TOWARDS A FINANCIAL LITERACY MODEL AS A COORDINATING INTERFACE BETWEEN FINANCIAL INFORMATION AND DECISION MAKERS

by

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ABSTRACT

The purpose of this study is to investigate how a financial literacy interface model could contribute towards the comprehensibility of financial information to decision makers in organisations. The way individuals and institutions use the concept of financial literacy suggests that different people attach different meanings to this construct. In order to establish a conceptual model for financial literacy, this study endeavours to formulate what financial literacy entails as well as decision makers’ expectations of financial information.

The increase in the volume and complexity of financial information often outstrips the abilities of users to understand and interpret it for decision-making purposes. A financial literacy interface provides an opportunity window for decision makers in organisations to break through their fears and concerns in using financial figures and language. Users of financial information differ vastly with regard to their level of financial capability and sophistication, and preparers of financial information should take cognisance of the fact.

The study revealed that financial literacy is a complex phenomenon and that the term encompasses more than the individual terms “financial” and “literacy”. It further endeavoured to develop a financial literacy interface model as a coordinating interface between financial information and decision makers.

Key words

Financial literacy
Financial information
Accounting information
Knowledge complexity
Information value chain
Information feedback
Decision-usefulness
Decision maker
DECLARATION

I, Christina Cornelia Shuttleworth, declare that

TOWARDS A FINANCIAL LITERACY MODEL AS A COORDINATING INTERFACE BETWEEN FINANCIAL INFORMATION AND DECISION MAKERS is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.
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CHAPTER 1
INTRODUCTION AND ORIENTATION

We can begin to see that organisational intelligence is not something that resides in a few experts, specialists, or leaders. Instead, it is a system-wide capacity directly related to how open the organisation is to new and disconfirming information, and how effectively that information can be interpreted by anyone in the organisation.

(Wheatley 1999:99)

1.1 BACKGROUND TO THE RESEARCH TOPIC

Every person associated with an organisation, be it a public listed company, a small private company or a government institution, forms a link in the organisation's information chain. Although the aim of financial information is to communicate meaning, the information per se, contains no meaning. The meaning exists in the minds of the sender and the receiver of the information (Thill & Bovée 2002:13). Thus, to communicate financial information effectively, the receiver of this information must share similar meanings for the words and symbols used by the sender.

Financial illiteracy can be regarded as a communication barrier, similar to bad connections, poor acoustics or any other distraction. Any one of these barriers will lead to a state of uncertainty when a decision must be made. According to Smith (2005: 59), “Decision making under conditions of uncertainty always provides the possibility of sub-optimal choices: psychological evidence ... suggests that managers may act in a biased and irrational manner with regard to their tolerance of both risk and ambiguity.” Risk prevails when the uncertainty gap cannot be bridged. Simon (1996:119) introduced the word “satisficing” to refer to the decision methods that look for good or satisfactory solutions instead of optimal ones. If decision makers are uncertain, they will
“satisfice”. Satisficing is one of the ways in which decision makers deal with their inability to facilitate uncertainty.

One of the principal functions of the preparers of financial information is to provide useful financial information to stakeholders in order to facilitate decision making for the planning, control and allocation of organisational resources (Cheng, Luckett and Schultz 2003:40). The usefulness of financial information, however, is not only the information dimension mentioned, but is also affected by the users' perception, interpretation and utilisation of the information. The usefulness of information depends on how feedback on the users' perception and interpretation of the information can influence the providers to produce information that satisfies their needs.

The understanding of how entities manage information, especially financial information, has a significant effect on decision makers' ability to plan strategies and create a competitive advantage. To create a competitive advantage, decision makers need the right information at the right time as well as the ability to assimilate it. Meaningful information can be regarded as communicated knowledge, and according to Ditillo (2004:401), the understanding of how an entity can manage knowledge is an issue that has received increasing attention in both theory and practice over the past decade. He also states that “knowledge and the capability to create and utilise such knowledge are the most important sources of competitive advantage” in organisations. Knowledge creation focuses attention on both information and individuals' ability to use it. Edwards, Collier and Shaw (2003: 35), also regard organisational knowledge as an asset, “the use of which is a key driver of competitive advantage”. Consequently, power in organisations is the capacity to utilise the energy created through relationships between information and knowledgeable individuals.
Communication thus plays a vital role in facilitating decision making. In a financial context, Smith (2003:17) contends that, the communication process requires one to distinguish between

- the transmitter of the message
- the financial message to be conveyed
- the “vehicle” of transmission (e.g., the annual report)
- the recipient of the message
- the impact of the message, resulting in a decision

Smith’s list, however, has a missing link in order to properly facilitate the communication process. This weakness is feedback from the recipient to the transmitter of the message. Feedback loops regulate the flow of information and are essential to alleviate uncertainty in the communication process. Without feedback, the relationship between the transmitter and receiver of the message could become clouded. If the recipient is not financially literate it is also possible that the recipient could misinterpret the message. For users to be able to give feedback, however, it may be inferred that financial literacy can contribute towards users requiring more detailed and useful information: “an expansion of the breadth of knowledge that the user may acquire a better sense of what is useful and what is not ...” (Belkaoui 1989:9). Consequently, if information cannot be transmitted successfully to stakeholders and understood by them, communication did not in fact occur and this could lead to a defective relationship between the organisation and its stakeholders.

While measurement of financial information is regarded primarily as the domain of accountants (Koornhof 1998:2), the users of this information are not necessarily accounting experts. Users in this sense refer to everyone who uses financial information for decision-making purposes, at all levels of the organisation. Wolk, Dodd and Tearney (2004:163) refer to the definition of accounting, published by the American Accounting Association’s (AAA) Statement of Basic Accounting Theory (ASOBAT), as the “… the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information ...”. Informed
judgement refers to the user’s ability to critically appraise the information and reach a decision on the basis of it. Knowledge of the subject matter, in this instance, finance or economics, will contribute to users’ ability to critically appraise the information. The above definition therefore implies that information must not only be properly prepared and communicated, but that the users must also be able to interpret and use it. A key objective of financial information is its usefulness. As early as April 1971, the Trueblood Committee, enumerated 12 objectives of financial accounting in which “decision usefulness” can be seen as the central theme of all these objectives. There are, however, problems associated with the decision-usefulness approach in accounting, of which user diversity is the most prevalent (Schoonraad 2003:50). Each member in an organisation is a user of financial information, for example, the managing director uses internal and external financial information for strategic decision making, while the production manager mainly focuses on financial information on the costing of a specific product. User diversity also means that users demonstrate different levels of financial literacy and that their ability to process financial information may be hampered if they are financially illiterate.

Users of financial information need to receive information that supports decision making. Internal users of financial information are usually involved in the day-to-day running of the business and therefore have a better understanding of the business and greater expertise than external users in interpreting trends and results (Koornhof 1998:31). In any business there are users with different information needs as well as different financial backgrounds, means of acquiring information and responsibilities. Some users of financial information are involved in decision-making activities, without being involved in the daily running of the entity, and in many instances, without the necessary expertise to interpret the financial information presented to them.
1.2 STATEMENT OF THE PROBLEM

The problem addressed in this thesis relates to the complexity of the financial literacy phenomenon to act as an interface between financial and economic information and the decision-making proficiency of individuals in organisations. This phenomenon can be conceptualised in the following dimensions, which will be discussed in more detail in section 1.2.1. Firstly, it involves the haphazard use of the term “financial literacy”. Secondly, it relates to the perception that financial literacy consists only of two separate systems (the information system and the human behaviour system) and is not also considered as one encompassing process. Thirdly, the gap between complex financial and economic information, on the one hand, and the decision makers’ mental processes, on the other, is difficult to reconcile, without using an interface. In the last instance, the education of financial literacy, especially in South Africa, is not possible without a clear identification of the diversity of the local organisational fraternity.

1.2.1 Perspectives on the problem statement

The general use of the term “financial literacy” poses a problem because of the different meanings attached to it. Various research studies (Dopfer 2005; De Beer 2006) have shown that the case of terminology is considered to be one of the primary obstacles in transcending meaning. Dopfer (2005:18) contends that disciplines such as economics suffer from a language deficit and this is a handicap both for theoretical expression and its communication. A distinction is necessary between the general and specific meaning of the term “financial literacy”. De Beer (2006:56) states that “certain words become overburdened with meaning while others are hallowed out and, in the process, stripped of their meaning”. The term “financial literacy” consists of the words “financial” and “literacy”, both of which are used to represent a myriad of issues that can easily lose their relevance when used together.

According to Collins dictionary and thesaurus the word “financial” also refers to the words: “economic”, “business”, “commercial”, “monetary”, “fiscal” and
“pecuniary”, each one of which has meanings of its own. “Literacy”, according to the same dictionary, basically means or is synonymous with: the ability to read and write; education, learning and knowledge. When these words are combined to form one term, “financial literacy”, a whole new dimension emerges, which encompasses more than the individual terms listed above. In an organisational context, financial literacy can refer inter alia, to the process of obtaining financial knowledge, understanding and using financial information for decision making.

The term “financial” can also refer to the information dimension, while “literacy” can refer to the mental processes of individuals when using this information. This implies that in an organisational context, both the information system (matter) and the human behaviour system (mind) are intrinsically involved with financial literacy and decision making. In Wilber’s (2001:25) view “ultimate reality is a unity of opposites”, in other words there are no boundaries. Financial literacy should therefore not be seen as a boundary, but as part of a process to unite the information system and the human behaviour system. Hence to facilitate decision making, these two systems need to be reconciled into one encompassing process.

A further problem addressed in this study is whether complex financial information, as produced by the information system of an organisation, is useful for decision making by the different stakeholders. Information only has value if it has the potential to influence a decision. The decision-usefulness objective of accounting implies that the information produced by the accounting system will also be understood by those with the least ability (AICPA 1973:13). Although the International Financial Reporting Standard’s (IFRS) framework identifies many users with different information needs and financial competencies, IFRS “follows an investor-centred approach by suggesting that other users’ information needs will largely be satisfied by providing the information that the investors, as providers of capital, require” (Vorster, Koornhof, Oberholster, Koppenschaar, Coetzee, Janse van Rensburg &
Binnekade 2008:5). If investors are regarded as users who are more proficient in financial matters, then some of the other users with “least ability” as mentioned above may find it difficult to understand the information produced on an IFRS basis. In addition, users with high financial literacy may themselves benefit, to the detriment of those with poorer financial literacy.

The question that comes to mind is whether general purpose financial reports, where the users cannot readily be identified, and where assumptions have to be made by the preparers on their behalf, can really communicate information useful to all users for decision making. While it is recognised that the accounting system is but one of the producers of financial information, it is also acknowledged that it may have an affect on other financial information provided to decision makers. According to Gouws (1997:76,78), the dependency on the accounting system and the way information should be produced, builds a false sense of confidence. The accountants’ ability to communicate accounting information effectively is crucial to bridge the gap between the entity and the users. Communication, however, is dependent on more than only the provision of information - it also relies on the recipient’s ability to use the information. Goldberg (2001:92) describes this dilemma as “plastering over a gaping hole in the fabric of communication”. Since it is almost impossible to bridge the communication gap from the information side only, it is also necessary to enhance the users’ mental ability to understand it.

A further dilemma is that while some of the recipients of financial information are known or strongly suspected to be incapable of analysing much of the detail contained in “general purpose” financial reports, those who are capable, can scarcely be satisfied by any amount of detail that could be provided (Goldberg 2001:92). One may infer that it is extremely difficult to satisfy the needs of both the more financially literate and the less financially literate users of financial information. Dunn, Cherrington and Hollander (2005:12) reiterate that most of the users of general purpose financial statements lack a good deal of information that they should have, but that they actually suffer more from an
overabundance of irrelevant information, which enhances their uncertainty. One of the principal questions and challenges facing the accounting profession, as one of the providers of financial information is therefore: How can accountants add value to business organisations in today’s computerised, interconnected, global business environment (Hunton 2002:60)? Since the problem is clearly not a lack of information, but instead, in most instances, too much information, there is also a need for an interface between the information system and the decision makers to enhance decision making. Although Gouws (1997:63) states that “It is evident that a decision-oriented information system should produce information which meets the needs of its users”, the diversity of users makes it difficult to meet all their different needs with the same information set. Simon (1977:108) concludes as follows: “The scarce resource today is not information, but the capacity to process it.” It follows that while providers of information have a responsibility to provide users with enough information, users also have the responsibility to enhance their capacity to understand and use it. A financial literacy interface can thus contribute to narrow the gap between the information provided, on the one hand, and the decision makers, on the other.

In order to enhance the financial literacy of decision makers in South African organisations it is imperative to first take cognisance of the diverse compilation of the financial information users in the country. It is a well-known fact that South Africa suffers from skills shortages in many areas. According to Venter (2005:47), trained human capital is a serious constraint in the South African economy, there is a general shortage of skilled labour and that since 1994, the country has lost at least 250 000 skilled workers to the Western world. The Auditor General also reported in 2005 to the National Assembly that there is a chronic shortage of senior managers in the public service and an even larger shortage in the provincial and local government sector. One of the possible reasons advanced by Roux (2005:59) for the current lack of service delivery in, for example, some municipalities in South Africa, appears to be inadequate human resource capacity and expertise. This apparent lack of skills, which
presumably includes a lack of financial literacy among people currently participating in financial decision making in South African organisations, puts pressure on the education system to provide individuals who can participate fully in the economy of the country. Financial illiteracy poses a threat not only to the overall performance of business organisations but also to the economy of the country itself and the entire region.

In order to create a performance-driven organisation, country or region, each member of the organisation needs to be knowledge driven. Smith and McLaughlin (2003:1) cite Wiig, who confirms that overall knowledge management will become more people-centric because it is the networking of competent and collaborating people that makes successful organisations, and organisations need to adopt greater people-centric perspectives of knowledge. Performance-driven organisations need people who can think and operate at all levels in the organisation. According to Gouws and Lucouw (2000:35), “researchers are beginning to recognise organisations as being systems, construing them as learning organisations and crediting them with some type of self-renewing capacity”. If people on all levels in the organisation, for instance, are unwilling to become more financially literate, the organisation will find it difficult to enhance its performance. Wheatley (1999:98) concurs that “if a system has the capacity to process information, to notice and respond, then that system possesses the quality of intelligence”. The capacity to intelligently think about and process financial information, however, is dependent on the financial capability of all the individuals in the organisation. Thinking and knowledge creation in an organisation should not only be an individual activity but also needs a joint organisational activity. As stated by Beinhocker (2005: 354) “organisations provide a vehicle for collective learning”. Hence, for organisations to acquire a higher order of intelligence and decision-making capability, all individuals in the organisation need to continually generate and utilise new information.
Organisations clearly need a management system based on the intelligent use of information. Smith developed a generic model (fig 1.1), to present such an outcomes-driven knowledge management performance system (Smith & McLaughlin 2003:3). The three fields namely *focus*, *will* and *capability*, presented in the model form a dynamic system, and optimal performance is represented by complete congruence of all three fields.

**Figure 1.1: The performance system**

![The performance system diagram](image)

*Source: Smith & McLaughlin (2003:4)*

The fields presented in the model (fig 1.1) can be seen as invisible forces in an organisation. The successful interaction between the fields, focus, will and capability will result in learning, which will ultimately lead to action. Action ultimately promotes performance. With regard to the apparent lack of financial literacy among some decision makers in organisations, the focus in this study will mostly be on capability and the interactive influence between learning and
capability. However, it is acknowledged that activities initiated in one field will influence one or more other fields. For example, will can be positively shaped by addressing how the people in an organisation meet, and people meet at their “boundary” and “every individual has their own boundary” (Smith & McLaughlin 2003:7). The individual’s financial capability or lack thereof can be seen as such a boundary. In order to expand decision makers’ boundaries their levels of uncertainty have to be addressed. Learning is an important way of addressing uncertainty (see chapters 3 & 6). It can further be assumed that enhanced financial literacy will expand financial decision makers’ boundaries and will contribute towards a coordinating interface, where decision makers’ level of uncertainty can be lessened. A preliminary model is used to illustrate the research problem as described above and is depicted in figure 1.2.

Figure 1.2: Financial literacy: towards a coordinating interface

![Figure 1.2: Financial literacy: towards a coordinating interface](source: Own observation)
There are a myriad of ways in which financial information can be acquired, as indicated in the examples shown in figure 1.2. With reference to Figure 1.2, it is evident that financial information, influenced by countless rules, standards and legislative requirements can be “mystifying rather than revealing” (Schoonraad 2003:43). In some instances, the complexity of financial information can increase users’ uncertainty levels and confuse rather than enlighten them. The users of financial information, on the other hand, need to understand the information in order to interpret it correctly for decision making. Feedback from the users to the creators of financial information is imperative to initiate growth and entry into an otherwise closed system. Closed systems are the result of very little feedback. Proper flow of information happens in an open system where users respond, albeit positively or negatively, to the information. Feedback may be indicative of to what extent both sides need to change in order to accommodate each other.

The users’ side in figure 1.2 indicates that individuals have different levels of understanding financial information. A high degree of understanding presupposes that users have a higher level of financial literacy. There are also language and cultural differences as well as differences in financial education, which complicate the process of becoming more financially literate and acquiring a higher degree of financial understanding. From figure 1.2 it can further be deduced that in spite of the complexity of the information side and the barriers and differences on the users’ side, organisations have a responsibility to ensure that decision making takes place. An interface that will narrow or strive to diminish the gap between the information system, on the one hand, and the decision makers, on the other, is contemplated.

1.3 RESEARCH AIMS AND OBJECTIVES

The main research aim is to develop a financial literacy model as a coordinating interface between financial information and decision makers in order to enhance sound financial decision making.
The secondary objectives to support the main research aim can be formulated as follows:

1. to analyse and comprehend the terminology employed when using the financial literacy concept in relation to South African organisations
2. to explain complex phenomena by using systems theory
3. to investigate the diverse financial literacy challenges facing South African organisational decision makers
4. to determine the useful attributes of financial information necessary for decision making and establish if an information value chain, with feedback loops from the users to the providers of information, will add value to the decision-making process
5. to investigate the difference between the information needs of the decision makers and the current state of financial information presented to them
6. to explain decision makers’ levels of thinking and their evolving financial consciousness in a learning organisation
7. to use a conceptual model to illustrate how financial literacy as an interface can narrow the gap between financial information and the users thereof

1.4 RATIONALE FOR THE STUDY

1.4.1 Importance of the research

Globally, there seems to be a sense of urgency to enhance the financial literacy of decision makers. In the USA, for instance, the American Institute of Certified Public Accountants (AICPA) introduced their “360 Degrees of Financial Literacy” campaign at a press conference in May 2004. According to an opinion poll commissioned by the AICPA, “Americans generally do not show great familiarity with a range of things that can impact their financial planning” (Tie 2004:14). In another example, the Financial Services Authority (FSA) and the Basic Skills Agency (BSA) in the UK developed an Adult
Financial Literacy Framework to support those individuals and organisations working to improve their own financial capability and that of others (BSA & FSA 2006:3). These efforts to improve the financial understanding of individuals and organisations in the countries mentioned provide a comprehensive approach to financial education, focusing on the information that people need at each stage of their lives, from childhood to retirement.

Since the early 1990s a broad spectrum of stakeholders in South Africa has recognised the importance of financial literacy in the way that individuals and communities build wealth and protects their assets (Piprek, Dlamini & Coetzee 2004:3). According to the final report of FinMark Trust, *Financial Literacy Scoping Study and Strategy Project*, the South African marketplace, “has experienced a plethora of activities in financial literacy since the late 1990s”. This research project by FinMark, endorses the fact that financial literacy is not a skill that is acquired through once-off learning, but rather a function of continuous repetitive learning over a lifetime. It further states that there is a need in South Africa to improve the outreach, particularly to disenfranchised communities and various segments of communities: the poor and unemployed, rural communities, pensioners and others (Piprek et al 2004:66). A financial literacy framework similar to the one established in the UK could contribute to a more structured approach to financial education in South Africa.

For users to be fully informed, at least minimal competence, not only technical but also moral and ethical astuteness, is required. Because financial decisions, especially in organisations, can impact directly or indirectly on all stakeholders of the organisation, the larger community or the environment, it is necessary to contemplate the moral and ethical consequences of those decisions. According to Riahi-Belkaoui (2000:307), “interest in the human information processing approach arose from a desire to improve both the information set presented to users of financial data and the ability of users to use the information”. Failure in competencies to interpret financial information can
expose the user to manipulation and financial detriment by other stakeholders or even the management of organisations.

The New Partnership for Africa’s Development (NEPAD) is the programme of the African Union (AU) which constitutes a holistic vision developed by the African leaders to promote sustainable development in Africa. According to Venter and Neuland (2005:xv): “Africans are no longer prepared to be wards of benevolent guardians from abroad; they want, and assert their right, to be architects of their own destiny and sustained upliftment.” Uneducated and unskilled people will never be able to play a meaningful role in the economic growth and development of their country or benefit from the opportunities presented by, say, the African Renaissance. Improving both the political and economic situation of South Africa, and of the African continent, is one of the basic ideas underlying the African Renaissance concept (Cling 2001:123). Hence becoming financially literate is but one of the basic processes necessary to enable people to lead meaningful lives in a community, country or region.

In South Africa, administrative incompetence in the public service can be related to a lack of skills in financial management. According to Beauchamp and Hicks (2005:13), public service organisations in particular, are highly diverse and complex, and make complicated trade-offs between competing demands and interests. Nowadays financial management responsibilities are widely diffused and are no longer the exclusive interest of the chief financial officer (CFO), and this demands a high degree of financial literacy from managers throughout the organisation (Beauchamp & Hicks 2005:16). The Public Finance Management Act (Act 1 of 1999, as amended by Act 29 of 1999) (PFMA) is also a key element in the management of public finances and provides, inter alia, for the responsibilities of persons entrusted with financial management in public entities. Because these managers are, according to the PFMA, accountable for sound financial management, one can argue that they do not only need financial information in a “digestible” format, but must also
acquire the competencies to interpret the information in order to make proper management decisions.

The South African National Skills Development Strategy (NSDS 2005-2010), spells out the national priority areas to which the projected over R21.9 billion income from the skills development levy, will be allocated over the next five years. It is quite clear that skills development, as well as accelerated broad based black economic empowerment (BBBEE) and employment equity (EE), are important for employment creation and poverty eradication. Financial literacy is one of the critical skills necessary for sustainable growth, development and equity.

In order to adhere to the above-mentioned National Skills Strategy and other legislation, decision makers in organisations at least need to understand the financial information they receive. The financial department in an organisation also needs to know what kind of information will be useful for its specific users. Financial information needs to have certain qualitative characteristics to be useful for decision making on the one hand, the users need to have the knowledge and skills to use the information to the benefit of the entity, on the other.

The strict regulations that apply to the presentation of financial statements of public entities and companies also pose a problem. Apart from adherence to the accounting standards, Treasury regulations and corporate governance issues also come into play in the preparation and presentation of some financial statements. With regard to arbitrary, complicated and misleading rules, Riahi-Belkaoui (2000:52) refers to the “selective financial misrepresentation hypothesis”. According to him, the problem is that standard setters have been “captured” by the intended regulatees and others involved in the financial reporting process, resulting in a process in which the main objective of regulation, which is the protection of consumers, is reversed to make the regulatees the beneficiaries. This hypothesis is assumed to be
across both public and private sectors, “since participation in both sectors is motivated to support standards that selectively misrepresent economic reality when it suits their purpose” (Riahi-Belkaoui 2000:52). The needs of the users of financial information, especially those who lack the necessary financial expertise, have to be considered by the regulatees and financial standard-setters.

The introduction of a financial skills development strategy to support users, who may need financial decision-making skills, may address one part of the problem. A model or strategy also needs to be developed to bridge the information gap between the current complex ways in which financial information is presented to decision makers and their ability to understand and use the information.

1.4.2 Previous and current research on this subject

Previous studies, in both the financial and psychological literatures, suggest that different people may process the same information differently, depending on factors such as their knowledge structure, experience and cognitive characteristics (eg, Gregory 2004; Cheng et al 2003; Goldberg 2001; Anderson & Krathwohl 2001). According to Smith and McLaughlin’s (2003:6) research, satisfying the physiological needs of individual employees correlates directly with the quality of an individual’s performance. They further believe that the need for self-actualisation pioneered by Goldstein and polished by Maslow is critical to the development of cultural traits that successful knowledge management implementation demands. This confirms the fact that the human behaviour system plays a vital role in the decision-making process and merits further investigation.

The AICPA’s “360 Degrees of Financial Literacy”, as mentioned above is a national effort of the American CPA profession to research the state of financial literacy in the USA. The Association of Chartered Certified Accountants’ (ACCA’s) world-class research programme, “Global insight into
responsible business”, was issued in September 2005. One of ACCA’s international research priorities deals with enhancing financial literacy. In the introduction to their statement on enhancing financial literacy they state the following (ACCA 2005: 12):

More than ever before there is a need for greater financial literacy among both, the general public as well as senior management. Along with the furore over personal investment schemes in some parts of the world, recent developments in governance have led to greater involvement in audit and remuneration committees of those without a strong financial background.

Goldberg (2001:70-93) also conducted research on the provision of information to decision makers and dedicated an entire chapter in his book, A Journey into accounting thought, to communication in accounting. With reference to Ayer (1955), Goldberg pointed out “that some things are harder to communicate than others, because either a suitable set of symbols has not been devised or mastered, or the intended receivers have not had the experience or the appropriate training to understand the transmitted message”. In a financial context, the set of symbols in the transmitted message may, inter alia, consist of amounts, narratives, graphs or even ratios. Many authors have elaborated on the complexity of financial information (Epstein 2007; Coppin 2006; Pickard 2007a) needed for decision making. The fact that some of the receivers of financial information lack the financial literacy to comprehend the symbols used in it complicates the decision-making process.

In South Africa, research by FinMark Trust, resulted in their report: Financial Literacy Scoping Study and Strategy Project. The objective of this study was to research the financial literacy programmes in South Africa and pay specific attention to recommendations for the implementation of the Financial Sector Charter (2003) which should improve the state of financial literacy in South Africa (Piprek et al 2004:4). Chapter 2 in this study gives a comprehensive overview of some of the findings of the FinMark research.
A search on the Nexus Database System did show that some research on adult basic education, basic life skills education, workplace literacy, arithmetic and English language literacy skills (Griffiths 1976; Jappie 1992; Dadabhay 1999; Ncube 2001) were undertaken. Zungu (1996), conducted research on “The factors associated with economic literacy among Black South Africans and the significance of teaching and learning the economic sciences”. Key words, such as, financial literacy, economic literacy, accounting and literacy, literacy and intellectual capital, did not reveal specific research on financial literacy for decision makers in South African organisations.

1.4.3 Beneficiaries of this research
The vision of the NSDS 2005-2010, “skills for sustainable growth, development and equity”, echoes the need for South African citizens to cope with change. According to the mission statement of the previous strategy document, South Africans need to be equipped with skills to succeed in the global market and be afforded opportunities for self-advancement (Prinsloo 2004:2-3). South Africa plays a key role in the Southern African Development Community (SADC) and this confirms that the lack of skills among some South Africans needs to be addressed prior to them contributing positively to the SADC region’s economic sustainability. It would thus indirectly benefit the country and its region if the financial literacy phenomenon were addressed and put into perspective with regard to the decision makers’ need to understand the financial information they receive.

South Africans appointed into management positions, either as employees, entrepreneurs, board members of public entities, trustees, members of audit committees and directors of companies, without formal training or experience in financial decision making will benefit directly from the study. These decision makers are accountable to all the stakeholders of the organisation and need financial training fit for their purpose. It is unfair to expect people who do not understand the information communicated to them, to be accountable for the
decisions they take without educating them for their specific decision-making responsibilities.

Educators engaged in financial training, at school level, tertiary level, adult basic training or workplace skills training, will also indirectly benefit from this research study. If they have a better idea of the different levels of learning involved in financial literacy training and the need of decision makers in organisations to understand the financial information relevant to their responsibilities they will be able to develop fit-for-purpose training.

1.5 RESEARCH METHODOLOGY

Although the focus of this research is financial, an interdisciplinary approach is also adopted. An interdisciplinary approach recognises the fact that only by viewing the financial information system as a whole, in relation to its environment and including areas addressed by related disciplines, can it be comprehended (Koornhof 1998:21). In this study, related areas of concern include information management, communication, human behaviour in decision making and financial education.

To implement the research objective specified above, a literature study and an empirical survey will both be used to draw conclusions and make certain recommendations. Mouton (2001:86) confirms that “it is essential that every research project begins with a review of the existing literature”. The literature study will further lead to the identification of a target population for the empirical survey as well as the design of the questionnaire.

1.5.1 Literature study
To know where one is heading, it is important to know where one came from. Hence, before embarking on a research project, a researcher should review previous work in the field (Terre Blanche & Durrheim 1999:17). A literature
study, which entails the examination of recorded facts in books, professional journals, dissertations and technical reports, will be used in chapters 2 to 7 and to a lesser extent in the remaining chapters.

The literature study will consist of an investigation of the financial literacy challenges facing South African financial information users, the nature of financial information, the information value chain, financial education, and decision makers as primary users of financial information. The ability or lack of financial information to satisfy the needs of different decision makers will also be researched. A literature review on the cognitive ability and different levels of learning involved in financial literacy education will also be used. This involves basic interdisciplinary research relating to, inter alia, education and the communication process.

1.5.2 Empirical research
Empirical research will be conducted to supplement the theoretical component of the study. Refer to chapter 9 for a detailed discussion on the empirical research process. This aspect of the research is generally concerned with establishing the relationships between variables, that is, for example, how one variable changes as another changes (Ryan, Scapens & Theobald 2002:119). The research therefore aims to establish certain relationships between the variables: financial information (matter) and decision makers (mind), and decision making in the organisation. Bohm and Hiley (1993:384) introduce “the notion that consciousness shows or manifests on two sides which may be called the physical and the mental”, and further contend that “active information can serve as a kind of link or ‘bridge’ between these two sides”. For the purpose of this study, the financial literacy concept will be researched to serve as such a link between the physical and the mental processes, that is, between the financial information system and the decision makers.

The empirical research will consist of interviews with financial role players as a basis for the development of the questionnaire. The questionnaire will firstly
focus on the perceptions of decision makers on different levels of the organisation on the financial literacy concept. It will further question financial literacy for decision making in organisations and the attributes of financial information for decision making.

Chapters 9 to 11 of the study will discuss the results of the survey research. The objective, hypotheses and target groups of the survey will be identified in this part of the study. It will also explain the design of the questionnaire, the data collection process, the preparation of the data, the interpretation of the research results, and finally, conclusions and recommendations on the basis of the research findings (Oppenheim 1979:1-2). The results of the empirical survey will be incorporated into the outcomes of the model and indicate areas for future research.

1.5.3 Problem solving by using the Mitroff model
The perceived financial literacy interface model will be introduced in chapter 8. A model for problem solving designed by Mitroff, Betz, Pondy and Sagasti (1974) will be used as basis for the development of a financial literacy interface model. Koornhof (2001:259) concurs that the Mitroff model is “found to be especially useful in Accounting areas where well established research methods are lacking, for example where new knowledge is generated or naturalistic and exploratory research are undertaken”. Because of the multidisciplinary nature of this study, it is difficult to choose if the problem lies more on the information side or on the cognitive behaviour of the decision makers and where to start with the research. As explained by Koornhof (1998:10), the Mitroff model is circular in the sense that there is no predefined starting or end point, which implies that the research project could begin at any one of circles I, II, III or IV, as depicted in figure 1.3.

This model (see fig 1.3) is used to demarcate the scope of the research in a simple system of interconnected activities prior to endeavouring to construct the financial literacy model.
Figure 1.3: Mitroff’s systems view of problem solving


Chapter 1 therefore commences at circle I (see fig 1.3), in which the existence of the specific reality problem situation is identified. The problem as identified, concerns the complexity of the financial literacy phenomenon to act as an interface between financial information and the financial decision-making proficiencies of individuals in organisations.

Circle II, the construction of a conceptual model, which sets out the variables necessary to identify the nature and extent of the specific problem is discussed in chapters 2 to 7. Chapter 2 will conceptualise the background to and necessary conditions for sustainable financial literacy in South Africa. Chapter 3 introduces the variables necessary to identify the financial literacy construct
to act as an interface between the financial information system and the human behaviour system. While chapter 4 explains the information dynamics and the information chain in the organisation, chapter 5 will focus on the complexity of financial information from an array of financial information sources. Chapter 6 views the learning for certainty versus learning for uncertainty paradox as the basis for financial literacy. To conclude the conceptual model, chapter 7 places in perspective the decision makers and the challenges for financial information to satisfy their needs. Chapter 8, however, will focus on the design of a model to link the features of the financial information systems to those of the financial knowledge creation needs of the decision makers in order to form a financial literacy interface.

Circle III, as depicted in figure 1.3, represents the scientific model. The formulation of the scientific model links the relevant activities as described in the preceding literature study together in a qualitative relationship. Where the conceptual model will be used to contextualise the literature and introduce the financial literacy phenomenon, the scientific model tests certain characteristics of the model empirically. Feedback from financial role players will be used to substantiate the complexity of the problem and legitimise the conceptual model. Chapters 9 and 10 explain the methodology used in the empirical research and the results obtained from the questionnaire. The questionnaire will be used to establish some of the problems and complexities of the financial information system and decision makers’ ability to use the information. Because individuals are very sensitive about their cognitive abilities and education levels, decision makers’ financial literacy levels will not be tested. Owing to the ethical constraints in testing individuals’ financial literacy levels, their perception of the financial literacy construct will be tested instead.

In circle IV (see fig 1.3), the scientific model will be applied to a proposed solution to minimise both the financial literacy and the financial information gaps. The envisaged financial literacy interface will form the breakthrough between certainty and uncertainty. Activity 5, depicting feedback in the narrow
sense, is applied when the goal is to derive better scientific solutions (Koornhof 2001:257). Feedback from the empirical research will thus be used to suggest solutions to the problem and propose further research to be done on the problem. This will form part of the concluding chapters 10 and 11. Activity 6, the validation of the research, will not be performed. Since an awareness of the financial literacy interface proposed in this thesis has not yet been created among decision makers in organisations, the construct should first be introduced and tested in organisations before it can be validated. Because of the need to create an awareness of the financial literacy interface in organisations, the implementation activity (activity 4) will also not be performed in this study.

1.6 CHAPTER LAYOUT

This study comprises 11 chapters, subdivided as follows:

Chapter 1:  *Introduction and orientation*

This chapter introduces the study. The background to the study, a discussion on the problem statement as well as the rationale for the study will be highlighted. This is followed by a discussion of the research approach and layout of the study.

Chapter 2:  *Financial literacy challenges in South Africa*

In view of the current financial literacy challenges facing South African decision makers, background information will be given on the South African political dispensation and the requirements for financially literate individuals to implement the government’s programme of action. The impact of the education system on the state of financial literacy as well as presently available financial literacy programmes will be highlighted. The necessary financial
literacy conditions for sustainable development in South Africa will also be discussed.

Chapter 3:  *A systems view of the financial literacy interface*

A systems view of the organisation will be introduced. Financial literacy as the interface between two systems, the decision-oriented financial information system (matter) and the human behaviour system (mind) will then be explained. The importance of an organisation’s intellectual capital and financial literacy in a cultural diverse society will also be highlighted.

Chapter 4:  *Information: the creative energy of the organisation*

Information dynamics and knowledge complexity will be described. An analysis of the characteristics of financial information will be analysed. The role of the accountant and financial reporting as a communication tool will be discussed and the argument for an information value chain put forward.

Chapter 5:  *Sources of financial information*

An overview of current available financial information will be provided. The complex nature of currently available financial information will be discussed. The financial knowledge, or lack thereof, of decision makers in relation to this information will be addressed. Their ability to create value for the organisation by interpreting currently presented financial information will also form part of this chapter.

Chapter 6:  *The learning for certainty versus learning for uncertainty paradox as a basis for financial literacy*

Key concepts in the financial literacy sphere will be defined. Financial literacy will be unpacked according to Bloom’s six levels of thinking and Beard’s teaching model. The notion to
guide learners towards a state of uncertainty in order to prepare them for decision making for an unknown future will also be discussed.

Chapter 7: **The evolving financial consciousness of decision makers**
The changing face of South African decision makers as primary users of financial information will be explained. Their need to acquire a financial consciousness with regard to financial information and decision making will be investigated.

Chapter 8: **A financial literacy interface model**
The role of a conceptual model will be explained in the light of the basic financial literacy proficiencies required by decision makers. The financial knowledge creation process will contextualise the influence of the outer and inner environment on interpretation of financial information. Mitroff’s system view of problem solving as introduced in chapter 1, will lay the foundation for the development of the financial literacy model.

Chapter 9: **The methodology used to establish the authentic essence of the financial literacy construct**
The research objectives of and rationale for the research methodology used, will be explained. The process of conducting the empirical research by way of interviews and questionnaires will be highlighted. The statistical presentation of the data and the research limitations will be further outlined.

Chapter 10: **Presentation and analysis of the research findings**
This chapter focuses on the presentation and analysis of the research findings. The desirability of financial capacity building for decision makers will be discussed. The need to present
financial information to users in a more user-friendly way will be highlighted.

Chapter 11: Summary, conclusions and recommendations

This chapter contains a summary of the previous chapters, with recommendations based on the literature review and the empirical investigation. The influence of the empirical survey on the scientific model will also be illustrated. Conclusions will be drawn and recommendations made for possible further research.
CHAPTER 2

FINANCIAL LITERACY CHALLENGES IN SOUTH AFRICA

To outmaneuver other nations, the government of an emerging economy needs to build, harness and channel the country’s human capital towards the achievement of goals that will benefit everyone.

(Dorrian 2005:22)

2.1 INTRODUCTION

Besides functioning in the global arena, South Africa also plays a pivotal role in the economies of the southern African region. The whole spectrum of decision makers in South Africa, needs at least minimal competencies in finance to enable them to participate in the economies of the country and the region. According to Meyer (2004:123), although information is one resource that can be applied to solve problems that contribute to the poverty phenomenon, the usefulness of information as a resource depends on the manner and format in which it is communicated to users in need. However, the problem, is that “the potential users’ level of understanding, their knowledge base, their way of handling information and the type of communication mechanisms they use to control the flow of information, will determine how outside information will be accepted and applied” (Meyer 2004:123). In a multicultural society, such as South African society, the level of individuals’ financial literacy can contribute to or hinder the way in which they understand and apply financial information.

The aim of chapter 2 is to put the complexity of the financial literacy problem, specifically in using financial information for decision making, in South Africa, in perspective. It will discuss the financial literacy challenges facing the South African economy and the impact of the current political dispensation on the development of the country’s human capital. Background to the education system and its role and limitations in financial education also needs to be examined. The key issue is not whether education and training are beneficial, but what appropriate skills are required to catapult the people of South Africa
to higher levels of employment. The objective of this chapter is also to investigate financial literacy as a prerequisite for the successful implementation of the numerous programmes initiated by government and the private sector for the social and economic upliftment of the nation. In view of the demand for transformation and black economic empowerment (BEE), the issue of decision makers’ accountability compels one to also focus on the financial literacy challenges in both the private and public sector.

Chapter 2 commences with a background study on the impact of political ideologies on the country’s human capital. The financial literacy needs of South African society and the impact of their social and political background on the way they perceive financial information are explained. The necessity for financially literate individuals to implement the government’s programme of action is considered. The role of the education system to satisfy the diverse financial skills and knowledge requirements of the South African decision makers to utilise financial information is then discussed. Financial literacy challenges and the necessary financial literacy conditions for accelerated growth and sustainable development in the country are a significant part of this chapter.

### 2.2 POLITICAL IDEOLOGIES AND THEIR IMPACT ON THE COUNTRY’S HUMAN CAPITAL

Although there is no single reason for individuals’ political choices, economic pressures are important reason for choosing a particular political ideology. “The political economy of a country is the way in which the production, distribution and consumption of wealth are organised within that society” (Venter & Landsberg 2006:234). In addition to a country’s internal political ideologies, globalisation also has a major impact on a country and its economy in particular. According to Venter and Landsberg (2006:246): “No matter what form of government a country has, the state is always to a greater or lesser
extent involved in the economy, if only through its function of formulating and implementing macroeconomic policy." It follows that the financial literacy levels of the policy makers will influence the way they formulate the country’s economic policy, while the financial literacy levels of the economic role players will also determine how well the policy will be implemented.

The new democratic South Africa emerged after the 1994 general elections and immediately had to face a global environment. Because, prior to 1994, South Africa’s economy was excluded from full participation in the world economy, the question was: Should the country adopt a neoliberal model of capitalism or a more social-oriented model that could perhaps function in the capital paradigm? Although there was and still is a notion towards a social-oriented model, the South African economy is primarily positioned as a capitalist market system. In a capitalist market system, capital formation and resource allocation are in the hands of individuals or organisations. Hence, such a free-market system will benefit from individuals with at least some level of financial literacy. To assess the stance of and challenges facing financial literacy in South Africa it is imperative to briefly reflect on the ideological background of the country’s historical legacy. This is necessary because the education system and the economy as a whole are influenced by the political dispensation of the day.

2.2.1 Democracy
The characteristics of a democratic dispensation include specifications of the manner in which representatives are elected; limitations on their terms of office; and the majorities required to pass legislation in parliament; and the freedom of individuals and organisations to make their own financial decisions. In a democratic dispensation, individuals are presumably responsible for creating and sustaining their own financial well-being. Welsh (2004:5) summarised this as follows: “Democracy is simultaneously a set of principles, a way of taking decisions, and a method of regulating conflict, while ensuring that basic freedoms are upheld.” Thus if political power is supposed to come
from the people, then a democratic society needs people who can make their own financial decisions and be accountable for the decisions they take.

Because economics and politics are inextricably linked, two major variants of democracy have developed, namely democratic capitalism and democratic socialism. Both these forces play a role in the economic dispensation of the new democratic South Africa.

2.2.2 Democratic Capitalism
Democratic capitalism favours an economy based on “free individual commercial activity, a strong central government, and a relatively paternalistic representative political system” (Baradat 1994:77). Free individual commercial activity suggests that individuals will be in a position to make financial decisions, that is, they will have a certain measure of financial know-how. Although the mainstream of the national liberation movement was influenced by socialist ideas, the African National Congress (ANC) government has embraced capitalism or a free-market system in South Africa, which has ultimately led to the emergence of a new generation of capitalists. In a free-market system, where the one individual generates income or creates wealth at the expense of another, financial knowledge will contribute to the successful participation in such a system.

Notwithstanding political demands from the left, such as accelerated social delivery and pressure from the liberal right to say, end cost-boosting labour legislation, the government has succeeded in getting the economy to reposition itself as a financially disciplined capitalistic market system (Bruggemans 2004:80 & 83). Hence if the capitalist economy is to keep on growing amidst these opposed forces, there needs to be a common aim to empower the whole South African workforce so that they can participate fully in the global market. By making financial training part of this empowerment process, people will participate more confidently in the economy.
2.2.3 Democratic socialism
The liberation movement in South Africa, influenced by socialist ideas, envisaged a prominent role for the state in transforming the national economy to realise equity for the poor and previously disadvantaged people. The state suddenly found itself between international and national capital interests, on the one hand, and national labour and consumer interests, on the other (Allen 2006:3). Although the aims of these ideologies may differ vastly, their execution depends on having financial resources as well as capable individuals who can manage these resources. It follows that financially literate individuals who can manage their own and the organisation’s resources will contribute to the advancement of the aims to transform the economy and improve the lives of the less advantaged.

The concept of ubuntu (African humanism), which is based on values such as inclusivity and concern for others, advocates principles such as sharing and communal living. Given the social injustices of the past, it is understandable that the political left, in particular organised labour will favour increased social delivery and accelerated transformation. This, in turn, calls for improving or honing skills, especially, the financial skills of previously disadvantaged individuals to participate in the quest for better social delivery. Hence to enhance economic growth initiatives such as BEE and increase full participation in the economy, the need for financially competent individuals is constantly increasing. Thus, without economic growth, the inequalities of the past and other social backlogs cannot be addressed. One may therefore infer that although South Africa favours a capitalist economy, the social intent to uplift people and capacitate every individual with financial literacy in order to become part of the economy is equally critical.

2.2.4 The democratic South African economy at the start of the 21st century
One of the features of the capitalist-oriented South African economy, at the start of the 21st century, is the previous neglect of human capital development.
According to Venter and Landsberg (2006:244), this neglect in the field of the formal education in particular, results in a shortage of skilled labour and the managerial skills necessary to develop productivity and competitiveness, while unemployment continuous to increase. To reap the benefits of a true capitalist economy, the people need to be empowered, not only with monetary resources, but also with the necessary skills and know-how to allocate these resources in such a way that they can participate fully in a capitalist-oriented economy.

Unemployment has a devastating effect on the economy of any country and major social and political implications. One of the aims of the Government’s Accelerated and Shared Growth Initiative of South Africa (ASGISA) is to reduce unemployment levels and halve poverty and unemployment by 2014 (State of the Nation 2006:8 & 15). Unemployment does not always mean that there are no work opportunities, but it can also mean that a person is not skilled enough to do the work and is therefore unemployable. Many organisations need individuals who have financial training and experience. Hence to become sustainable and remain as such in the 21st century South Africa, the quality of, inter alia, the financial literacy education of the most vulnerable in the country has to be addressed. Presumably if more financially educated individuals are employable, they will eventually make a greater contribution to reduce poverty and unemployment.

The informal sector constitutes a vital part of the South African economy and has the potential to provide income-generating and employment opportunities to the unemployed of the country (Wiese 2006:22). However, when entrepreneurs in the informal sector lack the business acumen needed to successfully practise their trade, this sector may not grow to its full potential. The informal sector of the economy will therefore benefit greatly from financial training or financial skills development. The problem is that many informal businesses do not contribute to the government’s sector education and training
authorities (SETAs) and are thus left out in the cold as far as receiving grants for formal skills training and development is concerned.

South Africa in the 21st century aims to become a key role player in the economies of the SADC countries as well as a player in the global economy. “A key objective of international economic relations would be to make South Africa’s economy more competitive, particularly through seeking access to international know-how, new technology, and global trading and investment” (Venter & Landsberg 2006:251). However, to be successful and to fully participate in the global market, local businesses will benefit from managers and decision makers who are financially competent enough to participate in international trading and investment.

2.3 THE REQUIREMENTS FOR FINANCIAL LITERACY IN THE IMPLEMENTATION OF THE GOVERNMENT’S PROGRAMMES OF ACTION

In order to address the public’s expectations for equal education, housing and social services after the transition to majority rule in 1994, the government of South Africa formulated two broad, macroeconomic policies. The first was known as the Reconstruction and Development Programme (RDP) of 1994. This programme focused on the demand side of the economy and dealt with the way in which wealth should be distributed. The RDP was the government’s “first policy blueprint for tackling the country’s huge historic inequalities and social backlogs …” (Bruggemans 2004:67). The second macroeconomic policy was known as the Growth, Employment and Redistribution Strategy of 1996 (Gear). Gear dealt with the supply side of the economy and was necessary to stimulate growth in order to realise the services envisaged in the RDP (Venter & Landsberg 2006:236). Although the aims of both these programmes are admirable, their achievement depends primarily on the expertise of those participating in the programmes. Huge amounts of money are necessary to
implement these programmes, which in turn implies that people with financial acumen also needs to play a part in the financial management thereof.

Although Gear was based on free-market principles, with the emphasis on growth in employment, it was chiefly supported by three pieces of legislation - the Basic Conditions of Employment Act (1997), the Employment Equity Act (1998) and the Skills Development Act (1998) (Venter & Landsberg 2006:236). The introduction of these Acts can be regarded as intervention in the economy, but was justified on the basis that they were promulgated to broaden participation in the economy and redistribute wealth. Although these Acts confirm the government’s commitment to improve the skills levels of the workforce, there is still a lack of skills in some critical areas, such as the financial disciplines. According to Van Eeden, Viviers and Venter (2004: 52), a lack of people with financial skills and management competencies influence small business success in South Africa. It follows that the skills shortage in the financial area cannot be alleviated merely by introducing new Acts, but rather by creating an awareness of the advantages of being financially skilled.

The RDP had the following key objectives, namely to (1) meet basic needs, (2) build the economy, (3) democratise the state and society, (4) developing human resources and (5) build the nation. These policy objectives of government were consolidated into the priorities of five Cabinet clusters as depicted in figure 2.1. Huge amounts of taxpayers’ money are involved in achieving the objectives set by the RDP, which stresses the fact that its activities have major financial implications and responsibilities. One may therefore assume that these objectives of government can only be achieved if there are enough individuals who are competent in managing the money allocated to each one of these clusters in order to deliver the proposed services.
As shown in figure 2.1, there are many cross-cutting issues in each of these clusters: (1) economic, investment and employment; (2) social; (3) governance and administration; (4) justice, crime prevention and security (JCPS) and (5)}
international relations, peace and security (IRPS) contribute to a number of broad RDP objectives. Although all the clusters presumably contribute to a better and improved standard of living for all the people of South Africa, the first three key cluster objectives as illustrated in figure 2.1 are of specific interest to this study. These key cluster objectives indicate, inter alia, the need for sustainable economic growth, skills development, education, governance and accountability. Sustainable economic growth is only possible if there are enough skilled individuals to govern and manage the institutions responsible for service delivery. One would presume that to achieve the set objectives of these clusters, each and every decision taken has financial implications. Government therefore needs at least financially literate public servants to accomplish the remarkable goals set by the RDP, GEAR and other programmes.

Some of the key objectives of the *economic cluster* (see fig 2.1) are job creation, the elimination of poverty, the reduction of inequality and the overall sustainable economic wealth. According to Beinhocker (2005:318), “wealth is knowledge and its origin is evolution”. Hence to achieve the objective of sustainable economic wealth, acquisition of knowledge, including financial knowledge, is imperative. Although macroeconomic stability lays the foundation for economic growth, especially that of increased investment, the growth in employment opportunities and skilled employees is a prerequisite for this cluster to reach its set objectives. While many unskilled workers are unemployed, there is a shortage of suitably skilled workers in, for instance, the financial services, information and communication technology skills (Towards a ten year review 2003:36). One of the actions of the economic cluster was the establishment of the Joint Initiative on Priority Skills Acquisition (JIPSA) to recruit and retain high priority skills in the labour market. It follows that although there may be a large reservoir of young unemployed matriculates or even graduates, their expertise may be in subjects that fail to prepare them for employment where financial knowledge is a vital prerequisite.
The social cluster as depicted in figure 2.1, in turn, deals mostly with the improvement of basic living conditions, social cohesion and education. The money spent on programmes to achieve these goals has to be managed, on the one hand, and people who are then placed in a better social and financial position through these programmes, on the other also need to know how to manage their financial resources in order to maintain their living conditions. Although the different programmes addressing income, human resources and poverty have already shown some improvement (Towards a ten year review 2003:31), priorities such as the implementation of the National Skills Development Strategy (NSDS) and the improvement of general education, need to be addressed. In this regard, ASGISA was established to reduce the country’s unemployment levels (State of the Nation Address 2006:10) which, in turn, will alleviate the state of poverty in some societies. This will only be possible if the education system can deliver people who attain sought after skills, including certain financial skills. The key aspect of education and its impact on financial education, however, will be discussed in more detail in the next section.

Four of the RDP objectives (to meet basic needs, to build the economy, to democratise the state and society and to build the nation) cross-cut to the governance cluster (see fig 2.1). The inclusion of government effectiveness, regulatory quality and accountability into the governance key cluster objectives, has indicated government’s good intentions to properly manage the resources at its disposal. These intentions led to the introduction of a new constitutional and legislative framework during the first years of the democratic state. The implementation of, inter alia, the PFMA, further improved accountability in public entities and government as a whole. The Act emphasises the significance of good management and accountability and recognises the importance of sound information for good management practices. The objectives of the PFMA can be summarised as follows: to secure transparency, accountability and sound management of the revenue, expenditure, assets and liabilities of the institutions to which it applies (PFMA
This leads one to believe that the officials and executives responsible for the management of the public entity need to have the financial acumen to achieve these PFMA objectives. In addition, the first King Report in 1994 and the second King Report in 2002 also led to a renewed effort to ensure that the boards and management of companies and public entities act in the best interest of all stakeholders (the King Report 2002). However, good governance requires that people who are accountable or even liable when acting in executive positions, at least have enough financial savvy to properly manage the entity’s resources and know when to question the numbers presented to them in financial reports.

It follows from the above that although government operates in different clusters, to succeed in fulfilling its key cluster objectives, the clusters have to interact with one another to reach the main objectives of the RDP. At the basis of all these programmes are the alleviation of poverty, job creation and business empowerment to create a better life for all. The then president Mbeki, stated the following in his State of the Nation Address (2006): “to meet our objectives, we will have to pay particular attention to the issue of scarce skills that will negatively affect the capacity of both the public and private sectors to meet the goals set by ASGISA”. Consequently, to meet all the mentioned development objectives and to build the nation’s social fabric, individuals who have financial knowledge and skills will contribute vastly to manage programmes and institutions in such a way that they can be accountable for the public money at their disposal.

2.4 THE IMPACT OF THE SOUTH AFRICAN EDUCATION SYSTEM ON FINANCIAL LITERACY

Although there are many social, economic and political prerequisites to obtain full employment in a country, the education system is often blamed for the state of unemployment. In the foreword to Dorrian (2005:xii), Clem Sunter emphatically states that “the principal responsibility of any nation is to foster its
own talent and improve its education system. Education and more education is the foremost characteristic of any winning nation.” Paragraph 29 of the Bill of Rights contained in the Constitution, states that everyone has the right to a basic education, including adult basic education and further education, which the State must progressively make available and accessible.

The South African education system had to make the transition from an education system based on race exclusivity in the pre-1994 dispensation, to not only a nonracial system of education, but also to a globalised education system. Apart from its apartheid heritage, education in South Africa also had to face the wide range of cultural backgrounds and language differences of learners before it could even contemplate the needs of a globalised, highly technical financial educational environment. Hence an overview of education in the pre-1994 dispensation is required before one can discuss the impact of the post-1994 education system on financial literacy.

2.4.1 Education in the pre-1994 dispensation
It is not the purpose of this study to discuss the education system in detail, but to view how the system impacted on the financial literacy and numeracy skills of the learners in this dispensation.

Prior to the 1994 elections, there were 19 education departments (Kallaway 2002:212). The curriculum of the different education departments was biased in terms of race and gender and was mainly aimed at providing the economy with unskilled migrant labour. According to Gaitskell, “for most of the 1950s and 1960s, the school curriculum for African primary schools was based on minimum literacy skills, plus sewing and housecraft for girls and woodwork and gardening for boys” (Emerging voices 2005:97). The perception has been that during the pre-1994 period, “all good quality education was the sole property of schools for whites, in white residential areas, beyond the reach of non-white students” (Du Plessis 2001:65). As a result of these inequalities and discriminatory policies, a huge portion of the current adult population of the
country was deprived of acquiring quality education and, in many instances, never had the opportunity to take subjects such as Mathematics and Accounting, both of which contribute to acquisition of numeracy and financial literacy skills.

2.4.2 Education in the post-1994 dispensation

After assuming power in 1994, the government consolidated the different departments of education into nine nonracial provincial education departments and extended the number of years of free and compulsory education for everyone to 10 years. Before embarking on a discussion of financial education at school, tertiary and adult level it is necessary to view formal education in South Africa in its broader context. Formal education in the country is categorised in the National Qualifications Framework (NQF) according to three levels:

1. General Education and Training (GET)
2. Further Education and Training (FET)
3. Higher Education and Training (HET)

The GET band consists of the receptive year (grade R) and learners up to grade 9, as well as an equivalent Adult Basic Education and Training (ABET) qualification. The FET band consists of grades 10 to 12 in schools and all education and training from the NQF levels 2 to 4 (equivalent to grades 10 to 12 in schools) and the N1 to N6 in FET colleges. The HET band consists of a range of degrees, diplomas and certificates up to and including postdoctoral degrees. Financial education in the GET, FET and HET bands will be discussed in the next subsection.

2.4.2.1 Financial literacy at school level

General school education (GET) consists of three phases, namely the Foundation Phase (grades 1 to 3), Intermediate Phase (grades 4 to 6) and Senior Phase (grades 7 to 9). The Foundation Phase currently comprises three learning programmes, namely Literacy, Numeracy and Life Skills. During the
Intermediate Phase, schools decide on the nature and number of learning programmes on the basis of the resources available to the school, but these should be drawn from the learning areas offered in the Senior Phase (South Africa Yearbook 2005/06:217). These are: Languages, Mathematics, Arts and Culture, Life Orientation, Social Sciences, Natural Sciences, Economic and Management Sciences and Technology. Learners enter the FET band which provides learning and training for grades 10 to 12, on completion of the compulsory phase of education in grade 9 or via the ABET route.

The different school curriculums were reviewed to establish whether currently basic financial literacy education is included. Apart from the Mathematical and Economic and Management Sciences Learning Areas, brief references to numeracy and costs (financial implications) were found in the Grade R to Grade 9 Technology, Natural Sciences, and Arts and Culture learning areas. According to the Revised National Curriculum Statement (NCS) Grades R-9 Policy (C2005 2002), the Mathematical Learning Area in this phase, includes some learning areas that can serve as foundation for financial literacy education:

- **Numbers, operations and relationships**
  Because numbers and calculations are an integral part of financial education, this learning area can be regarded as a vital basis towards financial literacy education. The understanding of how to determine and interpret relationships, for example, certain performance indicators, is equally important.

- **Patterns, functions and algebra**
  The aptitude to identify certain patterns and functions of numbers adds to the learners’ ability to use financial information provided in certain formats and can serve as a basis for learners in eventually becoming financially literate.
• Measurement
   To be able to measure or have the ability to ascribe value to something is an important part of any financial education and constitute proficiencies necessary in becoming financially literate.

• Data handling
   Learning how to capture data or to keep proper records enhances the learner’s ability to provide information. Data are processed into information and because information is important for decision making, knowledge of data handling is a necessary prerequisite in financial literacy education.

Of particular interest to this study are Learning Outcomes 1 to 5 of the above-mentioned Mathematical Learning Area, in which learners are supposed to learn how to recognise, describe and represent numbers and relationships, to critically analyse and interpret data and to be able to draw conclusions and make predictions. If these learning outcomes can be achieved, they may well serve as a basis for financial education. This basis in numeracy and problem solving techniques properly linked to the Economic and Management Sciences Learning Area, will contribute greatly to learners’ ability to analyse and interpret financial information where numeracy, relationships and data interpretation are of great significance.

The purpose of the Economic and Management Sciences (EMS) Learning Area (Grade R-9) is to equip learners with the knowledge, skills, values and attitudes that will enable them to adapt, participate and survive in an economically complex society (C2005 2002). Most of the aims of the EMS can also be seen as a vital basis for financial literacy education. According to C2005, the learning area aims to enable learners, inter alia, to:

• Become economically literate
   Decision makers need economic literacy or general knowledge about economic functions if they wish to operate effectively in the workplace or even make personal financial decisions.
• **Understand and apply economic and management principles and concepts in a responsible and accountable way**

Financial decisions can hardly be made if the principles of, say, inflation, interest rates and recession, are not taken into account and understood. Accountable decision makers do not take decisions without taking the bigger economic picture into account.

• **Understand and reflect critically on the wealth creation process**

Wealth can be measured in a variety of ways. The way in which wealth is created or increased, according to Beinhocker (2005: 4-5) is one of the most important and oldest questions in economics. It will be useful if learners can at least measure their own wealth and reflect on wealth creation with regard to their own economic activities.

• **Understand and promote the importance of savings and investments for economic development**

Knowledge on savings and investments can be regarded as fundamental in financial literacy education. Different modes of savings and investments, which ultimately lead to capital formation, can already be introduced at an early stage of financial literacy education.

• **Understand the impact of economic activities on human, natural and financial resources and socioeconomic systems**

Most, if not all economic activities have both financial and social consequences. A decision to produce a certain product must take into account the effect that this may have on natural resources, or on the labour force.

Notwithstanding the above-mentioned outcomes of the EMS Learning Area, research has shown that few school leavers are able to properly plan and manage their finances and some are even totally ignorant about how to utilise financial resources when they enter the labour market (Van Rooyen 2007:1; Swart 2003:16). To enhance school leavers’ financial knowledge, the JSE partnered with the Department of Education to provide an “in-depth financial literacy curriculum to Grade 9 and 10 pupils in 250 schools in Gauteng”
(Dlamini 2008). Another example where the private sector became involved to counterbalance this lack in financial skills, is the Rapport, Standard Bank and Master Card project (Money skills for learners) to enhance learners’ money skills and prepare them to make better financial decisions.

Although the Foundation and Intermediate phases of the EMS learning area are economically more generally oriented, they provide a solid basis for the introduction of the financial concepts and techniques necessary for acquiring more specific financial education in the Senior Phase. A problem in both these phases is that there is a major difference in the capacity of individual teachers to implement the Department’s programmes for the management and economic sciences. The good news, however, is that up to 2004, initiatives such as the Standard Bank Foundation invested in approximately 10 000 of the nearly 29 000 schools in South Africa in the area of material development and capacity building of teachers in these subjects (Piprek et al 2004:20). The Bankseta in partnership with the Department of Education: Eastern Cape and the South African Institute of Chartered Accountants’ (SAICA) Thuthuka programme, are trying to improve the skills levels of educators in subjects, such as, Mathematics, Accounting, English and science (Bankseta 2008:1). If the majority of teachers can be better equipped, they will hopefully produce individuals who have not only mastered basic financial principles and accounting techniques, but who can also relate these to the economy as a whole and who will eventually become financially literate participants in the economy.

Apart from Mathematics, which is a vital element in the curriculum of a grade 10 to 12 learner who intends to pursue a career in business, the subjects, Business Studies and Economics, will also contribute positively to such a career. However, the Accounting subject can also be regarded as an essential subject in the make-up of any individual, irrespective of the career he or she wishes to pursue. This claim is based on the purpose statement of Accounting as stated in the NCS. According to the NCS (2003), the subject of Accounting
“develops learner’s knowledge, skills, values, attitudes and ability to make meaningful and informed personal and collaborative financial decisions in economic and social environments”. Although these outcomes are in line with the kind of outcomes envisaged for a financial literacy curriculum, the subject currently tends to focus more on the technical aspects of recording transactions and the disclosure of its results and not as much on developing values, attitudes and the ability to make financial decisions.

Subjects relating to finance, the business environment as well as mathematics usually enhance the chances of employment in the economic world. Claxton (1999:274) concurs that “it is equally widely accepted, around the globe, that schooling in general is very far from delivering the quality of education that is needed. Even in many industrialised nations, basic levels of literacy and numeracy are unacceptably low”. The reason for this, according to Claxton (1999: 341), is that many schools focus too much on achievement, exercise only the students’ intellectual capabilities and deprive children of sustained opportunities to grapple with real difficulties and challenges. “Even in their own terms, schools are not very successful at establishing the bases of literacy, numeracy and rationality, and at the same time, may unwittingly undermine resilience” (Claxton 1999:341). It follows that subjects such as Accounting, Mathematics and/or Economics contribute to preparing students for a career in business or to enable them to make better personal financial choices. However, for those who do not wish to have a career in business, a basic financial literacy course, encompassing elements from the mentioned three subjects, could be contemplated as part of the school curriculum.

Apart from a need for basic financial literacy education for everyone, the economy could also do with learners who will eventually become financial experts and pursue a career in finance or accounting. According to Ignatius Sehoole, executive president of SAICA, there is a dire need for chartered accountants (CAs), specifically black CAs, to fuel economic growth. SAICA therefore initiated the Thuthuka Education programme to, inter alia, enhance
the mathematical skills of students at matric level (Sehoole 2006:82). Although the Thuthuka Programme seems to be having a positive impact on the Mathematics, Accounting and English results at school level, the initiation of more similar programmes could encourage learners to choose Accounting as a grade 12 subject, especially if they are considering a business career.

2.4.2.2 Financial literacy at tertiary level
Tertiary educational institutions have a decisive role to play in providing the vocational and technological training of future leaders in developing countries. Delors (1998:27) regards higher education (HE) institutions as scientific establishments and centres of learning offering occupational qualifications, combining high-level knowledge and skills, with courses and content continually tailored to the needs of the economy. However, one of the main drawbacks of these institutions is that there is a tendency to train students to the demands of certain professional practices alone and to emphasise practical applicable skills at the cost of intellectual formation (Rossouw 2006:4). A subject such as Accounting, in which a great deal of time is spent teaching the technical aspects of recording transactions and how to disclose the results thereof, may fail to also focus on intellectual formation. Intellectual formation inculcates a spirit of inquisitiveness and critical reasoning that is necessary for decision making in a changing economic environment. One could argue that in order to prepare students for a profession in the business world or even only to participate in business activities, HE institutions also have to provide graduates not only with technical subject-related financial knowledge, but also with an enquiring mind, ethical values and a social consciousness. They have to be taught that financial decisions could also have social, ethical or environmental consequences.

Again, as in the case of school education, the subject choice in the HE phase could be constitutive of the career opportunities for the student. One could therefore assume, for example, that an introductory financial course could be to the advantage of students in any field of study since it could add to the
business and financial competencies of the qualified individual. The problem with introductory financial education, especially accounting education, however, is that it is “too abstract, stripped of all the ingredients that are in concrete experience: emotion, needs, values, character, etc” (Slabbert & Gouws 2006:337). In particular, this will pose a problem for students not pursuing a career in accounting, for they will find the subject intimidating and removed from the practical realities of the business world. One could infer that there is a need for an introductory financial course that would develop all students’ numeracy and financial abilities to empower them to make their own basic financial decisions without the assistance of a financial expert. It is a fact that numeracy and literacy are building blocks for success in most professions and should therefore enjoy a great deal of attention (Aan die voorpunt … 2006:84). The contention is that numeracy and literacy education is necessary to prepare students for any profession and, in turn, is fundamental to the process of becoming financially literate.

2.4.2.3 Adult education in financial literacy

Adult illiteracy has been a great concern not only in South Africa, but also worldwide. According to Claxton (1999:274-275): “Globally there are estimated to be nearly 900 million adult illiterates. In Britain almost 15 percent of school-leavers and adults have limited literacy skills, while 20 percent of adults have limited numeracy skills”. Britain’s Education and Skills Secretary, Ruth Kelly, confirms that too many British adults lack the basic literacy and numeracy skills employers demand (Russell 2005:8). According to the 2001 Census, at least four million South Africans in the 20 years-and-over age group had no schooling at all, while another four million had limited schooling at primary school level (South Africa Yearbook 2005/06:222). One could therefore infer that eight million South Africans (2001 Census) did not acquire basic financial literacy teaching through the formal schooling process. Although they could have acquired financial skills through work experience, the country still lacks people with adequate financial knowledge to sustain the economic growth rate envisaged by government.
The adult literacy rate in any country is a primary outcome indicator for education and basically refers to the portion of the population over 15 years that can read and write in one language. Thus if approximately 71% of the population over 20 years has not completed secondary schooling, this could have a significant human capital impact on employment (Towards a ten year review 2003:20). This implies that they also did not have access to any financial or business-related subjects. The problem is that this not only has an impact on the workforce, but also on the self-esteem of the nation as a whole. “The fundamental problem of adult illiteracy and innumeracy is not so much that people have not acquired these skills. It is that they have come to believe they cannot” do it (Claxton 1999:275). Hence, as a starting point, programmes in numeracy and financial literacy for adults would have to focus on building learners’ self-esteem and their “believe” that they have the potential to become competent in financial matters.

Government intervention led to various legislative measures, programmes and funding to improve the provision and delivery of adult basic education and training. Government’s commitment to adult education is reflected in Minister Manuel’s Budget Speech for 2007, where the National Department of Education receives a further R850 million for a step-up in its adult basic education and training programmes (Manuel 2007). The SETA for Finance, Accounting, Management Consulting and Other Financial Services (Fasset) has also allocated funding for the delivery of an ABET programme for the financial sector (Fasset 2008). The high unemployment figures in the country, however, are a clear indication that many individuals are still excluded from the formal economy. One possible reason is that they do not have the means, on the one hand, or the faith in themselves, on the other, to enrol for these and other similar courses to prepare them for a career in the public or private sector. In becoming more financially literate, financial education would help to provide them with confidence to engage in financial activities and thereby get better access to financial services and employment opportunities.
2.5 OTHER FINANCIAL LITERACY PROGRAMME INITIATIVES IN SOUTH AFRICA

The time constraint in today’s fast-paced work environment necessitates the development of shorter, more informal learning programmes to empower the nation. Dorrian (2005:15) argues that “put into the context of the ‘brain drain’, the South African government has a moral responsibility to create the kind of environment that attracts and retains a calibre of human capital that is nothing short of world class”. The Organisation for Economic Cooperation and Development (OECD) also recommends that financial education should be considered as a tool to promote economic growth and stability (OECD 2005). Therefore, besides recruiting skilled employees, it is the responsibility of both the private and public sector to initiate programmes to uplift the financial knowledge and self-esteem of the existing workforce to promote economic growth and stability.

Whereas chapter 3 of this study will also refer to international financial literacy programmes, reference in this chapter will be to South African financial literacy initiatives and programmes only. As part of the general upliftment of skills in the country, the deputy president initiated the Joint Initiative on Priority Skills Acquisition (JIPSA). She stated in this regard that “skills shortages are not just one of the constraints facing the governments accelerated growth initiative but it is a potentially fatal restraint” (Hutton-Wilson 2006:4). Financial illiteracy could be regarded as such a potentially fatal restraint in economic growth in the country. Some of the main principles of the adjusted National Skills Development Strategy (NSDS) 2005–2010 are to support economic growth for employment and poverty eradication, to promote accelerated BBBEE and EE and advance the culture of excellence in skills development and lifelong learning. SETAs were established to facilitate skills development in the different economic sectors, including the financial and accounting sector.
The 23 SETAs are supposed to identify critical skills shortages in their sectors and facilitate skills development in these areas. The Financial and Accounting Services SETA (Fasset) introduced new social development programmes in finance and business. These are, for example, the Chartered Institute of Management Accounting (CIMA) Tirisano II Learnership Project, the Thuthuka Work Readiness Programme, the Stan Hutcheson and Associates (SHA) Work Readiness Programme and the Public Accountants and Auditors Board (PAAB) Work Readiness Programme (Staff reporter 2005:62). These programmes, however, focus more on individuals pursuing some kind of career in finance. Although this is a major step in the right direction for the already more financial literate employees, it would be to the advantage of all the other sectors if their SETAs were to contribute to their financial literacy status by way of financial or business literacy programmes. Although both the Insurance SETA (Insseta) and the Banking SETA (BankSeta) indicated that they have specific programmes in financial or consumer literacy (Piprek et al 2004:31), there is still a need for programmes to enhance the financial literacy of decision makers in all organisations.

ECIAfrica conducted a study on financial literacy programmes in South Africa on behalf of FinMark Trust. The final report was published in March 2004 under the title: Financial literacy scoping study and strategic project. According to the authors of this Report, despite multiple financial literacy initiatives, South Africans remain largely underserved by programmes offering financial education (Piprek et al 2004:iii). The FinMark Trust study indicated a high level of “confusion” about financial matters, even among fully banked individuals, and 45% indicated a level of confusion about financial matters. This percentage increases to 60% of the respondents without bank accounts, which is an indication that the lower-income households and pensioners remain the most vulnerable to, inter alia, lack of financial planning and exploitative schemes (Piprek et al 2004:1). These high percentages of uncertainty or confusion with regard to financial matters confirm that there is still a problem with regard to financial capacity building and that there is a
continuous challenge to provide more financial literacy programmes or a more specific fit for purpose financial education.

To ensure consistency in the standard of programmes developed, programme developers have to accredit their programmes with the NQF embodied in the South African Qualifications Authority (SAQA). Some of the unit standards for financial literacy registered at SAQA include the following: “Develop a business plan for a small business” (level 4), “Investigate ways of managing financial risk in own lives” (level 4), “Interpret basic financial statements” (level 4), “Describe the financial life cycle of an individual” (level 5), and “Describe the basic principles of personal income tax” (level 4). A comprehensive list of unit standards for financial literacy can be obtained from the SAQA website. Some of the private institutions that do provide accredited financial literacy programmes are: First National Bank (FNB), the READ Trust and the Microfinance Regulatory Council (MFRC) (Piprek et al 2004:34). In a country with such a diverse workforce, the role of multimedia, in-house, tailor-made and community-based initiatives, even if they are not accredited, are vital in educating the masses on financial matters. According to the FinMark study, the providers of financial education in South Africa are divided into four broad categories (Piprek et al 2004: 18). A summary of these programmes and their financial education scope is presented in table 2.1.

Table 2.1: Summary of financial literacy programmes in South Africa

<table>
<thead>
<tr>
<th>Main providers</th>
<th>Programme initiatives by:</th>
<th>Type of programme:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The government</td>
<td>- The Department of Education</td>
<td>- Formal school education</td>
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<tr>
<td></td>
<td>- The Department of Housing</td>
<td>- Housing consumer programme</td>
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<td></td>
<td>- The Department of Trade and Industry (DTI)</td>
<td>- Broader consumer rights</td>
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<td></td>
<td>- Department of Labour (SETAs)</td>
<td>- Learnerships through the NSDS</td>
</tr>
<tr>
<td>The financial industry</td>
<td>- National or broad industry level, eg Financial Services Board (FSB) and MongiMali</td>
<td>- FSB: collaborative initiative of financial literacy. MongiMali: inform consumers on debt</td>
</tr>
<tr>
<td></td>
<td>- Sector level, eg LOA, SAIBA, SAIA, SACCOL, MFRC, MLA and SASI</td>
<td>- Consumer literacy programmes</td>
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<td></td>
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<td>Borrower rights programmes</td>
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<tr>
<td></td>
<td></td>
<td>and education on prudent financial management</td>
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<tr>
<td>Institutional level, eg banks, insurers, assurers, funeral schemes</td>
<td>Corporate Foundations, eg Teba Bank, African Bank’s Money School, Standard Bank Foundation</td>
<td>Broad-based financial literacy programmes, client oriented. Classroom-based financial literacy programme – FNB Broad-based financial literacy programmes on indebtness. Life skills enrichment: savings and good personal money management</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>Nonprofit organisations</td>
<td>You and Your Money (NGO) Consumer bodies Vuka Trust, Read Trust Unions</td>
<td>Indebt counselling Consumer rights and protection Financial intelligence training, community-based training Limited financial literacy initiatives</td>
</tr>
<tr>
<td>The housing sector</td>
<td>Home Loan Guarantee Company (HLGC) The Rural Housing Loan Fund The National Department of Housing</td>
<td>Training on home ownership for bond applicants Financial implications of owning a home Empower consumers on housing options (through HLGC)</td>
</tr>
<tr>
<td>Private companies</td>
<td>Summit Financial Partners Vukani Africa Investment Management Services Ikhumiseng Consulting</td>
<td>Employee-based programmes on general financial wellness Transform African clients from consumers to investors Employee-based training, eg debt management programme</td>
</tr>
</tbody>
</table>

**Source:** Own summary from the FinMark Report (Piprek et al 2004:18-34)

Despite the numerous programmes listed in table 2.1 and even those not mentioned, the outreach is mostly limited to financial education for consumers, pertaining to personal finances and individuals with a high debt level. The debt management programmes seems to be reactive and product oriented with few broad-based financial literacy programmes in place (Piprek et al 2004:35). Although it is essential for consumers to be financially literate, the scope of this study is not on consumers, but on the financial capabilities of individuals in management, executive or other decision-making positions. From the above summary, one could infer that there is a shortage of programmes in South Africa to introduce decision makers in organisations to the arcane world of finance.
2.6 FINANCIAL LITERACY CHALLENGES IN SOUTH AFRICA

The financial literacy challenges in South Africa can only be addressed if there is a shift in the attitude of all prospective and present economically active citizens towards their ability to become financially literate. According to Claxton (1999:6), “too many people believe that, if they find something difficult, it means they are lacking in intelligence, rather than simply that they haven’t yet developed, or retrieved, the right learning tool”. People’s fears of any subject in which numbers and figures comprise the main component of the syllabus can already develop during their school careers. At tertiary level, the pass rate in subjects such as Accounting and Economics does not encourage students not wishing to pursue a specific career in these disciplines to enrol for them. Another argument is that some individuals could be more interested in social sciences, whereas others might be more interested in the financial and mathematical fields. Clearly individuals as well as cultural groups differ in their preferences and the way they perceive certain subjects or professions, as will be discussed in the next subsection.

2.6.1 Cultural diversity

Different cultural backgrounds influence the thinking and actions of people, the way they react to situations or even the way they do business. The interaction between individuals from diverse cultural backgrounds assures resilience in their thinking and actions. “Notions of ‘tradition’ and ‘culture’ do frame historical consciousness and generate modalities for social action” (Kallaway 2002:271). This was evident when the ubuntu concept was incorporated into the new South African democratic, capitalist dispensation. For example, Venter (2005:40) states the following: “The elections of 1994 have transformed South Africa from a white-dominated political order to a black-dominated political order, with egalitarianism deemed more important than individualism.” A country with 11 official languages will obviously boast many different cultures among the different social groups, and these differences also need to be accommodated in the way business is done in the country. Financial
education needs to take cognisance of the cultural diversity of individuals seeking financial training. As a starting point, one could establish whether different cultural groups attach different meanings to certain financial concepts.

An added diversity is seen in the way women are treated in different cultural groupings. Because of some African customary laws, it is more difficult for women to be empowered for bargaining with men in households and local communities (Allen 2006:189). Many women, especially those in rural areas, lack financial skills because they were traditionally deprived of opportunities to participate in the formal economy, let alone afforded the opportunity to gain financial education. Women’s entrepreneurial skills also need to be enhanced by involving them in economic activities and encouraging them to participate in financial literacy tutoring programmes.

In some instances, it may be difficult to relate African traditional forms of subsistence production and communal ways of lending and savings (stokvels) to the ways of a global economy. According to Allen (2006:190): “Global market culture is expanding everywhere at the expense of traditional cultures and religions.” If individual entrepreneurs and whole communities are capacitated to not only produce more than they consume, but also to sell more than they buy from the open market, becoming more adept in handling the financial side of their growing businesses is crucial. This means that they at least have to learn and understand the financial language and mechanisms used in doing business in the local and global arena.

In the sociopolitical context of the country, managers need to manage cultural diversity in their organisations, especially the way different cultures perceive certain financial concepts such as profit, capital and individual ownership. According to Booyzen (2005/2006:12), the ultimate aim of diversity management is to empower all staff members and to ensure that with social reconciliation, diversity becomes an actual resource and strength of the organisation. Consequently, this challenge can only be met if skills transfer and
financial mentorship programmes are initiated to capacitate the entire workforce to understand the organisation’s financial goals and objectives without alienating people from different cultural backgrounds.

2.6.2 Loss of human capital

Human capital can be lost in various ways. If people are not properly educated, their potential intellectual contribution to society is lost. If people emigrate or die, the loss of human capital is irreversible and irreplaceable. If those who emigrate are also those with financial knowledge and experience, the scarcity of financially educated individuals increases even more. This phenomenon is especially problematic for developing nations because they already have a scarcity of skilled professionals, especially in the financial area. When trained individuals leave a country permanently (the brain drain) a huge investment in higher education is also lost, which places an added burden on, for example, higher education institutions to educate even more people than usual. According to Bennett (2003), 40% of African professionals live outside the continent. The loss of financially learned individuals in top executive positions makes sustainable economic and environmental development on the continent even harder.

Another issue contributing to the loss of human capital is the negative impact of the HIV/AIDS pandemic on workforce numbers. It is predicted that HIV/AIDS will have a devastating effect on the South African economy in general and on individual businesses specifically. Apart from factors such as decreased productivity, increased overhead costs, reduced profitability and diminished investor confidence, HIV/AIDS will also result in a reduction of the overall available skills base (The King Report 2002:109). Randall (2002:86) confirms this by listing one of the impacts of HIV/AIDS on business as follows: “Increased labour turnover, leading to a loss of skills, knowledge and experience, and consequently declining morale and lower productivity”. Consequently, apart from increased administration costs, continuous replacements will also result in increased training and skills development.
costs. In view of the existing shortage of financially knowledgeable individuals, this pandemic will place an additional burden on organisations’ training budget to ensure that they have a financially literate workforce.

The economic and social consequences of the HIV/AIDS pandemic are catastrophic, according to the United Nations, it is projected that the life expectancy should decline in most affected countries, inter alia, South Africa, to 45 years between 2005 and 2010 (Cling 2001:128-129). If one assumes that most corporate leaders and managers fall more or less into the 40 to 50 age category, there will be a huge need for succession planning, especially in respect of company or public entity decision makers. Organisations will eventually have to train more people, especially in financial and management skills.

2.6.3 Transformation and empowerment
The primary goal of transformation is to make both the private and public sectors more representative of the demographic composition of the nation. In the public sector, government, for example, introduced severance packages for employees. This resulted in a reduction of the dominance of white males in the higher management positions specifically. The considerable loss in financial skills and experience, inter alia, had an adverse affect, on “... the ability of the public service to function efficiently in the short term” (Venter & Landsberg 2006:84). They contend that long-term negative consequences are “also possible if stringent measures are not undertaken to develop the necessary skills and capacity which is an essential component of modern-day government”. Financial knowledge and know-how are considered to be one of the skills necessary to capacitate employees, especially those in management and decision-making positions to fulfil their tasks. Coetzer (2005:41) confirms that “a rapid developing society and economy in which transformation has a central role there is a big need for directors – many of whom are fresh to the role – to be skilled for their functions on boards of companies”. Hence, transformation calls for measures to ensure that employees at all decision-
making levels in both the public and private sector are financially literate enough to function according to their position of responsibility.

One of the challenges of empowering individuals financially lies not only in the successful transfer of property, but also in the transfer of financial competencies. Minister Trevor Manuel mentioned that “empowerment is also about broadening participation in management, it is about skills and human development, it is about procurement practices and it is about social responsibility investment” (Manuel 2004). Participation in management, however, is only possible if the managers are financially competent to make decisions and realise the affect thereof on the organisation and society. It is all about being financially literate enough to fully participate in the economy. The Minister’s view that transformation and BEE can only be possible if the concerned individuals are financially empowered necessitates the introduction of financial education programmes by both the private and public sectors. Skills development is rightly one of the pillars of the BEE Scorecard. According to the Learnership indicator in the scorecard the “no-obligation ‘learn-while-you-work contracts are thought to be an ideal way to provide new market entrants with the experience they require, particularly in areas where there is a scarcity of black skills such as accounting” (FNB 2008). Organisations can therefore make a meaningful contribution empowering their employees by implementing financial learnership programmes.

Of late, the transferral of company shares to previously disadvantaged people has enjoyed much attention in the media. Although the idea is to ensure a more even distribution of wealth in the country, the transfer of ownership needs to be handled with care. In this regard, Nedbank’s Lot Ndlovu comments that although it is desirable that ownership through black economic empowerment should provide as many people as possible with shares, a skilled and knowledgeable owner is still in a better position than unskilled owners (Jekwa 2006:26). Financially knowledgeable individuals will have a better perception of what their shares are worth and will be better equipped to contribute to the
company’s success, than shareholders with no financial acumen. If some of these new owners who may have excellent industry-related expertise, lack basic financial know-how, they could jeopardise the company’s financial future by taking uninformed financial decisions.

Transformation in the financial sector, especially with regard to the recruitment of accountants and auditors, also poses a problem. In an interview with Cheryl James, CEO of Fasset, it was reported that the financial sector was rated second worst overall in terms of EE (Butcher 2005a:46-47). One of the reasons for this could be that few previously disadvantaged learners with higher grade Mathematics and/or Accounting as matriculation subjects are coming through the formal education system. This ultimately results in not enough students enrolling for degrees in the Accounting or Auditing study fields. Hence, for employment equity and transformation endeavours to succeed, the South African economy could do with not only financially literate individuals, but also professional accountants and auditors from previously disadvantaged groups.

2.6.4 Globalisation
Globalisation featured in many of the previous sections, but it is necessary to mention it as one of the financial literacy challenges in South Africa. The pre-1994 sanctions isolated South Africa’s business community in many ways. With the new dispensation came a rapid integration into the global market, which opened local businesses to the outside world. Playing in the global arena has an effect on the way businesses think and how they change to accommodate foreign ideas and principles. Dorrian (2005:23) contends that “countries with global aspirations need to create and maintain a proper knowledge infrastructure”. With regard to global economic participation, financial knowledge is one of the key resources that can help the country’s economy grow. Doing business in a global environment can be intimidating when one does not have the financial knowledge and experience to deal with the intricate world of international business.
2.6.5 Interaction and engagement with the financial sector

Consumers, businesses and the public sector interact with the financial sector almost daily. However, access to financial services might, in some instances, be hampered because financially illiterate individuals find the terminology and calculations used by financial institutions hard to understand. The challenge to clients and prospective clients of banks and/or other money lending organisations is to understand, among other issues, the terms and conditions in their lending agreements. Clients have to take informed decisions about borrowing or investing money. The financial sector, on the other hand, also has to reduce the risk of lending money to uninformed and financially illiterate clients.

The financial sector committed itself to the development of a BEE Charter. The signatories of the Charter, comprising the major role players in the financial sector, undertook to invest from the effective date of the charter to 2008, a minimum of 0.2% of annual post-tax operating profits in the financial education of consumers. They are also committed to spending 1.5% of total basic payroll, over and above any skills levies payable, per annum on training of black employees (Financial Sector Charter 2003: par 5.5 & 8.4). It is imperative that financial literacy education should start with employees working in a financial institution and that they at least have financial knowledge and experience applicable to the sector. According to the Financial Sector Charter (2003: par 3), one of the challenges confronting the financial sector is the low levels of black participation, especially black women in meaningful ownership, management and high-level skilled positions in the sector, and that the pool of intellectual capital needs to be improved. High-level skilled positions in the financial sector will obviously require a pool of financially literate employees. This could only be done by attracting new entrants to the financial sector and by investing in the skills development and training of new black professionals and managers, especially in financial literacy.
As seen by the money they are prepared to spend on human resource development, financial institutions are committed to investing in the development of a broad-based and diverse pool of skills for the financial sector. The financial sector plays a critical role in promoting sustainable development by financing business activities and providing a lifeline for economic activities (Moyo & Rohan 2006:289). However, they will not be able to render these services if their own workforce is not at least skilled in financial matters. Some of these needed skills in the banking sector, for instance, are in the opinion of Butcher (2005b:78), “information technology, management and leadership, customer interface, specialist financial skills and legislative compliance”. If the workforce lacks financial literacy, they will find it difficult to eventually become financial specialists as suggested by Butcher. To intercept the shortage in financial skills, the Bankseta plans to develop learnerships in each of the mentioned areas, and many of these learnerships will target the unemployed and pre-employed youth. The financial sector leads by example in its commitment to the development of financial skills, not only with regard to its employees, but also of the consumers who need to interact with this sector.

2.7 NECESSARY FINANCIAL LITERACY CONDITIONS FOR SUSTAINABLE DEVELOPMENT IN SOUTH AFRICA

In order to become more competitive in the local and global markets, companies and public entities need to unlock the potential of all their people and create a confident workforce with a culture of lifelong learning. “On a national scale the successful economies, in the increasingly cut-throat global marketplace, will be those that find forms of education to produce workforces that are adaptable, innovative and all-round smart” (Claxton 1999:247). South Africa faces critical skills shortages in, inter alia, the financial and management fields of government and private companies. Moyo and Rohan (2006:289) contend that the “inaccessibility of financial services for both individuals and micro-enterprises is a fundamental impediment to progress towards
sustainable development, particularly in Africa”. Thus, to encourage sustainable development in South Africa it would be commendable if the leadership of today, in both the private and public sectors could do everything in their power to leave a legacy of informed financially literate individuals.

### 2.7.1 Unlocking the potential

To unlock the potential of a nation means much more than creating jobs and employing people. It is about empowering the employed to do the job well and enabling them to make enlightened decisions on the basis of their knowledge and experience. According to Ng’onga (1998:15) “Africa is the perennial tortoise in the world’s race for social and economic development”. Africa’s own hurdles, such as a lack of skills and expertise in many fields, in the financial field too, hinder its economic development. Africa is a potentially wealthy continent in terms of natural resources and an abundance of human resources – but why is its social and economic development moving at such a slow pace? One could argue that Africa, in particular South Africa, has to create and maintain a proper financial knowledge infrastructure if it wishes to compete in the global economic race.

At a fundamental level, the development of an individual’s potential starts with becoming both literate and numerate. To add to the dilemma, Onyeani (2000:83) states that Africans also “lack an understanding of economic history or business techniques”. This lack of understanding of the economy and how to operate in the business world can only be addressed by perpetually investing in financial education. Literacy and numeracy are basic building blocks that will ultimately lead to empowerment and social upliftment, but individuals also need an understanding of the business environment. Mufuruki (2006:5) mentions that Africans refuse to invest in people and then wonder why they are forever dependent on others, and refuse to reward talent and wonder why there is so little of value created on the continent. If Africa is to become less dependent on others, it will have to unlock the financial potential of all its economically active people. People who have the necessary
knowledge to participate fully in the economy become more fearless and creative; they become players in the business game and do not continue to be spectators.

2.7.2 Transparency and accountability

Transparency and accountability are two of the seven characteristics of good corporate governance listed by the King Report (2002:11-12). Corporate governance entails more than compliance with legislation - it is about creating a corporate culture and ethos in which fundamental values drive and guide the enterprise in all its stakeholder relationships (Armstrong 2002). Fundamental values are dependent on individuals who can make fair financial decisions. At the heart of sound stakeholder relationships lies financial accountability. Good governance in the private and public sector therefore needs leaders and decision makers who have the ability to make financial decisions and be accountable for these decisions. Accountability in the public sector expects of the decision makers to not only use public funds wisely but also to provide quality public services with the available resources. For instance, the security of life and property is a major gauge of a government’s ability to provide sound governance, while the absence of it is an indication of other factors such as unemployment and an unhealthy gap in the distribution of wealth (Etuk 2003:130), which in turn could be indicative of shortcomings in the financial management of the entity. Okoye (2003:12) confirms that the “ultimate aim of governance is to secure the peaceful, harmonious and progressive existence of individuals in a given political entity”. One may thus infer that to demonstrate good governance, financially accountable leaders in both the private and public sectors are imperative.

As in the rest of the world, South Africa has also had its fair share of corporate failures, for example, Masterbond, MacMed, Leisurenet, Regal Treasury and Fidentia. Governance scandals are not restricted to the private sector; the public sector is also prone to corruption and mismanagement. The arms-deal scandal is a case in point. According to Piti (2004:16), one of the key corporate
governance issues underlying company failure is that board’s fail to challenge chief executives and do not adopt a questioning and independent approach, allowing them to take timely action. If board members do not have a solid financial basis and do not always understand the information presented to them, they will lack confidence to challenge executive managers on financial issues. Nevertheless, with regard to fraud and corruption, “CEOs and boards will no longer be able to claim ignorance of material aspects of the companies whose shareholders they represent and will be called to account for their actions like any other criminal” (Mammatt 2005/2006:9). Thus, board members are not only responsible to stakeholders for the financial performance of an entity, but are also accountable for the way they achieve their performance targets. According to Sweeney (2004:22), “director education is emerging as a key component to good governance”. Because directors or board members are financially liable and accountable, they can no longer be ignorant of the financial position and performance of their company or public entity. In gaining confidence to ask the right questions about the finances of the organisation, board members might be less prone to deception by outside parties.

South Africa is a changing society and economy, driven by transformation. Coetzer (2005:41) contends that out of necessity, transformation often results in more inexperienced directors being appointed to boards. Hence the problem is that “seasoned or green, directors are subject to the same level of personal liability for their decisions, and this is driving demand for director development”. It follows that directors who are financially literate and those who are not, are both liable if the organisation fails because of financial mismanagement. Director development is not a luxury but an essential ingredient of good governance and accountability towards stakeholders.

2.7.3 Lifelong learning
In order to alleviate poverty and improve the general welfare of people, leaders in government and in the private sector would benefit from making a paradigm shift towards creating a financial literate society. Kroukamp (2004:23) states
that “traditional productive factors seem to provide less and less added values whereas knowledge is perceived to be the main production factor of the future”. Knowledge as a productive factor includes financial knowledge. The management skills of political leaders, public servants and other office-bearers are going to be a determining factor in combating inadequacies in service delivery. It is imperative that the focus is on excellence in service delivery and sound financial management. Dorrian (2005:158) holds that “in any transformation process, re-education is often a critical factor in ensuring that employee skills can play a positive role in successful transformation”. Because of the changing economic situation, re-education, in financial matters, needs to be an ongoing process.

Lifelong learning in financial matters also implies that the new breed of managers and other decision makers should keep abreast of changes in the global business environment and adapt their financial training and education needs to the fast-paced work environment. South Africa preferably wants civil servants and executives who are not only equipped to meet the challenges in the country, but also the challenges of leadership on the continent. Mufuruki (2006:6) emphatically states that “Africa must over the next 20-30 years, work towards securing its future by deliberately investing in its people through better education, training and mentoring”. This includes education in all the financial aspects of the various organisations. Hence, South Africa will only be able to play a hegemony role on the continent if the continuous development of the country’s human capital resources becomes a priority.

2.7.4 South Africa and the African Renaissance

South Africa has a commitment to enhance the economic stability and the sustainable development of both the country and the continent. Economic stability, however, is only possible if decision makers have a clear understanding of the financial implications of their policies and decisions. If the financial resources are mismanaged by financially illiterate decision makers, everybody, especially the less fortunate, will suffer because of it. Minister Alec
Irwin stated in 1998 that South Africa’s future in an increasingly globalised world economy is intrinsically linked to that of its neighbours. He added that “South Africa can hope neither to be an island of prosperity in a sea of poverty, nor to compete efficiently on the global market while ignoring its regional partners” (Cling 2001:141). One of the caveats to this view is that it is imperative for South Africans to acquire financial and business acumen, before they can even anticipate contributing to the financial growth of its neighbours. If South Africans lack the will to educate themselves in financial matters or government, and the private sector does not initiate and fund financial training, they will not be able to play a part in the development of the region.

Two of the initiatives in multilateralism in Africa have been the establishment of the African Union (AU) and the New Partnership for Africa’s Development (NEPAD). Apart from promoting an African peer review mechanism, a political governance initiative and free and fair elections, NEPAD’s programme of action includes investing in Africa’s people through a comprehensive human resource strategy (Venter & Neuland 2005:278). The African Renaissance may be enhanced if a structure such as NEPAD develops the full capacity of Africa’s people by promoting a sense of financial responsibility amongst the continent’s decision makers. “NEPAD sought a paradigm of mutual accountability and mutual responsibility between Africa and its outside development partners to create the conditions for meaningful and sustainable development in Africa” (Venter & Landsberg 2006:258). While NEPAD’s aims of accountability and mutual responsibility are laudable, they will be difficult to accomplish it if the role players do not have the financial knowledge and the will towards the good governance of NEPAD’s programmes.

One of the South African Development Community’s (SADC) objectives is to further enhance the standard of living of the people of Southern Africa and to support the socially disadvantaged through regional integration (Schoeman 2005:17). This objective demonstrates a serious desire to uplift the people of Africa and southern Africa in particular. Thus, for the African Renaissance to
succeed, these desires have to lead to action and this will only be possible if the levels of financial education and knowledge of the people are appropriately enhanced.

2.8 A NEW CLASS OF DECISION MAKERS

Since the abolition of apartheid in 1994, South Africa has experienced a significant transition in the political arena as well as the business world. Where previously, company or public entity boards consisted mainly of a homogeneous group of white males with similar socioeconomic and educational backgrounds, these boards now have to be more representative of the demographic composition of the country. Swartz (2005:29) states unequivocally that “affirmative action and black economic empowerment practices have resulted in increased pressure for greater colour diversity on the boards of directors of South African publicly listed companies”. Dorrian (2005:159) maintains that this diversity in the South African workplace actually contributes to innovative thinking. Although this diversity brought a positive new dimension to these boards, it is necessary for their financial literacy levels to be up to speed, because most of the strategic decisions on board level have financial implications.

The lack of service delivery, especially in the public sector, has been frequently reported on. For example, the Auditor General reported in 2005 to the National Assembly that there is a chronic shortage of senior managers in the public service. “The pressure from government on the private sector to transform itself and to implement BEE, pulls competent black managerial staff from the state sector to the private sector, thus aggravating the problem of skills, especially management skills, in the public service” (Venter 2005:51). Good financial managers cannot be pulled out of the proverbial hat, but needs experience and expertise in his or her field, people skills and also financial knowledge. If individuals with some or most of these competencies are not
available, especially in the public sector, it demonstrates that there is an urgent need for financial education to enhance the decision making.

2.8.1 Financial experts versus financially literate decision makers
There is no doubt that all decision makers cannot become financial experts, but a basic understanding of financial literacy in terms of one’s own financial responsibility level would contribute acutely to the successful management of an organisation. The majority of board members or company directors serve on boards because they have expertise in fields other than finance. Coetzer (2005:41) confirms that “directors do not need to be experts in every area, but they need to be empowered to ask the right questions and demonstrate that they have properly applied their minds in making decisions”. Although they cannot all be financial experts, they do at least have to acquire basic financial knowledge in order to contribute to the organisation’s performance.

The King Report (2002) proposes the establishment of various committees to assist boards in their decision-making responsibilities. According to the King Report (2002: 29), each board should have an audit committee. Although board committees are established to assist the board with its duties and responsibilities, the ultimate responsibility remains with the board. The draft Companies Amendment Bill 2005, the Public Finance Management Act 1999 (PFMA), Treasury Regulations and the Protocol on Corporate Governance in the Public Sector also provide guidelines on the composition, scope and mandate of the audit committee. Marx and Dijkman (2006:26-27) hold that to adhere to the skills requirements set for the composition of the audit committee, outside members can be coopted, but then the majority still need to be financially literate. Financial literacy is thus a prerequisite for audit committee membership. Mammatt (2007:29) further states that although the audit committee performs a substantial amount of work towards ensuring the accuracy of the financial information, ultimately the entire board approves all the financial reports, and the board therefore also has to acknowledge this
responsibility. This proves that all board members have to at least know what they are approving when they approve these reports.

To assist board members, an independent audit committee is crucial in ensuring the proper identification of financial risks and reporting practices. Hence, when selecting audit committee members, it is regarded as best practice to select members who have the necessary levels of financial literacy. In the USA, the requirements for financial experts and financially literate individuals serving on audit committees are legislated by the Sarbanes-Oxley Act. In South Africa it is not legislated, but considered best practice, according to the King Report, and is therefore not always as strictly adhered to. The fact that audit committees are, in some instances, constituted of members who are neither financial experts nor financially literate could have a negative effect because the “inclusion of financial experts on audit committees is likely to add structure to the discussion of overall reporting quality and improve the consistency of assessments of overall reporting quality” (McDaniel, Martin & Maines 2002:163). Although the audit committee must ensure that the firm’s financial condition is understood by the board and accurately reflected in the financial reports, the board cannot abdicate its financial responsibility to the audit committee. The Blue Ribbon Commission’s Report on Director Professionalism (NACD 2001:10) regards financial literacy as one of the personal characteristics that all individual board members should possess. It states in no uncertain terms that boards should seek only candidates who are financially literate. The problem is that the report does not define the term “financially literate”, and the fact that financial literacy requirements may differ from one country or institution to another.

2.8.2 The development of all three economies of South Africa

A new class of decision maker is not necessarily part of the formal economy as described above. According to Freeman (2000:1), Africa, like South Africa, has three economies, namely the informal, the formal and the global. The informal economy, also referred to as the second economy, has a vital element of the
South African government’s development policy and plans to combat poverty (Wiese 2006:23). If the formal economy requires decision makers with financial and business acumen, the informal economy will require even more financially literate ones because a great deal of expertise is concentrated in one person – he or she is an owner, manager and worker, all in one.

2.9 SUMMARY

With its political background and diverse composition of people, South Africa faces unique financial literacy challenges. Innovative organisations that use the imagination, intellect and experience of every stakeholder will be in a better position to enhance performance and increase wealth. To succeed in creating conditions for rapid economic growth and job creation in a democratic capitalist society, increasingly more individuals need to become financially literate consumers, labourers and decision makers. It is presumed that the government’s programmes of action will enhance service delivery if public servants become more effective and if their financial competencies are improved.

The strength of any nation depends on the quality of its formal education system. South Africa implemented a Revised National Curriculum that seeks to create a lifelong learner who, among other things, is confident, independent, literate and numerate. There is currently a great deal of emphasis on enhancing education in Science, Technology and Mathematics. Although these subjects are of critical importance, it is equally necessary to empower the scientists, technicians and mathematicians in conducting business and handling their and their organisations’ finances. In the end, every person becomes a consumer, and as such, also needs to make financial decisions.

The unique financial challenges in South Africa have much to do with differences in cultural backgrounds, the emigration of skilled workers,
transformation and BEE. It remains a challenge that individuals with different levels of financial intelligence are all supposed to use the same intricate financial information prepared by the so-called “financial experts”. Riahi-Belkaoui (2004:69) summarises this dilemma as follow: “To be fully informed requires at least minimal competence, not only technical, but also moral and empirical. Failure in any of these competencies exposes the user to ideological domination that is conveyed in the accounting reports by management, eager to maximise its own interest”. Those decision makers with the fewest financial abilities are more prone to being exploited than those with financial capabilities.

Unlocking the potential of all individuals to become financially literate will presumably contribute to the sustainable development of the country’s growing economy. To eradicate poverty and unemployment, the country and the southern African region as a whole need individuals who can participate fully in the economy. Exploiting the financially uninformed only leads to more poverty and social inequality. It is also true that financially illiterate consumers more easily become the targets of crime and corruption. However, financially literate people and financial experts also need to be transparent and accountable in their dealings with people who are not financially competent. It is therefore necessary that the less financially skilled in society must engage in some form of learning to continuously improve their knowledge of financial matters and in doing so improve their standard of living. Spies (2004:98) concludes as follows: “Poverty is not the same as being poor – id est, it is not just being without money. Impoverished people are caught in a trap of hopelessness and meaninglessness because of their inability to serve their own needs and those of the communities within which they exist.” Thus, the second decade of South Africa’s nascent democracy asks for decision makers who are competent, transparent and accountable to their stakeholders. Decision makers operating in the formal, informal and global economy need to become at least financially literate in order to fulfil their stewardship obligations. The challenges facing South African decision makers with regard to their cognitive abilities to
understand and use financial information for decision making will be discussed in more detail throughout this study.
CHAPTER 3
A SYSTEMS VIEW OF THE FINANCIAL LITERACY INTERFACE

The systems view looks at the world in terms of relationships and integration. Systems are integrated wholes whose properties cannot be reduced to those of smaller units.

(Capra 1982:286)

3.1 INTRODUCTION

This thesis proposes a financial literacy model that could be used to help bridge the gap between the information system and the human behaviour system, in order to enhance understandability and decision-usefulness. Beinhocker (2005:19) also sees the economy as a “complex adaptive system”. The financial information system and the human behaviour system can thus be viewed as two of the many subsystems comprising a complex adaptive system. These two systems interact with each other through the flow of financial information to the decision makers, and back. These systems also have to adapt to each other and to their environment, before decision making can occur. Hence if the communication of information between the decision-oriented information system on the one hand, and the human behaviour system on the other, is obstructed or clouded, the main objective of providing financial information is defeated.

The objective of this chapter is to use a systems view to explain the financial literacy interface between the information system and the human behaviour system. Beinhocker (2005:19) explains that a systems view provides one with a “… new set of tools, techniques, and theories for explaining economic phenomena”. A systems approach is also used because it gives a holistic and interdisciplinary view of both the interacting, ever-changing and complex information system and the human behaviour system. It is therefore necessary to explain certain aspects of a systems view of the organisation and, in particular, those involved in the decision-making process. Financial literacy
and its role in acting as a coordinating interface - common boundary - between the two systems are also elucidated.

Chapter 3 commences with an explanation of a systems view of the organisation, whereafter the human behaviour system (mind) and the information system (matter) are discussed in more detail. Financial literacy as the interface to bridge the gap between these systems is defined. The process of learning the financial language or technical terms used in financial reports is further considered, as well as the significance of feedback between the systems mentioned. The chapter concludes with a discussion of the intellectual capital necessary in both these systems and the cultural diversity between all role players.

3.2 A SYSTEMS VIEW OF THE ORGANISATION

The organisation is more than a collection of assets, liabilities and people; it is about the way these resources interact with one another and the environment in which they exist. Various departments in the organisation produce financial and nonfinancial information and use information produced by external sources such as media releases, capital markets and others. Diverse individuals or groups of people also utilise this information for decision making. Because systems are defined as sets of interacting components that together form something more than the sum of their parts, the systems theory provides a useful tool to observe and analyse the interconnectiveness between the financial information system and the human behaviour system of the organisation. Beinhocker (2005:71) confirms that the systems approach can be applied to organisations because they can be regarded as social systems, which are “real physical systems made of matter, energy, and information; they are made up of people and all of that stuff outside your window, and they are just as subject to the laws of physics as any other phenomenon”. It is further assumed that the interaction and the feedback between the information system
and the human behaviour system may lead to an improved open social system, which in turn may inevitably lead to improved decision making.

For some time now there has been a definite shift towards a more holistic view of the world, viewing it in terms of integrated relations and complex structures. Since the beginning of the 20th century, there has been a breakdown of the mechanistic theory in favour of “sciences of organised complexity” – that is, systems sciences (Laszlo 1996:8). According to Koornhof (1998:19), “Systems Theory is a useful tool for studying the response of a system in turbulent times”. The reason for using a system’s interdisciplinary approach is summarised by Koornhoff (1998:22) in her statement that systems theory provides a “simple means of categorising, understanding, synthesising and structuring the knowledge gained from specialised and complex disciplines”. Every organism in nature is an integrated whole, a specialised and complex discipline - so is social systems, such as business organisations, which operate in turbulent times and an ever-changing environment. It follows that a systems approach is therefore well suited to explain the information system and the human behaviour system, the interaction between them and their external environment.

Since financial information is dynamic and changes continuously, the ability of the decision makers to understand and react to it also has to be constantly improved. In other words, they need the ability to thrive on individual choice and spontaneous creativity, but also need to be robust and capable of stability and self-renewal (Van Tonder 2004:40). The quality of choice in financial matters will be influenced by the decision maker’s level of financial literacy and his or her perception of the environment at the time of making a decision. As in natural systems, the organisation should be “in constant interaction with its environment, from which it takes in raw materials, people, energy and information, which are then transformed into products or services and which in turn are exported to the same environment” (Van Tonder 2004:37). According to Heylighen and Joslyn (1992), the biologist, Ludwig von Bertalanffy,
emphasised that “real systems are open to, and interact with, their environments, and that they can acquire qualitatively new properties through emergence, resulting in continual evolution”. Because of this interaction and constant feedback between the organisation and its environment, the business organisation, and consequently, its subsystems can be defined as open systems. It is imperative that for the organisation to remain an open system, it will constantly need to be open to new information and understand it.

Business organisations are usually composed of interrelated subsystems. Simon (1996:184) refers to these systems as hierarchic systems. Hierarchic systems interact with one another creating different relationships. Gouws and Lucouw (2000:29) emphasise that “business systems have to be understood in terms of processes that reflect the system’s dynamic organisation”. According to Hall (2007:7), “a system’s ability to achieve its goal depends on the effective functioning and harmonious interaction of its subsystems”. It may be inferred from the preceding quotations that the financial information system of an organisation can be identified as such a hierarchic subsystem. This, in turn, consists of more interrelated subsystems such as financial and management accounting systems and other systems, and the connection between these systems and, say, the human behaviour system, will determine the effectiveness of decision making in the organisation. If, for example, one of these subsystems fails, the overall system will fail to meet its objective. Hence, these systems need to be sustainable and coexist with one another.

The relationship between these different systems creates energy and new ideas in the organisation. Capra (1999:2) eloquently confirms that systems theory means “thinking in terms of relationships, connectedness, and context”. In this regard, Capra’s (2002:201) six principles of ecology – networks, cycles, solar energy, partnership, diversity and dynamic balance - could also be used to illustrate how “relationships, connectedness and context” can enhance sustainability in an organisation. These six principles of ecology could be related to a systems view of the organisation as follow:
(1) Networks
Communication between individuals and groups within the organisation creates networks. According to Littlejohn and Foss (2005:248), “the basic structural idea of network theory is connectedness ...” These authors (2005:41) also view feedback loops in an organisation as networks. Feedback loops among subsystems, for instance, the financial information system and the human behaviour system, is crucial to establish connectedness. Networks further control information flow and build common interpretations which are essential for self-regulation and the building of a learning community in order to create sustainability.

(2) Cycles
All networks have cycles. In the same sense that matter cycles through the web of life, information may travel around a cyclic path in an organisation and come back to its origin. The organisation can regulate itself because it learns from its mistakes and do it differently next time around (Capra 1994:6). An organisation has its own intelligence which is dependent on the interaction among the members of the organisation.

(3) Solar energy
While the constant flow of solar energy sustains life and drives ecological cycles, the cyclical flow of information through all the subsystems of an organisation is necessary for sustainability.

(4) Partnership
The cyclic flow of energy and the interdependence of network relationships imply cooperation and partnership (Capra 1994:7). In business organisations, as in ecosystems, cooperation and partnership is much more important than competition to ensure survival and sustainability.
(5) Diversity
The more complex the networks of an ecosystem or any kind of organisation, the more resilient it will be, because it can still function even if it loses some of its connecting links. Diversity means many links, many approaches to the same problem (Capra 1994:9). For diversity to act as a strategic advantage in an organisation there needs to be a free flow of information through its networks. However, diversity can generate prejudice if all the subgroups are not really part of the network, that is, if they are excluded from sharing and understanding the information that travels through the organisation.

(6) Dynamic balance
Dynamic balance in the ecosystem involves the creative interplay and adaption of all the above mentioned principles. To create dynamic balance the organisation needs to be seen as an interconnected whole, where information feedback loops regulates and organises itself. Self-organisation is dependent on a vibrant network of relationships and continuous fluctuation.

Decision makers can only react to the information if it relates to or is connected to a certain environment and is in context with the situation at hand. For an organisation to create sustainability, information has to be properly shared and understood as it travels through its diverse networks, or subsystems. However, the quality of the information determines the reaction of the decision makers, on the one hand, while the ability of the decision makers to use the information determines the creation of positive energy and new ideas, on the other.
3.3 THE TWO SYSTEMS: MATTER AND MIND

Descartes’s (1989:27) celebrated statement “Cogito, ergo sum” – “I think, hence I am”, placed a great deal of emphasis on rational thought which led to the division between mind and matter. For the purpose of this study, “mind” is assumed to be the behaviour of the decision maker, and “matter” the financial information produced in the organisation. Although mind and matter can be regarded as two separate systems, it follows from systems theory that there should be interaction and interdependence between matter and mind in order to form a dynamic whole system. Descartes proposed the concept of dualism in the 17th century: on one side is matter, res extensa, as described by geometry, and on the other, the mind, associated with res cogitans (Prigogine 1996:16). Wheatley (1999:89) also describes “a world of independence and interdependence, of processes that resolve so many of the dualisms we created in thought. The seeming paradoxes of order and freedom, of being and becoming …”. Because information cannot be regarded as a product, but rather as a process, it possesses the quality of “becoming”. This means that information changes as circumstances change and becomes more suitable or fitting for the choice at hand. Information thus changes continuously and, without it, decisions cannot be made. This, in turn, changes the organisation as a whole.

Financial information thus needs to exist in an open system, in which there is a continuous interaction with other systems. Bohm and Hiley (1993:386), however, do not regard the relationship between the physical and mental systems as two processes, but rather as one because “some kind of information” bridges these two processes. Open systems therefore create a dynamic balance, by maintaining themselves far from equilibrium, through continual flow and change (Gouws & Lucouw 2000:29). In this study the “kind of information” needed to bridge the gap or “create the dynamic balance” between the information system and the decision makers can be seen as the
decision makers’ enhanced financial capabilities to utilise the financial information.

### 3.3.1 The decision-oriented financial information system (matter)

It is necessary to define several individual terms before one can actually describe an organisation’s financial information system. Romney and Steinbart (2006:4), define a system as “a set of two or more interrelated components that interact to achieve a goal”. As already explained, systems are almost always composed of smaller subsystems, each of which is designed to achieve one or more organisational goals. The organisation consists of several departments, of which the information system is a subsystem and the financial information system yet a smaller subsystem.

Although the concept of financial information will be discussed in detail in chapter 4, the information concept must first be delineated from a systems perspective. The most basic form of information is data, which usually represent observations or measurement of business activities that are vital to information system users (Romney & Steinbart 2006:5). However, data as such cannot influence decision makers. Information, on the other hand, is data that have been organised and transformed to supposedly provide meaning to a user. Littlejohn and Foss (2005:13) argue that information can be transmitted without necessarily being received or understood. They regard the latter as a prerequisite for the successful exchange of a thought or idea. For example, decision makers can receive financial statements, containing loads of information, but if they do not understand it, it may as well been data. Hall (2007:12) contends that information should rather be determined by the effect it has on the user, and not by its physical form. In accordance with the systems view, the information system should contribute to decision making and the congruence of the organisational objectives or goals. The flow of information from the financial information system to the users, and back to the same system, is depicted in figure 3.1.
Figure 3.1: Model of a financial information system

This model, depicted in figure 3.1, is adapted from Hall (2007:12) to specifically refer to a financial information system and by providing examples for the different stages of the information process. The model illustrates the importance of interaction between the system and its internal and external environment. The flow of information to the internal and external users is as important as the feedback from them back to the system. Feedback also needs to reflect when the users of the information did not receive or understood it. If users lack the financial literacy to understand the financial information they receive, the interaction between the systems are interrupted.

The main goal of information is to resolve uncertainty. According to Weber (2002), “uncertainty is both the tormentor and motivator of life” and the concept uncertainty is epistemologically biased, in that it is viewed “as an attribute of
how we know what we know”. To alleviate uncertainty, more information is required before the mind can decide what action to take. Gouws (1997:69) states that an accounting message consisting of symbols and arranged according to accounting rules, has a degree of uncertainty and can lead to various interpretations. This implies that some messages may add to the uncertainty instead because the recipient does not understand the symbols or the way the message is presented. The purpose of financial information is to help people in an organisation to make decisions about economic activities and to reduce their uncertainty and financial risks. Risk, according to Ingram, Albright, Baldwin and Hill (2005:F5), is “uncertainty about an outcome”. It is important to keep in mind that risk is an integral part of every financial decision taken and that the external environment in which the firm operates, as stated by Zopounidis and Doumpos (2001:193) mainly causes these risks. Constant interaction with the environment and feedback from the information users may add value to the quality of information produced by the system.

The aim of financial information systems is to strive to produce information that alleviates uncertainty. Business organisation’s frequently uses financial information systems to assist them in producing quality information for decision-making purposes. These systems usually consist of a set of formal procedures and can be decomposed into two broad classes of systems: the accounting information system (AIS) and the management information system (MIS). The AIS subsystem processes financial transactions and nonfinancial transactions that directly affect the processing of financial transactions, whereas the MIS processes mainly nonfinancial transactions that are not normally processed by traditional AIS (Hall 2007:9). An information system, be it formal or informal, is not an end in itself, but has to be contextualised and communicated to decision makers in order to enhance their understanding of the current situation.

With regard to financial information systems, Greenblo (2006:26) contends that “financial communications should be revolutionised so that people can actually understand them”. He further states that “‘Intelligibility’ is a requirement of the
King Code that’s too often ignored but can be simply remedied”. Although information as such does not possess intelligence, it has the potential to influence the users’ thinking. Littlejohn and Foss (2005:164) see “intelligibility” as one of the characteristics of discourse that makes understanding possible. For them to share the same meaning, both the messenger and the receiver of the message should have experienced similar situations or have the same knowledge of the situation. Although the requirement in the King Code might be ignored in many situations, the remedy might not be that simple. Both the financial information system and the human behaviour system will need to adjust to satisfy the requirement.

Although information is essential for decision making, it is also true that information is not always perfect. Casta and Lesage (2001:432) conclude that imperfect information has cognitive implications for the decision process and that research on an individual’s reaction in a situation of ambiguity shows that he or she may, according to his or her cognitive characteristics, adopt one of two opposed attitudes: ignore the problem or seek further information. It is therefore crucial to study not only the attributes of information, but also the behaviour of decision makers in reaction to the information.

### 3.3.2 The human behaviour system (mind)

Although information users’ understanding of and reaction to information will be discussed in more detail in chapters 5 and 6, systems theory provides one with a certain view of human behaviour towards financial information. The creators of information (matter) must take cognisance of the fact that information has no value if it does not influence the behaviour of the recipients (mind) of that information. Littlejohn and Foss (2005:40) consider communication as the vehicle through which meaning is assigned to experience. Because it is so critical for the message to have meaning to the recipient, the communication concept will be discussed in greater detail.
3.3.2.1 Communication and cybernetics

Communication is only possible if the receiver of the message can decode and interpret the message correctly and if the receiver assigns the same meaning to the message as it was intended, and then responds in the desired way (Thill & Bouvée 2002:11). In finance, disclosure is often seen as communication. However, according to Schoonraad (2003:46), disclosure is only a “one-way process, while communication is ideally a two-way process”. The key element in the communication process (see fig 3.2) is how the receiver of a message interacts with past experiences and acquired knowledge and then reacts to the message received.

Figure 3.2: Communication in an open system

It is evident from figure 3.2 that the effectiveness of the message can only be evaluated by feedback from the recipient - in other words an open system must be formed to make successful communication and decision making possible. According to Littlejohn and Foss (2005:40&42), “the idea of a system forms the core of cybernetic thinking”, but more importantly “cybernetics is the branch of system theory that focuses on feedback loops and control processes”. The way in which the message is understood is essential to the output of the
receiver’s cognitive system. To complete the communication circle this output is supposed to be communicated through feedback from the receiver back to the sender of the message as new input. Hence a weakness of financial disclosure might be the lack of formal feedback to the preparers of the disclosed information.

### 3.3.2.2 Behavioural studies

The way human beings process information has generated new research efforts, inter alia, in the field of accounting, and resulted in a multidisciplinary approach and a keen interest in behavioural accounting studies. Beaver (1989:34) refers to information in a multiperson exchange setting with specific reference to more informed versus less informed users and to the problem of information asymmetry. The concern with information asymmetry, where there is a disproportion in the supply of information, is increased when one user of information is more informed than the other - that is, more financially literate than the other. One may assume that the more financially literate users may have a competitive advantage over those who are not financially literate. Riahi-Belkaoui (2004:372) further explains that the “behaviour of an individual is influenced by information in two ways: (1) through information use when acting as a recipient and (2) through information inductance when acting as a sender”. The process of information inductance is the result of an individual’s anticipation of the consequences of his or her communication of information - in other words, the individual anticipates the possible use of the information (Riahi-Belkaoui 2004:372). Information asymmetry and inductance, as explained in more detail in chapter 5, therefore jeopardises the objectivity of the information-producing process because of the behaviour of the users of the information.

One could infer that, although information is essential for supporting decisions and solving problems, it is never really neutral. According to Atkinson, Kaplan and Young (2004:17), “the mere act of measuring and informing affects the individuals involved”. This phenomenon can be related to physics, where the
Heisenberg uncertainty principle notes that the act of measuring the position or velocity of a subatomic particle affects the particle’s position or velocity (Atkinson et al 2004:17-18). This implies that the measurer or the person compiling the information affects it one way or another, thus influencing the measurer’s objectivity. In other words, information is not a product, but part of a dynamic process, and the way information is acquired is also part of the process that influences the information user. Wheatley (1999:65) reiterates that there is an observation dilemma and that it is important to be aware of the realisation that no form of measurement is neutral. Measurement, which can be described as the assignment of numerals to events, activities or objects, according to specific rules, has certain constraints. According to Riahi-Belkaoui (2004:42), these are “limitations of availability of data as well as specific characteristics of the environment, like uncertainty, lack of objectivity and verifiability”. Add to this the measurer’s subjectivity and it follows that financial information cannot be entirely objective. It is almost impossible to generate objectivity when observers evoke different meanings and interpretations in different situations. Wheatley (1999:67) further recognises data as “a wave, rich in potential interpretations, and completely dependent on observers to evoke different meanings”. However, it can be to the organisation’s advantage if all the observers or stakeholders, irrespective of their position, can be capacitated to interpret information, especially financial information. The reason is that almost every decision in the organisation has financial implications, for example the decision to lay off employees or to manufacture a new product. If an organisation can mobilise the cognitive ability of all its stakeholders, this could lead to an organisation rich with many different interpretations and more competent decision making.

3.3.2.3 Cognitive styles and approaches

Decision makers can process the same information differently because of their cognitive style or ability. In So and Smith (2003:5), Ho and Rogers (1993) define cognitive style as “distinctive ways of acquiring, storing, retrieving and transforming information”, while Libby and Luft (1993) define cognitive ability
as “the capacity to complete the information encoding, retrieval, and analysis tasks”. These definitions indicate that information is crucial to initiating cognitive style and ability. One may therefore assume that producers of financial information have to be aware of the fact that the users of the information have different cognitive styles and abilities. The ideal situation to enhance the decision-making process is for financial information to be presented in such a way that it suits the cognitive style and ability of the majority of users.

The theory of constructivism has had a huge impact on the field of communication, because, according to this theory, individuals interpret and act according to conceptual categories of the mind. Littlejohn and Foss (2005:119) state that because cognitive complexity plays a key role in communication, it is a mainstay of constructivism. They further argue that individuals do not have a consistent level of cognitive complexity, but think at different levels of sophistication about different topics. For example, many people use accountants to do their books and even allow them to make financial decisions on their behalf because they do not understand the complexities of the financial environment.

It is imperative that accounting studies based on cognitive style approaches focus on classifying users of information by their cognitive structure and on designing information systems that are best suited to the decision-maker’s cognitive style (Riahi-Belkaoui 2004:377-378). This will entail, for instance, that tailor-made financial statements are necessary for each individual, resulting in a situation that will not be practical, cost effective or even verifiable. One may assume that sophisticated cognitive individuals, who can make more distinctions than cognitively uncomplicated individuals, may understand general-purpose financial information better. With regard to the cognitive complexity approach, decision makers are also classified in terms of two cognitive styles: heuristic and analytic. These styles, based on the terms used by Huysman, in Riahi-Belkaoui (2004:377), are as follows:
1. **Analytical decision makers** reduce problem situations to a more explicit, often quantitative, model on which they base decisions. They usually have a desire for more information, specifically quantitative facts and different alternatives to select from. Financial reports, budgets and “what-if” scenarios will suit the analytical decision maker’s style.

2. **Heuristic decision makers refer instead to common sense, intuition and unquantified feelings about future development as applied to the totality of the situation as an organic whole rather than to clearly identifiable parts.** These decision makers rely more on rules of thumb or selectivity based on feedback of information from the environment. An expert system (ES), also known as a knowledge-based information system, that uses decision models and specialised databases, is an example of a computerised heuristic problem-solving and decision making tool. Such a tool can assist decision makers who do not have the financial knowledge to rely on rules of thumb or common sense.

Research has shown that there are different approaches to decision makers’ cognitive approaches and styles (Riahi-Belkaoui 2004; Littlejohn & Foss 2005; Robbins 2003). Based on research on decision styles, Robbins (2003:140) identified four different decision-making approaches, namely directive, analytic, conceptual and behavioural. These approaches differ along two dimensions, firstly, their way of **thinking**, and secondly, a person’s **tolerance for ambiguity**. According to their way of thinking, most decision makers in the financial fields are logical and rational, and process information serially, while others may be more intuitive and creative, and perceive things as a whole. With regard to a person’s tolerance for ambiguity, some people have a high need to structure information in ways that minimise ambiguity, while others are able to process many thoughts at the same time (Robbins 2003:140). Financial information systems produce information that is not necessarily adapted to suit the cognitive styles or abilities of different users, and these systems are usually driven by people who are experts in their respective fields, while the users of the information might not be.
The human information-processing approach also encompasses the cultural relativism in accounting. According to Riahi-Belkaoui (2004:379), “cultural relativism postulates that culture shapes the cognitive functioning of individuals faced with an accounting or auditing phenomenon”. Although various concepts of culture exist in anthropology, this study will specifically take into account Geertz’s symbolic anthropology, in which culture can be viewed as “a system of shared symbols and meanings” (Riahi-Belkaoui 2004:381). In a diverse cultural society such as South Africa, it is critical to take cognisance of the different interpretations that people from different cultural backgrounds may attach to certain symbols or terms. This phenomenon will be discussed in more detail in section 3.7 in this chapter.

3.4 FINANCIAL LITERACY AS THE INTERFACE BETWEEN TWO SYSTEMS

Individual subsystems in a complex system need a liaison between them - they need something to act as an interface in order to form an integrated whole. An interface, as defined by the *Oxford concise dictionary*, is a “surface forming common boundary between two regions”, a place where interaction occurs between two systems. The interface’s function is to “pull together the behaviour of their own parts, and to integrate this joint effort with the behaviour of other components in the system” (Laszlo 1996:53). An interface can also be described as a meeting point between two environments or systems and is concerned with attaining goals by adapting the one to the other (Simon 1996:6&113). The two systems, the *decision-oriented financial information* system and the *human behaviour* system, can only become more than their individual parts if they are linked by an interface (see fig 3.3) that can enhance the feedforward (prediction) and feedback action between them. There may be many such interfaces, but this study will focus on financial literacy as a necessary link in bridging the gap between the decision-oriented financial information system and the human behaviour systems.
While Thill and Bovée (2002:13) illustrated how shared experience affects understanding, figure 3.3 depicts how a financial literacy interface can affect the integration of the financial information system and the human behaviour system. From figure 3.3 it is clear that the aim of the interface is to integrate both the financial information system and the human behaviour system into a one-encompassing process in which decision making can be facilitated. When there is little shared experience, and individuals attach dissimilar meanings to certain financial terms and concepts, there is an understanding gap between the two systems. The process of integrating these two systems will only be possible if there is a large amount of shared experience, similar meanings and a high degree of understanding between them. Financial literacy can be seen
as the interface facilitating this high degree of understanding between the financial information system and the human behaviour system.

### 3.4.1 The financial literacy concept

Because financial literacy is used in this study, as an interface between the financial information system and the human behaviour system, the concept needs to be further explained. The word *literacy* means to be “learned” or “skilled in reading and writing”. Mr Koïchiro Matsuura, the Director-General of UNESCO on the occasion of International Literacy Day (September 2006), highlighted the fact that “literacy is not merely a cognitive skill of reading, writing and arithmetic, for literacy helps in the acquisition of learning and life skills that, when strengthened by usage and application throughout people’s lives, lead to forms of individual, community and societal development that are sustainable”. From Mr Matsuura’s message one can deduce that without basic literacy it is difficult to ensure a sustainable livelihood. *Financial literacy*, on the other hand, is generally defined as “the ability to make informed decisions and take appropriate actions on matters affecting one’s financial wealth and well-being” (Piprek et al 2004:4). It would therefore seem that literacy alone will not necessarily ensure sustainability, but that the individuals should also be financially literate to be able to create wealth and promote wellbeing. Wealth, according to Beinhocker (2005:317), is the same thing as information, or rather fit information - in other words, knowledge. While information on its own may be worthless, in this context, knowledge is information that can be used to create wealth. It follows from this definition that financially literate individuals have more knowledge than financially illiterate ones to allocate their resources and those of the organisation - time, money, labour and knowledge effectively to ultimately create some form of wealth. This definition also applies to people from all walks of life, consumers, students, entrepreneurs, managers, shareholders, pensioners, etc, who should all be capacitated to make educated financial choices. Education in economic and financial matters, like educating people to read and write, affects the financial wellbeing of every individual and the community as a whole.
In an increasingly complex marketplace, a lack of financial literacy can impact negatively on individuals in the human behaviour system. Jacob, Hudson and Bush (2000:15) define three categories of money knowledge:

(1) **Economic literacy** or general knowledge. This is about the way in which economies function. Examples are costs, prices, and interaction of supply and demand, inflation and regulations. Ideally, decision makers need economic literacy to operate effectively in the global economy.

(2) **Consumer literacy** or the knowledge of the rights and responsibilities of economic actors and the skills of comparing price and quality to make purchasing decisions. Individuals, managers of organisations, company directors and other decision makers are all consumers, one way or the other. In any situation, be it personal or organisational, they need to make sound procurement decisions.

(3) **Financial literacy** or personal financial knowledge and skills. Financial literacy entails the ability to understand financial terms and concepts and to translate that knowledge skillfully into behaviour. Topics under this term include, savings, earning interest, budgeting and managing credit and loans. Financial literacy embodies different knowledge levels necessary to participate gainfully in the economy. Without this financial knowledge or these skills, it would be almost impossible to make personal daily financial choices, let alone financial decisions in a business management or executive decision-making role.

Because learning is a distinctive feature of the human behaviour system, it is vital to be aware of efforts to enhance financial literacy education. Many countries embarked on programmes and other initiatives to introduce and enhance the financial literacy of individuals in the human behaviour system. As the President of the National Council on Economic Education (NCEE) in the USA, so aptly explained “Educating young people in economics and personal finance is vital to our nation’s future. Indeed, it is an essential key to building a nation of knowledgeable investors and savers, informed consumers, productive members of the workforce, responsible citizens and effective
participants in the global economy” (Zulauf 2003). The American Institute of Certified Public Accountants (AICPA) launched its 360 Degrees of Financial Literacy campaign in May 2004. The aim of the campaign is to forge a network of partnerships with state societies, schools, small businesses and local organisations to help chartered public accountants (CPAs) deliver the benefits of financial literacy to people across the country (Tie 2004:14). It is acknowledged that the mentioned financial literacy programmes and initiatives in the USA are only a few examples and not a comprehensive list.

In the UK the Association of Chartered Certified Accountants (ACCA) identified international research priorities, one of them being to enhance financial literacy. The Basic Skills Agency (BSA) and Financial Services Authority (FSA) in the UK also developed an Adult financial capability framework that outlined the skills and competences deemed necessary for financial capability (BSA & FSA 2006:3). These are but a few examples of the countless programmes, projects and seminars on financial literacy in some developed economies. However, the fact remains that there are still too many financial illiterate decision makers out there, especially in developing economies, many of whom are on the African continent. Initiatives and programmes to enhance the financial literacy level of South Africans in particular were addressed in chapter 2.

The Financial Accounting Standards Boards (FASB), the US standard-setting body, has long claimed that the main purpose of financial statements is to “provide information (to external users) that is useful in making business and economic decisions”. But, the FASB states that the information will only be comprehensible to users “who have a reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence” (Bardo 2004:1). On the other hand, one of the objectives of financial statements, according to the Trueblood Report (AICPA 1973), is to “serve primarily those users 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 activity”. One could infer from these seemingly opposing statements that there is a definite need for a financial literacy interface to integrate the financial information system and the human behaviour system. Such an interface is necessary because the usefulness and comprehensibility of information produced by the financial information system can only be improved up to a point, whereafter it is up to the decision makers as part of the human behaviour system, to improve their ability to understand and use the information.

The concern about financial literacy has increased in recent years. Financial literacy or the lack of it, has gained the attention of a wide range of banking corporations, government agencies, educational institutions, consumer and community interest groups. This has resulted in an increased supply in the number and variety of financial literacy programmes and programme providers. According to Braunstein and Welch (2002:445), some of these providers offer comprehensive information on “savings, credit, and similar topics for a broad audience and others tailored to a specific group, such as youth or military personnel, or focused on a specific goal, such as home ownership or savings”. Notwithstanding all these financial literacy programmes, there are still many occurrences of high-profile corporate malfeasance and misfeasance. More specific financial literacy programmes will enhance the efficacy of responsible decision making in the boardrooms of companies and public entities.

3.4.2 The financial literacy interface

In the modern, computer-based global environment, financial literacy serving as an interface between the two systems will be almost unattainable if decision makers are not also “information literate”. Simon (1977:108) contends that, “the critical task is not to generate, store or distribute information but to filter it so that the processing demands on the components of the system, human and mechanical, will not far exceed their capacities”. Without the competence to demarcate information into usable and understandable components, information overload can become a problem. Information overload is discussed
in chapter 5, section 5.7.2. In a society in which information abundance rather than a lack of information is the norm, the ability to use the relevant information at the right time, based on the appropriate knowledge, could form the foundation of the interface between any two systems in the organisation.

The American Library Association Presidential Committee on Information Literacy, stated that “to be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate and use effectively the information needed” (Thompson & Cronjé 2001:3). For example, it is difficult, albeit impossible, for a financially illiterate person to know when and what kind of financial information is needed. One should therefore bear in mind that subject knowledge is just as necessary to provide “the underlying structure for information retrieval and use” as “information literacy cannot take place in a vacuum” (Thompson & Cronjé 2001:6). Without an understanding of the relevant subject, the information literate person will still experience uncertainty and apprehension. The problem is exacerbated when the decision maker is in a state of ambiguity - that is, if he or she does not know enough to determine whether he or she is asking the right questions (Peters 2003:23). Although everybody cannot be financial experts, at the very least, decision makers in general need to be financially literate enough to know the right questions to ask.

The financial literacy interface demands, on the one hand, a well-structured financial information system, and a knowledgeable information literate individual on the other. Knowledgeable in this sense refers to individuals who are able to combine information with thinking, insights and experience to produce solutions. According to Hammes (2001:49), knowledge is much more than organised information, and acting on it is far more valuable than merely possessing it. To be able to act swiftly on intricate financial information, the decision maker needs to be able to at least understand the financial language in which the information is presented.
3.5 THE FINANCIAL LITERACY LEARNING PROCESS

In the same way as information continuously changes, individuals in the human behaviour system also adapt to change through a learning process. To maintain a competitive advantage, organisations have to innovate and adapt to change. Individuals in an organisation need to continuously adapt to their environment, to produce new ideas and develop new skills in order to contribute positively to the organisation’s competitive advantage. Claxton (1999:11) contends that “learning is what you do when you don’t know what to do”. When individuals are uncertain about a situation, they search their memory to retrieve information from previous experiences to try and solve the problem, and if they fail to find something, they will seek new information. This is when learning really occurs. In the same sense, Simon (1996:94) holds that “efforts to solve a problem must be preceded by efforts to understand it.” It follows that daily financial decisions can only be made if the decision maker understands the short- and long-term financial implications of such a decision. Because the organisational environment changes continuously, decision makers learn new financial knowledge on a daily basis. Learning is therefore not a finite process, but a lifelong process to be encouraged by every knowledge-driven organisation.

3.5.1 Learning the financial language

Both the financial information system and the human behaviour system communicate with each other through some kind of language. Language is the tool used to express ideas, feelings and events. According to Sayre (1976:198), language is the medium through which intentions are communicated. Claxton (1999:136) states that there is more to language than literal comprehension: “language gives us contrasting ways of organising experience and making meaning”. In the financial language facts and figures should be organised in such a way that it communicates meaningful information. Goldberg (2001:74) explains that communication is “an attempt to bring into common agreement the perceptions of different people of their
understanding of symbols of the language used between them”. Although English is the most prevalent language in international business, it would be a mistake to assume that everyone understands it (Thill & Bovée 2002:58). The same is true of the “language of business”; not everyone speaks or understands it. Hence, with the growth in social interdependence and developed exchange of commodities, there is an emergence of the need for orderly ground rules to facilitate exchange (Tinker 1985:93-94). These ground rules or terms of trade and the value assigned to the tradable commodities need to be articulated in a common “financial language”. The financial language commonly produced by the financial information system, uses unique symbols, for example, a certain monetary unit will be used to assign value to a commodity.

The financial language, of which accounting forms a part, has many things in common with other languages. According to Littlejohn and Foss (2005:40), language is packed with meaning and the “spoken word” constantly affects our experience of events and situations. For instance, financial “terms” and numbers have to mean the same thing to a wide variety of users. Financial terminology is even published in much the same way as the vocabulary of different languages is listed in a dictionary. With specific reference to accounting as a component of the financial language, Schoonraad (2003:44) warns that the use of accounting language poses the same dangers as any other language, namely that of misunderstanding, or even misrepresentation. On the basis of Hawes, Riahi-Belkaoui (2004:99) concludes that the recognition of, for say, accounting as a language rests on the same two components as any other language, namely: symbols and grammatical rules. He (2004:99-100) argues as follows:

1. The symbols or lexical characteristics of a language are the “meaningful” units or words identifiable in any language. Symbolic representations do exist in accounting. Financial language uses numerals and unique symbols, for example, “R” or “$”, or words,
example, “assets”, “liabilities”, “debits” and “credits” give meaning to certain concepts.

2. The grammatical rules of a language refer to the syntactic arrangements in any given language. In financial language, grammatical rules refer to the general set of procedures used that are followed to create meaning. For example, the format in which a balance sheet is presented depicts grammatical rules and the specific order in the statement creates meaning for the receiver of the message.

The view of financial language as a science, with a relationship between theory and practice, implies that decision makers have to understand the financial consequences of their decisions in practice, which, without a basic theoretical knowledge of financial terminology and financial numeracy will be almost impossible. According to Goldberg (2001:72) “the way people react to a symbol depends upon the symbol’s relation to his or her remembered experience”. Claxton (1999:120) adds that learning power comprises both literacy and numeracy, and is ultimately more fundamental than either of them. Learning power can be obtained through various means, such as formal education, informal education and/or experience. Decision makers will only be able to encode the financial information presented to them if the symbols (terminology and numbers) communicated to them relate to their learning experience of the financial language.

The deficiency in the communication of financial information does not only lie in the education or training of the recipient of the message, but can also be in the ambiguity of the words used by the sender of the message. The same word produced by the financial information system can mean different things to different people. Goldberg (2001:78-79) confirms that financial experts and financial writers often demonstrate a lack of precision in the use of some words. For example, some writers might use the words income, net profit and total income interchangeable. If financial terminology is used erratically when reporting financial activities, it might confuse financial experts, but it can be detrimental to laypeople without the financial background to understand the
terminology in the full context. Notwithstanding the fact that the financial language changes and that new terminology is often coined, the onus is still on decision makers to ensure that they understand the meaning attached to the terms and symbols used.

3.5.2 Feedback as a learning tool

Feedback is the basic ingredient for communication to take place; it is an essential part of the information exchange process between systems. Sayre (1976:49) defines feedback as a “process by which the behaviour of an operating system is influenced in turn by the effects of this behaviour with respect to the system’s operating environment”. Feedback is necessary for the existence of an open system. According to Capra (1982:289), the functioning of organisms or, in this context, a business organisation is guided by “cyclical patterns of information flow known as feedback loops” (see fig 3.2). Wheatley (1999:145) adds that in order to change, the system needs to learn more about itself from itself. Since change in an organisation is essential in order to grow and remain competitive, the organisation cannot afford to operate in a closed system. Substantially more information available and placed in the feedback loop implies a substantial intensification of change, which again generates more information (Van Tonder 2004:47). Feedback information creates continuous improvement in an open system; the system learns from itself and from the environment in which it operates.

Feedback, on the one hand, is the result of a process, and the beginning of a new process on the other. As Hall (2007:15) puts it, “feedback is a form of output that is sent back to the system as a source of data”. Feedback may be generated internally or externally - either way it is used to initiate or alter a process. Feedback control shows how a system can work towards goals and adapt to a changing environment (Simon 1996:172). To survive in a changing environment, an organisation needs feedback from its environment to become a self-organising and self-renewing system.
Feedback can be categorised as either positive or negative. Waldrop (1992: 34) views positive feedback as the “sine qua non of change, of surprise, of life itself”. Sayre (1976:50) argues that positive feedback is a process that results in self-administered positive reinforcement of the activity in question, but, if left unchecked, it can also be a source of instability and lead to the destruction of the system itself. By contrast, he considers negative feedback as a source of stability and control because it acts to prevent (“negate”) excessive deviation of the system from a standard operating condition. Sayre (1976:61) also refers to negative feedback as a “mode of interaction by which a system gains structure at the expense of energy extracted from its operating environment”. Waldrop (1992:35) concurs in stating that negative feedback or diminishing returns are what “underlie the whole neoclassical vision of harmony, stability, and equilibrium in the economy”. Consequently when the information system is in equilibrium, that is, when it is not influenced by information from the external environment or by feedback from the users, it follows that such a system can stagnate.

Disequilibrium, however, contributes to system’s growth – hence the need for positive feedback for the organisation to adapt and change. A state of equilibrium, on the other hand, may lead to stagnation. Feedback between systems should be regarded as a learning tool and not as something that threatens the organisation’s stability. It should be used to transform and transcend the organisation as well as the individual using the feedback information. However, for this to happen, the receivers of financial information and the preparers thereof need to understand the feedback they receive.

3.6 INTELLECTUAL FINANCIAL CAPITAL

The financial literacy learning process as discussed in the previous section, appends the intellectual capital of the organisation. Representing a section of the human behaviour system, financially literate board members and
employees of an organisation both constitute a portion of the company’s intangible assets. Intangible assets can be described as those things that represent the “knowledge, know-how, and relationships that may be used to create value for the owner or owning organisation” (Harrison & Sullivan 2006:5). One can also assume that the collective interaction of individuals’ financial knowledge can create even greater value for the organisation. According to these authors, intangibles may be tacit or codified. “When they are tacit, they reside within the mind(s) of company employees and other stakeholders. When they are codified, they have been committed to some form of media – typed into a computer, drawn on a blueprint, written on a piece of paper, or painted on a canvas.” Tacit intangibles are referred to by an array of terms, such as “economic capital”, “social capital”, “human capital”, “knowledge capital”, “knowledge assets” and “intellectual capital”. Minsky in Beinhocker (2005:378) refers to the “society of mind”, thus emphasising the value of collective intelligence. Although these terms are often used interchangeably, they have been defined differently and influence initiatives in human capital differently.

Some researchers define intellectual capital as comprising “human capital (individual capabilities, knowledge, skill and experience of the firm’s talent), structural capital (intellectual property, methodologies, software, documents and various other representations of knowledge acting as the firm’s supportive infrastructure) and customer capital (client relationships)” (DiVanna & Rogers 2005:52). Swartz (2005:7) cites various authors to illustrate the increasing importance of a company’s intellectual capital as being crucial in creating economic wealth and a competitive advantage; and that it is projected to become the “pivotal factor in corporate growth and development”. Organisations have a competitive advantage if they have something that distinguishes them from the next organisation. Financial literacy can be regarded as one of the sought-after competencies required in employees to create economic wealth and a competitive advantage for the organisation. If
employees do not have financial competencies on all levels in the organisation, these competencies can be developed through training or formal education.

Although it is also necessary to measure the value of a firm’s intellectual capital, the focus in this study is not on the measurement thereof, but on the enhancement of the financial know-how of the decision makers. It is believed that to perform well in a knowledge-based global economy, the decision makers on each and every level of the organisation must have access to information, appropriate education and a mindset to embrace lifelong learning.

3.7 FINANCIAL LITERACY IN A CULTURALLY DIVERSE SOCIETY

The human behaviour system consists of individuals with diverse cultural backgrounds and different value systems. The interaction between these different cultures brings a certain dynamic to the system. Cultural diversity can be delineated on more than one level. There is cultural diversity in the global sense, in an individual country or society, or in an organisation. As explained in chapter 2, South Africa, with its multicultural population speaking different languages, does not only play a role in the economy of African countries, but also participates in the global economy.

Human development in any country forms the basis of sound economic growth and sustained upliftment. According to the United Nation’s Development Programme Report (2004), human development is about much more than the rise and fall of national incomes. “It is about creating an environment, in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests” (Venter & Neuland 2005:129). The South African economy has been undergoing rapid transformation since 1994, and a new force of economic active participants who were previously not part of the business scene has erupted. However, it is a known fact that if an individual does not feel confident in a particular post and does not have the
know-how or experience to do his or her work, this is contraproductive to both
the individual and the organisation. Such an employee cannot add value to the
organisation’s knowledge base and contribute to its intellectual capital. If the
nation’s total human capital is not adequately developed, economic growth will
be seriously constrained.

Cultural diversity can have a positive influence on the way business is
conducted. However, problems may arise if people do not attach the same
meaning to certain key concepts, especially with regard to the financial aspects
of the organisation. One of the dimensions that reflects the cultural orientations
of a country and explains 50 percent of the differences in value systems, as
provided by Hofstede, is individualism versus collectivism (Riahi-Belkaoui
2004:381). For example, the concept of ubuntu (African humanism), which is
underpinned by a set of traditional African values based on inclusivity, humility,
respect, responsibility and concern for others, generational responsibilities,
and a spirit of participation (Khoza & Adam 2005:3), differs from capitalism,
where the focus is on wealth creation by individuals. If these fundamental
differences in value systems are not taken into consideration in financial
education, some individuals may feel alienated. Cling (2001:76), however,
attests that in order “to succeed, black business has to respect the laws of
profit, in which respect for solidarity objectives should be of secondary
importance only”. The development of individuals’ financial capabilities
therefore needs to take cognisance of the value systems of the cultural
diversity of individuals in an organisation. In order to capitalise on cultural
diversity in South Africa, a middle course needs to be found to combine the
African way of doing business with the Western way.

There are also cultural differences in the different economic sectors in a
country. Throughout the African continent, a high percentage of the economic
activity takes place in the informal sector. Freeman (2000) conceptualises
African economic activity as occurring in three separate interlinked and
interacting economies: “the informal, the formal and the global”. He
acknowledges that high unemployment statistics throughout Africa are one indication that most people are excluded from the formal economy and are thus driven into the informal. Some of the entrepreneurs in the informal sectors need to interact with the formal sector, for example, to borrow money from them. If they are not well grounded in the financial terms or financial mathematics, they may lend at much higher rates or lose money because they do not understand the fine print. Hence financial illiteracy is not only a legacy of cultural diversity, but also one of an education system not catering for the needs of people operating in the informal sector of the economy.

3.8 SUMMARY

A systems view was used in this chapter to illustrate the complex nature of organisations and its subsystems. The dynamics of an open system depicted the importance of feedback between two systems, in this case the financial information system and the human behaviour system. Management’s and other stakeholders’ responsibility to properly manage the resources of the organisation, also known as the stewardship function, rests on the quality of the available information on which their decisions are based. However, it also depends on their understanding, interpretation and perception of the information presented. There is a dire need to narrow the gap between the financial information system and the cognitive abilities of those who use it for decision-making purposes.

Financial literacy was identified as one of the basic requirements needed to form an interface between the financial information system and the human behaviour system. In essence, financial literacy was described as the ability to use and understand the business language and to be fluent enough in it in order to make decisions and be accountable for them. Financial knowledge has become not only a convenience but also an essential survival tool, whereas the lack of such knowledge can contribute to the making of poor
financial choices (Jacob et al 2000:3). An organisation’s financial intellectual
capital can be vastly improved if everyone in the organisation can acquire a
financial conscience. South African companies and other organisations are
made up of people from different cultural backgrounds. Some of the prominent
decision makers in these organisations are well educated in certain fields, but
not necessarily in the field of finances or economics. In view of the fact that
almost every decision in an organisation has a financial impact, it can only be
to the advantage of organisations if their decision makers, on all levels, are
financially literate individuals.
CHAPTER 4

INFORMATION: THE CREATIVE ENERGY OF THE ORGANISATION

Information is unique as a resource because it can generate itself. It’s the solar energy of organisation – inexhaustible, with new progeny possible with every interpretation”.

(Wheatley 1999:97)

4.1 INTRODUCTION

While the function of information can be seen as “to inform”, the timing and quality of information have a huge impact on its usefulness. However, the dynamic nature of financial information can only be considered as the creative energy of the organisation if the recipients of the information have the financial knowledge to use it for decision making. Financial information will positively contribute to decision making if it has certain characteristics and if it is presented to financially literate individuals in a knowledge-driven organisation.

In chapter 3 the concept of information, and financial information in particular, was introduced as part of the decision-oriented financial information system. A system’s approach was used to explain that interaction between the financial information system and the human behaviour system is crucial for decision making. It was further noted that information is a process and needs to function in an open system in which feedback creates continuous improvement. Hence the objective of this chapter is to further consider the information system in more detail and to focus on the attributes of information, with special reference to financial information, in order to enhance financial decision making in organisations. This chapter also aims to explain the dynamic nature of information and its contribution to create a knowledge-driven organisation.

Chapter 4 starts with a description of information dynamics with special reference to the nature of financial information, the knowledge-driven
organisation, communication in an information-rich organisation, and consequently, the way in which financial information promotes decision making. The conceptual framework underlying financial information is then discussed. As part of the framework, the objectives of financial reporting, the qualitative characteristics of financial information, the elements of financial reporting and the recognition and measurement concepts of financial reporting are highlighted. The financial information value chain is then explained and the role of financial information producers as message transmitters in a financial literacy context is finally addressed.

4.2 INFORMATION DYNAMICS

Information is presumed to be the energy that converts the uncertainty of the future into the certainty of the past. Information about the past may be quite reliable or certain, but could lack relevance, whereas information about the future may be extremely relevant, but not that reliable. Goldberg (2001:56) attests to this by asking: “Why should, or how can, accounting information, which portrays past activity, be relevant to, and therefore useful for, determining what should be done now for effect in the future?” It follows that if organisations focus on historical information they might find it difficult to shape the future of the organisation. Information has to be dynamic because time continuously changes the present into the past and influences the quality and relevance of information. Dynamic information also means that the information generates new ideas and energises the decision-making process. Hence change, that is, change in the timeframe and the environment, generates new information. However, the dynamic flow of information is also necessary to initiate change, because new information leads to new decisions, resulting in changed actions. In turn, changed actions generate new information.
4.2.1 The nature of financial information

In the accounting literature there are various examples of the terms, financial accounting and accounting or accounting reports and financial reports, being used interchangeably (see Riahi-Belkaoui 2004; Deegan & Unerman 2006:5&11; Hollander, Denna & Cherrington 2000). In view of the interchangeable use of the terms, accounting and financial, it is noted that the name of the International Accounting Standards (IAS) recently changed to that of International Financial Reporting Standards (IFRS). Therefore, in this study, reference to financial information and nonfinancial indicators can also be regarded as reference to accounting information, and vice versa.

As stated in chapter 3, the financial information system should presumably contribute to decision making and reduce uncertainty about the organisation’s financial prospects. However, Beinhocker (2005:317) reasons that information should be useful and fit for some purpose in order to create knowledge. This is only possible if the information is presented in such a way that the target audience can understand and interpret it, which in turn implies that the audience should have the cognitive capability to understand it. According to Christensen and Demski (2003:3), information in the broadest sense is “some observable that reveals something, leading to a change in the probability assessment”. In other words, a change in the probability assessment means that the available information alleviates the probabilities and ultimately leads to choice making. Financial information should refine the recipient’s knowledge of the different states or probabilities present in the organisation. If the decision maker is confronted with a set of alternative choices, the financial information at his or her disposal is supposed to help him or her to choose the better alternative that usually entails the better allocation of resources. Resource allocation is essential for survival, sustainability and creativity.

The dynamic nature of financial information implies that the information produced by the system is not a product in itself but rather a continuous process. However, although financial information is supposed to be dynamic, it
usually only provides the history of an organisation’s transactions in its environment. According to Gouws and Rehwinkel (2004:96): “the financial accounting and reporting system focuses on the effects of past events, creating a perception of reality by a set process of observation and reporting standards, which direct what we choose to notice and the manner in which we reflect”. Financial information is by nature historical and can only have decision-making value if the information can be used to choose between alternatives. Hence users of the information produced by the information system need to have the financial capability to recognise the historical value of the information and adapt, analyse and interpret it for their unique decision making purposes. It follows that in order to adapt it, the recipient of the financial information must be able to observe the information in context and be able to assess if the information was manipulated in any way and to what extent it can be used for decision making. If the user is not financially literate, he or she will find it extremely difficult to assess the authenticity of the information.

4.2.2 The knowledge-driven organisation

It is easy to confuse information with knowledge. The truth of the matter is that one needs to apply a cognitive process to information before it can be regarded as a form of knowledge. In this regard, Abell and Oxbrow (2001:72) concur that

... information and knowledge meet, converge and overlap. They are not the same but it is difficult to see how one exists without the other. Information is not of itself valuable. Its value is in its use and its effective use depends on the ability of an individual to see meaning and significance in that information and thus to create new knowledge.

This knowledge creation process will be explained in more detail in chapters 6 and 8. Knowledge, according to Edwards, Collier and Shaw (2004:2), is a key organisational resource. According to them, knowledge management is “more concerned with ‘flows’ of knowledge that take place as part of organisational processes than the ‘stocks’ of knowledge presented in financial reports”. This flow of knowledge is indicative of a continuous process and not only that of a
once-off final product. Consequently, the continuous flow of information and the users’ ability to analyse and use it, form the basis for the flow of knowledge.

Apart from managing information in the organisation, it follows that a firm also has to manage knowledge and the capability to create and utilise such knowledge. The investment in, inter alia a knowledge management system (KMS) can become extremely costly because rapid changes in the business environment demand high-quality, timely and flexible information. Hence the design of new knowledge management systems for the organisation should “ensure that adaptation and innovation of business performance outcomes occurs in alignment with changing dynamics of the business environment” (Malhotra 2004). But, to fully utilise the outcomes produced by a KMS, the decision makers in the organisation first have to understand the financial information used as basic input into the system. Malhotra (2004) further distinguishes between two knowledge management systems, namely: model 1: knowledge management for routine and structured information processing, and model 2: knowledge management for nonroutine and unstructured sense making. These models are depicted in figures 4.1 and 4.2 below.

**Figure 4.1: Knowledge management for routine and structured information processing**

<table>
<thead>
<tr>
<th>Data, information, rules</th>
<th>Human and machine intelligence</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computational inputs</td>
<td>Pre-determined meaning(s)</td>
<td>Pre-defined action(s)</td>
</tr>
<tr>
<td>Best practices, rules, procedures</td>
<td>Pre-programmed and controlled</td>
<td>Pre-specified outcomes</td>
</tr>
<tr>
<td>Organisational inputs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MODEL 1**

*Source: Malhotra (2004)*
Model 1 (see fig 4.1) depicts knowledge management for routine and structured information processing. It focuses primarily on knowledge re-use over creation of new knowledge and is often characterised as “getting the right information to the right person at the right time”. The outcomes are usually prespecified, stable and predictable. According to Malhotra (2004), the overriding belief is that “designers of the systems and the knowledge managers have accurate and complete knowledge about the viability of the input-output transformation process as well as the viability of the performance outcomes that have been predefined”. This input-output transformation process refers to the calculations and changes done on the data in order to provide information. The lack of feedback from the users to the designers of the system can be regarded as a weakness of the model as depicted in figure 4.1. This model is also characteristic of the accounting information system with inputs processed through a system based on predefined accounting standards. The designers of the accounting system uses predefined source documents or set rules for input information, and the process of capturing and processing it is also predetermined, resulting in a prespecified outcome.

**Figure 4.2: Knowledge management for nonroutine and unstructured sense making**

![Diagram of Model 2](Image)

**Source:** Malhotra (2004)
Because figure 4.2 illustrates knowledge management for nonroutine and unstructured sense making, knowledge is represented in model 2 as a *dynamic* construct in contrast to the more *static* representation of model 1. This model is more dynamic because there are no predetermined meanings or predefined actions resulting in prespecified outcomes. According to Malhotra (2004), this dynamic representation is because “diverse [individual and shared] meanings are possible based upon diverse interpretations of the same information inputs across different contexts and at different times”. The lack of feedback on the diverse interpretations of the same information can also be seen as a limitation of Model 2. Whereas model 1 is more concerned with rules and specification of tasks, model 2 takes into consideration the way in which the data are interpreted and the fact that performance outcomes should be re-assessed with respect to changing conditions.

From the above it is evident that a knowledge-driven organisation does not only need information but also individuals who are able to interpret it in order to give the firm a competitive advantage. To enhance the information dynamics, the users also need to give feedback on the way they use and interpret the information. Goldberg (2001:72) contends that although intellectual people live in a world of signs that set up boundaries around their interpretations, these boundaries are not inflexible and may therefore vary their interpretations as and when necessary. This implies that these different interpretations express a certain level of uncertainty, referred to here as knowledge complexity. Ditillo (2004:405) explains that knowledge-intensive organisations are difficult to manage because they need to not only attract the right individuals with the right expertise, but they also need to integrate the knowledge of those recruited in order to perform activities primarily characterised by uncertainty. Hence organisations need individuals who are able to apply their knowledge to the available information in order to maximise profit and/or performance.
4.2.3 Communication in an information-rich organisation

Basically, communication is the process of formulating or preparing a message, sending it and receiving it by someone else, who interprets it. However, communication is only effective “when people understand each other, stimulate others to take action, and encourage others to think in new ways” (Thill & Bovée 2002:3). Thus, according to Goldberg (2001:73), effectiveness requires some commonness of experience between sender and receiver, and an agreement between them about the relationship between the signs or symbols to be used when referring to such a shared experience. The problem is that, say, individuals in different departments of the organisation do not always share the same experiences or understand the signs and symbols used in other departments.

With regard to communication in the business world, Schoonraad (2003:8) defines financial communication as “The establishment and maintenance of mutually beneficial relationships between a company and its relevant stakeholders, by exchanging information that is needed to facilitate optimal decisions regarding the allocation of scarce resources”. Physical (eg plant and equipment) and human (eg management talent, employee skills) resources are what management use to explore and exploit opportunities (Beinhocker 2005:367). However, without the necessary information and the ability to interpret it, they will be unable to detect opportunities and allocate resources for the financial benefit of the organisation.

Information can be exchanged in different ways; it can be done through writing, verbal or even nonverbal means. Financial information can even be exchanged by using a variety of tables and graphs. However, communication through writing, especially printing, led to profound changes in society. According to Littlejohn and Foss (2005:278): “When you can write something down, you can separate it from the moment. You can manipulate it, change it, edit it, and recast it. In other words you can ‘act on’ information and knowledge in a way not possible in the oral tradition”. Financial information is generally
communicated by way of written reports, and as a result, in some instances, it can be changed, manipulated or recasted. Decision makers will be in a better position to make decisions if they are aware of this and acquire the experience and expertise to separate the wheat from the chaff.

Factors such as globalisation, intricate financial instruments and transactions, have resulted in the development of increased numbers of international financial reporting standards, new legislation, listing requirements and other pronouncements. These requirements have a profound effect on accounting information as well as other financial information. These factors have added to the growing complexity and expanded volume of financial reports. Nevertheless, Holman and Bruce-Gardyne (2002:9) hold that that “greater disclosure does not automatically produce more informed investors”. With specific reference to financial reporting, Smith (2003:17) states that “unsophisticated users of accounting information rely almost exclusively on narrative sections in the annual report. But the financial narrative is a complex document and, if the user can’t understand it, there are opportunities for misinterpretation”. Where the narrative section is supposed to explain more about the amounts and figures used in the reports, it follows from Smith’s statement that the complexity thereof defies the object, especially when the readers are financially illiterate. It is evident that there may be a widening communication gap between these complex written reports and the users who need to base their decisions on the information concealed in pages of intricate figures and financial jargon.

The increase in the sheer volume of financial information can lead to some degree of information overload, which in turn can influence the effective communication of financial information to decision makers. According to Simon (1971:40): “In an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes.” In his opinion, this scarce commodity is the attention of the recipients who can only attend to one thing at a time. This problem is
aggravated if the recipient is financially illiterate, and does not even know what information he or she needs. This information overload has a cost implication. The cost incurred by the recipient to interpret and utilise an abundance of information may actually be more than the cost to produce the information.

Hence the proper aim of transferring information is not to give decision makers all the information they need, but to reorganise their environment of information in order to reduce the amount of time they have to spend in receiving it (Simon 1971:44). In an information-rich organisation a proper information management system or information-processing system is essential to filter and organise the information decision makers need. Apart from having such a system, accountants and other financial intermediaries also need to produce information in a user-friendly format that reduces the time spent deciphering it. According to Smith (2003:17), “accountants have a professional idiom that can be an obstacle when communicating with outsiders”. Although the preparers of financial reports are deemed to be different and separate from the users, these reports should still contribute to effective communication in the organisation by taking the users’ financial acumen into account. If users find the information incomprehensible, they have to at least know if and when to use intermediaries to facilitate the success of the communication process. The ideal would be for financial information to be communicated in such a manner that the users could interpret it without having to pay intermediaries to assist them and without having to spend too much time deciphering it.

4.2.4 Financial information that makes decision making possible

Decision making is a complex activity of reducing the decision maker’s uncertainty and making choices from different alternatives. This implies that decision making clearly involves a distinct “information gathering function” (Harris 1998:1). Goldberg (2001:149), however, states that the basic reason behind any desire or requirement for making a decision is “a felt need or wish to alter the status quo, that is, some dissatisfaction or unease with existing circumstances”. Romney and Steinbart (2006:12) see decision making as a
multistep activity consisting of: identifying the problem, collecting and interpreting information, evaluating ways to solve the problem, selecting a solution methodology, and implementing the solution. Hence, all these steps require that the decision maker should have the financial acumen to identify the status quo, collect the applicable information and be able to interpret it, before a decision can even be contemplated.

With regard to problem-solving, “Einstein is often quoted as saying: No problem can be solved from the same consciousness that created it” (Wheatley 1999:7). In other words, radically different information is sometimes necessary to view decision-making problems from a new perspective. According to Schoonraad (2003:42), “decision-usefulness is based on a utilitarian philosophy, also referred to as the ethics of care”. This means that the available information should also reflect the effect of the decision, not only on the organisation, but also on society and the environment. This characteristic of decision-usefulness is in line with the “stewardship” responsibility of decision makers in an organisation. If they are not financially literate, they will not be able to fulfil this stewardship role. Rayman (2006:15) refers to the stewardship responsibility as the “custody and safekeeping of enterprise resources”. From the above it is evident that making a decision implies that information is needed to consider and choose between different options, to allocate resources and reduce uncertainty. Hence, if information on these resources and the activities surrounding it is not available or is not clear, decision makers will not be able to properly fulfil their stewardship responsibility or their management function.

The Nobel prize-winning economist, Herbert A Simon (Gelinas, Sutton & Hunton 2005:28), describes decision making as a three-step process:

1. **Intelligence**: Searching for and identifying things that require change. Seeking information and analysing it are important actions to initiate and facilitate change.
2. **Design**: Results of the analysis process need to be interpreted, a resolution made and possible courses of action are then formulated. The interpretation of the analysed information will indicate different options to choose from.

3. **Choice**: Change may be required or the status quo may be the best available alternative. When decision makers are faced with uncertainty they search for more information (step 1), use computational and other means to analyse and interpret (step 2) the information and eventually choose (step 3) the option they feel most comfortable about.

All three decision-making steps referred to above, emphasise the importance of information and the proper interpretation thereof. If the decision is a financial one or has financial implications, financial information is needed to identify (investigate or analyse) options, to make a resolution or take a possible course of action, and to ultimately choose the best available option. This is only possible if the individual choosing between alternatives has the financial knowledge to seek, investigate and analyse the information available at that particular moment. Decisions cannot be postponed indefinitely until the decision maker can acquire more information or until he or she acquires the financial knowledge to use the available information. However, in the three-step process described by Simon, there is no indication of the timeframe in which a decision has to be made. Evidently, decision making has a time constraint, which simply means that the time and effort to gain information or identify alternatives are limited, and as time passes, the decision environment continues to grow and expand (Harris 1998:2). The three decision-making steps are depicted in figure 4.3.
Figure 4.3: Steps in decision making

The original figure depicted in Gelinas et al (2005:28) was adapted by inserting feedback loops only described by the authors. The three steps, intelligence, design and choice, explained above, are linked by the continuous flow of information. As shown in figure 4.3, feedback loops are an integral part of decision making and should improve the flow of information to and from all three steps in the decision-making process. Feedback, “should improve the intelligence, design, and choice that occur as part of an iterative process” (Gelinas et al 2005:28). Feedback on the success or failure of the selected course of action that has been taken should therefore improve all three steps illustrated in figure 4.3. For example, if the choice made did not yield positive financial results, more or better financial information on certain elements may be identified as necessary for future decision making. In addition, information from the environment and the organisation itself is needed to recognise problems and opportunities requiring decisions. Thus continuous feedback
through the three decision-making steps will contribute to the better reporting of financial information, and ultimately, to better decision making.

In an attempt to find out whether the current financial reporting model was meeting the decision making needs of investors for transparently presented and complete financial information, PricewaterhouseCoopers conducted an in-depth survey among 43 investment professionals in the UK. The results showed that participants were not obtaining the information or insights they needed to do their jobs effectively (Phillips 2005:60). According to the survey, the providers of financial information are struggling under the current regulatory model to present the information they believe is actually important in running the business. On the other hand, the users of that information are increasingly frustrated that they are not receiving the information they need (Phillips 2005:60). It follows from this survey that there is a need for interaction (feedback) between the information-reporting model and the user’s information needs, before information can actually make decision making possible. Everingham and Kana (2004:2) conclude: “Over time, companies can expect growing pressure to develop meaningful disclosure practices that more adequately address the diverse information requirements of different stakeholder groups on an integrated basis.” In order to meet the expectations of the user groups, organisations will have to encourage stakeholder groups to give feedback on their information requirements and then take cognisance of this feedback. Users’ responses could contribute to a more user-specific reporting model.

4.3 THE CONCEPTUAL FRAMEWORK UNDERLYING FINANCIAL INFORMATION

Financial information originates from the happening of events or transactions. It emanates from various sources, such as the financial media, capital market releases and the organisation’s own accounting process. It therefore follows
that there can hardly be one single conceptual framework underlying financial information per se. Although the accounting profession developed a framework for the presentation of accounting information, the principles of this framework can also be used as a guideline for the presentation of other financial information. The key principles of this framework applicable to financial information in total will be discussed.

Before the establishment of a conceptual framework, the accounting profession was criticised because the generally accepted accounting principles of the time allowed for much diversity in accounting treatments. There was a lack of agreement on key issues about, inter alia, the acceptance of decision-usefulness as the criterion for the formulation of accounting policy, “the role and objectives of financial reporting, appropriate definition, as well as recognition and measurement rules for the elements of accounting” (Deegan & Unerman 2006:172). These problems led to the formation of the Trueblood Committee, which listed 12 objectives and seven qualitative characteristics that financial information should possess, to make it useful for decision making. The real meaning of the Trueblood Committee centred on the establishment of objectives that would be relevant and responsive to the financial information needs of different users for decision-making purposes. The idea was to narrow the gap between financial information, on the one hand, and the usability thereof for decision makers, on the other.

The Financial Accounting Standards Board (FASB) in the USA developed one of the first conceptual frameworks in accounting, which was based on the Trueblood Report’s recommendations. According to Gibson (2007:4), the FASB’s Framework is intended to “set forth a system of interrelated objectives and underlying concepts that will serve as the basis for evaluating existing standards of financial accounting and reporting”. The FASB formally defined its conceptual framework as “a coherent system of interrelated objectives and fundamentals that is expected to lead to consistent standards” (FASB 1978:S FAC No. 1). Consistency in the way financial information is presented is
crucial when users, especially those who are not as affluent in the financial language, need to base their decisions on the information or to compare different sets of information in order to make decisions.

Other countries also embarked on the development of a conceptual framework for accounting. *The Corporate Report* (1976) in the UK, *The Stamp Report* (1980) in Canada and similar attempts in Australia and New Zealand were all developed with a number of similarities to that of the FASB’s Framework. As a result of globalisation and the attempt to set international accounting standards, the International Accounting Standards Committee (IASC) also developed a Framework (1989) that its successor, the International Accounting Standards Board (IASB), subsequently adopted. The South African Framework, issued in 1990 as the *Framework for the Preparation and Presentation of Financial Statements* (AC 000), is based entirely on the Framework developed by the then IASC. All these attempts were initiated with the intention of increasing the quality and usefulness of financial information for decision making.

Although decision makers can at least be sure that financial information based on the conceptual framework was prepared according to a well-considered process, the complexity of these financial reports, as will be discussed in chapter 5, has the potential to baffle decision makers who are not financial experts. There seems to be general support for differential reporting rules and the IASB is writing its SME standard using the same conceptual framework as used for IFRS but reducing the financial reporting burden (IFAC 2006:21). For the many small entities, where the owner or managers may find current financial information based on IFRS complex and incomprehensible, these new standards may come to the rescue. The components of a conceptual framework based on the IASB/IASC framework are illustrated in figure 4.4. This figure indicates the sections in which some of these components are further explored in this thesis.
As indicated in figure 4.4, the components of the conceptual framework of specific importance to the decision-usefulness of financial information are addressed in this study. The objectives and qualitative characteristics of financial statements used by decision makers who are financial experts as well as those who have limited financial acumen are relevant to this study and are discussed in some detail. However, the elements of financial statements, recognition criteria and measurement basis are only briefly explained. The different users of financial information and their information requirements will be discussed in chapter 7.
4.3.1 The objectives of financial reporting

The basic objective of financial reporting is to provide information on which users can base economic decisions. Information serves to reduce the uncertainty inherent in the business environment and further reduces entropy on the basis of the assumption that chaos exists where there is no information (Koornhof 1998:33). Information can thus be regarded as the energy available to lower the measure of disorder (entropy) in the system. In line with information’s basic decision-usefulness objective, is the claim that information has value if the “decision maker’s expected utility is higher with than it is without the information” (Christensen & Demski 2003:113). However, the decision-usefulness objective also entails that the expected utility depends on the user’s financial ability to understand and use the information. Other schools of thought regard accountability (or stewardship) to the owners and investors of a company as the primary objective of accounting (Schoonraad 2003:42). However, according to IAS 1 (SAICA 2008:par 7), the objective of financial statements of generally accepted accounting practice (GAAP) is “to provide information about the financial position, performance and cash flows of an entity that is useful to a wide range of users in making economic decisions”. Hence, in IAS 1 the focus is not only on owners and investors, but on a wide range of users. Irrespective of which one of these objectives is the most important, if financial information is not presented in a format useful for decision making by a wide range of users, it serves no purpose.

The 12 objectives stated in the Trueblood Report were intended to be equal, but in the opinion of Riahi-Belkaoui (2004:167) there is a definite hierarchical structure to these objectives. The basic or first objective of financial statements is “to provide information on which to base economic decisions” (AICPA 1973). Although all 12 objectives embrace the usefulness of information for decision making, as well as predicting, comparing and alleviating uncertainty attributes, objective No. 2 is of special interest for the purposes of this study. As mentioned in the previous chapter, objective No.2 states that the purpose of “financial statements is to serve primarily those users 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 activity” (AICPA 1973). Although “limited ability” may be interpreted as stating that financial statements should serve specific users, say those who are financially illiterate, Wolk, Dodd and Tearney (2004:175) state that it may simply be a code for full disclosure and broad, general-purpose financial statements. The Discussion Document, Making Corporate Reports Valuable, states that users of corporate reports can cover the whole spectrum, from those who are highly knowledgeable in financial matters, to those who tend to become bemused when faced with masses of figures (McMonnies 1988:28). Therefore if the objective of financial statements is to aid users in making rational decisions, then financially illiterate users, that is, those with a limited ability, should presumably also be able to understand and interpret the statements correctly if they have been fully disclosed in broad general-purpose financial statements. If this is not the case, then they should either become more financially literate in order to understand it or the information should be presented in a more user-friendly, comprehensible way so that even those with limited financial capability can understand it. One can argue that a process of establishing an interface is necessary to integrate the financial information and the decision makers’ ability to understand and interpret it.

Users of financial reports, especially company shareholders, are concerned whether management uses the resources entrusted to them for the intended purposes. This stewardship objective is dependent on whether the financial information made available to the shareholders is presented in such a way that they can base their decisions on it, and also that they have the ability to understand it. Apart from the decision usefulness and the stewardship objectives, another commonly cited objective of financial reporting is in the following opinion of Deegan and Unerman (2006:179): “to enable reporting entities to demonstrate accountability between the entity and those parties to which the entity is deemed to be accountable”. Wolk et al (2004:184-185) regard the accountability concept to mean more than the narrower concept of
stewardship, which follows Ijiri’s usage that it is management’s responsibility to report on achieving goals for the efficient and effective utilisation of organisational resources. Owing to numerous corporate failures, inexorable pressure has been placed on the accountability of organisational managers and decision makers. It is therefore becoming imperative for, inter alia, individual company directors and board members of organisations to understand the entity’s financial reports before they commit themselves and become accountable for decisions taken by these boards of directors. Although the onus rests on these stakeholders to become competent in interpreting financial information, the financial information presented to them needs to possess certain characteristics before it can be useful for decision making.

4.3.2 The qualitative characteristics of financial information

The qualitative characteristics as described in the conceptual framework pertains to accounting information, but are also applicable and fundamental to any other financial information. Qualitative characteristics are those properties of the information provided in financial reports that will render it useful to users for decision making. Hence the objectives of financial reporting, as stated above, are a natural starting point in assessing the quality of financial information. The characteristics of information that make it a desirable commodity, guide the selection of preferred accounting policies from among available alternatives. The qualitative characteristics are those basic attributes deemed necessary to attempt to narrow the gap between financial information and decision makers.

As far back as 1973, the Trueblood Report listed seven qualitative characteristics that accounting information should possess. These characteristics are relevance and materiality, form and substance, reliability, freedom from bias, comparability, consistency and understandability (AICPA 1973). Since accounting reports are by no means the only source of financial information about organisations, one can infer that these characteristics are also relevant to enhance the quality of any other kind of financial information.
The main purpose for the establishment of these characteristics is to serve decision makers’ needs. The Financial Accounting Standards Board’s (FASB) Statements of Financial Accounting Concepts (SFACs) No. 2 (1980) examined the characteristics that make accounting information useful for investment, credit and similar decisions (Gibson 2007:5). While the Trueblood Report refers to users with “limited ability”, the FASB’s statements adopt the position that “… users of financial statements must be assumed to be knowledgeable about financial information and reporting …” (Wolk et al 2004:198). One can thus infer that the qualitative characteristics can only enhance the usefulness of information up to a point; thereafter the onus is on the users to become financially knowledgeable in order to base their decisions on it. Therefore, financial literacy can be used as a dynamic interface to bring the information side and the decision makers closer to each other.

Regarding the function to serve the decision needs of users, the FASB makes a further distinction between the different qualitative characteristics. According to Hendriksen and Van Breda (1992:131), the FASB distinguishes between decision-specific qualities and user-specific qualities. Although these qualities are defined from an accounting perspective, they are just as important for the preparation and presentation of any other financial information. These authors regard decision-specific characteristics such as timeliness, relevance and reliability as independent of users because all users need these information qualities. On the other hand, user-specific information qualities relate to the nature of the user. Knowledgeable users might find some information irrelevant because they already know it, while sophisticated users might find complex information more relevant than novices (Hendriksen & Van Breda 1992:131). Novices can also be seen as users with “limited ability” or who lack financial skills or experience.

The International Accounting Standards Board’s (IASB) framework, identifies four principal qualitative characteristics, namely understandability, relevance, reliability and comparability (SAICA 2008) deemed fundamental for decision
making. Before the qualitative characteristics as set out by the IASB’s framework are discussed, the FASB’s hierarchy of information qualities is depicted in figure 4.5, with reference to the applicable sections of the thesis in which it is further discussed.

**Figure 4.5: A hierarchy of information qualities**

<table>
<thead>
<tr>
<th>Users of financial information</th>
<th>More financially literate and less financially literate decision makers and their characteristics (Ch 7, sec 7.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pervasive constraint</td>
<td>Benefits &gt; Costs</td>
</tr>
<tr>
<td>User-specific qualities</td>
<td>Understandability (Sec 4.3.2.1)</td>
</tr>
<tr>
<td>Decision-usefulness</td>
<td></td>
</tr>
<tr>
<td>Primary decision-specific qualities</td>
<td>Relevance (Sec 4.3.2.2)  \ Reliability (Sect 4.3.2.3)</td>
</tr>
<tr>
<td>Ingredients of primary qualities</td>
<td>Predictive value  \ Feedback value  \ Timeliness</td>
</tr>
<tr>
<td>Secondary and interactive Qualities</td>
<td>Comparability (including consistency)  \ Neutrality</td>
</tr>
<tr>
<td>Threshold for recognition</td>
<td>Materiality</td>
</tr>
</tbody>
</table>

**Source:** FASB (1986: 44)
Regarding the theme of this study, both the characteristics of the decision makers and of information are depicted in figure 4.5. Decision makers and their characteristics, however, will be discussed in detail in chapter 7, while the focus in this chapter is on the characteristics of information. The above hierarchy (see fig 4.5) includes two primarily qualitative constraints on information. Firstly, the benefits must exceed the costs, and secondly, all the stated qualities of information are subject to a materiality threshold. If it is to be desirable, information has to be worth more to decision making than the cost of providing it. The problem with this constraint is that the benefits cannot always be quantifiable and directly related to the costs of providing the information. According to Nikolai and Bazley (2003:37), materiality refers to “the magnitude of an omission or misstatement of accounting information that, considering the circumstances, makes it likely that the judgement of a reasonable person relying on the information would have been influenced by the omission or misstatement”. It is meaningful that the hierarchy distinguishes between primary and other qualities, but does not assign priorities to these qualities. However, some authors (Gibson 2007:5; Riahi-Belkaoui 2004:167) are of the opinion that understandability and usefulness for decision making are the most important characteristics that makes information a desirable commodity. However, one should bear in mind that understandability is also dependent on the users’ level of financial literacy and not only on the quality of the information. If information is not understandable and useful for decision making it becomes obsolete and serves no purpose.

4.3.2.1 Understandability
As mentioned above, understandability, depicted in figure 4.5, is a user-specific quality; hence the understanding of the information is also dependent upon the nature of the user. The understandability of financial information in particular is closely related to the cognitive characteristics and knowledge level of decision makers. It follows that a certain level of expertise, including numeracy skills, is expected of financial information users. Dantzig (2005:1&5) does not refer to numeracy, but instead to having a number sense or even to
possessing the *art of reckoning*. This implies that numeracy involves not only counting, but also the ability to discern numbers and devise rules for operating on them. The art of reckoning includes not only being able to count, estimate or calculate, but also to account, judge and consider the effect of the amounts on the organisation. Numeracy is discussed in more detail in chapter 6. More specifically, Deegan and Unerman (2006:178) even expect financial report readers to be proficient in financial accounting. Paragraph 25 of the FASB’s conceptual framework adds that “… users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence”. Users may well be willing to study the information, but if they do not understand what they are reading, it will be almost impossible to study the content with reasonable diligence. This leads one to believe that all users of financial reports should be at least financially literate and capable of understanding these reports.

Contradictory to the above, Objective No. 2 of the Trueblood Report refers to those users who have “limited authority, ability or resources to obtain information”. The discussion document: *Making Corporate Reports Valuable*, also states that “reports should be framed in such a way that users can get what they want from them without having to turn for advice to an accountant, lawyer, economist or other specialist” (McMonnies 1988:28). This document goes further to suggest that accounts do not need to be translated for the lay user, but should be comprehensible to a reasonable person (McMonnies 1988:50). If a “reasonable person” refers to the person’s financial capabilities, one may assume that a lay person is then regarded as someone who is less financially literate. Deegan and Unerman (2006:181) see understandability as a requirement or challenge for standard-setters to ensure that the accounting standards they develop for dealing with complex issues produce understandable disclosure, irrespective of the complexity of the underlying transactions. In the same sense, an individual may be able to drive a car, but does not necessarily know how the engine works.
It is thus preferable that the disclosure of financial information should be of such a nature that the users can understand it without knowledge of the detailed transactions underlying it. One may assume that financial statements should ideally be presented in a comprehensible fashion and that unnecessary technical jargon should be avoided. The dilemma in the understandability of financial information is that the financial reports need to be presented in plain format, but that the user needs to have a reasonable knowledge of business and economic activities. The fact that users may have different levels of financial literacy has to be considered when contemplating the presumed understandability of the information. Users need to possess a specific level of financial expertise to understand the numbers in the context of other financial information and the economic environment. Besides the need to understand the information presented in financial reports, users should also be able to base their decisions on the belief that the information presented is relevant and reliable, as explained in the next section.

4.3.2.2 Relevance

Relevant information is supposed to influence “the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations” (SAICA 1990: par 26). However, without financial literacy it would be difficult to evaluate events and, if necessary apply any corrective actions. Although relevant information should be able to influence the user’s decisions, the degree of relevance will depend on his or her needs and expectations. According to Hendriksen and Van Breda (1992:133), information will only be relevant if it affects goals, understanding and decisions. Goldberg (2001:174) argues that the relevance of information relates to the use made of it. He further states that the “provider of information cannot foretell its relevance; he may speculate or hold an expectation (perhaps justified) that it will be (or will not be) interpreted by the recipient as being relevant”. It follows that for information to be relevant - in other words, to serve a purpose - there should be a definite link between the quality of the information and the decision makers’ objectives. The quality of the information,
in turn, will depend on the decision makers’ ability to understand it and also on the feedback that users give to the producers of this information.

In figure 4.5, relevance is depicted as a primary decision-specific quality. However, the nature of the user is shown as a secondary determinant in order to decide what information to submit. Wolk et al. (2004:167) regard relevance as the major issue of financial information because of the different user groups with different backgrounds who need to make decisions in different contexts. According to the IASB framework (SAICA 2008:par 26), relevant information should further have *predictive value* and *feedback value* to assist the different decision makers. These are not the primary qualities of financial information but the essential ingredients of an encompassing process to produce relevant information. In contrast to the IASB framework’s statement on financial information’s predictive value, Goldberg (2001:19) contends that “… however valid an analysis of past performance may be, the future is always unknown, even though it may be imagined”. This suggests that financial information as such might not always have predictive value and that it depends instead on the users’ imagination or perceptions of future financial conditions. However, financially illiterate users may find it difficult to imagine or perceive future financial conditions. As far as feedback value is concerned, Nikolai and Bazley (2003:35) state that financial information has feedback value when it enables decision makers to confirm or correct prior expectations and that knowledge about previous actions will generally improve a user’s ability to predict the results of similar future actions. As seen in chapter 3, feedback, be it positive or negative, is the basis for information flow in an open system, and it is essential for the user to adjust to the outcomes of decisions made in the past.

Knowledge of past events is also necessary to predict future events and the outcome of similar future actions, say, credit and bank lending decisions may be predicted on the basis of the organisation’s accounting and other financial information. A survey by KPMG (2008:39) commented that investors “… are asking for better measures of economic value and more reliable guidance on a
company’s future performance”. The problem is that value already relates to a future concept and is dependent on future circumstances unknown in the present. According to Simon (1996:147), one of the requisites for good predictions is an understanding of the phenomena to be predicted. Predictions on a company’s future performance can therefore be risky if those who use financial information for predictions are not financially literate enough to understand the information used as the basis for such predictions. Forward-looking financial information and its predictive ability are discussed in more detail in chapter 5. Hence, although financial information has predictive value, it can never be a prediction in itself; it can only be used as guidance on the organisation’s future prospective. If decision makers do not have the necessary financial acumen they may find it difficult or even impossible to make predictions on the basis of the available information without the help of, say a financial analyst.

A further ingredient for information to be relevant is that of timeliness (see fig 4.5). Timeliness implies that information must be available to the decision maker before it loses its capacity to influence any resolutions. Gelinas et al (2005:24) confirm that “lack of timeliness can make information irrelevant”. Hall (2007:15) further explains that “information must be no older than the time period of the action it supports”. Because financial reporting often happens up to and between three to six months after the financial year end, decision makers need to have the financial capability to assess if the information is still relevant and applicable to the specific decision-making situation. Users must take timeliness into account when using financial information as basis for decision making. The less informed may use irrelevant and outdated information to base their decisions on. Timeliness as such does therefore not guarantee relevance, but a lack of timeliness robs information of its relevance (FASB 1980:par 56). Hence timeliness does not only imply that financial information must be produced as quickly as possible, but rather that timely information must be available throughout the financial period, be it in the form
of management reports or any other financial information releases, in order to make sound economic decisions at the required time.

4.3.2.3 Reliability

The credibility of information is jeopardised if it does not have both the qualities of relevance and reliability. The IASB framework defines reliability as the quality information possesses “when it is free from material error and bias and can be dependent upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent” (SAICA 2008:par 31). From this definition one may infer that in order to be reliable, information must be neutral and free of bias. Bias, according to Gelinas et al (2005:24) is the “tendency of information to fall more often on one side than on the other of the object or event it represents”. If the debtors’ account, for example, is higher than what can be collected, the balance presented is bias. Free from bias also means that the information preparer is only an observer and has no judgement to express (Goldberg 2001:16-17). The preparer is only supposed to present the financial events of the organisation objectively and realistically without clouding them with his or her own interpretation thereof. Hence the users of the information, especially those with limited financial knowledge, need to know that the information was not influenced by the subjectivity of the preparer. If the user is financially illiterate, it will be almost impossible to judge whether the information is neutral and unbiased. Verifiability addresses the reliability of the measurement method, whereas neutrality addresses the reliability of the person doing the measuring (Gelinas et al 2005:24). It follows that to be neutral, the person who measures is not supposed to influence the outcome of the measurement in any way.

Free from material error in the above definition further means that the information must be accurate. Users who do not have financial knowledge and experience will find it extremely difficult to evaluate the accuracy and materiality of the financial information presented to them. Material in this sense implies that in some cases, information must be perfectly accurate, while in
others, the level of accuracy may be lower (Hall 2007:15). According to Hall (2007:15), material error exists “when the amount of inaccuracy in information causes the user to make poor decisions or to fail to make necessary decisions”. This means that for decision making, the numbers must at least agree and be based on legitimate events or transactions. As stated by McDonnell (2005:83) “there needs to be a single, consistent version of the truth, both for compliance purposes and for ongoing credibility with the investor community”. This implies that representational faithfulness is a necessary attribute to ensure that information is accurate and not based on artificial or superficial events in order to use it for decision making. By contrast, the application of IFRS emphasises that certain assets are valued at fair value or revaluated to present a more realistic current value. This may lead to different values being based on different calculations, which may not represent one single consistent version of the truth; something that complicates the use of financial information, especially for those without financial expertise.

The usefulness of financial information for decision making is further enhanced if verification of the information proves that the accounting measures represent what they purport to represent. The word “verify” is derived from the Latin word versus, which means truth. Verifying the reliability of information implies that the measurement has an existence separate from the person making the measurement (Hendriksen & Van Breda 1992:138). In contrast to this statement, Wheatley (1999:65) states that no form of measurement is neutral. This makes it difficult to know if decisions are based on sound measurement techniques. Measurement in this context means assigning a value to certain objects or events according to certain rules (Riahi-Belkaoui 2004:42). The verification process can therefore help to reassure users who are not that financially literate that the financial information at least represents the truth. According to Horngren, Sundem and Elliot (1996:734), verifiability means “that there would be a high extent of consensus among independent measurers of an item”. It is thus assumed that less subjectivity and personal bias are applied by the measurer. Where a lack of neutrality and uncertainty may create
constraints to measurement, the limitation of the less financially literate user to verify the validity of the numeral assigned to the object or event can also be regarded as a major drawback.

4.3.2.4 Comparability

Comparability is defined as a secondary and interactive quality in the hierarchy of information qualities (see fig 4.5). Financial information becomes more useful for decision making if it can be compared with similar information for other reporting periods or information on other enterprises. Some companies compare their figures or ratios with benchmark figures or ratios established by a set of leading companies in the same industry. Consistency in the methods and policies used to prepare and present financial information is an essential attribute if information is to be compared from one period to the next. Consistency and comparability enable even those less experienced in financial matters to make some sense of current financial results. This is true not only for annual financial statements but also for other financial information, such as management reports, budgets and stock market releases.

For instance, financial statements prepared according to GAAP and based on IFRS are presumed to be comparable because the same accounting standards are applied throughout. However, “comparability should not be confused with mere uniformity and should not be allowed to become an impediment to the introduction of improved accounting standards” (SAICA 2008:par 41). Users must be aware of the possibility that there may have been a change in the way certain standards were applied. There could be environmental circumstances that dictate a more desirable change in accounting policy or technique (Riahi-Belkaoui 2004:187). If this is the case, the nature of and justification for a change in accounting policy and its effect on, for example, income should be disclosed to enable decision makers to compare the information with the reports for any other period.
The increasing number of multinational corporations and cross-border transactions demands the compatibility of accounting standards worldwide. Cross-national analysis of organisations entails, firstly that comparability of the reporting methods and accounting principles employed by the organisations is achieved, and that the user needs to thoroughly understand the reporting practices employed in different countries (Stickney, Brown & Wahlen 2004:381). However, it is debatable whether this level of comparability is simultaneously attainable in both the developed and less-developed countries of the world where there is also a huge difference between individuals with financial knowledge and those without. Even if the information is comparable, users in different countries may not have the financial acumen to even understand the information, let alone to compare it. Hence globally, users will benefit from having financial knowledge.

4.3.3 The elements of financial reporting

Financial reporting represents only a section of financial information. Although the elements described in the conceptual framework relate to accounting and form part of annual financial reporting, they have an influence on many other forms of financial and management reporting. For example, the value of the elements as depicted in a company’s financial reporting is reflected in information such as the listing of share prices in the financial media. Having considered the qualitative characteristics of financial information, it is therefore also imperative to consider how the elements of financial reporting are defined. The users of these financial reports need to at least know what the elements stand for before financial reports containing these elements are used as the basis for decisions. Five elements of financial reporting were identified by the IASB’s conceptual framework. These elements were subdivided into two broad groups, firstly, elements relating to the financial position of the organisation, and secondly, elements relating to performance.

An organisation’s financial position comprises the elements of assets, equity and liability, which are also the elements portrayed in the balance sheet.
According to Berman and Knight (2006:76&77), for the less financially intelligent user, the balance sheet is a little harder to understand than the income statement and these users may be somewhat wary of it and the assumptions, decisions and estimates that go into compiling it. If users are at least financially literate enough to identify if something is an asset, liability or part of equity, they might be less wary of using the statement of financial position in taking certain financial decisions. Assets are defined as having “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events”. However, liabilities are “probable future sacrifices of economic benefits arising from the present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events” (Riahi-Belkaoui 2004:188).

Equity is defined in paragraph 49 of the IASB’s framework as the “residual interest in the assets of the entity after deducting all its liabilities”. Although these definitions are general, decision makers, especially those with limited financial knowledge, will at least need to know what these definitions mean before they can interpret the elements presented in the balance sheet.

Users of financial information will also benefit from understanding the elements used to compile the organisations income statement. The elements relating to the entity’s performance or income statement comprise income and expenses. Even for the financially illiterate, these elements are usually not that difficult to understand because they relate to their own experiences of receiving money and paying expenses. However, an organisation’s income and expenses are somewhat more complicated, and users need to understand what they entail. For example, expenses include losses, which imply a reduction in net assets. Losses are caused by events that are not under the control of the entity, for example, losses caused by fires or floods which were not insured (Deegan & Unerman 2006:192). Income and expenses are recorded in the income statement and are used to determine profit or loss. Riahi-Belkaoui (2004:189) attests that the above terminologies are critical for decision makers because they “provide a significant first screening method for determining the content of
financial statements”. Hence, if users of financial information are not familiar with the terminology used to describe these elements or with the effect of these elements on the financial results of an organisation, they will be unable to make sound financial decisions. These users may benefit from a financial literacy interface when using the statement of financial performance for decision making.

4.3.4 The recognition and measurement concepts of financial information

To be recognised and included in the financial statements, items must first meet the definition of an element of financial statements. They must further be measurable, relevant enough to make a difference in user decisions and reliable (Riahi-Belkaoui 2004:190). Knowledge of the conceptual framework’s recognition criteria of elements included in financial statements will contribute to the usefulness of these statements for decision making. Although the recognition criteria are the rules or conventions determining when an asset, liability, revenue amount or expense has to be recorded in the financial statements, the recognition of an item cannot be divorced from decisions on its measurement. Users of financial information need to be financially literate to be aware of the recognition criteria, and need to know if they base their decisions on inaccurately recorded information.

According to the conceptual framework, there are different bases of measurement to determine the monetary amounts at which the elements of the financial statements should be recorded. These bases include (1) historical cost, (2) current replacement cost, (3) current market value, (4) net realisable value, and (5) present (or discounted) value of future cash flows. While on subsequent measurement, IFRS gives an entity the choice to revaluate certain assets such as property, equipment and investment property to fair value (IAS 16), the revaluation of certain assets to fair value is mandatory (IAS 39) (PWC 2006). For decision making, it is imperative that users of financial statements know on what basis items are measured and whether there was a change in
the measurement basis from one period to the next. Although users of financial information do not necessarily know how the values were calculated, they at least have to have a certain financial literacy to know if the values given in the statements are not entirely unrealistic.

4.4 THE FINANCIAL INFORMATION VALUE CHAIN

A financial information system is perceived to help an organisation make better decisions. Such a system may also assist less financially literate decision makers in making financial decisions. For this to happen, raw data need to be transformed through a process in order to become valuable to the organisation. This process can be regarded as a value chain similar to the production value chain introduced by Michael Porter in the 1980s. Atkinson, Kaplan and Young (2004:286) define the value chain as “a sequence of activities that should contribute more to the ultimate value of the product than to its cost”. A value chain approach requires that cost-creating activities should be reduced and that nonvalue-adding activities in the organisation should be eliminated. It follows that an information value chain has to contribute to the production of useful information to add value to the decision-making process.

A financial or management information system also consists of a sequence of activities with the ultimate goal of effecting decisions and alleviating uncertainty. Phillips (2001) refers to a management information value chain (MIVC) approach which, inter alia, makes possible explicit cost-benefit analysis of information technology investments. As shown in figure 4.6, according to Phillips (2001), an MIVC consists of all the activities in an organisation whereby information is acquired, transformed, stored, disseminated and ultimately presented in order to support decision making. According to this encompassing process, information acquisition, transformation and presentation flow into decision-making actions without any boundaries. However, if decision makers do not understand the information, there will be a
break in the value chain, which could be linked by means of a financial literacy interface.

**Figure 4.6: Elements of the MIVC**

As depicted in figure 4.6, the MIVC includes six types of activities (Phillips 2001):

1. The *data acquisition* activity includes the internal and external acquisition of raw data in the system.
2. The *initial transformation* activity involves the summary and purifying of the raw data as well as combining data from different sources to ultimately produce information.
3. The *dissemination* activity delivers the right information to the right people at the right time. The purpose of this activity is to determine who needs what information when.
4. The *modelling tools and presentation* activity involves the final transformation and presentation of the information. In this step, information from different sources is combined and transformed into a format that provides clear guidelines for decision makers. Although the idea is to present understandable information to users, they still rely on a financial literacy interface to understand it.

**Source:** Phillips (2001)
(5) The *decisions* activity is usually done by humans, but in certain situations, where a great number of decisions need to be made quickly, computerised decision-making systems may be used. This may be helpful to those without financial acumen, but can also be detrimental to the organisation if the decision makers do not have the financial knowledge to verify the quality of the computerised decisions.

(6) The *actions* activity is a dynamic process and depicts the conversion of information into actions while continually adjusting to changes in the environment.

The volume of information presented to decision makers does not necessarily add value to the decision-making process. To create a competitive advantage, it may be better if the information system is seen as a value chain and each one of the activities can be streamlined to produce the right information to the right people in time. However, if the value chain is broken because people do not understand the information produced by the first four stages for lack of financial capability, the management activities in the last two stages will not take place. This implies that an interface might become necessary between the information system and the users thereof. Simon (1996:113) contends that an interface is concerned with attaining goals by adapting one environment or system to another. The decision makers’ information requirements therefore need to be established and communicated to the accountants or other presenters of information before any of the other activities can be initiated. The problem is that, this feedback activity is only possible if the decision makers are knowledgeable enough to know what kind of information they need at a specific time.
4.5 THE ACCOUNTANTS’ ROLE IN FACILITATING DECISION MAKING

It is acknowledged that accountants are not the only providers of financial information, but that the information they prepare is a vital basis or source to produce other financial information. According to Gouws and Terblanché (1998:102), accountants are “communication facilitators between entities and users” and as such need to keep in mind that communication involves the “awakening of perceptions and experiences”. To be able to truly transmit a message, an accountant needs to be aware of his or her audience and the way the message is interpreted by them. In other words, the accountant is supposed to receive feedback from the audience on their perception of the message they received which makes him or her not only a message transmitter but also a message receiver. However, it is not always possible for accountants to adjust the message according to the feedback they receive from those who are not that financially literate, because they are obligated to adhere to certain standards and rules.

Accountants, as the main transmitters of financial information, are perceived to have a certain degree of power. Deegan and Unerman (2006:50) confirm that accountants have an extremely powerful role in society because “they provide the information that is used in many decisions and they are able to highlight or downplay particular facets of an organisation’s performance”. According to Belkaoui (1989:173), the basis of accountants’ power is “not their monopoly on accounting working knowledge, but the control they have of such knowledge”. They present financial information from this position of power without always taking into account that the users have not obtained the same level of power in interpreting such information. Montondon and Marsh (2005:53&56) further state that while standard-setters place increasing emphasis on providing information for individuals, accountants are not accustomed to preparing reports to reach such a less-informed audience. Schoonraad 2003:43-44) explains that because accounting, with its countless rules and standards, is
difficult for most individuals to understand and use for decision making, accountants, who can interpret and use the information, are therefore not only in "a privileged position, but also in a very powerful one". From this position of power, it would be useful if accountants could act as an interface between the information system and the decision makers, but unfortunately they cannot compromise their role as objective measurer in order to interpret the information for the decision maker.

In his address to the South African Institute of Professional Accountants in August 2006, Minister Trevor Manuel, stressed the importance of accountants who are “professional, observe the highest standards of ethical conduct and deliver a service of the highest quality to the organisation they belong to” (Manuel 2006:19). In the light of this statement, one can expect of accountants as financial message transmitters to adhere to the highest standards when expressing an objective and accurate account of the organisation’s financial affairs. A counter-view to this perspective is that “accountants can, in a sense, create different realities, depending upon the particular judgements taken, the accounting standards available, and so on. That is, accounting does not objectively reflect a particular reality – it creates it” (Deegan & Unerman 2006:45&47). Accountants therefore only deal with representations of reality - they cannot create reality. Receivers of financial information need to be aware of this and be knowledgeable enough to realise the difference between real happenings and created realities.

Stakeholders in publicly traded companies, private enterprises and government organisations rely on the reports prepared or assessed by accountants. According to Ward (2006:8) “the assurance of accurate records, the stewardship of assets, and the mitigation of risk, are all elements within the professional accountant’s mandate”. This mandate does not, however, include taking decisions on behalf of people in the organisation. The public need to be protected by accountants committed to integrity and objectivity in fulfilling their mandate - hence the need to remain independent in order to demonstrate
objectivity and integrity. In this sense, the accountant’s role could be reduced to that of a technician, merely capturing and reorganising data. On the other hand, accountants can assist decision makers, both the financially literate and financially illiterate, in an advisory capacity.

To add to the supposed independence and objectivity of accountants, the person who records activities in an organisation is not supposed to be the user of the data initially recorded and subsequently processed in the system. For example, “the accountant may not be the decision maker, the recorder has to interpret the occurrence or phenomenon and use symbols which can be useful, when processed, to the decision maker” (Goldberg 2001:93). This, however, does not imply that the accountant, when fulfilling the task of recorder, does not need to keep the specific users’ needs in mind when preparing financial information. Since accountants are supposed to be objective and independent in preparing financial information for users, they cannot be the interface between the information and the decision makers.

4.6 SUMMARY

This chapter examined the dynamic nature of financial information which makes decision making possible. Communication in an information-rich organisation is highly dependent on how knowledgeable decision makers are. The creative energy in an organisation is dependent on a continuous supply of new information. A component of the financial information produced by organisations originates from the capturing of events by the accounting department. Since the implementation of, inter alia, IFRS, financial information systems have proliferated tremendously. The increase in the volume and complexity of financial information often outstrips the users’ abilities to understand and interpret the information thus presented. The need for knowledgeable users of financial information who can provide feedback to the presenters of such information was therefore further highlighted.
In the light of the above dilemma, financial information has to at least comply with certain attributes to supply useful information for decision making. It was therefore necessary to identify the objectives of financial reporting and the qualitative characteristics of financial information as part of the conceptual framework underlying financial information. The elements of financial reporting and the recognition and measurement thereof were discussed. It was also mentioned that without these basic recognition criteria and established measurement bases, users of financial information might be exposed to unreliable and confusing information.

The vital role of the accountant as a message transmitter was explained. Following the recent highly publicised accounting scandals and corporate failures, the international and local accounting profession has attempted to regain the public’s confidence by introducing more legislation and overseeing bodies, such as the Financial Services Bill and the GAAP Monitoring Panel. The result is that accountants are under tremendous pressure to adhere to a myriad of accounting standards, legislation and codes of corporate governance, while they also have to take cognisance of the information needs of different stakeholders. They even have to consider the fact that some of the users of financial statements have a limited ability to understand the information presented to them. In the light of the fact that financial information increases in complexity and accountants as producers of it cannot act as an interface between the information and the decision makers, one may infer that the improvement of the decision makers’ financial abilities actually enhances the decision-making process.

In chapter 5, the array of information sources, the complex nature of financial information, financial reporting controversies and the effective communication of financial information is further discussed.
CHAPTER 5

SOURCES OF FINANCIAL INFORMATION

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

(Romney & Steinbart 2009:27)

5.1 INTRODUCTION

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

This chapter endeavours to consider the challenges for current financial information, including annual financial statements, to satisfy the needs of both sophisticated and unsophisticated decision makers. The status of financial information as a basis for sound decision making will be contextualised by taking into account the complex nature of financial information processing. Information inductance and asymmetry will also be explained. The various information sources, including financial statements based on accounting standards, will also be discussed. Although chapter 4 investigated the communication of financial information, this chapter specifically looks at the array of financial information sources and the challenges for communicating it
to the less-informed users. Some of the controversies and complexities in the financial information milieu will be unpacked in order to explain the occurrence of an information expectations gap. The way forward for financial information to act as part of the interface in order to shrink the expectation gap between the information system, on the one hand, and the decision makers, on the other, will also be contemplated.

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

5.2 THE CRISIS OF MEANING

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

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

5.2.1 Information inductance

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

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

Although senders of information need to take cognisance of the positive and negative feedback given by the receivers of information, they are not supposed to be influenced by their own anticipation of the information’s impact on the users. For example, their anticipation of the effect that the information may have on share prices, is not supposed to influence the way the information is reported. Positive feedback usually does not influence senders to alter the information to the same extent as negative feedback does. For example, if
salary incentives are jeopardised by negative feedback, managers may want to paint a better picture than the real situation. Negative feedback, such as a drop in share prices, may be a reaction on poor financial results or performance reflected in the financial reports or even the financial media. Organisations need a well-orchestrated communication strategy, and all communication collateral (printed media, advertising, presentations, interviews, promotions, public relations and digital applications) should be integrated to achieve their communication objectives (Boshoff 2007:23). Notwithstanding the mentioned variety of communication channels, organisations annually disclose their operations and performance through financial reports to their stakeholders. Although the organisation’s management may be concerned with the usefulness of the reported information for investor decision making, they will also be concerned with the feedback from other users, such as employees, creditors and customers. Employees’ feedback could be in the form of new wage negotiations if they think the organisation is making unrealistic profits. Information inductance thus adds to the complexity of the dilemma between information, on the one hand, and decision makers, on the other.

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

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

5.3 CREDIBLE FINANCIAL INFORMATION PROVIDERS

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

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

5.3.1 The media

Financial information about business organisations become publicly available in a variety of ways, including news releases reported on television and the internet, as well as in the newspapers and other financial publications. Publicly available information as presented in the media, especially the financial media,
may be used by investors as a basis for forecasting either a business’s success or failure. Although financial information as presented in the media is available to everyone, not everyone understands it. Consequently, those decision makers who lack financial knowledge may therefore not gain from publicly available information as presented by the media.

5.3.2 Financial market information

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

5.3.3 Firm-oriented information releases

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

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

Table 5.1  Organisational-oriented information releases

<table>
<thead>
<tr>
<th>Type of release</th>
<th>Level of thinking needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Earnings-related announcements.</strong> (a) Preliminary annual figures, (b) annual report details, (c) preliminary interim figures, (d) interim report details, (e) accounting changes, (f) auditor qualifications or report, (g) other.</td>
<td>1. Knowledge Comprehension Analysis</td>
</tr>
<tr>
<td>2. <strong>Forecast announcements by company officials.</strong> (a) Earnings forecasts prior to fiscal year end, (b) earnings estimates after fiscal year end, (c) sales forecasts, (d) other.</td>
<td>2. Comprehension Synthesis Evaluation</td>
</tr>
<tr>
<td>3. <strong>Dividend announcements.</strong> (a) Cash distributions, (b) stock distributions, (c) other.</td>
<td>3. Application Analysis</td>
</tr>
<tr>
<td>4. <strong>Financing announcements.</strong> (a) Equity-related announcements, (b) debt-related announcements, (c) hybrid security announcements, (d) leasing, (e) standby credit agreements, (f) secondary issues, (g) stock splits, (h) stock repurchases, (i) joint venture announcements, (j) other.</td>
<td>4. Knowledge Comprehension Application Analysis</td>
</tr>
<tr>
<td>5. <strong>Government-related announcements.</strong> (a) Impact of (new) legislation, (b) investigations into firm’s activities, (c) regulatory agency decisions, (d) other.</td>
<td>5. Comprehension Application</td>
</tr>
<tr>
<td>6. <strong>Investment announcements.</strong> (a) Exploration, (b) new ventures, (c) plant expansion/contraction, (d) plant shutdowns, (e) R&amp;D developments, (f) other.</td>
<td>6. Comprehension Analysis Application</td>
</tr>
<tr>
<td>7. <strong>Labour announcements.</strong> (a) Negotiations, (b) new contracts, (c) strikes, (d) safety and health reports, (e) other.</td>
<td>7. Application</td>
</tr>
<tr>
<td>8. <strong>Legal announcements.</strong> (a) Lawsuits against the company or its officials, (b) lawsuits by company or its officials, (c) other.</td>
<td>8. Application Evaluation</td>
</tr>
<tr>
<td>9. <strong>Marketing-production-sales announcements.</strong> (a) Advertising, (b) contract details, (c) new products, (d) price changes, (e) product recalls, (f) production reports, (g) product safety reports, (h) sales reports, (i) warranty details, (j) other.</td>
<td>9. Application Analysis Synthesis</td>
</tr>
<tr>
<td>10. <strong>Management board of director announcements.</strong> (a) Board of directors, (b) management, (c) organisation structure details, (d) other.</td>
<td>10. Comprehension Evaluation</td>
</tr>
</tbody>
</table>
Table 5.1 shows that although annual financial statements are an important information channel, they are but one of many ways in which information is released to stakeholders. Some of the information releases referred to in table 5.1 require a high level of thinking and extensive knowledge of financial concepts. Because financial information from annual financial statements is readily available to stakeholders it sometimes seems as if stakeholders base their decisions entirely on financial information derived from the accounting process, which is not necessarily the case in view of all the other information releases by organisations. However, it is necessary to discuss this assumption in more detail.

### 5.3.4 Accounting information through financial statements

The term “financial reporting” based on accounting information is used in a broad sense to encompass the disclosure and communication of any financial information to both internal and external users. Financial reporting will include financial statements, as well as any other relevant financial information, whether or not it is in monetary terms. Brigham and Ehrhardt (2008:84) state the following: “Of the various reports companies issue to their shareholders, the annual report is probably the most important.” The reason might be that the annual report gives the shareholders a holistic view of the company’s performance and position during the previous financial year. However, users are also interested in assessing the organisation’s future cash flow and require
information to help them assess various risks and uncertainties as well as management’s responses to them (Young 2006:595). One should bear in mind, however, that the preparers of financial statements do not make predictions about the future, but that the users must make their own predictions, based on the information they received. The importance of providing financial statements useful for prediction is accentuated in most of the Trueblood’s objectives of financial statements (Wolk et al 2004:173). Although the accounting profession endeavours to satisfy the needs of all the different user groups, it is evident that financial statements alone cannot meet all their needs for greater transparency and information symmetry. These statements also negate the fact that the financial literacy levels of the users to understand and interpret it, may also differ.

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

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

5.4 THE FINANCIAL REPORTING PARADIGM

As indicated above, financial reports are not the only source of financial
information available to decision makers. However, they are a vital tool to
assist users in making certain financial predictions. Conversely, in preparing
these statements, the preparers are constrained to make some assumptions
about the audience to which they can address their reports, and have, at least
in the case of published corporate reports, “been guided or directed by the
issuing of ‘standards’ to which they are required to conform and which have
been developed by some authoritarian body of people, whether recognised as community legislators or not” (Goldberg 2001:92). Although these standards dictate the format and content of financial statements, they are also limited in their ability to address the interests of the broader range of stakeholders in the so-called “triple bottom-line” information. Triple bottom-line information suggests that organisations report on their performance against economic, social and environmental parameters. As noted in the King Code (King Report 2002:40), financial reporting should also address material matters of significant interest to all stakeholders (including customers, employees, government and the public) and should be made in the context of greater transparency and accountability, taking into account the circumstances of the communities in which they operate. Organisations’ actions impact on the social and environmental circumstances of the communities and this should be reflected in the organisation’s financial reports. This aspect of corporate governance can improve if organisations take into account that communities may consist of individuals who do not necessarily have the financial knowledge to evaluate the impact of the organisation’s actions as reflected in their reports on the community.

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

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

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

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

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

**Source:** Ewer (2007:20-22).

From table 5.2, one can infer that both the FASB and the IASB explain that understandability can only be accomplished by presumptions of a user’s knowledge and willingness, which is willingness to study the information with diligence in order to comprehend its meaning. Because the user focus of the FASB and IASB is on investors and creditors, it follows that they have a vested financial interest in the organisation and will be willing to study the financial information with diligence. The FASAB, on the other hand, focuses on “average citizens”, thus implying that the financial information must be
understandable to the general public. According to Ewer (2007:21), the FASB might take more than passing notice of the FASAB’s effort to make financial information more understandable to the average citizen, who may also represent novices participating in the capital market. In this instance, the term “novices” may be interpreted as individuals who are not financially literate but are willing to learn. The broader stakeholder concept as mentioned, inter alia, in the King Report will probably necessitate standard-setters to take into account the financial knowledge possessed by the “average citizen”, which encompasses the public, environmentalists, et cetera, when defining their user focus as seen in figure 5.2. However, the average citizen can also strive to enhance his or her level of financial literacy in order to better understand the financial information.

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

Notwithstanding the above-mentioned language, cultural and financial background issues, according to Gill (2007:70), International Financial Reporting Standards (IFRS) are destined to be the lingua franca of the international world. Because financial statements prepared according to IFRS are a given in the South African business environment, it is advantageous for users of financial statements based on these standards to acquire the financial knowledge necessary to understand and use them for decision making.
In view of the significance of corporate governance in South Africa, accounting standards also need to take into account the social issues in financial reporting. Rees (1995:381) comments that “where accounting rules can affect the distribution of wealth and income in society, it is unclear that the accounting profession has a mandate to make social decisions”. From the accountants mandate to report on the organisation’s activities, it is difficult to simultaneously serve the client’s interests, the legislators and society at large. To ensure good corporate governance, the financial information of organisations has to be understood by all the relevant stakeholders and not only by a privileged few. If some stakeholders do not have the financial knowledge to understand the information, skills development needs to be implemented.

5.5 THE FINANCIAL REPORTING CONTROVERSY

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

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

Another limitation in financial reporting is a perception that the level of readability of the risk disclosures is difficult, or in some instances, extremely difficult. Linsley and Lawrence (2007:625) confirmed this hypothesis in a study conducted on risk disclosure of the 25 largest nonfinancial companies listed in the UK’s FT-SE 100. Although this study indicated that directors do not deliberately obfuscate less favourable risk news, they may well require
guidance on how a narrative can be constructed to communicate the company’s risks more effectively - in other words, how these risks can be spelt out by the preparers of financial information. However, unfortunately some users who lack financial knowledge might not even realise the risks involved. This also implies that some investors or potential investors will need to use financial analysts or intermediaries to assist them in determining the risk factor.

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

### 5.5.2 Trustworthy financial figures

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

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

5.6  FINANCIAL REPORTING’S GROWING COMPLEXITY

It is evident from the above that the global business economy resulted in financial information becoming more complex and difficult to understand. Pickard (2007a:29) concurs that there is a growing concern in the financial literature over the increasing complexity of financial reporting. Some believe that the complexity of modern financial accounting requirements exceeds the
ability of preparers and auditors to fully comprehend it, which arguably serves to make financial statements and the accompanying footnote disclosures incomprehensible to management and outside users (Epstein 2007:6). Hence the complexity of the information will affect the financially illiterate users even more. Coppin (2006:20) contends that the growing number of standards issued is becoming longer and more complex, which makes financial statements less accessible to the layperson who does not understand the challenges of using international standards. It is therefore necessary to bridge the gap between the intricate financial information and the users’ ability to understand and use it for decision making.

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

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

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

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

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

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

5.7.2 Information overload

One tends to believe that abundant information will shield one from risky decision making. Yet, according to Bernstein (1998:278), “psychologists report circumstances in which additional information gets in the way and distorts decisions, leading to failures of invariance and offering opportunities for people
in authority to manipulate the kinds of risk that people are willing to take”. Lengthy reports can become complex and confusing, and it is sometimes preferable to receive more concise information, without additional irrelevant information that may confuse the user. Thus, without saying that additional information does not result in effective communication, it is also true that effective communication does not necessarily imply that more information is better - it may rather be a case of “less is more”.

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

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

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

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

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

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

However, Brigham and Ehrhardt (2008:122) hold that “many companies are providing other types of forward-looking information, including key operating ratios plus qualitative information about the company and its industry”. Forward-looking information can, inter alia, be presented in the form of prospected financial statements or as a 12-month profit forecast or cash-flow forecast. Organisations may, however, be concerned with the risk of releasing sensitive forward-looking information, especially if it will be used by less financially knowledgeable individuals who are unable to view it in the context of the economy as a whole.
Although forward-looking information may have several applications and benefits, unfavourable forward-looking information can become a self-fulfilling prophecy and have a negative influence on the national economy and the stock market. Laszlo (2006:ix) also points out that “the future is not to be forecast, but created”. Decisions based on past events, will influence future activities, thus creating the future. This implies that forward-looking information can have inherent inaccuracies and this could be misleading, especially to users with a limited understanding of financial reports in general, and future-oriented information in particular. According to De Jager (2007), users need at least some economic knowledge combined with “street-smarts” towards getting to grips with the harder part of finance – preparing them for an unknown future. This implies that they also need to become financially literate to be able to anticipate future events.

5.8.2 The predictive ability of financial information

It can be contested that the real value of financial information lies in the fact that it can be used to help predict future earnings, dividends and free cash flow. In this regard, Brigham and Ehrhardt (2008:123), state that “predicting the future is what financial statement analysis is all about, while from management’s standpoint, financial statement analysis is useful both to help anticipate future conditions and more important, as a starting point for planning actions that will improve the firm’s future performance”. Riahi-Belkaoui (2004:407) confirms that earnings forecasts based on available financial information are becoming “increasingly popular to an efficient functioning of capital markets”. Predicting these future values and conditions greatly depends on the analyst’s ability to understand and interpret the financial and nonfinancial information as well as on the relevance and reliability of the information. Decision makers can use the services of professional information intermediaries to analyse financial information for the purposes of prediction (called prospective analysis) (Beaver 1989: 165). It can therefore be assumed that a certain level of financial expertise is needed to make financial
predictions, and if users are not equipped to do so they will need financial analysts to predict for them.

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

It can be difficult to develop probabilities from limited amounts of real-life information. In Bernstein (1998:121) Bernoulli suggested as a solution to the problem of developing probabilities that one must “assume that under similar conditions, the occurrence (or non-occurrence) of an event in the future will follow the same pattern as was observed in the past”. Although this may sound too simple a solution to the above-mentioned problems, Negash (2001:50) states that “sound prediction depends on the correct identification of the present state of the object and the recognition of the principle of indeterminacy”. The principle of indeterminacy implies that an extent of uncertainty prevails in the present state of the object. Again, prediction is not
as easy as it sounds; it will also depend on what is regarded as the “correct identification” of the object’s present state as well as on the predictor’s ability to foresee its future state. Consequently, sound predictions are usually done by financial intermediaries who are supposedly financially literate, but these predictions are not always used by individuals with the same level of financial acumen.

5.9 THE FUTURE OF THE FINANCIAL INFORMATION AGE

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

It is envisaged that in the near future, financial information will be available in virtual real time and delivered to people in what today would be considered innovative ways. Information may, for example, be streamed to users in an already-processed form over wireless devices they carry in their hip pockets (Pickard 2007a:30). This means that users will not only be required to be financially literate, but also familiar with new and innovative information technologies. Because of the real-time, on-line nature of the available information, understanding and communicating information in different languages or formats can create problems and global confusion. One of the
ways to alleviate this problem was the development of the eXtensible Business Reporting Language (XBRL). According to Charles Garthwaite (2000:18) of PricewaterhouseCoopers, XBRL is a standard format for existing financial (and nonfinancial) information to be presented using the rules set out by eXtensible Markup Language (XML), to be read, communicated and analysed by any XML-compliant program. In Pickard’s (2007a:30) opinion, “XBRL is revolutionising the efficiency of the reporting process and the usability of reported information”. However, the usability pertains to those who already have the financial knowledge to understand regular or standard financial information, and will be of no help to those without this knowledge. The main benefits of using XBRL will be that XML-compliant systems will be able to communicate with each other and that data can be custom compiled to meet the needs of users and researchers. Although it is foreseen that using XBRL-published information will save time and provide more reliable up-to-date information, the decision maker now requires to not only understand the information, but also to master the Internet and be able to download the information in a common format ready for analysis.

The advent of personal computers and information networks linking everyone in the organisation to the information chain resulted in bringing financial information from the top echelon down to the shop floor. This, according to Peters and Waterman (2004: 267), is “a major step in bridging the gap between management and labour”. This means that from the executives to the ordinary labourers will have access to financial information if the organisation so wishes. In future, global competition will demand that decision makers on every level of the organisation will not only have access to financial information, but also be empowered to use it for sound decision making. In this regard, Drucker (1986:x) emphasises that an organisation’s tomorrow is being shaped today and will depend heavily on the knowledge, insight, foresight and competence of the current executives. It will thus be to the organisation’s advantage if the executives are at least financially knowledgeable. Nonaka (1991:96), however, argues that “... successful
companies are those that constantly create new knowledge, disseminate it widely throughout the organisation, and quickly embody it in new technologies and products”. Everyone in the organisation has to be empowered to be part of the financial knowledge creation process. Thus, although executives will set the strategic path for the organisation’s future and need to be knowledgeable, the decisions made at grass-root levels, according to Nonaka, are just as important. It follows that to set the pace and give direction to the lower levels of decision making, the executives need to at least have a high level of financial competency in the organisation’s financial matters.

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

Apart from focusing on the sustainability of society and the environment, organisations also have to address their own quest for sustainability. Where the focus up to now was more on the acquisition of fixed assets, many executives believe that intangible assets have replaced fixed assets as the key to a company’s competitive sustainability and that innovation and related intangible assets represent the principal basis for growth (Olsen & Halliwell
2007:66). Accurately assigning a value to intangible assets, (eg franchises, trademarks, patents, copyrights and goodwill) is currently a controversial issue and will probably remain so in future. This might be difficult for the accountants and analysts, but might even be more difficult for the less financially skilled users to delineate between the appropriateness of the values assigned to these assets and this will hinder them in making these kinds of sustainable financial decisions.

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

5.10 SUMMARY

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

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

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

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

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

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

(Peters 2003: 284)

6.1 INTRODUCTION

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

Since financial information might in some instances contribute more to users’ uncertainty than certainty in decisions they have to make, this chapter aims to reflect on certainty versus uncertainty in the knowledge creating process of the users of financial information. The need to establish a powerful learning
environment in which individuals can acquire financial knowledge will be discussed, as well as the key concepts in the financial literacy model. Uncertainty as an untapped source of evoking the need to find out, learn more, continuously change uncertainty to certainty, and vice versa, is highlighted. While Herman and Mandell (2006:7) call this state of uncertainty “wonderful bewilderment”, Barnett (2004:247) refers to the paradox as constructing learning for an unknown future. Uncertainty and an unknown future are usually familiar concepts to financially illiterate people. The challenge will be to use both these concepts to encourage people to embark on a path of lifelong learning and empowerment to become financially literate.

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

6.2 DEFINING KEY CONCEPTS IN THE FINANCIAL LITERACY MODEL

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

6.2.1 Financial knowledge

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

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

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

6.2.2 Financial intelligence

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

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

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

1) **Cognitive intelligence** encompasses the brain’s aptitudes to perform certain mental activities and logical and rational reasoning. Regarding financial activities, it may, for example, refer to having number aptitude, meaning among other competencies, that the individual can do speedy and accurate arithmetic calculations. These basic competencies are some of the building blocks necessary in becoming financially literate.

2) **Social intelligence** is a person’s ability to relate effectively to others, morally and ethically. Social intelligence in the business environment may, inter alia, refer to the individual’s ability to assemble financial
information from various people and, in turn, communicate financial information or results to others who need it for decision making. The ability to function in a social environment and consider other people when making financial decisions should preferably form part of a financially literate person’s make-up.

(3) **Emotional intelligence** is a person’s ability to successfully handle his or her emotions and the emotions of others. It is presumed that emotional intelligence greatly influences the performance of managers. Financial intelligent managers might, for example, base their decisions on facts and figures and not so much on emotional feelings. If managers are financially literate they will probably be more inclined to base their decisions on facts and figures.

(4) **Cultural intelligence** depicts awareness of cross-cultural differences and the ability to function successfully in a cross-cultural environment. Because South Africa has a culturally diverse workforce, there is a need for cultural intelligent managers. For example, financially intelligent managers need to take cognisance of the values and financial perceptions of different cultural groups in an organisation.

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

(1) **Understanding the foundation.** Financially intelligent decision makers are not intimidated by the numbers in financial statements. They understand the basics of financial measurement and can, inter alia, read the different reports presented in the AFSs.

(2) **Understanding the art.** Decision makers who are financially intelligent are able to distinguish when numbers are based on assumptions or estimates and when not. They will know when the artful aspects of finance have been applied to the numbers and then to question or challenge these numbers when appropriate.

(3) **Understanding analysis.** Managers and other decision makers need to be knowledgeable enough to analyse the financial information supplied
to them in order to interpret and use it for decision making. They are, for example, not intimidated by ratios such as operating return on assets (ROA) or return on equity (ROE).

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

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

With specific reference to financial intelligence, the concept of *number intelligence* can be added to the subparts discussed above. Because financial information is either based on amounts or relates to the results of calculations, number intelligence or the understanding of financial symbols becomes an essential building block towards financial intelligence. Financially intelligent decision makers also have the ability to use numbers or amounts and financial tools to analyse financial information and make better financial decisions. According to Berman and Knight (2006:9): “Financial intelligence means understanding where the numbers are ‘hard’ – well supported and relatively uncontroversial – and where they are ‘soft’ – that is, highly dependent on judgement calls.” Hence financial intelligence implies that managers have at
least a sound working understanding of the financial side of the business and they will at least know when and if the numbers should be questioned. Financial intelligence can thus be regarded as a causal ingredient in the quest to become financially literate.

6.2.3 Financial consciousness

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

Having a financial consciousness, however, is not enough to become financially literate. Financial literacy can rather be seen as a combination of financial knowledge, financial intelligence and having a financial consciousness. Financial literacy further means that the individual has to apply his or her mind to obtain and use financial information in creating value for the organisation. Abell and Oxbrow (2001:12) emphasise the importance of individuals and information in the knowledge-creating process by stating the following: “The recognition of knowledge as a primary competitive advantage focuses attention on both people and information.” Harrison and Sullivan (2006:30) confirm that “people’s brains have a never-ending capacity to create knowledge, but, our corporations and public organisations are only able to
exploit a fraction of it”. The onus therefore lies not only on the individual to become financially literate, but also on the organisation to trust him or her with relevant financial information in order to use it to the organisation’s benefit. It follows that financial literacy depicts not a passive state of mind, but an active involvement in financial matters. Figure 6.1 in section 6.2.4 illustrates financial literacy as the intersection between financial knowledge, financial intelligence and financial consciousness applied in the organisation.

### 6.2.4 Other numeral literacy concepts

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

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

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

**Figure 6.1: The financial literacy intersection**

![Diagram showing the intersection of financial literacy, financial knowledge, financial intelligence, and financial consciousness, with mathematical literacy and quantitative literacy at the center, and the organizational context influencing the intersection.]

*Source: Own observation*

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

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

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

Apart from being a multi-dimensional concept, there can also be different levels of financial literacy. The financial literacy of individuals operating on the lowest decision-making level in the organisation will differ from that of decision makers on executive level. Ironically, the lower socioeconomic group who acutely require some form of financial literacy education do not always have the opportunity to receive it. Apart from managing their own personal finances, they could also do with an understanding of financial information provided to them by, inter alia, employers, pension schemes and other businesses.
According to Dolezalek (2006:1), employees, even in the lowest ranks of an organisation, should not be seen as cogs in an organisation’s machinery, but as people assumed to have brains who want to use them. However, individuals in the higher income groups may be in need of a deeper understanding of financial information, especially if they are investors, creditors, executives or employees. It is clear that although everyone needs to become financially literate, there may be different levels of financial literacy in an organisation. For example, the sweeper of the factory floor will operate on a different financial literacy level than the senior managers involved in intricate financial decisions.

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

Employees, such as the sales manager, the engineer and the human resource officer, all need financial information to either measure their department’s performance or, say, budget for capital expenditures. The board members require financial information to formulate a strategic plan for the organisation. If all these role players are at least financially literate they will know that there is more to the numbers than meets the eye and will feel intimidated if they do not have enough financial savvy to ask the right questions.
From the above it is clear that financial literacy is a complex construct and comprises different features (see fig 6.1 in sec 6.2.4). To view financial literacy as an interface between financial information (see ch 4), on the one hand, and the users (see ch 7) of it, on the other, it is necessary to first contextualise the learning process necessary for decision makers to ultimately acquire financial knowledge, skills and understanding. Because learning is the foundation for becoming financially literate it is necessary to discuss the learning process in more detail.

6.4 THE BLOOM AND BEARD HERITAGE: A FINANCIAL PERSPECTIVE

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

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

- **Common language about learning goals to facilitate communication across persons, subject matter and grade levels.** A common learning goal and language also need to be established for financial literacy education across persons, subject matter and grade levels. For instance, if the same financial terminology as used in practice is also taught at school level as well as in tertiary education, financial communication will improve.
• Basis for determining for a particular course or curriculum the specific meaning of broad educational goals, such as those found in the currently prevalent national, state, and local standards. Although broad educational goals for financial literacy education may be envisioned, it might be difficult to suggest a common curriculum for financial literacy. The problem is that decision makers have different financial decision-making responsibilities in organisations, which require different levels of financial literacy.

• Means for determining the congruence of educational objectives, activities and assessments in a unit, course or curriculum. The means for determining the congruence of financial literacy educational objectives and assessments will probably depend on the level of financial literacy required for a specific purpose. Financial literacy curriculums could be designed for specific levels of decision makers in organisations.

• Panorama of the range of educational possibilities against which the limited breadth and depth of any particular educational course or curriculum could be contrasted. The wide ranges of educational possibilities of financial literacy need to be contrasted with other subjects and disciplines. For example, subjects such as Business Economics, Economics, Accounting and Mathematics can be related to financial literacy education. Applicable topics from these subjects can be incorporated in a curriculum for financial literacy.

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

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

Beard, another well-known educationist, also emphasised knowledge, attitude and skills in his teaching model. According to Gouws and Bosua (1997:87), learners need to know the levels of knowledge, skills and attitude they require to prepare them for their careers. Based on Beard’s teaching model (Beard &
Hartley 1984:36-37), educational objectives adapted to identify characteristics of the financial literacy teaching domain can be outlined as follow:

(1) **Knowledge.** Learners need to know the terminology, principles and applications used in their particular subject. For example, in acquiring financial knowledge, learners ideally need to know the financial terminology, the basic rules and concepts used to capture financial information and the application of the knowledge in analysing the information for decision making.

(2) **Skills.** Financially literate individuals can judge the information or situation, acquire more information if needed, and think critically and creatively before taking a decision. The financial literacy process requires that decision makers use financial information and financial knowledge to adapt to change and become skilful in solving financial problems.

(3) **Attitudes.** Some of the key aims in teaching individuals to become financially literate are to cultivate their knowledge, enthusiasm and preciseness in the day-to-day application of their skills. Acquiring a financial attitude implies that decision makers are motivated, have a social and moral awareness and take ownership of their own financial education and capacity building.

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

### 6.4.1 The cognitive domain

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

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

(1) **Factual knowledge** depicts the basic elements that learners must know about the subject to be able to solve problems in it. In the financial discipline, the learner must, for example, be knowledgeable about the financial terminology and basic calculations, in order to determine elements such as capital, reserves, assets, liabilities and costs. Examples of basic calculations include the computation of monthly instalments, value-added tax amounts and budget variances.

(2) **Conceptual knowledge** describes the “interrelationships among the basic elements within a larger structure that enable them to function together” (Anderson & Krathwohl 2001:29). Apart from interrelationships between elements in a specific subject field in the financial domain, there can also be interrelationships between different subjects, for instance Economics, Business Economics, Accounting and Taxation. Conceptual knowledge also implies that one has a sound relationship with the environment and broader community. However, to be knowledgeable on the interrelationships between certain financial elements, for example: to classify or categorise financial information and be knowledgeable about the underlying financial theories, principles and assumptions, may require a higher level of financial literacy.

(3) **Procedural knowledge** refers to the knowledge of subject-specific skills, algorithms and subject-specific techniques. Although many complex subject-specific techniques are used in the financial domain, in becoming financially literate, individuals will benefit from obtaining financial skills such as budgeting and the use of ratio analysis.
(4) Metacognitive knowledge encompasses strategic knowledge, knowledge of cognition in general and awareness about one's own cognition. Cognition in its basic form means acquiring knowledge. As explained by Claxton (1999:195): “The activity of thinking about our own thinking and learning has become known as metacognition.” - in other words, acquiring knowledge of one’s own knowledge-creating process. Financially illiterate individuals need to become aware of their lack of financial knowledge or level of financial knowledge and become responsible for acquiring the knowledge necessary for financial decision making.

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

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

On the positive side, if an organisation can cultivate a positive enthusiasm towards acquiring financial skills or some level of financial astuteness, this would presumably lead to a more competent workforce and sound financial
management. If the organisation can succeed in changing *number-scared* people to *number-brave* people who have a questioning attitude towards the financials presented to them, the financial risks in the organisation will most probably decrease. The moment individuals can make an informed financial choice, the financial risks in the company will presumably diminish.

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

6.4.3 The psychomotor domain

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

All the above-mentioned educational domains impact on the educational objective of becoming financially literate.
6.5 FINANCIAL LITERACY ACCORDING TO BLOOM’S SIX LEVELS OF THINKING

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

Figure 6.2: The six levels in the cognitive domain

<table>
<thead>
<tr>
<th>Bloom’s</th>
<th>Financial literacy sample activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation/creating</td>
<td>Rearrange the information to generate new information.</td>
</tr>
<tr>
<td>Synthesis/evaluating</td>
<td>Evaluate the estimates and assumptions in the numbers used.</td>
</tr>
<tr>
<td>Analysis/analysing</td>
<td>Analyse the numbers in context.</td>
</tr>
<tr>
<td>Application /applying</td>
<td>Apply the numbers and verbal reports to the situation.</td>
</tr>
<tr>
<td>Comprehension/understanding</td>
<td>Understand what the numbers and narratives mean.</td>
</tr>
<tr>
<td>Knowledge/remembering</td>
<td>Know and remember the financial terminology.</td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

6.5.3 Application

Application, or according to the revised Taxonomy, applying, involves the use of previously acquired knowledge in new and concrete practical situations. As seen in figure 6.2, it is apparent that learning outcomes in this area require a higher level of understanding than in the comprehension level. The application of rules, methods, standards, principles, theories and concepts falls into this level of the cognitive domain. The financial domain has many standards, principles, practices and legislation, for example different Acts, such as Credit Acts and Companies Acts in different countries or accounting statements as laid down by the accounting professions or the rules set for good corporate governance. At this level, individuals know how to apply previously acquired knowledge to adhere to the rules laid down by different authorities.
In a financial literacy context, the application of learnt techniques or methods, for example, the use of financial principles or practices to prepare financial reports and to act on financial information compiled according to certain methods refers to this learning area. From a user’s decision-making perspective, the basic interpretation of financial information requires a financially literate individual to have reached at least the application level of the cognitive domain.

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

Analysis is the breaking down of information into its component parts for study and interpretation. Analysing is the ability to distinguish between relevant and irrelevant parts of the whole. It constitutes the identification of motives or cause, the relationships between parts and finding coherence between them. The analysis level is critical for financial information. It includes verbs such as appraise, calculate, compare, contrast, question and differentiate. Financially literate individuals will presumably be able to do calculations on financial information, contrast or compare it with other such information, question its accuracy, etc. For example, financial ratios can be used to appraise and compare the organisation’s performance with that of other entities or periods. One may infer that financial decision makers will have to progress to at least this level of the cognitive domain to enable them to base their decisions on properly analysed information.

6.5.5 Synthesis
Synthesis refers to the creative ability to put parts together to form a new or original whole. Anderson’s revised taxonomy uses the verb evaluate to identify this level (Anderson & Krathwohl 2001:5). Where the noun synthesis emphasises the set of a plan of operations or the formulation of new patterns and structures, the term evaluate is more concerned with detecting
inconsistencies or fallacies in the process or product. An individual with a basic financial literacy level of thinking may find it difficult to advance to this level where he or she is expected to formulate or create new or original financial information. It is clear that the revised taxonomy’s evaluate refers to a more critical approach, with synonyms such as testing, detecting and monitoring. For instance, the attest function of auditors is typical of the synthesis level of learning.

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

6.5.6 Evaluation

The highest order of the cognitive domain is classified as evaluation (see fig 6.2). Evaluation is concerned with judging the value of information for a given purpose, on the basis of personal opinions or values. Judging information encompasses the appraisal of its reliability and value. The learning outcomes in this area contain elements of all the other categories, plus a person’s own conscious value judgements, based on clearly defined criteria. However, the revised taxonomy refers to a more complex form of thinking and defines this level by means of the verb, create. Pohl (2000) explains that, according to the
original taxonomy, one can be critical without being creative. The verbs applicable to this level range from appraise, criticise, defend, interpret, justify and judge in the original taxonomy and to generating, hypothesising, planning, designing and inventing in the revised taxonomy. This level of learning will require the learner in the financial domain to become quite an expert, for example, the attest function of auditors relates to the criticising and judging of the value of the information. On the contrary, it would be difficult for the lower level to average financially literate person to operate on this more complex level of thinking.

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

6.6 LEVELS OF LEARNING NECESSARY FOR FINANCIAL LITERACY

In keeping with Bloom’s taxonomy and Beard’s teaching model, teaching non-financial individuals basic financial literacy can also be structured at different
levels of learning. Berman and Knight’s (2006:xii-xiii) four basic prerequisites for acquiring financial intelligence as explained in section 6.3 above can also be presented as four levels of learning. In figure 6.3 these prerequisites are adapted to illustrate levels of learning towards becoming financially literate individuals.

**Figure 6.3: Basic financial literacy levels of learning**

<table>
<thead>
<tr>
<th>Knowledge of and understanding of financial information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applying knowledge to the art of estimates and assumptions</td>
</tr>
<tr>
<td>Analysing the numbers</td>
</tr>
<tr>
<td>Evaluating the numbers in context</td>
</tr>
</tbody>
</table>

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

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

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

However, uncertainty as portrayed above should not be confused with ambiguity. Peters (2003:23) explains the difference between the two terms: “Uncertainty means that you don’t know everything, but you know something, and you know how what you know relates to what you don’t know.” However, he describes ambiguity as “you don’t know enough even to know if you’re asking the right questions”. In the same sense as that of ambiguity, De Bono (1999:11) states the following: “Confusion is the biggest enemy of good thinking.” Confused individuals do not even know that they do not know. This
leads one to believe that financially literate individuals will, in many instances, still feel uncertain, but they will at least know something and know how it relates to what they do not know. Ambiguity, however, implies that financially illiterate people will feel confused most of the time and will not even know what questions to ask.

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

Decision makers will depend on more than only technical financial education if they wish to make sound financial decisions about the future of an organisation. They will need a financial consciousness with which they can address and solve problems of meaning and value and with which they can assess that one course of action is more meaningful than another. According to Zohar and Marshall (2000:3-5), this kind of intelligence is spiritual intelligence (SQ), which allows human beings to be creative, to change the rules and have a moral sense when making those decisions. Zohar and Marshall (2000:200) also hold that SQ gives one the ability to live creatively
under uncertainty, and that uncertainty can inspire one because it creates conditions in which one must make a choice. It is questionable whether financial education currently prepares learners to also use their SQ when making financial decisions for an unknown future. One could argue that if SQ is included in both formal and informal financial education, financial decision makers will make decisions that are more meaningful and sustainable not only for the organisation but also for the wider society. Subjects relating to ethical, moral and environmental issues could form part of the financial education syllabi.

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

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

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

While the kind of learning, as illustrated in Bloom’s taxonomy, is crucial to guide learners in dealing with known or predictable situations, the uncertainty present in the business world demands a new approach that will prepare them to make decisions in uncertain circumstances. Claxton (1999:58) states that “learners need to be resourceful in the face of uncertainty” and that “they need to know what to do when they don’t know what to do”. A presumed teaching model for individuals to become financially literate would have to include a more holistic approach towards learning. This implies that the financially literate person would require self-awareness, be able to use his or her imagination, think in more than one way and learn through experience. Hence,
to not only achieve financial literacy status, but also to remain at such a level financial information users will require resourcefulness and a culture of lifelong learning. Chapter 7, identify various financial information users and discusses the fact that decision makers need to obtain an evolving consciousness when making financial decisions.
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**

![Image of an information processing model](image)

**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.
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 one’s 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 (Gelinas 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 (Gelinas 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 (e.g., 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 & Haupert 2003). The audit committee assists the board with financial matters, but board members remain accountable for their decisions. According to Grace and Haupert (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

<table>
<thead>
<tr>
<th>Topic</th>
<th>Target consumers</th>
</tr>
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| 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/contracters  
Women business owners/entrepreneurs |
| Home purchase counselling                                           | Homebuyers, those in transition from public housing |
| Home loan products                                                   | Older, low-to-moderate income home-owners  
Homeowners  
Homeowners  
First-time homebuyers and homeowners |
| Reverse mortgage                                                     |                                                                                  |
| Home equity                                                          |                                                                                  |
| Home expansion                                                       |                                                                                  |
| Home mortgage                                                        |                                                                                  |
| Consumer credit/financial products                                  | All  
College students, those with credit problems  
Checking accounts holders  
All, children  
Lower income  
Employees |
| 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                                           |                                                                                  |
| Other                                                                | All  
Older, lower income, marginal borrowers with imperfect credit  
All  
All |
| Credit reports                                                       |                                                                                  |
| Predatory lending                                                    |                                                                                  |
| Identity thefts                                                     |                                                                                  |
| Consumer protection                                                 |                                                                                  |

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 ethically/rationally 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

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Level</th>
<th>Senior management</th>
<th>Middle management</th>
<th>Lower management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Extended competence &amp; confidence</td>
<td>Developing competence &amp; confidence</td>
<td>Basic understanding &amp; developing confidence</td>
</tr>
<tr>
<td>Organisation’s financial goals/vision/mission</td>
<td>Knowledge, skills &amp; overall responsibility</td>
<td>Knowledge, skills &amp; competence</td>
<td>Knowledge and understanding</td>
<td></td>
</tr>
<tr>
<td>Corporate governance</td>
<td>Knowledge, skills &amp; attitude &amp; responsibility</td>
<td>Knowledge, skills &amp; attitude</td>
<td>Knowledge &amp; understanding</td>
<td></td>
</tr>
<tr>
<td>Financial terminology used in organisation</td>
<td>In-depth expert knowledge base</td>
<td>Broad knowledge base</td>
<td>Fundamental knowledge base</td>
<td></td>
</tr>
<tr>
<td>Numeracy</td>
<td>Skills &amp; competence in using numbers</td>
<td>Understanding &amp; skills in using numbers</td>
<td>Understanding &amp; skills in using numbers</td>
<td></td>
</tr>
<tr>
<td>Knowledge of GAAP/GRAP/GAMAP</td>
<td>Know if organisation comply</td>
<td>Understand to some extent</td>
<td>Know what it stands for</td>
<td></td>
</tr>
<tr>
<td>Budgeting</td>
<td>Knowledge, skills &amp; responsibility</td>
<td>Knowledge, skills &amp; responsibility</td>
<td>Knowledge &amp; skills</td>
<td></td>
</tr>
<tr>
<td>Information on the income statement &amp; balance sheet</td>
<td>Knowledge/understanding &amp; skills/competence</td>
<td>Knowledge &amp; skills</td>
<td>Basic understanding</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>Asset management</td>
<td>Understand the estimates and assumptions used to value assets</td>
<td>Knowledge of safeguarding and controlling assets</td>
<td>Maintenance and use of assets</td>
<td></td>
</tr>
<tr>
<td>Liability management</td>
<td>Knowledge to keep long-term liabilities within overall debt/equity ratio</td>
<td>Knowledge to keep medium- to short-term liabilities within manageable limits</td>
<td>Knowledge of procurement policy and budget constraints</td>
<td></td>
</tr>
<tr>
<td>Cash-flow management</td>
<td>Knowledge to read and analyse the cash-flow statement</td>
<td>Knowledge to read the cash flow and how to better the cash position</td>
<td>Understand that each activity has either a positive or negative effect on the cash flow</td>
<td></td>
</tr>
<tr>
<td>Cost management</td>
<td>Know how to plan for and manage costs</td>
<td>Understand the need to save costs</td>
<td>Identify and allocate cost items</td>
<td></td>
</tr>
<tr>
<td>Wealth creation</td>
<td>Ability to assess the implications of financial choices in wealth creation</td>
<td>Understanding and competence in executing wealth creation strategies</td>
<td>Knowledge of wealth creation strategies</td>
<td></td>
</tr>
</tbody>
</table>

**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.
THE METHODOLOGY USED TO ESTABLISH THE AUTHENTIC ESSENCE OF THE FINANCIAL LITERACY CONSTRUCT

Research is an activity that we all undertake to learn more about our environment and the impact we have upon it. Research is labelled in many different ways: “academic”, “scientific”, “fundamental” and “applied”, to give just four examples. However, none of these labels changes the most important aspect of research itself – namely, that research is about discovery.

(Ryan et al 2002:1)

9.1 INTRODUCTION

The main objective of the empirical research was to gain a first-hand, holistic understanding of the financial literacy phenomenon and its relationship with financial information and decision making. The research also endeavoured to illustrate that the financial literacy concept acquires meaning, or even new meaning, within a conceptual framework such as the interface model depicted in chapter 8. Mouton and Marais (1990:60) concur that “the aim in empirical research is to operationalise such constructs in a meaningful manner by making them either measurable or observable”. In order to observe, the researcher obtained more information about the specific phenomenon by conducting personal interviews and using questionnaires.

The aim of this chapter is to introduce the empirical research methodology used to establish the authentic essence of the financial literacy construct and to improve the financial literacy interface model as presented in chapter 8. For the purpose of this study, methodology refers to “the coherent group of methods that complement one another and that have the ‘goodness of fit’ to deliver data and findings that will reflect the research question and suit the research purpose” (Henning 2004:36). The methods used to suit this specific research purpose will subsequently be discussed.
The chapter first highlights the research methods used and gives an overview of the development of the research instruments. Even though the preceding literature review (chs 1 - 7) and the construction of the model (ch 8) adopted a multidisciplinary approach to understand the present stance of the financial literacy concept, the identification of individual decision makers’ perception of the financial literacy construct and the usefulness of financial information for decision-making purposes needed further clarification. The purpose of the literature review was to find out what has been done in the field of financial literacy, and the use of information for decision making in organisations was thus described. The chapter explains that interviews and questionnaires were used as data collection methods. It also emphasises that the finalisation of the questionnaire was dependent on the feedback received from the interviews.

9.2 THE RESEARCH METHODS USED

In this study, use was made of a literature review and survey research. A literature review was mostly conducted in chapters 2 to 7. To implement the survey research, interviews were used to adapt and attune the questionnaire. Interviews deemed necessary because the literature review did not show substantive evidence of research into financial literacy in organisations. The researcher therefore needed to establish financial role players’ perception of the financial literacy construct before the questionnaire could be finalised. The questionnaire, in turn, was designed to investigate the respondents’ perception of the content and structure of the financial literacy concept, the financial literacy proficiencies needed by decision makers in organisations and the attributes of financial information for decision making.

A predominantly qualitative research approach was followed. De Vos et al (2005:269) contend that “in quantitative research the design determines the researcher’s choices and actions, while in qualitative research the researcher’s choices and actions will determine the design or strategy”. During the course of
the study, interviews as a data collection method were only considered once the questionnaire had been designed. As explained, the interviews were deemed necessary when statements in the questionnaire had to be formulated especially pertaining to the financial literacy concept.

9.2.1 Literature review
A literature study was conducted to review the available body of knowledge on financial literacy and financial information with regard to decision making in organisations. An interdisciplinary approach which spanned several disciplines, including Financial and Management Accounting, Education, Management Information Systems and Business Management was adopted. According to Koornhof (1998:21): “An interdisciplinary research approach complements Systems Theory as Systems Theory adopts a holistic view of science.” A systems theory was used to conduct the interdisciplinary literature review on the financial information system and the human behaviour system. The literature review or “scholarship review”, as referred to by Mouton (2001:87), not only saves time in the sense that it helps to avoid duplication of previous studies, but it also “provides clues and suggestions about what paths to follow”. From the literature review, subject ideas, issues and problems were identified and general conclusions drawn about the financial literacy phenomenon.

Although the sample of references was taken from relevant books, periodical articles, theses, dissertations and technical reports, it was not exhaustive for the topic of research. Apart from researching the most recent and authoritative theorising on the subject, the literature review was also used to find out what the accepted empirical findings in the field of study are (Mouton 2001:87). Ryan et al (2002:181) consider the critical analysis of the literature as one area that distinctively links methodology to method. A critical evaluation of the literature was therefore not only necessary to demarcate and evaluate the existing body of knowledge, but also to initiate the empirical research.
9.2.2 Interviewing as orientation

As opposed to consumers’ financial literacy, little has been published on the financial literacy needs and proficiencies of decision makers using financial information in organisations, especially in a South African context. Because this study adopts an organisational rather than a consumer approach to the financial literacy construct, the development of a questionnaire as the basis for an empirical research was challenging. It was therefore decided to use qualitative interviews with leading role players in organisations to gain insight into their perceptions of the financial literacy construct and decision making in situations of uncertainty, in order to develop the proposed questionnaire.

Qualitative interviews are frequently used as an information collection method, especially if one is trying to introduce a fairly new topic to a population. Kvale (in Sewell 2001:1) defines qualitative interviews as “attempts to understand the world from the participant’s point of view, to unfold the meaning of people’s experiences, [and] to uncover their lived world prior to scientific explanations”. Qualitative interviews can either be unstructured or semi-structured. De Vos et al (2005:292 & 296) explain that while unstructured interviews are conducted without utilising any of the researcher’s prior information, experience or opinions in a particular area, the semistructured interview is organised around areas of particular interest in order to gain a detailed picture of a participant’s beliefs about or perceptions of a particular topic. According to Terre Blanche and Durrheim (1999:281-282), some of the advantages of using semistructured interviews are that in-depth information can be derived and that interviewees can ask for clarification of the questions if needed. For the purposes of this study, the semistructured one-to-one interview was used to gain a fuller picture of the financial literacy dilemma in organisations as perceived by the interviewees.

Both the unstructured and semistructured interviews can also be regarded as open-ended or guided interviews. The open-ended interview explores new territory with the participant, whereas the guided interview is used when the
information required is about a certain topic, the structure of the topic is known and the answer cannot be anticipated (De Vos et al 2005:292). The guided interview approach, in which different interviewees are asked the same questions, were mainly used in this case to obtain complete and comparable data. The questions, however, were open ended in order to allow the interviewees the freedom to express their perception of the financial literacy topic.

9.2.3 Questionnaires
Questionnaires are commonly used to gather information from people. A questionnaire can be defined as a group of written questions or statements used to gather information from respondents, usually consisting of a number of measurement scales (Terre Blanche & Durrheim 1999:293). De Vos et al (2005:166) regard the basic objective of a questionnaire “to obtain facts and opinions about a phenomenon from people who are informed on the particular issue”. Consequently, a questionnaire consisting of various statements was developed and used to gather information on the financial literacy construct from decision makers in different organisations. The literature review, the responses of the interviewees and the experience of the researcher in the financial decision-making field were used as the basis to develop the individual statements used in the questionnaire. The development and implementation of the questionnaire will be discussed in more detail in the next section.

9.3 IMPLEMENTING THE EMPIRICAL RESEARCH METHODS

9.3.1 Conducting the interviews
The interviewees were selected from various organisations, representing financial institutions, providers of financial information, users of financial information, educators and trainers. A procedure known as purposive sampling was used to select the interviewees. Purposive sampling simply looks for people who can help build the substantive theory further, people who,
according to the researcher’s knowledge of the subject, fit the criteria of *desirable participants* (Henning 2004:71). Table 9.1 lists the individuals who were interviewed and some of the organisations in which they are involved.

The selected interviewees (see tab 9.1) were asked if they are willing to participate in the interview. After permission was granted, a letter or e-mail explaining the purpose of the interview and confirming the date, time and venue was sent to them. The letter is included in appendix A. This letter also ensured the participants of the confidentiality of the process and adherence to ethical principles of research. Although a set of predetermined questions was used during the interview (see appendix B), the interviewees were not provided with the questions beforehand. This was done to prevent pre-empted responses.

**Table 9.1: List of interviewees**

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Organisation (inter alia)</th>
<th>Position in organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Mike Abel</td>
<td>Insurance SETA (INSETA)</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Mr Ewald Mulder</td>
<td>South African Institute of Chartered Accountants (SAICA)</td>
<td>Senior Executive Standards</td>
</tr>
<tr>
<td>Prof Pierre Joubert</td>
<td>University of South Africa (UNISA) JSE Investment Education Project</td>
<td>Professor in Industrial and Organisational Psychology Project manager</td>
</tr>
<tr>
<td>General Roy Andersen</td>
<td>SA National Defence Reserves Murray &amp; Roberts Sanlam</td>
<td>Chief Chairman of the Board Chairman of the Board</td>
</tr>
<tr>
<td>Dr Johan van Zyl</td>
<td>Toyota SA</td>
<td>President</td>
</tr>
<tr>
<td>General Keith Mokoape</td>
<td>Army Foundation Nampac iFour Properties Limited</td>
<td>Chief Board member Board member</td>
</tr>
<tr>
<td>Prof Albert Weideman</td>
<td>University of Pretoria (UP)</td>
<td>Head of the Department for Academic Literacy</td>
</tr>
<tr>
<td>Ms Maureen Dlamini</td>
<td>Johannesburg Stock Exchange (JSE)</td>
<td>Senior General Manager: Education</td>
</tr>
<tr>
<td>Ms Albertina Kekana</td>
<td>Public Investment Corporation (PIC)</td>
<td>Chief Operating Officer (COO)</td>
</tr>
</tbody>
</table>

The interviews were recorded and transcripts of them then analysed and interpreted. The following is a summary of the responses that were incorporated into the final questionnaire:
(1) **Interviewees’ understanding of the “financial literacy” concept**
Financial literacy means being aware of the movement of money, the impact of money and an understanding of the consequences of its movement. It involves having an idea of what the economic mode of one’s existence is, knowing about concepts such as trading, the costs associated with goods and services and market activities.

(2) **Do individuals at all levels in an organisation need to be financially literate?**
The higher one’s position in the hierarchy, the more financially literate one needs to be. People throughout the organisation are obliged to know what the role of finance is. It is imperative for financial decision making that everyone should know what kinds of decisions are ethical, moral and justifiable. Individuals should be in a position to question experts’ financial decisions. Even the cleaner in the organisation needs be financially literate.

(3) **Do cultural differences influence financial perceptions?**
Although some interviewees were of the opinion that cultural differences influence financial perceptions, some stated that such differences have no influence, but that individuals of all cultures are in fact influenced by the environment in which they grow up and live. However, one interviewee stated that some cultures find the competitive capitalist notion difficult to deal with.

(4) **Is financial information in organisations relatively easy to understand?**
Financial information in organisations is only user-friendly to those who have been exposed to financial training and education. Financial information is extremely complex; even senior people do not always understand it.
(5) **Does financial information provided in annual financial statements promote better future decision making?**

Although financial statements may contribute to better decision making, they are becoming increasingly complex. Financial information should be more forward-looking and user-friendly. A layperson’s guide to financial statements would contribute to better decision making.

(6) **Are employers responsible for their employees’ financial training?**

The majority of interviewees felt that the organisation has a responsibility in respect of its employees’ financial training. It is in the organisation’s interest to train and educate its employees in financial matters. However, employees also have a responsibility to become financially literate.

(7) **General ideas on financial literacy**

There are not enough financial courses tailored to the needs of different levels of decision makers. While some interviewees indicated that it was a good idea to test all aspirant employees’ financial literacy status, one in particular stated that this should only be done if the position specifically requires it. The nation desperately requires numerical skills and should become financially literate.

### 9.3.2 Development of the questionnaire

The questionnaire was designed to assess the perceptions on financial literacy of individuals participating in different economic activities and decision-making categories. A covering letter of which an example is included in appendix C explaining the purpose of the survey and the confidentiality of the response, accompanied the questionnaire. In order to obtain background information, the respondents were asked to indicate whether they participated in the primary, secondary or tertiary sector of the economy, or in the government sector, a parastatal organisation or academic institution. They were further required to indicate if they participated on the executive, senior management, middle
management, junior management or ordinary employee level of decision making.

The questionnaire (see appendix C) was divided into three main sections. These sections were identified as the central issues applicable to the subject of this study. Statements on the financial literacy concept were presented in section A. Section B comprised statements relating to financial literacy for decision making in an organisation and section C consisted of statements on the attributes of financial information for decision making. The letter of consent attached to each questionnaire ensured that the respondents understood the purpose of the questionnaire and also afforded them an opportunity to declare their willingness to participate in the research.

The statements in sections A, B and C were evaluated on a five-point agreement Lickert scale rating. The scale rating was indicated as follow:

S/D Strongly disagree
D Disagree
U Unsure
A Agree
S/A Strongly agree

The respondents were asked to indicate to what extent they agreed/disagreed with each statement.

9.3.3 Pretesting
Before the questionnaire was distributed, a pilot test was conducted. Ten questionnaires were distributed to some of the previously mentioned interviewees, academics and other educators. Cooper and Emory (1995:66) contend that a pilot test is “conducted to detect weaknesses in design and instrumentation and provide proxy data for selection of a probability sample”. The participants were asked to pay special attention to the following:
(1) the comprehensibility of the statements
(2) the time it took to complete the questionnaire
(3) whether they experienced any problems answering specific questions

Feedback from the participants in the pilot study was incorporated into the final questionnaire.

9.4 SAMPLE CHOICE AND RESPONSE RATE

The sample chosen for the empirical survey comprised members of organisations in the following economic categories based on those used in certain research studies conducted by Statistics South Africa and adapted to suit the purpose of this study:

- primary sector (e.g. agriculture, forestry and fishing; mining and quarrying)
- secondary sector (e.g. manufacturing; electricity, gas and water; construction)
- tertiary sector (e.g. wholesale and retail trade, catering and accommodation; transport, storage and communication; financial intermediation, insurance, real-estate and business services; community, social and personal services)
- government sector
- parastatals (Eskom and Transnet)
- academic sector (primary, secondary and tertiary)

Since the total population of decision makers in organisations could not be determined, use was made of nonprobabilistic convenience sampling. According to Cooper and Emory (1995:200): “The basic idea of sampling is that by selecting part of the elements in a population, conclusions may be obtained about the entire population.” As suggested by the statistician
consulted for this thesis, at least two organisations per economic activity category were chosen. The organisations were conveniently selected to enable the researcher to identify a specific contact person to ensure the distribution and completion of the questionnaires in order to increase the response rate. Some questionnaires were sent by e-mail, but for the most part, hard copy questionnaires were distributed to the participants.

Table 9.2 provides a summary of the response rate of the hard copy questionnaires distributed. The names of the chosen organisations that participated per sector were not listed because the respondents participated in their personal capacity and not as official representatives of these organisations.

Table 9.2: Summary of respondents of the hard copy questionnaires distributed

<table>
<thead>
<tr>
<th>ORGANISATIONS</th>
<th>DISTRIBUTED</th>
<th>RESPONDENTS</th>
<th>RESPONSE RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary sector</td>
<td>55</td>
<td>42</td>
<td>76,36%</td>
</tr>
<tr>
<td>Secondary sector</td>
<td>25</td>
<td>17</td>
<td>68,00%</td>
</tr>
<tr>
<td>Tertiary sector</td>
<td>50</td>
<td>35</td>
<td>70,00%</td>
</tr>
<tr>
<td>Government sector</td>
<td>20</td>
<td>18</td>
<td>90,00%</td>
</tr>
<tr>
<td>Parastatals</td>
<td>50</td>
<td>38</td>
<td>76,00%</td>
</tr>
<tr>
<td>Academic</td>
<td>50</td>
<td>42</td>
<td>84,00%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>250</strong></td>
<td><strong>192</strong></td>
<td><strong>76,80%</strong></td>
</tr>
</tbody>
</table>

The response rate was so high because dedicated contact persons at the different organisations accepted responsibility for the distribution and collection of the questionnaires. A smaller number of hard copy questionnaires were distributed to the secondary and government sector because more e-mail copies were sent to these organisations. It is difficult to give a response rate on the e-mail copies sent, because they were distributed by a key individual in the
organisation. In total, 24 e-mail responses were received, from the following sectors:

- primary sector: 1
- secondary sector: 9
- tertiary sector: 6
- government: 5
- parastatals: 1
- academic: 2

From the above it is clear that questionnaires were mainly distributed on hard copy and only a few via e-mail. In total, 216 questionnaires were received and captured. The survey results are discussed in chapter 10.

9.5 DATA PREPARATION

Data preparation involved scrutinising each questionnaire in order to determine if all the statements were appropriately completed. Two questionnaires were discarded as unusable, because all the statements were not completed or the respondents chose the unsure rating for all statements.

To facilitate the data-capturing process, all the responses in the questionnaires were coded. The captured data were compared back to the original questionnaires to double check that the correct values for each variable had been captured. Terre Blanche and Durrheim (1999:10 & 522) contend that the data must be “clean” before any statistical calculations can be done. The few errors that were encountered were rectified. The data capturing and processing were done by the Department of Statistics at the University of Pretoria.
9.6 STATISTICAL PRESENTATION OF THE DATA

Descriptive and inferential analysis can be used to analyse the data statistically. Descriptive analysis “aims to describe the data by investigating the distribution of scores on each variable, and by determining whether the scores on different variables are related to each other”, while inferential analysis “allows the researcher to draw conclusions about populations from sample data” (Terre Blanche & Durrheim 1999:101). Both descriptive and inferential analysis was done to determine the relationships between the different economic sectors, as well as the level of decision making and the way the statements in the questionnaire were scored.

The SAS (version 8.2) program and the Statistical Program for the Social Sciences (SPSS, version 15) were used to do the statistical analysis of the data. Means and medians were calculated for each statement in the three sections in the questionnaire. Descriptive statistics frequency percentages were calculated to summarise the response to each statement. Cluster analysis was done to group respondents and statements with similar response patterns into two or three groups. Factor analysis was applied to group statements to analyse the intercorrelations between these individual statements. Hierarchical clustering diagrams (dendograms) were also designed. The reason for doing dendograms is “to detect patterns of relationship between variables” (Terre Blanche & Durrheim 1999:362). In order to compare the mean response of a factor for more than two groups of respondents the analysis of variance (ANOVA) method was applied. ANOVA was specifically used to test for the differences in the response of the various sociodemographic respondent groups.

The chi-square statistics technique was also used to test for differences in the response of different sociodemographic respondents groups. It was specifically used to test for independence of association and to test hypotheses on patterns of outcomes of random variable in the population. The purpose of this
test is to establish whether a random variable follows certain patterns of outcomes in the population (Wegner 1993:248). When testing for independence of association, the chi-square test tries to establish whether or not two categorical random variables are independent.

The results of the statistical analysis of the data obtained in the empirical survey will be discussed in chapter 10.

9.7 RESTRICTIONS ENCOUNTERED IN CONDUCTING THE SURVEY

In concluding the discussion of the research methodology used to determine decision makers’ perceptions of, (1) the financial literacy concept, (2) financial literacy for decision making in an organisation and (3) the attributes of financial information for decision making, it should be noted that the research results are subjected to certain restrictions.

Firstly, the target groups used in the research were not determined by means of random sampling, but were selected by means of convenience sampling. Although, strictly speaking, the results of the study cannot be generalised to the entire decision-making population, the participating decision makers represented such a broad spectrum of economic activities, that one could infer that the results generally represents decision makers in organisations.

Secondly, the questionnaire did not test the respondents’ level of financial education. The reason for this was the sensitivity and ethical issues pertaining to the financial literacy levels of decision makers in organisations. Presumably more inferences would have been made if the respondents’ financial background had been tested.
9.6 SUMMARY

This chapter described the various research methods used to investigate decision makers’ perceptions of the financial literacy concept, the need for financial literacy for decision making in an organisation and the necessary attributes of financial information for decision making. The research was conducted to endorse and increase knowledge of the subject and to provide justification for the development of a financial literacy interface model.

The perceptions of the target groups from the different sectors of the economy were tested by means of questionnaires. Since the questionnaires were vital to the success of the research, interviews were conducted beforehand in order to improve the design of the statements used in the final questionnaire. The layout of the questionnaire, the covering letter and the consent form which accompanied the questionnaire were also explained. Reference was also made to the limitations imposed on the research process.

This chapter further dealt with the response rate and the preparation and analysis of the collected data by means of the SAS and SPSS software programs. The statistics used in the analysis and interpretation of the data were also described.

The presentation and analysis of the research findings provided by the above methodology are discussed in the next chapter.
CHAPTER 10

PRESENTATION AND ANALYSIS OF THE RESEARCH FINDINGS

Data analysis is also the process of bringing order, structure and meaning to the mass of collected data. It is a messy, ambiguous, time-consuming, creative and fascinating process.

(De Vos et al 2005:333)

10.1 INTRODUCTION

In chapter 9, the methodology used to determine the respondents’ perception of the financial literacy concept, financial literacy for decision making and the attributes of financial information for decision making, was explained. Ultimately, empirical research culminates in the analysis and interpretation of the survey data. “The aim of analysis is to understand the various constitutive elements of one’s data through an inspection of the relationships between concepts, constructs or variables, and to see whether there are any patterns or trends that can be identified or isolated, or to establish themes in the data” (Mouton 2001:108). The aim of the empirical survey was to establish decision makers’ perception of the financial literacy concept and trends or themes relating to the attributes of financial information and the need for financial literacy in organisations. The results of the questionnaire therefore need to be analysed and then interpreted to draw appropriate conclusions.

This chapter deals with the collation, analysis and presentation of the data emanating from the empirical survey. Henning (2004:80) describes the tools used in the analysis phase as “tools of interpretation and condensation and specifically as a process of synthesising”. The accumulated data are therefore reduced to a manageable size and significant findings emanating from the research are reflected upon and discussed in detail.
Chapter 10 commences with the research findings relating to the sociodemographic information, information on the financial literacy concept, on decision making in organisations and on the attributes of financial information for decision making. The results of the descriptive and inferential statistics used are then discussed with specific reference to the results of factor analysis and clustering as well as chi-square statistics.

10.2 THE RESEARCH FINDINGS

The number of responses and the response rate were outlined in table 9.2 and the rationale for the sample choice also explained in the preceding chapter. The sociodemographic information will be summarised to portray the economic activity in which the respondents participate as well as the decision-making category into which they fall. Interesting findings of the three sections in the questionnaire (see appendix C) will also be discussed. Appendix D contains the results of the descriptive statistics.

10.2.1 Sociodemographic information

The first statement required respondents to indicate the economic activity in which they participate. Of the 216 respondents, 43 were employed in the primary sector, 26 in the secondary sector, 41 in the tertiary sector, 23 in the government sector, 39 in parastatals and 44 in the academic sector. Hence a satisfactory distribution of the different sectors of the economy was achieved. Although the aim of the statement was only to ensure that all the sectors of the formal economy were represented, a few interesting correlations were made, these will be discussed in section 10.3.

Secondly, respondents had to indicate in which decision-making category they reside in the organisation. Executives constituted only 9,72% of the total number of respondents. The distribution of the other decision-making levels was as follow: 26,39% represented senior management; 24,54% middle
management; 13,43% junior management; and 25,93% employees who were not part of management.

10.2.2 Information on the financial literacy concept
Section A of the questionnaire contained statements testing the respondents’ perception of the financial literacy concept. According to the hierarchical clustering diagram (dendrogram), using average linkage between statements in section A that were the nearest to each other, statements 3, 6, 7 and 14 could be grouped together, and to a lesser extent, statements 9, 11 and 15.

In statement 3, a significant number of respondents (96,76%) agreed or strongly agreed that financial literacy entails more than the mere understanding of the terms “financial” and “literacy”. This response confirms the supposition that because the individual terms encompass many different meanings, the meaning of the combined term financial literacy is complex and not easily demarcated. Stuart (2004:16) highlights the complexity of the financial literacy construct in stating that “even the best director education cannot clarify the murky definition of financial literacy or define the level of expertise that regulators expect”. An overwhelming percentage (97,69%) of the respondents agreed or strongly agreed in statement 6 that there are different levels of financial literacy for different purposes. In this regard, Berman and Knight (2006:229) also point out that although one cannot expect everyone to become a Wall Street analyst or even an accountant, the fact remains that employees need to at least understand the operating numbers of the department they work in. A high percentage (93,98%) of the respondents also indicated in statement 7 that they agree that the financial literacy concept requires an awareness of the available information in a decision-making situation. While it is necessary for decision makers to be aware of the available information, Goldberg (2001:155) argues that any collection of information about any given set of circumstances is incomplete in some respects and that these limitations should be admitted. Financially literate individuals should therefore also be aware of the fact that the information that is available may to
some extent be incomplete. Of those who responded to statement 14, 92,13% agreed or strongly agreed that financial literacy is an important step on the road to sustainability. Although growth in the organisation and the economy is attributed to many factors that go beyond financial literacy, Widdowson and Hailwood (2007:41) contend that “financial literacy does make a longer-term contribution to the growth and robustness of the economy”. Arguably, if this is applicable to the wider economy, financial literacy will also contribute to an organisation’s long-term growth and sustainability.

Regarding statement 9 in the second cluster, 84,72% of the respondents agreed that financial literacy involves the contemplation of future scenarios. Simon (1996:147) contends that sound predictions require a theoretical understanding of the phenomena to be predicted and having reliable information about the initial conditions. Contemplating future scenarios or making financial predictions involves an understanding of the financial information set. Thus the contemplation of future scenarios will be almost impossible if the decision maker lacks the financial literacy to understand the financial information. Statement 11, financial literacy requires a scale of measurement to compare options, had a 84,25% response of agree or strongly agree. From this high positive response one could assume that financially literate decision makers should be able to compare or weigh-up different scenarios by using the same measurement scale. The response to the third statement in this cluster, statement 15, indicated that 84,26% agreed that financial literacy lays the foundation for decision making under uncertainty. While the future is always uncertain, it will at least help if the decision maker understands the information upon which decisions for future actions are based.

Notwithstanding the somewhat high percentage (18,06%) of unsure participants in statement 10, a significant 75,92% still agreed that financial literacy mitigates against the risks involved in decision making. According to Bernstein (1998:113), individuals can test their own degree of risk aversion by determining their “certainty equivalent”. Thus, the more financially literate
decision makers are, the higher their “certainty equivalent” will be. One can therefore deduce that financially literate decision makers are better equipped to make a trade-off between risk and return. From the response to statement 4 (78,71%) and statement 5 (59,19%), it can be inferred that the participants perceive financial literacy to be dependent on the understanding of the use of numbers and not as much a language proficiency issue. However, Claxton (1999:120) explicitly states that “learning power comprises both literacy and numeracy, and is ultimately more fundamental than either of them”. Financial information currently encompasses a great deal of narrative information. Hence decision makers have to understand the whole financial picture expressed in both language and numbers.

In statement 12, 68,05% of the respondents agreed that financial literacy is a process to be followed rather than an achieved educational level. Becoming financially literate is a lifelong process. Because economic circumstances continuously change, decision makers’ financial knowledge and skills have to adapt to these changes. Although 16,67% of the respondents were unsure, 69,90% still agreed with statement 13 that the outcome of financial literacy is the optimal allocation of resources. In this regard, Widdowson and Hailwood (2007:41) concur that “financial literacy can influence the allocation of resources in the economy”. Financially literate decision makers are likely to choose more wisely when they allocate the organisation’s resources. From the results, it would seem that statement 8, financial literacy is about perceiving value, was not clear, because 20,37% of the respondents were unsure, while only 60,19 agreed. The fact that so many of the respondents were unsure could be because the term “value” has several connotations. Harrison and Sullivan (2006:195) observe that “value is in the eye of the beholder”. Moreover, value can be interpreted differently, depending on the decision maker’s disposition at a specific time and place.
10.2.3 Information on financial literacy for decision making in an organisation

In section B of the questionnaire, participants had to indicate their perception of the current status or need for financial literacy for decision making in organisations. The hierarchical cluster analysis conducted on section B indicated that statements 16, 17, 18 and 21 could be grouped together, as well as statements 22 and 24. Another group pertaining to the financial literacy training and competence of employees consisted of statements 23 and 28.

Of the 216 respondents, 211 agreed with statement 16 that decision makers at executive level should know that they are both individually and collectively responsible for the organisation’s financial activities. This high percentage of agreement is in line with the statement in the King Report (2002:22) that the “board is ultimately accountable and responsible for the performance and affairs of the company”. This means that decision makers at executive level cannot mitigate their responsibilities on the basis of a lack of financial knowledge. In statement 17, 96.76% of the participants agreed that decision makers at all levels should understand the financial and accounting terminology generally used in the organisation. A significant percentage of respondents (94.90%) to statement 18 were of the opinion that it would be to the overall benefit of the organisation if decision makers at all levels were financially literate. Zulauf (2003) confirms that “… entrepreneurs and governmental organisations alike recognise that financial literacy contributes greatly to financial success”. Organisations will thus benefit from the combined financial literacy of role players on every level of the organisation. In statement 21, a fairly high percentage (89.36%) also agreed that senior managers have to understand the meaning of financial ratios in order to evaluate their organisations’ performance. Although it is necessary for managers to understand the meaning of financial ratios, Brooks (2007) mentions “the extremely important need for nonfinancial managers to know about and recognise the limitations of ratio analysis”. In other words, ratio analysis and
the views based on the results of these analyses should not be blindly accepted by those who are less financially literate.

Statements 22 and 24, which are more general, elicited more or less the same kind of response. In statement 22, 87,50% of the participants agreed that organisations with a financially literate workforce generally have a competitive advantage over those who do not. In accordance with this response Ditillo (2004:401) concurs that “... knowledge and the capability to create and utilise such knowledge are the most important source of competitive advantage”. A considerable percentage of respondents (88.43%) in statement 24 also agreed that knowledge of good corporate governance is an essential ingredient of becoming a financially literate decision maker. Pointer and Stillman (2004:24) regard information as the critical ingredient of truly great governance. Hence knowledge of good corporate governance implies that decision makers at least know where to find information and how to interpret it. The capacity to understand information and use it for decision making is also a critical ingredient of becoming financially literate.

Regarding the financial literacy training and competence of employees, 73,15% of the respondents agreed with statement 23 that financial literacy courses need to be industry specific or fit for purpose. In line with this response, Berman (2001) clearly states that financial literacy training should be customised because every organisation’s financials are different and every organisation has different key areas. With regard to training, 64,81% of the respondents concurred with statement 28 that employers generally have an obligation to provide financial training to their employees. Nonaka (1991:97) puts knowledge creation at the very centre of an organisation’s human resource strategy. Even if an organisation does not have an obligation to provide financial training, it should at least form part of the organisation’s human resource strategy. However, in statement 25, 75,00% of the respondents agreed that employees in an organisation do need financial training to understand the basics of how business success is measured.
From statement 19, it is interesting to note that 78,24% of the participants agreed that *white-collar crime will generally be better addressed if more people are financially literate enough to ask the right questions*. With regard to white-collar crimes or corporate scandals, Wright (2002) states that the “Enron debacle has increased the need for financial literacy of oversight officers”. He also holds that executive decision makers should be aware of red flags that could indicate that organisations are in financial difficulty. Of the respondents, 76,85% agreed with statement 27 that *managers seldom admit that they do not know how to read their organisation’s financial statements*. This corroborates Berman’s (2001) concern that 60% of employees cannot read an income statement. Hence 75,46% agreed with statement 29 that there is a general shortage of financially literate people in decision-making positions.

Statement 26 clearly indicated that the respondents were not totally comfortable that employers should evaluate prospective employees’ financial literacy levels before appointing or promoting them. Although 55,09% agreed that this is necessary, 26,86% disagreed, while 18,06% were unsure. This is a contentious issue - the response indicates that individuals may feel threatened by such an evaluation. From the response it can be assumed that respondents either did not understand statement 20, *decision makers perceive financial literacy as “knowing about money”*, or they were simply unsure (22,69%) about how they should have responded to the question. Although 54,17% agreed that decision makers perceive financial literacy as knowing about money, Lanfranconi and Robertson (2002:3) contend that “the first step in financial reporting literacy is to understand the underlying economics of the business”. Even though these authors refer to “financial reporting literacy”, financial literacy as such encompasses more than only “knowing about money” - it also requires a basic knowledge of the organisation’s business as a whole.
10.2.4 Information on the attributes of financial information for decision making

Section C comprises statements on the attributes of financial information for decision making. According to section C’s dendogram, statements 42, 43, 37 and 32 were linked together, as were statements 30, 31, 38 and 40.

In the first cluster, statement 42 - *there is a need for a layperson’s guide to the annual financial statements, to explain the important issues in the statements* - attained the highest percentage of agreement (87.96%). This high percentage of agreement confirms the view of one of the interviewees who suggested that there is a need for a layperson’s guide to explain the financial issues in financial statements. Of the respondents, 81.48% also agreed with statement 43 that *information overload increases uncertainty*. This response is in line with Romney and Steinbart’s (2009:27) view that “there are limits to the amount of information the human mind can effectively absorb and process”. In statement 37, 74.07% of the participants agreed that *different terms are sometimes used in financial information to indicate the same thing*, while in statement 32, 77.77% agreed that *annual financial statements have a limited target market*.

In support of the stakeholder approach, it is essential that financial information should be communicated to all the individuals or groups who can affect or are affected by the organisation’s activities and not only to a targeted market, such as the shareholders. In agreement, Preble (2005:411) refers to a Harvard study that found that companies that put only their shareholders first did less well for them than companies that balanced the interests of all their stakeholders.

While 45.37% of the respondents to statement 30 agreed that *annual financial statements provide executives with enough information to make future-oriented financial decision*, 46.76% disagreed. From a survey conducted by Deloitte Touche Tohmatsu (2007:3), 54% of respondents said that forward-looking information is of greater value to management and the board than historical information. Hence, notwithstanding the importance of future-oriented
information, many of the respondents in this study feel that executives are not provided with enough information to make future-oriented financial decisions. In the same sense, 45,37% of the respondents to statement 38 disagreed that it is easy to make performance predictions on the basis of information contained in financial statements. The problem, according to Hague, Jones, Milburn and Walsh (2006:267), is that “Forecasting an entity’s future financial performance requires a sound understanding and analysis of what is happening now, and a prediction of future change”. Only 57,87% of the participants agreed with statement 31 that financial information is presented in such a way that it highlights the important issues. This response confirms the fact that stakeholders, specifically investors, are asking for more reliable guidance on a company’s future performance (KPMG 2008:39).

Uncertainty was evident in the response to statement 40 – financial information prepared by financial departments is always reliable and trustworthy, while only 31,02% agreed, 49,07% disagreed and 19,91% were unsure. However, a survey by Gouws and Van der Poll (2004:111) showed that 80% of the respondents agreed that “book entries precipitated as journal entries may be used to manipulate financial information”. The way Enron, for example, manipulated its financial statements is a good example that financial information is not always as trustworthy or reliable as it seems. While the setting of Accounting Standards is supposed to enhance the reliability and trustworthiness of the financial information presented in accordance with these Standards, Clarke (2006:130) however, is concerned that when the Standards change, as they have recently done with the introduction of IFRSs, what was previously true and fair no longer satisfies the criterion.

More respondents to statement 35 disagreed or were unsure (52,31%) than agreed (47,69%) that the financial section of the newspapers is easy to read and understand. This response confirms Tieman’s (2001:24) opinion that business leaders are not ready to admit their ignorance of even the most basic financial concepts, while more still are loath to admit their poor grasp of the
financial jargon of the world’s newspapers. On the same level, 48,15% of the respondents to statement 36, agreed that it is difficult to understand capital market information as presented in the media, while 17,13% of the respondents were unsure. However, even if individuals think that they understand the information presented in the media, there is a concern that many investors do not realise how risky the capital market is (Brigham & Ehrhardt 2007:7).

It should be noted that statement 33 had the highest level of unsure responses (26,39%) in the total survey. Only 37,50% of the respondents agreed with this statement, namely cash-based financial information is more useful to executives than accrual-based financial information. With reference to the importance of cash-based information, Berman and Knight (2006:140) explain that “cash flow is a key indicator of a company’s financial health, along with profitability and shareholders’ equity”. One may deduce that the high unsure percentage could be due to the fact that many of the respondents did not understand the meaning of accrual-based information as used in the statement.

In statement 34, 75,00% of the participants disagreed that most of the information in financial statements is based on estimates and assumptions. In contradiction to this response, Hague et al (2006:268) are concerned that “users of financial statements may not realise the extent to which estimates have been used or the degree of uncertainty attached to the measurement of financial statement amounts”. From the response to statement 39, the narratives in financial statements assist in the understanding of the numbers, 68,99% of the respondents agreed. In this regard, Greenblo (2006:26) argues that the sheer complexity of international accounting demands makes narrative reporting essential. According to Gouws and Cronjé (2008:122), contextual accounting, which complements the narrative section in financial statements, “serves as the context in which to better understand the statutory disclosures generated by GAAP”. With regard to statement 41, only 34,72% agreed that
only financial experts understand annual financial statements. This response is in total contrast to Tieman’s (2001:28) view that an alarming number of business leaders are ignorant of the simplest financial terms used in financial statements. Thus, if they do not understand the financial terms used, it would be difficult understanding the financial statements that use these terms as basis. The high percentage (54,63%) of respondents who disagreed with statement 41 – only financial experts understand annual financial statements, could be attributed to the fact that they were unsure of who can be classified as being “financial experts”.

10.3 DESCRIPTIVE AND INFERENTIAL STATISTICS

As explained in chapter 9, chi-square statistics and ANOVA were used for associations between response and sociodemographic group. The results of the descriptive and inferential statistics are outlined below.

10.3.1 Factor analysis and clustering

The statistical technique, factor analysis, was applied to the data obtained from the empirical research. According to Terre Blanche and Durrheim (1999:362), “factor analysis is a statistical technique that is used to identify a relatively small number of factors that can be used to represent the relationship among sets of many interrelated variables”. Eigenvalues were used to represent the amount of variance explained by each factor, and only those factors with eigenvalues greater than 1 were considered meaningful factors.

From the ANOVA of the mean factor responses of the sociodemographic groups there were only a few statistically meaningful relationships of less than 0,05, that is the f-statistic had a probability (p-value) of less than 0,05. In the first instance, statements 18, 19, 20 and 21 (FB1) were combined and related to the different sectors of the economy in which the respondents participate. Collectively these statements stated that it would be to the organisation’s
overall benefit and lead to a better evaluation of the organisation’s performance if decision makers in organisations were financially literate. Figure 10.1 indicates the difference in mean factor scoring by the different sectors.

Another meaningful relationship with a p-value of less than 0.05 was obtained by combining statements 20, 22, 26 and 28 (CB2) and plotting them in relation to the economic sectors in which the respondents participate. These statements related to the fact that organisations with a financially literate work force have a competitive advantage over those who do not, and that employers should not only evaluate prospective employees’ financial literacy levels before appointing or promoting them, but that they are also responsible for providing employees with financial training. This relationship is depicted in figure 10.2.

Figure 10.1: Mean score for questions 18, 19, 20 and 21 (FB1) in relation to the economic sector
Figure 10.2: Mean score for questions 20, 22, 26 and 28 (CB2) in relation to the economic sector

Both of these figures show that government scored the highest and the primary sector the lowest. One may deduce from figure 10.1 that respondents from the government sector agreed to a greater extent than, say, the primary sector that decision makers at all levels in organisations need to be financially literate for the overall benefit of the organisation to enable them to ask the right questions in order to better address white-collar crime. Senior managers also need to understand the meaning of financial ratios to enable them to evaluate the organisation’s performance.

Figure 10.2 indicates that government sector respondents scored high in relation to the other sectors regarding the fact that organisations with a financially literate workforce have a competitive advantage over those who do not, and that employers should evaluate prospective employees’ financial literacy levels before appointing or promoting them. Regarding financial training, they felt more strongly than the other sectors that employers generally have an obligation to provide financial training for their employees.
A meaningful relation was also found between statements 30, 31, 38 and 40 (CC2) and the economic sectors represented by the participants. These statements collectively suggested that annual financial statements provide executives with enough information to make future-oriented decisions and that it is presented in such a way that it highlights the key issues. These statements also suggested that it is easy to make performance predictions on the basis of financial statement information and that the information prepared by financial departments is always reliable and trustworthy. The relationship between these statements and the economic sectors is shown in figure 10.3.

**Figure 10.3: Mean score for questions 30, 31, 38 and 40 (CC2) in relation to the economic sector**

The mean scores in the questions grouped together in figure 10.3 were low with regard to the usefulness of financial statements for decision making. However, it is interesting that the academic sector scored the highest while the
primary sector scored the lowest and the government sector the second lowest.

10.3.2 Chi-square statistics

The number of responses per decision-making category was not always enough to perform chi-square statistics, and certain categories were therefore combined. Executives and senior management were combined to form a “senior” category and middle management, junior management and employees (not part of management) in a “junior” category. The strongly disagree, disagree and unsure responses were combined into a “not agree” category and the agree and strongly agree responses in an “agree” category. Only those results with a chi-square statistic probability smaller than 0.05 will be discussed here.

(1) Statement 25: Employees in your organisation do not need financial training to understand the basics of how business success measured.

Table 10.1: Statement 25

<table>
<thead>
<tr>
<th>Employees do not need financial training to understand the basics of how business success is measured</th>
<th>Decision-making level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JUNIOR</td>
<td>SENIOR</td>
</tr>
<tr>
<td>Agree</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>12,32%</td>
<td>25,64%</td>
</tr>
<tr>
<td>Not agree</td>
<td>121</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>87,68%</td>
<td>74,36%</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>78</td>
</tr>
</tbody>
</table>
Because this statement was negative, table 10.1 and figure 10.4 show that only 12.32% of juniors and 25.64% of seniors agreed that employees do not need financial training to understand the basics of how business success is measured. Although it is somewhat disconcerting that more seniors than juniors concurred with this statement, it is still encouraging that 87.68% of juniors and 74.36% of seniors felt that employees do need financial training.

(2) Statement 27: *Managers seldom admit that they do not know how to read their organisation’s financial statements.*

**Table 10.2: Statement 27**

<table>
<thead>
<tr>
<th>Managers seldom admit that they do not know how to read their organisation’s financial statement</th>
<th>Decision-making level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JUNIOR</td>
<td>SENIOR</td>
</tr>
<tr>
<td>Agree</td>
<td>98</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>71,01%</td>
<td>87,18%</td>
</tr>
<tr>
<td>Not agree</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>28,99%</td>
<td>12,82%</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>78</td>
</tr>
</tbody>
</table>
From table 10.2 and figure 10.5 it is clear that a higher percentage of seniors agreed that managers seldom admit that they do not know how to read their organisation's financial statements. However, a significant percentage of juniors also concurred with this statement.

(3) Statement 39: *The narratives in financial statements assist in the understanding of the numbers.*

**Table 10.3: Statement 39**

<table>
<thead>
<tr>
<th>The narratives in financial statements assist in the understanding of the numbers</th>
<th>Decision-making level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JUNIOR</td>
<td>SENIOR</td>
</tr>
<tr>
<td>Agree</td>
<td>88</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>63,77%</td>
<td>78,21%</td>
</tr>
<tr>
<td>Not agree</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>36,23%</td>
<td>21,79%</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>78</td>
</tr>
</tbody>
</table>
As shown in table 10.3 and figure 10.6, senior managers agree to a greater extent than juniors that the narratives in financial statements assist in the understanding of the numbers.

## 10.4 SUMMARY

This chapter described the collation of the responses to the survey research conducted to determine decision makers’ perceptions of the financial literacy concept, their views on the need to be financially literate and the attributes of financial information for decision making. The responses were first collated by clustering certain questions, and then presented in paragraph form. The descriptive and inferential statistics were then presented by means of tables and graphs. The main findings of the survey are summarised in the paragraphs below.
In total, the answers on 216 questionnaires were processed. The respondents participated in the primary, secondary and tertiary sector of the economy as well as government, parastatals and the academic sector. They also represented executive, senior management, middle management, junior management and other employees (not part of management) of the different organisations.

Regarding the respondents' perception of the financial literacy concept, it became clear that they overwhelmingly agreed that financial literacy entails more than the mere understanding of the terms “financial” and “literacy” and that there are different financial literacy levels for different purposes. A significant percentage of the respondents also agreed that the financial literacy concept requires an awareness of the available information in a decision-making situation and that being financially literate is a significant step on the road to sustainability.

An extremely high percentage of the respondents also agreed that financial literacy involves the contemplation of future scenarios and that it requires a scale of measurement to compare options. It was therefore no surprise that a significant percentage agreed that financial literacy lays the foundation for decision making under uncertainty and that it mitigates against the risks involved in decision making. From the responses it was evident that the participants perceived financial literacy to be more dependent on an understanding of the use of numbers and not as much as being a language proficiency issue. They also agreed that the outcome of financial literacy is the optimal allocation of resources.

An overwhelming number of respondents agreed that decision makers at executive level should know that they are both individually and collectively responsible for the organisation’s financial activities, and also that decision makers at all levels should understand the financial and accounting terminology generally used in the organisation. Notwithstanding the fact that
most of the respondents agreed that it would be to the overall benefit of the organisation if decision makers at all levels were financially literate, they also concurred that senior managers have to understand the meaning of financial ratios in order to evaluate their organisations' performance. The respondents further agreed that organisations with a financially literate workforce generally would have a competitive advantage over those who do not.

Although a high percentage of the respondents agreed that employees in an organisation require financial training to understand the basics of how business success is measured, they were also convinced that financial literacy courses need to be industry specific - in other words, fit for purpose. Of interest, however, is the fact that only 64.81% agreed that employers generally have an obligation to provide training for their employees.

On a more controversial note, a significantly high percentage of respondents agreed that white-collar crime would generally be better addressed if more people were financially literate enough to ask the right questions. A major percentage also concurred that managers seldom admit that they do not know how to read their organisation’s financial statements. According to the chi-square statistics, a higher percentage of senior managers as opposed to juniors agreed to this statement. From the survey, it could also be deduced that only 55.09% of the respondents concurred that employers should evaluate prospective employees’ financial literacy levels before appointing or promoting them.

From the factor analysis it became clear that in most of the statements on the competitive advantage obtained by a financially literate workforce and addressing white-collar crime, the government sector scored the highest on the agreement scale while the primary sector scored the lowest.

With reference to the attributes of financial information, an extremely high percentage of respondents agreed that there is a need for a layperson’s guide
to the annual financial statements to explain the important issues. However, a large percentage also concurred that information overload increases uncertainty and that different terms are sometimes used in financial information to indicate the same thing. It was also felt that annual financial statements have a limited target market.

It could further be inferred that the respondents do not think that annual financial statements provide executives with enough information to make future-oriented financial decisions and also that it is easy to make performance predictions on the basis of information contained in financial statements. The reason for this could be that only 57.87% agreed that financial statements are presented in such a way that they highlight the critical issues or because many of them were unsure or negative with about the reliability and trustworthiness of financial information prepared by financial departments. The factor analysis indicated that academics have more faith in the ability of financial information to provide decision makers with enough user-friendly and trustworthy information to make future-oriented financial decisions. One should bear in mind that more than half the academics who participated in the survey are well-grounded in the financial discipline. The results of this particular statement would probably have been different if the academics were from a nonfinancial background.

Notwithstanding a high percentage of unsure scores, respondents still felt that it is difficult to read and understand the financial section of the newspapers or capital market information as presented in the media. Interestingly, only a small percentage (15.74%) of respondents agreed that most of the information in financial statements is based on estimates and assumptions. This could be because they are not aware of the fact that financial statements no longer only reflect historical transaction-based figures, but are based instead on significant judgement by the preparers. Significant judgement includes fair-value estimation, provisions, estimates of residual values and the useful life of property plant and equipment as well as contingent liabilities. This response is
an indication that a high percentage of the respondents are ignorant about the compilation of information in financial statements.

Lastly, respondents agreed that the narratives in financial statements assist in the understanding of the numbers, and according to the chi-square statistics the senior managers agreed more to this than the juniors. However, this could be regarded as being contradictory to the fact that respondents agreed that financial literacy is not a language proficiency issue.
CHAPTER 11

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In summary, knowledge is the expertise, experience and capability of staff, integrated with processes and corporate memory; information is the raw material that knowledge work requires and is made up of a variety of forms and types. ... Perhaps the simplest definition, however, is that knowledge is what people know; information is how they communicate it.

(Abell & Oxbrow 2001:73)

11.1 INTRODUCTION

In the introductory chapter to this thesis, it was indicated that for organisations to acquire a higher order of intelligence and decision-making capability they do not only need to generate new information, but also to enhance the ability of their employees and other role players to utilise this information. To address this dualistic problem, the nebulous or elusive financial literacy construct has been identified to act as a coordinating interface between the financial information system and the human behaviour system in an organisation.

In recent research there seems to be a global sense of urgency to enhance the financial literacy levels of the general public (eg Tie 2004; Piprek et al 2004; BSA & FSA 2006). In South Africa, with its unique challenges not only locally but also as part of the economic upliftment of the southern African region, the development of the nation’s skills, including their financial capabilities, has also been supported by many authors (Beauchamp & Hicks 2005; Coetzer 2005; Manuel 2004; De Klerk 2006; Jekwa 2006). Although many programmes to enhance individuals’ financial literacy levels have been put in place (see ch 3), the focus appears to be more on the needs of consumers than those of individuals actively involved in decision making in organisations.

In addition to the financial literacy issue, research on financial information presented to decision makers in organisations also indicated that many
perceive it to be complex, lengthy and not always user-friendly, even to those who do have the necessary financial background (e.g., Goldberg 2001; Dunn et al. 2005; Schoonraad 2003; Pickard 2007a; Coppin 2006). The fact that South Africa competes in a global economy with complex business issues and has adopted IFRS, contributes to the intricate nature of financial information available in organisations. The following questions therefore arise: Does financial information currently alleviate the nonfinancial decision maker’s uncertainty levels or does it contribute to it? How can this gap between the intricate financial information and the decision makers without formal financial education be bridged?

In an attempt to answer the above questions and to address the issues at stake, the study focused on the following:

1. the financial literacy challenges in South Africa
2. a view of the financial information system and the human behaviour system with self-renewal and adaptive capabilities
3. an analysis of the information dynamics as the organisation’s creative energy
4. the challenge of financial information to satisfy decision makers’ needs
5. the unpacking of financial literacy according to Bloom’s six levels of thinking and Beard’s teaching model and the challenge of preparing learners for a state of uncertainty
6. the evolving financial consciousness of decision makers as primary users of financial information
7. the development of a financial literacy interface model to bridge the expectations gap between financial information and decision makers
8. an empirical investigation into the perception of decision makers with regard to the financial literacy construct, to decision makers and to financial information in organisations
11.2 OVERVIEW OF THE LITERATURE AND EMPIRICAL STUDY

The problem addressed in this thesis relates to the need for a coordinating interface model to fill the financial literacy gap between decision makers with a nonfinancial background and the information mostly produced by the financial section of organisations, and other media. Two approaches were followed to examine the foregoing aspects: a literature review and a research survey. An overview of both these approaches is presented below.

11.2.1 Literature review

The theoretical foundations of the subject were examined in the literature review and comprised chapters 2 to 8. The first seven focus areas listed above were reviewed in these chapters by consulting books, periodical articles, dissertations, theses and technical reports. These secondary information sources were used to explore whether previous studies could contribute to the problems at hand and to identify the need for further research.

The challenges and need for financial literacy in a South African context were investigated in chapter 2. From the literature study it can be deduced that to succeed in creating conditions for rapid growth and job creation in the country, increasingly more individuals need to become financially literate, be it as consumers or decision makers in organisations. To improve service delivery and apply government’s programme of action, public servants in particular need to improve their financial competencies.

An interdisciplinary systems approach was adopted to research the dualistic problem at hand. In chapter 3, attention was focused on the nature of the financial information system (matter) and the human behaviour system (mind). The dynamics of an open system and the importance of feedback between these two systems were highlighted as one of the prerequisites to narrow the gap between them. Financial literacy was also identified as another essential requirement to form an interface between matter and mind.
The nature of financial information as an enabler of decision making in a knowledge-driven organisation was discussed in chapter 4. Although there are many sources of financial information, attention was focused on the accounting conceptual framework underlying the presentation of financial information with special reference to the qualitative characteristics necessary to provide useful information for decision making. These characteristics are not only applicable to accounting information, but also to any other kind of information. The importance of a proper management information value chain to create a competitive advantage for the organisation was explained. The role of the accountant as one of the main transmitters of financial information and his or her role in the communication process were also discussed.

In chapter 5, the challenge for financial information to satisfy the needs of all the decision makers was contemplated and the different sources of financial information discussed. Many of the authors cited in this chapter are concerned that the growing complexity in the way financial information, in particular accounting information, is presented does not contribute to the production of information useful to a wide variety of decision makers. Presumably the effective communication of financial information requires financial information to some extent to be decoded by the preparers for the specific users of the information and that care must be taken not to indulge in information overload. To address the expectations gap between the preparers and the users of the information, there needs to be constant feedback from the users to the preparers, and the users need to empower themselves to become at least financially literate.

Chapter 6 introduced the learning for certainty versus learning for uncertainty paradox as a basis for financial literacy. Key concepts in the financial literacy sphere were defined and explained. Since learning plays a key role in the process of becoming financially literate, Bloom’s six levels of thinking and Beard’s teaching model were unpacked. Preparing learners for the uncertainty of the business world implies that a financially literate person requires a
financial consciousness, an awareness of quality and a culture of lifelong learning.

From the literature reviewed in chapter 7 it became clear that knowledge of the behaviour of individuals in decision-making situations should be used to improve both their decision-making skills and the way financial information is presented to them. Care should be taken to ensure that users do not acquire a manufactured consciousness whereby management succeed in conveying their own expectations and beliefs to users while they do not have the financial capability to question the information presented to them. It was also deduced that the rights of less sophisticated users of financial information should be taken into account by the preparers of the information and that they should not only focus on the interests of investors as identified in the user primacy principle.

One of the aims of this thesis was to develop a financial literacy interface model to enhance decision making in organisations. The construction of such a model was attempted in chapter 8. The model encompassed the basic financial literacy proficiencies needed by decision makers and the whole process of knowledge creation, depicting the learning process starting with experiencing the outer and inner environment of the organisation. Mitroff’s view of problem solving, as introduced in chapter 1, was used to conceptualise the research problem and demarcate the scope of the research.

11.2.2 Survey research
Survey research was conducted to determine the perceptions of decision makers in the formal South African economy, of the financial literacy concept, financial literacy for decision making and the attributes of financial information for decision making. From the literature review performed it became apparent that there is a need to gather more information on decision makers’ perceptions of financial literacy and information from an organisational perspective rather than a consumer’s perspective.
The methodology used to conduct the survey was explained in chapter 9. Interviews with some role players in the economy preceded the design of a questionnaire. The pilot study as well as the distribution of the questionnaire to organisations in all the sectors of the formal economy was discussed. The data preparation and statistical presentation of the data were also discussed. The constraints encountered in conducting the survey were mentioned.

The collation of the survey responses and the presentation and evaluation of the research findings were depicted in chapter 10. Although the findings of the empirical research were explained in detail in the previous chapter, the following summarises the main findings of the research with regard to some of the research issues identified in chapter 1 of the thesis and depicted in the financial literacy interface model in chapter 8:

(1) **Defining the financial literacy concept**
   An overwhelming percentage of the respondents agreed that financial literacy entails more than the mere understanding of the terms “financial” and “literacy”. Most of the respondents also concurred that there are different levels of financial literacy for different purposes. This perception corroborates the different information and cognitive levels (step-like approach) depicted in the financial literacy model in chapter 8. Of the respondents, a high percentage agreed that the financial literacy concept requires an awareness of the available information in a decision-making situation. The respondents also perceived financial literacy to be dependent on the understanding of the use of numbers.

(2) **The need for financial literacy among decision makers**
   Most of the respondents agreed that decision makers at all levels in the organisation should understand the financial and accounting terminology generally used in the organisation. This includes an understanding of all the different types of information available in the organisation, as depicted in the model (see ch 8). A high percentage
also felt that senior managers have to understand the meaning of financial ratios in order to evaluate their organisation’s performance. Most of the respondents held that organisations with a financially literate workforce generally have a competitive advantage over those who do not, and a high percentage agreed that knowledge of good corporate governance is an essential ingredient of becoming a financially literate decision maker. The respondents’ feedback is thus in agreement with the illustration in the model (see ch 8) that users of financial information should evolve from having a financial awareness to eventually becoming financially intelligent and knowledgeable.

(3) The usefulness of financial information for decision making
In order to explain the primary issues in financial statements, the majority respondents agreed that there is a need for a layperson’s guide to the annual financial statements. This response emphasises the financial information gap as shown in the model in chapter 8. Most of the respondents held that information overload increases uncertainty, while many also indicated that annual financial statements in particular have a limited target market. To a lesser extent, respondents stated that the narratives in financial statements assist with the understanding of the numbers. A lower than average percentage of respondents held that annual financial statements provide executives with enough information to make future-oriented financial decisions, and in the same sense, they disagreed that it is easy to make performance predictions on the basis of the information in financial statements. Where the model in chapter 8 illustrates that financial information provides the energy for decision making in the organisation, it is clear from these responses that users find information as presented in financial statements especially difficult to understand.
(4) The financial literacy interface

From the response it was clear that financial literacy could be used as an interface between financial information and decision making. Most of the respondents agreed that financial literacy alleviates the risks involved in decision making. As shown in the model in chapter 8, risk can only be alleviated when the user of financial information is financially literate enough to understand and interpret the information. In addition, an overwhelming percentage of the respondents concurred that financial literacy is a vital step on the road to sustainability and that it lays the foundation for decision making under uncertainty. A high number of respondents stated that white-collar crime would generally be better addressed if more people were financially literate enough to ask the right questions. Hence the interface between financial information and users is dependent on the education and training of decision makers to become more financially literate. Many of the respondents also indicated that employees need financial training to understand the basics of how business success is measured.

11.3 THE ADJUSTED FINANCIAL LITERACY MODEL

The results of the empirical survey influenced the proposed model illustrated in chapter 8. From the empirical research the need for a financial literacy interface between the financial information system and decision makers, to facilitate meaning, became clear. To understand the meaning of the financial information, decision makers need to relate it to other things in the economic environment. However, the relationship between the financial information system and decision makers could only be sustainable if it allows a continual flow of energy (information) through the organisation – creating an open system of interconnected networks. The systematic understanding of the financial literacy interface offers an opportunity to use as guideline, a set of principles suggested by Capra (2002:201), to construct the financial literacy
interface. Capra identified six principles of ecology (see ch 3) critical to sustaining life - networks, cycles, solar energy, partnership, diversity and dynamic balance - which could also be applied to illustrate the concept of a sustainable financial literacy interface (see fig 11.1). Because organisations evolve over time in continual interaction with its environment, sustainability means that there is a cyclic process of co-evolution within the different systems (networks) of the organisation, to create, through partnerships and diversity a state of dynamic balance. Information is the energy necessary to bring about change and growth, and to ultimately create value. However, financial literacy – the ability to understand the financial information and use it for decision making – is also a vital step on the organisation’s road to financial sustainability.

Organisations, identified as social systems, use communication networks to create thought and meaning. According to Wheatley (1999:151), “meaningful information lights up a network and moves through it like a windswept brushfire”. Hence to facilitate communication, information must be meaningful. A key competence underpinning financial literacy in an organisation is an understanding of financial information and business networks and the context in which they operate. A financial literacy interface could enhance a network’s communication capacity, by making financial information more meaningful to decision makers. However, sustainable financial literacy also requires an understanding of the financial information process wherein decision making is influenced by relationships between different variables and the cyclic interaction between networks.

The complexity of both financial information and the decision makers’ ability to understand financial information in a changing environment and timeframe, illustrated in the scientific financial literacy interface model (see fig 11.1), was discussed in the literature review and established in the empirical survey. In addition, Capra’s (2002:200-204) ecological literacy principles, used in this study to illustrate sustainable financial literacy, are depicted in figure 11.1.
Figure 11.1: The financial literacy interface model

Source: Own observation
The way in which the results of the empirical survey changed the original model as depicted in chapter 8, will be explained by means of the principles of ecology, introduced into the model to illustrate a sustainable financial literacy interface (see fig 11.1):

(1) **Networks**

Organisations consist of systems, or networks, interacting with one another. In a business organisation these networks communicate with one another by sharing information. According to the empirical survey most of the respondents agreed that decision makers at all levels should understand the financial information generally used in the organisation and that organisations with a financially literate workforce generally have a competitive advantage over those who do not. The different organisational departments or the management hierarchy can be seen as networks in the organisation. A sustainable financial literacy interface uses the financial information flow to link these networks and create value.

(2) **Cycles**

The dynamic interplay of information (matter) and energy, cycles through the organisation to generate new ideas and facilitate decision making. However, from the empirical survey it became clear that the majority of respondents find financial information as presented in financial statements difficult to understand and that they need, for example, a layperson’s guide to explain the important aspects. Hence, instead of having a linear financial information flow, the process should be redesigned to imitate a cyclical process where feedback on the usefulness of the information will be given to those who produce it. The information flow cycle should not be broken because some individuals do not understand it.
(3) **Solar energy**
In nature, the sun, transformed into chemical energy by the photosynthesis process of green plants, provides the energy to drive the ecological cycles (Capra 2002:202). In the same sense, financial information is the energy that alleviates uncertainty and drives decision making in organisations. Most of the respondents in the empirical survey agreed that financial literacy lays the foundation for decision making under uncertainty and involves the contemplation of future scenarios. Financial literacy can therefore be regarded as a cyclical flow of energy connecting the network patterns in an organisation in order to alleviate uncertainty.

(4) **Partnership**
The exchange of information and resources in an organisation are sustained by cooperation between different networks. There should be pervasive cooperation between the financial information system and the cognitive ability of decision makers to ensure a sustainable financial literacy interface. With regard to cooperation, most of the respondents in the empirical survey concurred that decision makers are individually and collectively responsible for the organisation’s financial activities. In organisations, there is interdependence between systems and subsystems. In the financial literacy interface this interdependence or partnership is a key characteristic for sustainable cooperation.

(5) **Diversity**
The richness and complexity of financial information and the diversity of the decision makers’ cognitive ability assures resilience in decision making. But, when the information flow is restricted, because some may not understand it, suspicion and distrust is created and diversity becomes a hindrance (Capra 1994:10). From the empirical survey one may infer that the respondents basically perceived financial information as complex and difficult and that there are different levels of financial
literacy training necessary for different purposes. Because individuals have diverse information needs, comprehensible fit for purpose information could lead to quality decision making. Hence intellectually conceived quality is possible in the interface as a trinity of financial literacy, mind and matter.

(6) Dynamic balance
An organisation is a flexible, ever-fluctuating network. The continuous flow of information to decision makers and their feedback keep the organisation in a state of dynamic balance where no single variable is maximised. Although many factors contribute to the organisation’s sustainability, an overwhelming percentage of respondents in the empirical study agreed that financial literacy is an important step on the road to sustainability. This places financial literacy as a dynamic balancing factor in the centre of the interface between the diverse organisational networks, partnerships and information cycles.

A sustainable financial literacy interface provides a means of integrating the financial information system and the human behaviour system into a dynamic decision-making system. From the results of the literature review and the empirical survey, it was clear that complex financial information on its own cannot alleviate uncertainty and facilitate decision making. Kapur and Kesavan (1992:2) concur with most of the respondents in the empirical survey, that to decrease uncertainty, individuals collect an increasing amount of information, but, more often than not, it may in itself contribute to an increase in uncertainty. One may argue that although there can never be a world without uncertainty, one can “attempt to minimise it to the extent possible in order to get a glimpse of reality” (Kapur & Kesavan 1992:4). Hence the financial literacy interface as a meeting point between financial information and decision makers could contribute to minimise this uncertainty and attain quality in the decision-making process. Figure 11.2 depicts such an interface between mind and matter in more detail.
Flow of information/arrow of time/energy transformation

Past

DATA
INFORMATION
PAST
EXPERIENCE
KNOWLEDGE

CERTAINTY
ENERGY

Present
MIND
(Human contact with reality)

Moving now

Awareness of quality

Infinite possibilities

Choices

Value

Structure

Becoming
MATTER

Quality

Pre-intellectual reality

Intellectual reality

Mind

Matter

Subjective

Objective

Risk

Readiness/fitness

Future

THERMODYNAMICS = ENERGY TRANSFORMATION
(Self-organisation, autopoiesis)

Source: Gouws (2008)
In figure 11.2, Gouws (2008) depicts the human contact with reality as a trinity between quality, mind and matter. Quality, in turn, consists of pre-intellectual reality and intellectual reality (see fig 11.2). Pre-intellectual reality leads to an awareness of quality. But, on the other hand, if one is ignorant of, say, financial activities, it “connotes distorted or incomplete knowledge” (Smithson 1989:7), which, in turn, will cloud the possibilities available to choose from. Hence, to facilitate choice and to create value (see fig 11.2), the financial literacy interface requires that one reflects upon or think about infinite possibilities.

Regarding the flow of information and the arrow of time, Pirsig (1999:247) contends that the present is one’s only reality, because the past only exists in one’s memories and the future only in one’s plans. However, the problem with financial information is that it relates mostly to transactions or events that have already occurred (past). In Pirsig’s opinion, “reality is always the moment of vision before the intellectualisation takes place”. In other words, this pre-intellectual reality identifies quality, which ultimately leads to infinite possibilities to choose from. Consequently, financial choices should create value within the structure of the organisation and ensure sustainability.

Intellectual reality (see fig 11.2), constitutes both mind (subjective reasoning) and matter (objective information). Although financial information, per se, is not always objective, its objectivity could be regarded as representing irreversible transactions that cannot be subjectively altered by the user thereof, because they already occurred. The way this information (matter) is interpreted by decision makers (mind) involves certain risks. Notwithstanding these risks, decision makers need a readiness or intellectual fitness to make decisions leading to organisational sustainability.

To maintain their self-organisation (see fig 11.2) and become sustainable, organisations need to continuously exchange energy between the financial information system and the human behaviour system, thus creating an open system where a high degree of non-equilibrium is always at work. This
principle is in accordance with Capra’s principles of ecology previously discussed. Organisations continuously transform energy (data and information) into purposeful knowledge, in order to lower uncertainty. Financial literacy could thus be the interface through which this energy can be transferred. From the empirical survey, it is also evident that respondents concur that financial literate individuals must be aware of the available information and also that financial literacy is an important step on the road to sustainability. Consequently, according to Gouws (2008), in order to create value, to learn, to transcend and to sustain, three conditions (Beinhocker 2005:303) must be jointly met in the interface. These conditions are irreversibility, decreasing uncertainty and fitness.

(1) **Irreversibility**

All transformation and transactions are thermodynamically irreversible on the arrow of time. However, irreversibility on its own is not a sufficient condition for value creation, because some irreversible processes can destroy value, for example incompetent management, damage to property or money lost. The second condition, decreasing uncertainty, is therefore also necessary for value creation.

(2) **Decreasing uncertainty** (entropy)

When the organisation is in a state of equilibrium, it has exhausted all of its capacity to change and “dissipated its productive capacity into useless entropy” (Wheatley 1999:76). Within the organisation information is needed to reduce uncertainty, but new transformations and transactions, in turn, create uncertainty, if not in the same system, then in others. Hence low uncertainty is necessary in the financial literacy interface to ensure value creation. Although the first two conditions are necessary for value creation, the third one, fitness, must be jointly met.
(3) **Fitness**

All economic transformations and transactions produce products, services and events fit for human purposes. However, individuals have economic preferences that dictate the decisions they make. Hence financial decision making is always fit for purpose, which means that decision makers’ financial literacy levels also need to fit their specific decision-making objectives. The majority of respondents in the empirical survey also concurred that financial literacy course need to be industry specific (fit for purpose).

One may infer that in order to create value, a full understanding of the financial literacy interface is essential to reduce uncertainty and improve financial decision making.

### 11.4 CONCLUSIONS

In compliance to the main research objective stated in chapter 1, a financial literacy model as a coordinating interface between financial information and decision makers in order to enhance sound decision making, was developed. The secondary objectives to support the main research aim (ch 1), were addressed in the literature study and the empirical survey. In compliance to these objectives, general conclusions were drawn from the literature study, while more specific conclusions were drawn from the empirical study.

#### 11.4.1 General

With reference to the objectives and problems defined in chapter 1 of this study, and on the basis of the results of the literature study, the following general conclusions can be drawn:

1. Organisations are complex and consist of many interrelated systems and subsystems, of which the financial information system and the human behaviour system are but two.
Financial literacy can be regarded as one of the basic requirements needed to form an interface between these two systems.

South Africa is in dire need of financially literate individuals who can participate fully in the economy and who can contribute to the eradication of poverty and social inequality.

Financial literacy in an organisation can be described as the ability of everyone in the organisation to make informed financial decisions required for their specific responsibility level.

The increase in the volume and complexity of financial information often outstrips the ability of users to understand and interpret it for decision making.

Decision makers need to be equipped to operate amid an ever-present uncertain and complex economic environment.

A financial literacy teaching model would need to include a holistic approach towards learning from the knowledge level up to the level of evaluation and creation.

Users of financial information differ vastly in their level of financial capability and sophistication, and preparers of financial information should take cognisance of this fact.

The dilemma in many organisations is that only a few key players, especially those in the financial department, understand the intricate financial reports.

As a consequence of the intricate relationship between the financial information system and the human behaviour system, the financial literacy interface is a complex construct.

From the financial literacy interface model, one may infer that sound financial decision making is only possible when the trinity of mind, matter and quality, in the interface is fully understood.

### 11.4.2 Empirical study

Although the survey results were discussed at length in chapter 10, the following interesting conclusions can be drawn from the research survey:
(1) Financial literacy is a complex phenomenon and the term encompasses more than the terms “financial” and “literacy”.

(2) Financial literacy is an important step on the road to sustainability.

(3) Financial literacy lays the foundation for decision making and mitigates against the risks involved in decision making.

(4) Financial literacy is perceived to be more dependent on the understanding of the use of numbers and not as much a language proficiency issue.

(5) It would be to the overall benefit of an organisation if decision makers at all levels were financially literate.

(6) Organisations with a financially literate work force have a competitive advantage over those who do not.

(7) Employees in organisations need financial training to understand the basics of how business success is measured.

(8) Financial literacy courses need to be industry specific - in other words, fit for purpose.

(9) White-collar crime would generally be better addressed if more people were financially literate enough to ask the right questions.

(10) Managers seldom admit that they do not fully understand their organisation’s financial statements.

(11) Annual financial statements do not provide executives with enough information to make future-oriented financial decisions or performance predictions.

(12) The academic sector, as opposed to the other economic sectors, has more faith in the ability of financial information to provide decision makers with enough user-friendly and trustworthy information to make future-oriented financial decisions.

(13) Respondents from the government sector realise to a greater extent than those in the other sectors that it is to the organisation’s overall benefit if decision makers in the organisation are financially literate and that prospective employees’ financially literate levels are evaluated before appointing or promoting them.
11.5 RECOMMENDATIONS

The recommendations below on both the literature study and the survey results would presumably contribute to narrowing the gap between financial information and decision makers:

1. The major challenges confronting the decision-making dilemma in organisations should be viewed holistically, taking into account the environment in which the organisation operates. These challenges include the intricacies of economic activities in the global arena, the complexity and overabundance of financial information and the lack of financial literacy among many of the organisation’s role players pertaining to their decision-making responsibility.

2. Problems with financial decision making should be addressed from an open systems perspective where the feedback from the users of financial information is taken into account. However, this kind of feedback is virtually nonexistent, and a culture of feedback needs to be encouraged before mention can be made of taking it into account.

3. To address the expectations gap between financial information and decision makers in organisations, the decision makers need to hone their financial literacy levels. The different needs of decision makers have to be established and industry-specific financial literacy courses then have to be developed. Financial training in organisations needs to be promoted.

4. Decision makers require complete, timely and understandable financial information on which to base their decisions. Additional future-oriented information could assist users with forecasts and predictions. Narratives should at least highlight the main issues.

5. A layperson’s guide should also accompany organisations’ annual financial statements to explain the important issues and provide additional information on organisations’ activities, financial performance and position.
Care should be taken to ensure that decision makers do not receive an overload of information. The financial department could, for example, demarcate the information for users operating on different decision-making levels in the organisation, or information could be summarised and presented in tables or graphs.

A common learning goal and financial language need to be established for financial literacy education across persons, subject matter and levels. This could be done for primary, secondary and tertiary levels of education or for basic adult education. Within an organisation, this could also be done for different decision-making levels - strategic, tactical or operational.

The wide ranges of outcomes for financial literacy education need to be linked to other subjects and disciplines, such as economics, mathematics, accounting and language.

A basis for determining a national financial literacy curriculum for decision makers in organisations should be envisioned.

Industry-specific financial literacy courses should be developed.

More research into the dimensions and challenges within an interface is necessary to demystify the relationships between matter, mind, quality, value and sustainability.

11.6 CONTRIBUTIONS TO RESEARCH

This study should make several mainline contributions to financial management and some derived contributions to related disciplines. These contributions can be summarised as follow:

- Through an interdisciplinary literature survey, the study identifies the dire need for an interface between the financial information system and the human behaviour system of organisations.
The literature review and empirical research recognised the challenge of general purpose financial statements and other financial information to satisfy the needs of nonfinancial decision makers in organisations.

The study acknowledges that, in general, globally and in South Africa specifically there is a shortage of financially literate people in decision-making positions in organisations.

It creates a greater awareness of the competitive value of having financially literate decision makers in organisations.

The study focuses on the importance of identifying the different cognitive levels of learning as a basis for financial literacy education and on the fact that financial literacy encompasses financial consciousness, financial intelligence and financial knowledge.

The proposed model takes an observed phenomenon, financial literacy interface, and makes it visible by identifying the following key aspects:

- There are different levels of learning, from the basic level of financial awareness to the higher knowledge level where the decision maker can evaluate the information and create new applications from it.

- Decisions based on a variety of financial information are always taken in the present, but relate to future actions. Because the outcomes of these decisions are uncertain, there is an element of risk involved.

- Decision making occurs in the interface, at the point where communication successfully takes place, that is, the bifurcation point or interface where mind resides over matter. Decision makers have to acquire a financial awareness, intelligence and knowledge to be able to analyse and interpret financial information for decision making.
11.7 SUGGESTIONS FOR FURTHER RESEARCH

Although the results of the study are encouraging, further research is also required in the following areas:

- empirical testing of the financial literacy levels of decision makers in organisations
- devising a simplified method of presenting financial statements that is easy to understand but still complies with generally accepted accounting practice
- developing a framework for a layperson’s guide to the annual financial statements, to explain the important issues in the statements
- assessing the influence of knowledge of good corporate governance on the rationale for becoming more financially literate
- designing a basic curriculum for financial literacy education for decision makers on different management levels in organisations
- assessing the influence of feedback from decision makers to the preparers of financial information, on the way they prepare this information
- analysing the weight assigned to financial literacy education in the school curriculum, apart from that presented in the formal Accounting subject

The above-mentioned topics should highlight the fact that the problems facing decision makers in organisations, specifically with reference to the South African environment, need to be pursued in further research. In order to create and maintain a sustainable economy, financial literacy should feature as an important element of future skills development studies.
A Books


South Africa Yearbook. 2005/06. Pretoria: GCIS.


**B Periodical Articles**


C Dissertations, theses and technical reports

AICPA, vide American Institute of Certified Public Accountants. 1994. Database of materials on users’ needs for information. From a study conducted by the Special Committee on Financial Reporting. Jersey City, NJ: AICPA.


Jappie, NB. 1992. A needs assessment for a workplace literacy programme, incorporating basic skills training with job-related instructional material, within the textile industry. MSoc SC, University of Natal. Durban.


Ncube, TP. 2001. The role of industries in providing basic life-skills education to unskilled black employees in the Empangeni/Richards Bay industrial areas. MPhil dissertation, University of Stellenbosch, Stellenbosch.


Consent for participation in an academic research interview

Decision makers’ perception of the financial literacy concept

Dear ........................................

Thank you for your willingness to participate in an academic research study conducted by Christina Cornelia Shuttleworth, a doctoral student under the supervision of Professor Daan Gouws of the School of Financial Management Sciences at the University of Pretoria.

The way individuals and institutions use the concept of financial literacy suggests that different people attach different meanings to this construct. In order to establish a conceptual model for financial literacy, it is important to attempt to formulate what financial literacy entails, and to understand decision makers’ expectations of financial information.

The purpose of this study is to investigate how a financial literacy interface can contribute towards the comprehensibility of financial information for decision makers in organisations. Both the attributes of the financial information and the financial acumen of the decision makers will be addressed.

The purpose of the interview is to gain a picture of your perception of the concept of financial literacy and its effect on decision making in organisations. The responses obtained from the interviews will be analysed and incorporated in the final questionnaire to be completed by a selected target group.
The information from individual interviewees will at all times be treated as confidential and will not be made available to any entity or third party. Neither your name nor your company will be linked to your individual contributions to this study. The information obtained from the interview will be used for academic research purposes only.

Your participation in this study is very important and will be appreciated. You may, however, choose not to participate and you may also stop participating at any time without any adverse consequences.

The interview should take approximately 15 minutes of your time and will be conducted as per our appointment:

Date: ....................................................
Time: ...................................................
Venue: ..................................................

Should you require any further information, please do not hesitate to contact Christina Cornelia Shuttleworth at:

Telephone: 083 2300809
Fax: (012) 365 2684
E-mail: shuttcc@unisa.ac.za
Postal address: P.O. Box 70626
The Willows
Pretoria
0041

Thank you in anticipation for your kind cooperation and assistance with this research project.

Yours sincerely

CC Shuttleworth
LETTER OF CONSENT:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>I understand that the information I provide will only be used for the purposes of this research project and that I will remain anonymous. I confirm having participated under informed consent.</td>
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<tr>
<td>Consent: I give my permission for the use of information I provide to be used for research purposes (which will not in any way be to my disadvantage or detriment)</td>
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<tr>
<td>I confirm that I am aware that I may at any point during the interview cease to participate without being adversely affected.</td>
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</tr>
<tr>
<td>I grant permission that my name and that of my organisation may be listed as a participant in this research interview, on condition that my individual contributions will not be linked to my name or that of my organisation.</td>
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Signed on ................................ (date) at ...................................................(location)

Dr/Prof/Mr/Me .................................................................
APPENDIX B
INTERVIEW SCHEDULE

A. The financial literacy construct

1. Please give your own understanding of the “financial literacy” concept.

2. Do you believe that individuals at all levels in an organisation need to be financially literate? If so, why do they need to be?

3. Do you think that cultural differences influence financial perceptions?

B. Financial information

1. Do you think that the financial information available in organisations is relatively easy to understand?

2. Do you believe that the financial information provided in annual financial statements contributes to better future decision-making?

C. Education and training

1. Are employers responsible for their employees’ financial training?

D. General

1. General ideas with regard to the subject.
Consent for participation in an academic research study

Decision makers’ perception of the financial literacy concept

Dear Respondent

You are invited to participate in an academic research study conducted by Christina Cornelia Shuttleworth, a doctoral student under the supervision of Professor Daan Gouws of the School of Financial Management Sciences at the University of Pretoria.

The way individuals and institutions use the concept of financial literacy suggests that different people attach different meaning to this construct. In order to establish a conceptual model for financial literacy it is important to attempt to formulate what financial literacy entails as well as decision makers’ expectations of financial information.

The purpose of this study is to investigate how a financial literacy interface can contribute towards the comprehensibility of financial information to decision makers in organisations. Both the attributes of the financial information and the financial acumen of the decision makers will be addressed.

The questionnaire comprises mostly statements about financial literacy perceptions made by the researcher on the basis of statements made by other researchers extracted from financial and other literature. The researcher also conducted interviews with various role players on their perceptions of the financial literacy construct and the role of financial information in decision making. The feedback from these interviews was used to construct and verify some of the statements in the questionnaire.

The responses obtained from the individual questionnaires will be analysed and statistically processed into final results. The information from individual
respondents will at all times be treated as confidential and will not be made available to any entity or third party. Neither your name nor your company will be linked to your contributions to this study. The data obtained from the questionnaires will be used for academic research purposes only.

Your participation in this study is of vital importance and would be appreciated. You may, however, choose not to participate and you may also stop participating at any time without any adverse consequences.

As soon as the research is completed, an electronic copy of the final research study will be made available to all participants requesting such information.

Please complete the questionnaire electronically if possible, which should take approximately 10 to 15 minutes, and return it via e-mail as an attachment or fax or post the completed questionnaire before 25 January 2008 to the address below.

Should you require any further information, please do not hesitate to contact Christina Cornelia Shuttleworth at:

Telephone: 083 230 0809
Fax: 012 365 2684
E-mail: shuttcc@unisa.ac.za
Postal address: PO Box 70626
The Willows
Pretoria
0041

Your response to the enclosed questionnaire would be greatly appreciated.

Thank you in anticipation for your kind cooperation and assistance with this research project.

Yours sincerely

CC Shuttleworth
I understand that the information I provide will be used only for the purposes of this research project and that I will remain anonymous. I confirm having participated under informed consent. 

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<tr>
<th>Consent: I give my permission for the use of the information I provide below to be used for research purposes (which will in no way be to my disadvantage or detriment).</th>
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<td>Yes</td>
<td>No</td>
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I confirm that I am aware that I may at any point during the survey cease to participate without being adversely affected. 

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<th>I confirm that I am aware that I may at any point during the survey cease to participate without being adversely affected.</th>
<th>Please tick</th>
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<tr>
<td>Yes</td>
<td>No</td>
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</table>

Please indicate with an “X”, the category in which you or your business predominantly belongs. (Mark only 1.)

### 1. Economic activity in which you participate

<table>
<thead>
<tr>
<th>Primary sector (eg agriculture; mining)</th>
<th>Please tick</th>
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<tbody>
<tr>
<td>Secondary sector (eg manufacturing; electricity, gas &amp; water; construction)</td>
<td>1</td>
</tr>
<tr>
<td>Tertiary sector (eg wholesale &amp; retail, catering &amp; accommodation; transport, storage &amp; communication; financial intermediation, insurance; community, social &amp; personal services)</td>
<td>2</td>
</tr>
<tr>
<td>Government sector (eg national; provincial; municipal)</td>
<td>3</td>
</tr>
<tr>
<td>Parastatals (eg. Eskom; Transnet)</td>
<td>4</td>
</tr>
<tr>
<td>Academic (eg primary, secondary, tertiary education)</td>
<td>5</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>6</td>
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### 2. Decision-making category

<table>
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<tr>
<th>Executive</th>
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<tbody>
<tr>
<td>Senior management</td>
<td>1</td>
</tr>
<tr>
<td>Middle management</td>
<td>2</td>
</tr>
<tr>
<td>Junior management</td>
<td>3</td>
</tr>
<tr>
<td>Employee (not part of management)</td>
<td>4</td>
</tr>
</tbody>
</table>

For official use only:

- Primary sector (eg agriculture; mining) \( V_1 \)
- Tertiary sector (eg wholesale & retail, catering & accommodation; transport, storage & communication; financial intermediation, insurance; community, social & personal services) \( V_2 \)
Please use the following scale to rate the statements in the categories below:
1. S/D Strongly disagree
2. D Disagree
3. U Unsure
4. A Agree
5. S/A Strongly agree

A. The financial literacy concept

Please indicate with an “X” the extent to which you agree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>S/D</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>S/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Financial literacy entails more than the mere understanding of the terms “financial” and “literacy”.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Financial literacy is dependent on the understanding of the use of numbers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Financial literacy is not a language proficiency issue.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. There are different financial literacy levels for different purposes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. The financial literacy concept requires an awareness of the available information in a decision-making situation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Financial literacy is about perceiving value.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Financial literacy involves contemplating future scenarios.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Financial literacy mitigates against the risks involved in decision making.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Financial literacy requires a scale of measurement to compare options.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Financial literacy is a process to be followed rather than an achieved educational level.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. The outcome of financial literacy is the optimal allocation of resources.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Financial literacy is an important step on the road to sustainability.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Financial literacy lays the foundation for decision making under uncertainty.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
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</table>

[Turn over]
### B. Financial literacy for decision making in an organisation

Please indicate with an “X” the extent to which you agree with the following statements:

**Decision makers = DMs**

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<th>For official use only</th>
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<tbody>
<tr>
<td>V16</td>
<td>DMs at executive level should know that they are both individually and collectively responsible for the organisation’s financial activities.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V17</td>
<td>DMs at all levels should understand the financial and accounting terminology generally used in the organisation.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V18</td>
<td>It will be to the overall benefit of your organisation if decision makers at all levels are financially literate.</td>
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<td>DMs perceive financial literacy as “knowing about money”.</td>
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<td>Senior managers have to understand the meaning of financial ratios in order to evaluate their organisations’ performance.</td>
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<td>Generally, organisations with a financially literate workforce have a competitive advantage over those who do not.</td>
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<td>Employers should evaluate prospective employees’ financial literacy levels before appointing or promoting them.</td>
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C Attributes of financial information for decision making

Please indicate with an “X” the extent to which you agree with the following general statements:

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## APPENDIX D

### DESCRIPTIVE STATISTICS

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