focuses on the information needs of the more sophisticated users, which normally includes present and potential investors and creditors, with a higher degree of financial literacy. It is contestable whether all the stakeholders have a legal right to information as opposed to being at liberty to access the

information. According to Stanton (1997:687), the legal right to information confers a duty on the preparers of financial information to consider those with such a right, whereas the liberty to access the same information does not confer a duty on the preparers to consider the needs of those possessing only a liberty of access. Access to financial information is therefore extended to all the organisation's stakeholders (not only those with a legal right) and may include those who are more financially literate as well as those who are less financially literate.

One should bear in mind, however, that a variety of noninvestor users of published financial information have moral rights to that information because of the existence of both implicit and explicit contracts binding the reporting entity to these stakeholders; and then there is also a moral contract between the entity and the society it serves (Stanton 1997:699). This moral contract with society implies that everyone is entitled to information on the organisation. This results in a serious difficulty for the standard setter and the preparers of financial reports to communicate with both, informed and uninformed users, that is, financially literate and financially illiterate users, by means of the same set of reports. According to Goldberg (2001:79), they will have to either use something like common language terminology so that the receiver can acquire an approximate understanding of their message, or require the receiver to study or master the specialised or technical vocabulary used by the subject specialists or technicians. Because of the different rights of both laypeople and specialists to the same set of information and the highly technical nature of financial information, there seems to be a need for some form of financial literacy as an interface to bridge this communication gap.

7.8 SUMMARY

Notwithstanding the lengthy debates in the financial literature on the different approaches to the presentation of financial information, it is clear that the

decision-usefulness or user-need approach becomes more important as the rights of groups and individuals nowadays attract more attention. Behavioural research on how individuals deal with uncertainty and make judgements on the basis of cues from the environment or by using heuristics, is particularly relevant when one contemplates how financially literate versus financially illiterate individuals take decisions. Knowledge of the way the different users of financial information make their decisions could be used to help them improve their decision-making skills or even to improve the way financial information is presented to them.

Decision makers as users of financial information differ vastly in their relationship with the organisation and their information needs. Their level of financial literacy and sophistication regarding the interpretation of financial information differs not only from group to group but also among the individuals in a certain group. Although there are benefits to financial information being presented according to prescriptive standards, there are nevertheless issues such as the increased complexity of these reports that make it difficult for the financially illiterate user to understand and interpret it. It would thus be advantageous for individual decision makers to acquire an evolving consciousness about the usefulness of the financial information available for decision making in organisations. However, the organisation's strength as a whole will ultimately be determined by the positive relationships between these individual financially conscious decision makers, the organisation as a whole and the greater economic environment.

The complexity of the financial information and the different cognitive abilities of its users are incorporated into the financial literacy interface model, illustrated in chapter 8.

CHAPTER 8

A FINANCIAL LITERACY INTERFACE MODEL

There has never been a more important time for everyone to improve their financial capability. New ways to earn and spend money, together with increasingly complex financial services make it essential for individuals to gain the necessary skills, knowledge and understanding to make informed decisions and effective choices regarding their finances.

(FSA & BSA 2006:3)

8.1 INTRODUCTION

The increased volume and complexity of financial information were discussed in chapter 5. The changing global business arena, with its abundance of financial and other information sources, has resulted in a need for information to be processed, understood and analysed by individuals who cannot necessarily make an authentic connection between the financial numbers and the real business world context. In terms of developing a financial literacy interface model, the challenge is to coherently find contexts that are sufficiently relevant to both the flow of information (matter) and the users' ability to derive meaning (mind) from the information.

The purpose of this chapter is to develop a model that uses the systems theory as the basis to explain the research process and to draw attention to the intricate relationships between the financial information system and the human behaviour system. In view of the advantages of the systems theory (ch 2), a model to capture and explain the complexities and dimensions of the financial literacy culture is used in this chapter. The model to be constructed therefore adopts a systems or holistic view of the different variables needed to solve both the financial literacy gap and the information gap to facilitate better decision making in organisations. By using the Mitroff model (see ch 1), different phases of problem solving are identified and various research approaches highlighted (Koornhof 2001:255). The assumptions already made

about the financial literacy interface construct to link the attributes of the financial information system and the cognitive abilities of decision makers will be used in the perceived model. However, to establish the authenticity of the model, these assumptions also need to be empirically validated. Consequently, on the basis of empirical research results, which constitute the responses to interviews and questionnaire surveys (see chs 9 & 10), the model, will, if required, be adjusted and refined.

This chapter commences with a background discussion on the basic financial literacy proficiencies necessary to form an interface between the financial information system and decision makers. The assumptions and conditions underpinning the basic financial literacy proficiencies needed for decision making in business and other organisations are briefly explained. The importance of a financial knowledge creation process necessary to form the financial literacy interface used in the model is then delineated. The role of a conceptual model to derive meaning from the financial literacy construct is discussed. In developing a financial literacy interface model, the systems view of problem solving, based on that of Mitroff et al (1974) is then used. The methodology used by these authors to explain the problem-solving sequence followed in the thesis will subsequently be addressed, followed by the development and outcomes of the proposed financial literacy model.

8.2 BASIC FINANCIAL LITERACY PROFICIENCIES

From the discussions in previous chapters, one may assume that for individuals to participate in today's financial marketplace, they need a certain level of financial literacy in order to make sound economic decisions. Although it is recognised that individuals, especially consumers, move along a financial literacy continuum and require certain financial proficiencies, the focus of this study is on the financial capabilities of individuals in decision-making positions in organisations. As elsewhere in the world, South Africa also offers an

abundance of financial education programmes as described in chapter 2 of this study. However, according to Piprek et al (2004:39), these programmes remain “... inadequate and practitioners perceive financial literacy levels as unacceptably low particularly in poor communities”. Because organisations employ individuals from different communities or social backgrounds, it is vital for the organisation to take cognisance of its employees’ different levels of financial literacy. Most of the financial literacy programmes, as depicted in chapter 2, however are aimed at consumer level and not specifically other role players actively participating in decision making in the business organisation.

Although this study focuses on decision makers in organisations, individuals are first introduced to the financial world by participating in the economy as consumers. Thus, prior to becoming decision makers in business organisations, individuals are foremost consumers, and one may assume that they will have to have basic consumer literacy before participating in an organisation’s decision-making sphere. Hence before embarking on the development of a financial literacy model for decision makers in organisations, it is necessary to first address the topics essential to the education of target consumer audiences. Knowledge of some of these topics, say, budgeting, using mainstream banking, credit card usage and small business finance, are just as important for decision makers in organisations as for consumers. While consumers may, in this sense, be defined as individuals who buy goods or use services for personal fulfilment, decision makers in organisations can also be defined as individuals who buy goods and services to meet organisational goals. Table 8.1 illustrates the primary financial literacy topics for specific target audiences as identified in the research of Toussaint-Comeau and Rhine (2000:10).

Table 8.1: Topics and target consumer groups for financial literacy education

Topic	Target consumers
Budgeting/personal finances/record-keeping. Obtaining or maintaining a checking account. Using mainstream banking.	Lower income Elderly/widower Students Rebanked Immigrants/minorities
Assessing the relative costs (or benefits) of using financial services	Less educated/lower income/minorities
Small business finance/planning	Small business owners/contractors Women business owners/entrepreneurs
Home purchase counselling	Homebuyers, those in transition from public housing
Home loan products Reverse mortgage Home equity Home expansion Home mortgage	Older, low-to-moderate income home-owners Homeowners Homeowners First-time homebuyers and homeowners
Consumer credit/financial products Financing durable goods Credit/charge cards ATM cards/machines usage Savings accounts Special savings (eg Individual Development Accounts or matching funds programmes) Retirement and investment	All College students, those with credit problems Checking accounts holders All, children Lower income Employees
Other Credit reports Predatory lending Identity thefts Consumer protection	All Older, lower income, marginal borrowers with imperfect credit All All

Source: Toussaint-Comeau & Rhine (2000:10)

From table 8.1, one may infer that the topics relating to budgeting, personal finance and record-keeping are more important to lower-income individuals and students. These topics, however, are vital in conducting business in an organisational set-up. In the same study by Toussaint-Comeau and Rhine (2000:4), the issue of culture was also identified as one of the recurring themes. According to their survey, many of the ethnically/racially diverse participants were reluctant to engage in a financial relationship with banks, which implies that a percentage of the workforce of any organisation may, in addition to having other financial shortcomings, be unbanked. This means that

they do not even have a bank account. It follows that in establishing a financial literacy model it is imperative to take cognisance of the culturally diverse South African workforce in which these decision makers operate and endeavour to break down the barriers to financial inclusion. It is obvious therefore that the crucial first step in constructing a financial literacy model is to identify the levels of decision making in an organisation and the subject areas vital to them. In order to further develop financial literacy education in organisations, it will be imperative to establish the financial literacy levels at which employees enter the organisation.

Currently, financial literacy may be regarded as a gateway to the business world for many economically disadvantaged individuals. With regard to consumers as well as organisational decision makers, "... financial knowledge has become not just a convenience but an essential survival tool" (Jacob, Hudson & Bush 2000:7). By contrast, financial illiteracy contributes to poor financial decision making that can be detrimental to both consumers and organisations. Although the responsibility to acquire financial well-being rests on the shoulders of individuals, employers also need to realise that employees' expectations have changed and that the success of organisations depends on the way every individual makes an impact on the numbers. Berman (2001) contends that in the more competitive and faster-paced business environment, employees at many more levels in the organisation have bottom-line accountability. This implies that financial decision making is not only the sole responsibility of the organisation's financial department, but also encompasses the need to utilise the financial intelligence of the whole workforce. The tea lady, for example, has to take responsibility for the inventory entrusted to her and realise the financial implications if any stock is wasted or mismanaged. The collective financial knowledge of everyone in the organisation contributes to the overall achievement of their financial targets.

The financial literacy interface provides an opportunity window for employees to break through their fears and concerns in using financial figures and

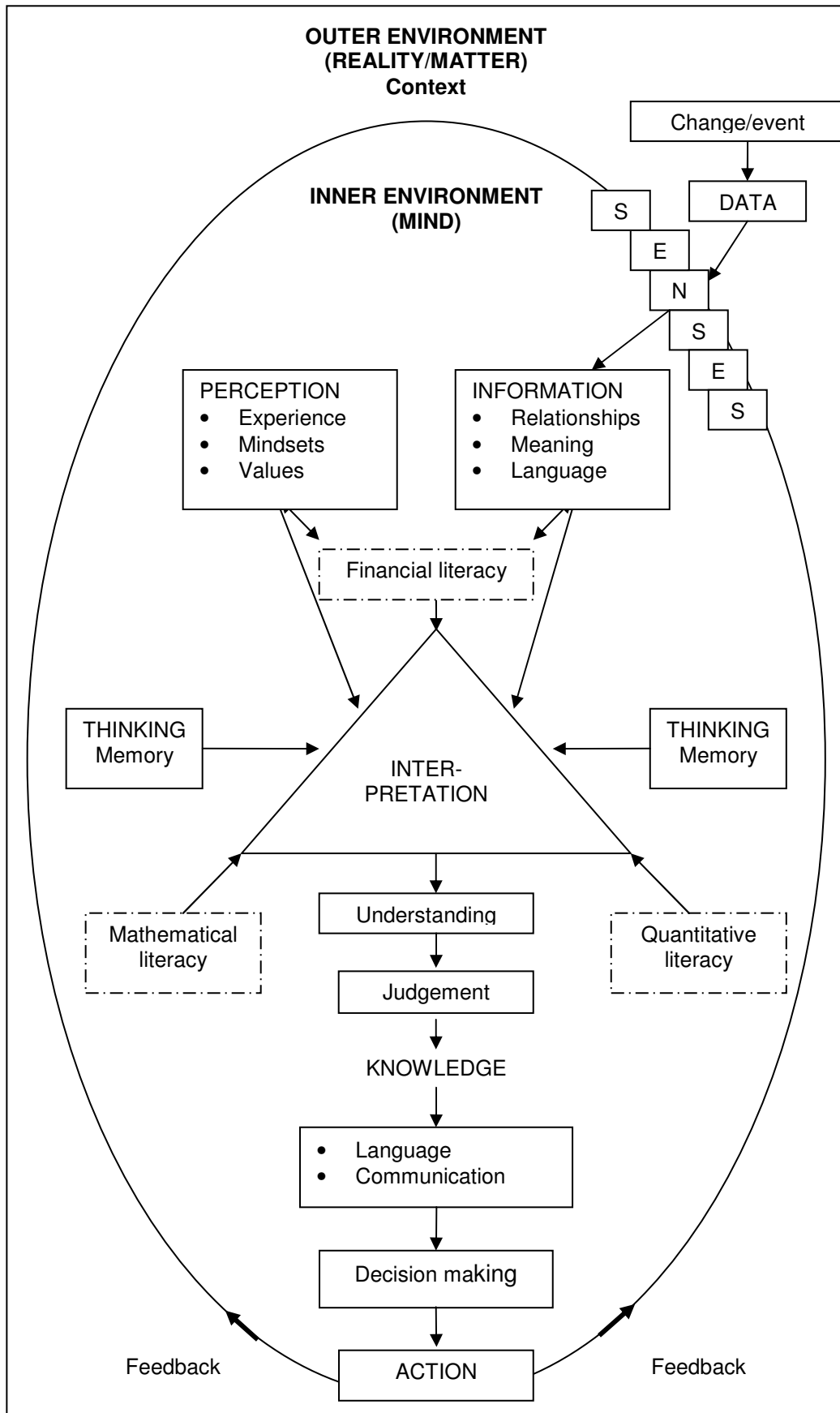
language. For the purpose of this study, employees can be categorised into different decision-making levels such as senior management, middle management and lower management, including ordinary employees.

8.3 THE FINANCIAL KNOWLEDGE CREATION PROCESS

To propose a financial literacy interface model between the financial information system and decision makers requires decision makers to achieve financial literacy appropriate to their responsibility levels. Hence becoming financially literate involves a financial knowledge creation process. But, one should keep in mind that “knowing is a process based on the unknown” (Bohm 1994:178). This implies that at the lowest level of becoming financially literate, a person may be in a state of total financial ignorance, they may even have a financial phobia – that is, they shy away from anything to do with financial information. Furthermore, organisations are sometimes structured “so as to enforce mandatory ignorance by the efforts of special personnel whose roles involve controlling information flow” (Smithson 1989:251). Hence, in some instances, the financial departments in organisations may well be the ones to obstruct the financial information flow, to cause financial ignorance.

The knowledge creation process ultimately requires individuals to have the ability to express their understanding of the quantitative and qualitative financial information coherently, which in turn represents the feedback action necessary to complete the process. The knowledge creation process as designed by Gouws (2001) and portrayed in figure 8.1, indicates that the learning process starts with experiencing the outer environment, which represents the above-mentioned context necessary for quantitative literacy practice. Events experienced in the outer environment, the organisation’s environment in particular, is ultimately transformed into information by the senses. The information is interpreted by the concurrence of perception and thinking.

Figure 8.1: The knowledge creation process



Source: Adapted from Gouws (2001)

The cognitive process of interpreting financial information or “making sense” of it as depicted in figure 8.1, leads to the understanding thereof and the inference of an enlightened judgement, which enables the individual to make a decision. The decision-making process should also result in some form of action which has a continuous feedback flow to the senses of the decision maker and the outer environment. The actions taken by financially literate decision makers may differ from those taken by financially illiterate ones, resulting in different methods of feedback.

Although new knowledge always begins with an individual, it is important that such an “individual’s personal knowledge is transformed into organisational knowledge valuable to the company as a whole” (Nonaka 1991:97). The organisation or outer environment (see fig 8.1) will only benefit from the individual’s knowledge if a proper feedback process is in place. For instance, investors’ actions, whether they decide to buy or sell the company’s shares, will provide the company with feedback on their perception of the way the company performs in relation to previous periods or other organisations in a similar environment.

In the case of creating financial knowledge in the inner environment (mind), the process as illustrated above (fig 8.1), is highly dependent on the interpreter’s mathematical literacy, quantitative literacy and ultimately financial literacy (see ch 6). In other words, they need to have adequate numeracy skills. These skills make possible creative and logic reasoning about events in the real financial world context. In the knowledge creation process “thinking” plays an important role in the interpretation of information and perceptions. While thinking implies a present activity, it does not disappear, but leaves behind “thought”, which gives one “vast amounts of connected, logically interrelated information” (Bohm 1994:8, 94). One may infer that the interpretation of financial information is therefore highly dependent on how the mind attributes various qualities to the information.

In creating financial knowledge, the emphasis should not only be on conceptual knowledge but also on the individual's perceptions and experiences of the financial world, how he or she thinks about it. According to Slabbert and Gouws (2006:346): "With the phronesis conception of knowledge, the learner perceives all the features of his experiences through an awareness of all the relevant particulars of a situation he judges as relevant." Phronesis, usually translated as *practical wisdom* involves the learner not only acquiring financial skills, but also being able to apply them in the real economy, to gain the experience to determine the mode of action to effect change. In business there is a continuous interaction with others, which usually occurs in a specific context demanding a certain cognitive ability to interpret not only the information but also the context itself. One could therefore infer that it would be difficult, albeit impossible, to create a sound financial knowledge base outside the concrete realities of practical financial events and experiences. The financial knowledge creation process has to include the teaching of how to act in a particular financial situation in order to enhance the prosperity of the organisation as a whole. Financial literacy training therefore needs to be contextualised and cannot be done without considering the influences of the greater financial world.

The process of understanding and constructing the financial literacy interface in the context of the business environment assumes an interpretivist/constructivist theoretical paradigm. According to Henning (2004:20): "The type of knowledge frameworks that drive society, also known as its discourses, become key role players in the interpretive project." She further comments that the interpretive researcher looks for the frames that shape the meaning and that researchers in this paradigm are extremely sensitive to the role of context. The financial literacy phenomenon can therefore only be interpreted if the influence of the business world and its information systems is seen in context. In figure 8.1, the foundational assumption is that knowledge is gained through social construction such as experience, attitudes, relationships, language and interpretation.

8.4 THE ROLE OF A CONCEPTUAL MODEL

When scientific statements (definitions, hypotheses or observation statements) are integrated into conceptual frameworks this results in familiar structures of science, namely typologies, theories and models, in which concepts acquire meaning or even new meaning (Mouton & Marais 1990:60&136). Models, as a type of conceptual framework, not only assist in classifying scientific statements, but also suggest new relationships between observations and hypotheses. A model's most common basic function is heuristic - in other words, "discovering or 'exposing' certain relationships between concepts" (De Vos, Strydom, Fouché & Delport 2005:35). A model attempts to illustrate the dynamic nature of the relationships between different aspects of the concept. The model introduced in this study depicts the relationship between the financial information system and the human behaviour system. Because these two systems consist of different levels of involvedness, the relationship between them also becomes complicated. Henning (2004:26) further explains that a theoretical model anchors one's research in the literature. This emphasises the significance of the researcher's interpretation of the literature review and gained knowledge in a specific domain.

Apart from the fact that models can be used to suggest new areas of research, the main characteristics of a conceptual model are summarised as follows by Gorell, in Mouton and Marais (1990:141):

1. *Models identify central problems or questions concerning the phenomenon that ought to be investigated.*

The financial literacy interface model identifies the gap between the financial information system and the abilities of decision makers to understand and use the information for decision-making purposes as a central problem that ought to be investigated.

2. *Models limit, isolate, simplify, and systematise the domain that is investigated.*

The proposed model limits the domain to financial information in particular and to financial decision makers in organisations. While other interfaces may have been identified to link the financial information system to the human behaviour system, a financial literacy interface was isolated as such a possible link.

3. *Models provide a new language game or universe of discourse within which the phenomenon may be discussed.*

The term *financial literacy interface* is introduced to discuss a way to bridge the gap between financial information and decision makers. The discourse of the financial literacy phenomenon uses terms such as financial knowledge, financial intelligence, financial consciousness, mathematical literacy and quantitative literacy.

4. *Models provide explanation sketches and the means for making predictions.*

The financial interface model is explained by means of a schematic step-like presentation of the different levels of financial information and the different levels of cognitive abilities of the decision makers.

Based on these four characteristics, the proposed financial literacy model identifies the financial literacy gap as a central problem concerning the relationship between the financial information and its users. It further limits the domain to the attributes of financial information and capabilities of decision makers in organisations to use it. With regard to the “universe of discourse”, the meaning of terms used in slightly new or different ways to discuss the financial literacy concept is explained. By suggesting certain relationships between the variables, the model explains, inter alia, a certain level of financial literacy necessary to use financial information for sound decision making. A

step-like approach to illustrate the relationship between the growing complexities of the variables is adopted.

An appropriate example of a conceptual framework that can be used as a basis for a model in the financial literacy field is the *Adult Financial Capability Framework* developed by the Financial Services Authority and the Basic Skills Agency in the UK. The framework (BSA & FSA 2006:4) has the following three interlinked sections, which can also be related to the educational objectives of Beard's teaching model discussed in chapter 6 of this thesis:

- (1) *Financial knowledge and understanding.* Financial knowledge and understanding of key financial terminology and concepts is essential to deal with everyday financial matters and to make the right financial decisions.
- (2) *Financial skills and competence.* Financial skills and competence enable people to apply knowledge and understanding of financial matters across a range of contexts including both expected and unexpected situations.
- (3) *Financial responsibility.* Financial responsibility with regard to decision makers in organisations is not only the ability to appreciate the wider impact of financial decisions on the organisation's performance and profitability but also on the broader community and to also consider social and ethical issues.

This framework has three levels for each one of the above-mentioned sections:

- (a) *Basic understanding and developing confidence.* Basic speaking, listening, reading and writing skills underpin this level. Chapter 2 of this study discussed some of the problems faced by South African organisations when their managers and other decision makers lack these basic competencies. According to Mbanjwa (2008:1): "One in

three municipal councillors cannot read or write, and more lack basic competencies to run local government finances.” Apart from basic literacy, learners, inter alia, also need to recognise different types of money or ways of payment; understand the difference between essential and nonessential spending, and recognise different income generation modes. They need to be able to gather financial information, conduct some form of record keeping and understand different ways of financial planning, such as saving and budgeting. Learners must also be aware of risks when money is borrowed and realise the consequences of losing money. In an organisation, employees will require this basic level of financial understanding before they can move to higher levels of financial literacy and numeracy.

- (b) *Developing competence and confidence.* At this level, learners in both their personal capacity and acting as employees in an organisation, have to build on the competencies acquired in the previous level and act with more confidence when making financial decisions. For example, with regard to their personal finances as well as the organisation’s finances they should at least be able to investigate different forms of payment and compare them. They have to understand how earnings and salaries are calculated and explore the implications of tax deductions and retirement provision. They must be able to check financial records, such as bank statements and other bills. They further need to begin to understand the difference between long-term and short-term planning and consider the use of budgets to conduct planning. They have to know the principles of risk and return and explore how different types of savings and investments have different levels of risk.
- (c) *Extending competence and confidence.* Organisations can benefit from having employees who possess extended financial competence and confidence. At this level, learners have to, inter alia, understand the

implications of different forms of credit and the implications of borrowing money. They should also understand how organisations are financed and how they contribute to local and national taxation. Learners need to be able to gather, compare and contrast information, for example, reconcile their or the organisation’s bank statements and other bills. They have to understand the need to evaluate and monitor financial risk by way of insurance and savings. Learners also need to understand that there are ethical and social dimensions to financial decisions.

Although this framework aims to support individuals to improve their financial literacy capabilities, it is also applicable to decision makers in organisations. Adapted from the above mentioned Financial Capability Framework (BSA & FSA 2006:4), the perceived financial literacy proficiencies for nonfinancial managers, necessary to participate gainfully at different decision-making levels are set out in table 8.2. The researcher’s own randomly selected examples of subject areas in organisations, in which decision makers may need these financial literacy proficiencies, are also provided.

Table 8.2: Subject areas and decision-making levels in the organisation

Level Subject Areas	Senior management Extended competence & confidence	Middle management Developing competence & confidence	Lower management Basic understanding & developing confidence
Organisation’s financial goals/vision/mission	Knowledge, skills & overall responsibility	Knowledge, skills & competence	Knowledge and understanding
Corporate governance	Knowledge, skills attitude & responsibility	Knowledge, skills & attitude	Knowledge & understanding
Financial terminology used in organisation	In-depth expert knowledge base	Broad knowledge base	Fundamental knowledge base
Numeracy	Skills & competence in using numbers	Understanding & skills in using numbers	Understanding & skills in using numbers
Knowledge of GAAP/GRAP/GAMAP	Know if organisation comply	Understand to some extent	Know what it stands for
Budgeting	Knowledge, skills & responsibility	Knowledge, skills & responsibility	Knowledge & skills

Information on the income statement & balance sheet	Knowledge/understanding & skills/competence	Knowledge & skills	Basic understanding
Asset management	Understand the estimates and assumptions used to value assets	Knowledge of safeguarding and controlling assets	Maintenance and use of assets
Liability management	Knowledge to keep long-term liabilities within overall debt/equity ratio	Knowledge to keep medium- to short-term liabilities within manageable limits	Knowledge of procurement policy and budget constraints
Cash-flow management	Knowledge to read and analyse the cash-flow statement	Knowledge to read the cash flow and how to better the cash position	Understand that each activity has either a positive or negative effect on the cash flow
Cost management	Know how to plan for and manage costs	Understand the need to save costs	Identify and allocate cost items
Wealth creation	Ability to assess the implications of financial choices in wealth creation	Understanding and competence in executing wealth creation strategies	Knowledge of wealth creation strategies

Source: Own interpretation of the Financial Capability Framework (BSA & FSA 2006:4)

The financial proficiencies as set out in the Financial Capability Framework were adapted in table 8.2 by integrating it with different subject areas and management levels. In principle, decision makers on every level could benefit from information on all the topics depicted in table 8.2. For example, when managers are promoted to a position that has income statement responsibility, they are not always provided with training focused on how to read this specific statement, the key numbers contained in the statement or how to manage their functional area using the statement (Berman 2001). Berman is further concerned that more than 60% of employees cannot read an income statement, and if they cannot, they obviously do not have the opportunity to see the connection between their work and revenue, expenses and profit. This does not imply that all managers have to become financial experts - instead they need to empower themselves to realise and deal with the financial implications of their decisions and actions.

In view of the different competency levels of decision makers in organisations, the proposed conceptual model in this study focuses on a financial literacy interface between decision makers in organisations and the available financial information.

8.5 TOWARDS A FINANCIAL LITERACY INTERFACE MODEL

As suggested by the title of this thesis, its aim is to introduce a financial literacy interface model to enhance decision making in organisations. A model can be used to identify the different phases of problem solving, and also to highlight various research approaches, styles and attitudes towards science (Koornhof 2001:255). Ryan, Scapens and Theobald (2002:27) reiterate that there seems to be “recognition of the distinct existence of ‘models’ as abstract theoretical descriptions of reality which are developed through an exhaustive process of refinement and validation”. The perceived model will be based on the literature study and the researcher’s own observations conducted thus far, and will be refined and validated once the empirical research has been conducted.

Chapter 3 of this thesis introduced the relationship between the information system (matter) and the human behaviour system (mind) of the organisation. The importance of a systems or holistic approach to decision making is also a recurring theme throughout the rest of the study. In order to develop a model for a financial literacy interface between these systems, the model of a systems view of problem solving designed by Mitroff et al (1974) (see ch 1) was used as the basis.

Since the preceding literature study was conducted from a holistic or systems perspective, the Mitroff model, as explained in chapter 1, is used as the foundation for the development of a financial literacy interface model. Slabbert and Gouws (2006:338) corroborate that this is an extremely valuable model of a systems view of problem solving. The multidisciplinary nature of the literature

review conducted thus far is a clear indication of the complexity of a financial literacy interface between the financial information system and the human behaviour system. Circles I (reality problem situation) to II (conceptual model) of the Mitroff model were discussed in chapters 1 to 7 of this study. While chapter 8 is concerned with the design of the financial literacy interface model, chapters 9 to 10 introduce the empirical testing of certain characteristics of the model (circle III).

8.5.1 The financial literacy model

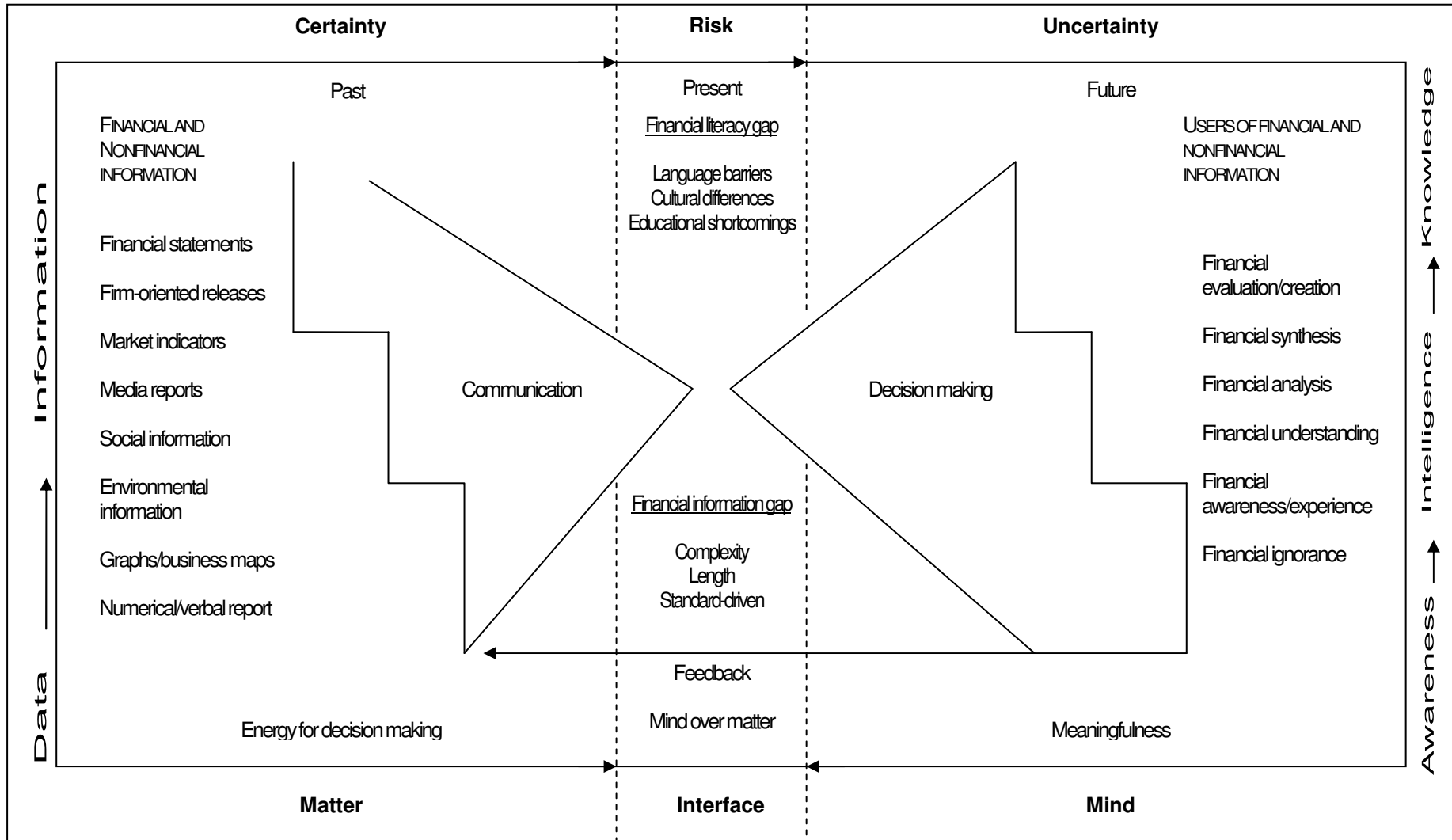
From the literature study conducted in the previous chapters, it is evident that little research has been done on financial literacy from a systems perspective. The systems perspective as portrayed in the Mitroff model inspired the development of a financial literacy model to depict the interface needed to interconnect the information system and the human behaviour system. Theory-building or model-building studies aim to explain particular phenomena; in this case they illustrate the financial literacy interface needed to facilitate decision making in organisations. Mouton (2001:177) contends that “a model is a set of statements that aims to represent a phenomenon or set of phenomena as accurately as possible”. However, one should bear in mind that a model does not “pretend to be more than a partial representation of a given phenomenon” (De Vos et al 2005:36; Mouton & Marais 1990:140). Some of the phenomena described in the financial literacy model, as presented in figure 8.2, represent the interface needed to link certainty to uncertainty and facilitate the risk taken by decision makers in organisations.

The model further depicts the complex nature of the financial literacy interface, where mind and matter interconnect to create a window of opportunity in which decision making can occur. To create a snug fit between the two systems and minimise both the financial literacy gap and the financial information gap, certain barriers need to be addressed and if possible minimised. The feedback arrow and the step-like approach (see fig 8.2) indicate that the interface is the result of a continuous process and not a finite product.

Because of the complexity and interaction of both systems with themselves and the environment, as indicated in figure 8.2, the interface can be regarded as a bifurcation point. Prigogine (1996:69 & 70) states that “bifurcations are the manifestation of an intrinsic differentiation between parts of the system itself and the system and its environment” and “... bifurcations can be considered the source of diversification and innovation”. From this, one can infer that although uncertainty can never be eliminated, one can attempt to minimise it and move beyond the bifurcation point to a nonequilibrium state conducive to diversification and innovation. In Laszlo’s (2006:76) view, the bifurcation point can also be seen as a breakthrough point or decision-window where an evolved consciousness can be very powerful and bring about change in the organisation.

Figure 8.2 illustrates the different levels of learning, from a level of financial ignorance, to a financial awareness stage and ultimately to the higher knowledge level where the user can evaluate the information and create new applications from the information. In teaching decision makers to progress from the fundamental level to the higher cognitive level, it is imperative to first assess their financial competency levels. Financial literacy assessment is necessary to enable decision makers to demonstrate what they know rather than what they do not know and integrate operational, tactical and strategic level goals of financial literacy education.

Figure 8.2: The financial literacy interface model



Source: Own observation

As seen in the model (see fig 8.2), for most, the variety of financial and nonfinancial information needed for decision making, irrespective of its source, is *certain* and usually represents *past* events. In other words, while past events are certain because it did happen, reality is only experienced in the present. Hence for information to act as the energy necessary for decision making in the *present*, it has to be communicated in such a way that it is meaningful to the decision maker. Although decisions are always taken in the present, it relates to anticipated *future* actions. Goldberg (2001:16) reiterates that while financial records exhibit what has already occurred, they are intended for some future use. Because the outcomes of decisions are *uncertain*, a huge element of *risk* is involved when taking decisions in the present pertaining to future events. While the inclination is to want more information to alleviate the uncertainty, more information is not necessarily the solution. Instead, better information or the insight of *mind over matter* - having the ability to cope with uncertainty, may in fact be the answer. Mind over matter implies that the user of financial information will be knowledgeable enough to understand and apply the information to the decision at hand. Becoming more literate in the financial sense of the word may therefore negate the perception of uncertainty when making decisions.

Financial literacy education as depicted in figure 8.2 means climbing the steps of knowledge creation by training all employees about the financials of the business and ultimately treating them as part of the business. Berman (2000:4) contends that organisations that practise business literacy will conduct training programmes, coach managers and regularly share information with employees and use a training programme that might, say, include teaching employees about the organisation's goals, the financial statements and how employees' decisions impact the numbers. Consequently, by empowering employees with financial knowledge, skills and attitude, the organisation will probably gain a competitive advantage over those who keep their decision makers in the dark. Financially literate employees will realise that improvements in the organisation's financial results may also lead to improved

remuneration thus motivating them to save costs and attempt to improve income.

From figure 8.2 it is evident that different levels of financial literacy are necessary for different levels of financial responsibility. The more financially literate individuals become, the less they are hampered by language barriers, cultural differences and earlier educational shortcomings. They become more adept at understanding the complex, lengthy and standard-driven financial information.

8.6 OUTCOMES OF THE PROPOSED MODEL

The model illustrated above was used to explain, simplify and systemise the research domain and provide relationships in the financial literacy concept. The model depicted in figure 8.2 is only a partial representation of the financial literacy phenomenon and does not claim to be more. It does, however, identify the multidimensional relationship between the information system and the human behaviour system and introduces the concept of a financial literacy interface to facilitate sound financial decision making. A key characteristic of the financial literacy model is that it depicts a process and not a fixed structure. There is a continuous flow from data to information, from a financial awareness to knowledge, from the certainty (past) to uncertainty (future) and a distinct feedback flow from the users to the providers of the information.

The proposed model as explained above has certain distinct outcomes which will be substantiated once the results of the empirical survey have been incorporated into chapter 11. The outcomes thus far, as depicted in the model and deduced from the literature review, can be summarised as follow:

- There is an overabundance of information.
- Information explosion does not necessarily raise understanding.
- More uncertainty asks for more information.

- More information leads to even more uncertainty.
- Efforts to understand and regulate the decision makers' perception of uncertainty have to increase.
- Gaining confidence in using financial information is one way of assisting individuals to cope with uncertainty.
- Sound decision making only takes place when both the financial literacy gap and the financial information gap have been minimised.
- Decision making happens in the interface where the duality of mind and matter becomes a trinity of financial literacy, mind and matter.

The outcomes listed above seem to demonstrate some paradoxes. More financial information is needed to alleviate uncertainty, on the one hand, but more information can also lead to more uncertainty, on the other. There is also an overabundance of financial information (see ch 4 & 5), but this does not mean that the issue at hand is better explained. Information overload usually leads to confusion and obfuscation. In an attempt to solve the financial information paradoxes one needs to ensure that the information at least conforms to the qualitative characteristics as described in chapter 4 and that the individuals also become more financially educated and skilled in order to discern, use and understand the relevant information.

The interface model depicted above is merely an attempt to explain the financial information and financial literacy phenomena with regard to decision making in organisations; its aim is not to make implausible claims on reality. Reality implies, for instance, that one has to establish the financial literacy levels of decision makers. Although, this is difficult to establish because of ethical constraints, it is almost impossible to establish what they do not know. Instead, the model aims to suggest that both financial information (matter) and the cognitive ability of the decision makers to understand it (mind) have to evolve in order to narrow the gap between them.

8.7 SUMMARY

In order to reveal the intricate relationships between the information system and the human behaviour system as well as the formation of an interface between them, a financial literacy interface model was presented in this chapter. The model portrayed in figure 8.2 does not merely identify the major elements applicable to the decision-making process, but also attempts to show the relationship between two systems and the creation of an interface. Financial literacy depicted in facilitating the interface can be defined as being able to understand, analyse, synthesise and evaluate financial information applicable to the individual's specific financial decision-making needs in the organisation or in his or her personal capacity. From this definition of the interface, one may infer that financial literacy is a "fit for purpose" phenomenon, where the person's responsibility position and specific decision-making function will determine the level of financial literacy required. From an organisational point of view, the ultimate objective of being financially literate is to enable individuals to use the financial information at their disposal to make decisions that will contribute to realising the organisation's financial goals.

Mitroff's circular view of problem solving was used to conceptualise the research problem into the conceptual model. The substantiation of the conceptual model and suggested solution will only be discussed in the final two chapters of the thesis. The viability and usefulness of the financial literacy interface will be examined after the survey results have been incorporated into the study. The guiding function of models is usually heuristic – in other words, models are mostly used to reveal or discover certain characteristics of a phenomenon. Mouton and Marais (1990:140) conclude that the model is used "... to suggest new areas of research because certain relationships and dimensions are emphasised to an unusual degree". In the financial literacy interface model, the relationship between certainty and uncertainty as well as matter and mind is emphasised to the extent where decision making happens where risk is minimised because mind prevails over matter. Further research

into, say, the financial information needs of users with limited financial literacy could be contemplated.

An empirical study will be used to link the model to the real-world perspectives of the financial literacy construct. The methodology and results from a personal interview with role players in the business world as well as the outcomes of a survey questionnaire will be presented in the following chapter.