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

by

CHRISTINA CORNELIA SHUTTLEWORTH

submitted in fulfilment of the requirements for the degree of

DOCTOR OF COMMERCE

in the subject

FINANCIAL MANAGEMENT

at the

UNIVERSITY OF PRETORIA

PROMOTER: PROF DG GOUWS

2009
ACKNOWLEDGEMENTS

With the submission of this thesis, I acknowledge with gratitude the assistance, encouragement and support of all the persons involved in this study. In particular, I would like to sincerely thank the following:

- My Lord, for the grace, courage and strength to persevere.
- My promoter, Professor Daan Gouws, for his able guidance and the exceptional manner in which he mentored, inspired and encouraged me to complete the study.
- My husband, Henry, for his technical assistance and motivation throughout this study.
- My children, family and friends for their support and tolerance.
- My colleagues at the Department of Management Accounting at Unisa for allowing me the time to complete my thesis.
- Miss Yvonne van Stuyvenberg, of Unisa Library, for her efficiency, willingness and friendly assistance in the collection of relevant literature sources.
- Professor Francois Steffens and Ms Jaqui Sommerville of the Department of Statistics at the University of Pretoria for their invaluable assistance with the compilation and processing of the questionnaire and research results.
- The individuals at the different organisations who diligently distributed and collected the questionnaires.
- Moya Joubert from Unisa for editing my thesis.
- The anonymous reviewers of this thesis who provided valuable feedback.
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.
# TABLE OF CONTENTS

## CHAPTER 1
INTRODUCTION AND ORIENTATION

1.1 Background to the research topic 1  
1.2 Statement of the problem 5  
   1.2.1 Perspectives on the problem statement 5  
1.3 Research aims and objectives 12  
1.4 Rationale for the study 13  
   1.4.1 Importance of the research 13  
   1.4.2 Previous and current research on this subject 17  
   1.4.3 Beneficiaries of this research 19  
1.5 Research methodology 20  
   1.5.1 Literature study 20  
   1.5.2 Empirical research 21  
   1.5.3 Problem solving by using the Mitroff model 22  
1.6 Chapter layout 25

## CHAPTER 2
FINANCIAL LITERACY CHALLENGES IN SOUTH AFRICA

2.1 Introduction 29  
2.2 Political ideologies and their impact on the country’s human capital 30  
   2.2.1 Democracy 31  
   2.2.2 Democratic capitalism 32  
   2.2.3 Democratic socialism 33  
   2.2.4 The democratic South African economy at the start of the 21st century 33
2.3 The requirements for financial literacy in the implementation of the government’s programmes of action

2.4 The impact of the South African education system on financial literacy
   2.4.1 Education in the pre-1994 dispensation
   2.4.2 Education in the post-1994 dispensation
      2.4.2.1 Financial literacy at school level
      2.4.2.2 Financial literacy at tertiary level
      2.4.2.3 Adult education in financial literacy

2.5 Other financial literacy programme initiatives in South Africa

2.6 Financial literacy challenges in South Africa
   2.6.1 Cultural diversity
   2.6.2 Loss of human capital
   2.6.3 Transformation and empowerment
   2.6.4 Globalisation
   2.6.5 Interaction and engagement with the financial sector

2.7 Necessary financial literacy conditions for sustainable development in South Africa
   2.7.1 Unlocking the potential
   2.7.2 Transparency and accountability
   2.7.3 Lifelong learning
   2.7.4 South Africa and the African Renaissance

2.8 A new class of decision makers
   2.8.1 Financial experts versus financially literate decision makers
   2.8.2 The development of all three economies of South Africa

2.9 Summary
CHAPTER 3
A SYSTEMS VIEW OF THE FINANCIAL LITERACY INTERFACE

3.1 Introduction 74
3.2 A systems view of the organisation 75
3.3 The two systems: matter and mind 80
  3.3.1 The decision-oriented financial information system (matter) 81
  3.3.2 The human behavioural system (mind) 84
    3.3.2.1 Communication and cybernetics 85
    3.3.2.2 Behavioural studies 86
    3.3.2.3 Cognitive styles and approaches 87
3.4 Financial literacy as the interface between two systems 90
  3.4.1 The financial literacy concept 92
  3.4.2 The financial literacy interface 95
3.5 The financial literacy learning process 97
  3.5.1 Learning the financial language 97
  3.5.2 Feedback as a learning tool 100
3.6 Intellectual financial capital 101
3.7 Financial literacy in a culturally diverse society 103
3.8 Summary 105

CHAPTER 4
INFORMATION: THE CREATIVE ENERGY OF THE ORGANISATION

4.1 Introduction 107
4.2 Information dynamics 108
  4.2.1 The nature of financial information 109
  4.2.2 The knowledge-driven organisation 110
  4.2.3 Communication in an information-rich organisation 114
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.4 Financial information that makes decision making possible</td>
<td>116</td>
</tr>
<tr>
<td>4.3 The conceptual framework underlying financial information</td>
<td>120</td>
</tr>
<tr>
<td>4.3.1 The objectives of financial information</td>
<td>124</td>
</tr>
<tr>
<td>4.3.2 The qualitative characteristics of financial information</td>
<td>126</td>
</tr>
<tr>
<td>4.3.2.1 Understandability</td>
<td>129</td>
</tr>
<tr>
<td>4.3.2.2 Relevance</td>
<td>131</td>
</tr>
<tr>
<td>4.3.2.3 Reliability</td>
<td>134</td>
</tr>
<tr>
<td>4.3.2.4 Comparability</td>
<td>136</td>
</tr>
<tr>
<td>4.3.3 The elements of financial reporting</td>
<td>137</td>
</tr>
<tr>
<td>4.3.4 The recognition and measurement concepts of financial information</td>
<td>139</td>
</tr>
<tr>
<td>4.4 The financial information value chain</td>
<td>140</td>
</tr>
<tr>
<td>4.5 The accountants’ role in facilitating decision making</td>
<td>143</td>
</tr>
<tr>
<td>4.6 Summary</td>
<td>145</td>
</tr>
</tbody>
</table>

**CHAPTER 5**

**SOURCES OF FINANCIAL INFORMATION**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Introduction</td>
<td>147</td>
</tr>
<tr>
<td>5.2 The crisis of meaning</td>
<td>148</td>
</tr>
<tr>
<td>5.2.1 Information inductance</td>
<td>149</td>
</tr>
<tr>
<td>5.2.2 Information asymmetry</td>
<td>151</td>
</tr>
<tr>
<td>5.3 Credible financial information providers</td>
<td>152</td>
</tr>
<tr>
<td>5.3.1 The media</td>
<td>153</td>
</tr>
<tr>
<td>5.3.2 Financial market information</td>
<td>154</td>
</tr>
<tr>
<td>5.3.3 Firm-oriented information releases</td>
<td>154</td>
</tr>
<tr>
<td>5.3.4 Accounting information through financial statements</td>
<td>157</td>
</tr>
<tr>
<td>5.4 The financial reporting paradigm</td>
<td>159</td>
</tr>
<tr>
<td>5.4.1 The drive behind accounting standards</td>
<td>161</td>
</tr>
<tr>
<td>5.4.2 Accounting standard-setting</td>
<td>163</td>
</tr>
</tbody>
</table>
5.5 The financial reporting controversy 164
  5.5.1 Inherent constraints in providing financial information 165
  5.5.2 Trustworthy financial figures 166
5.6 Financial reporting’s growing complexity 167
5.7 The effective communication of financial information 169
  5.7.1 Decoding of financial information 169
  5.7.2 Information overload 170
5.8 The financial information expectations gap 172
  5.8.1 Forward-looking financial information 173
  5.8.2 The predictive ability of financial information 174
5.9 The future of the financial information age 176
5.10 Summary 179

CHAPTER 6
THE LEARNING FOR CERTAINTY VERSUS LEARNING FOR
UNCERTAINTY PARADOX AS THE BASIS FOR FINANCIAL LITERACY

6.1 Introduction 181
6.2 Defining key concepts in the financial literacy model 182
  6.2.1 Financial knowledge 183
  6.2.2 Financial intelligence 184
  6.2.3 Financial consciousness 188
  6.2.4 Other numeral literacy concepts 189
6.3 Integrating financial knowledge, financial intelligence and
  financial consciousness towards financial literacy 191
6.4 The Bloom and Beard heritage: a financial perspective 193
  6.4.1 The cognitive domain 195
  6.4.2 The affective domain 197
  6.4.3 The psychomotor domain 198
6.5 Financial literacy according to Bloom’s six levels of thinking 199
CHAPTER 7
THE EVOLVING FINANCIAL CONSCIOUSNESS OF DECISION MAKERS

7.1 Introduction 211
7.2 The value school or user-need school and other decision-usefulness approaches 212
7.3 Behavioural research: decision making at the individual level 215
  7.3.1 The lens model 217
  7.3.2 Probabilistic judgement 220
  7.3.3 Predecisional behaviour 221
  7.3.4 The cognitive style approach 222
7.4 Decision-support systems 224
7.5 The different users of financial information 226
  7.5.1 External users 228
    7.5.1.1 Investors 230
    7.5.1.2 Creditors and suppliers 232
    7.5.1.3 Customers 233
    7.5.1.4 Financial analysts 234
    7.5.1.5 Employees 236
    7.5.1.6 Regulators 237
9.3 Implementing the empirical research methods 280
  9.3.1 Conducting the interviews 280
  9.3.2 Development of the questionnaire 283
  9.3.3 Pretesting 284
9.4 Sample choice and response rate 285
9.5 Data preparation 287
9.6 Statistical presentation of the data 288
9.7 Restrictions encountered in conducting the survey 289
9.8 Summary 290

CHAPTER 10
PRESENTATION AND ANALYSIS OF THE RESEARCH FINDINGS

10.1 Introduction 291
10.2 The research findings 292
  10.2.1 Sociodemographic information 292
  10.2.2 Information on the financial literacy concept 293
  10.2.3 Information on financial literacy for decision making in an organisation 296
  10.2.4 Information on the attributes of financial information for decision making 299
10.3 Descriptive and inferential statistics 302
  10.3.1 Factor analysis and clustering 302
  10.3.2 Chi-square statistics 306
10.4 Summary 309
# CHAPTER 11
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1</td>
<td>Introduction</td>
<td>314</td>
</tr>
<tr>
<td>11.2</td>
<td>Overview of the literature and empirical study</td>
<td>316</td>
</tr>
<tr>
<td>11.2.1</td>
<td>Literature review</td>
<td>316</td>
</tr>
<tr>
<td>11.2.2</td>
<td>Survey research</td>
<td>318</td>
</tr>
<tr>
<td>11.3</td>
<td>The adjusted financial literacy model</td>
<td>321</td>
</tr>
<tr>
<td>11.4</td>
<td>Conclusions</td>
<td>330</td>
</tr>
<tr>
<td>11.4.1</td>
<td>General</td>
<td>330</td>
</tr>
<tr>
<td>11.4.2</td>
<td>Empirical study</td>
<td>331</td>
</tr>
<tr>
<td>11.5</td>
<td>Recommendations</td>
<td>333</td>
</tr>
<tr>
<td>11.6</td>
<td>Contributions to research</td>
<td>334</td>
</tr>
<tr>
<td>11.7</td>
<td>Suggestions for further research</td>
<td>336</td>
</tr>
</tbody>
</table>

# BIBLIOGRAPHY

A. Books 337  
B. Periodical articles 347  
C. Dissertations, theses and technical reports 361  

# APPENDICES

1. Appendix A: Letter to interviewees 370  
2. Appendix B: Interview schedule 373  
3. Appendix C: Covering letter and questionnaire 374  
4. Appendix D: Descriptive statistics 380  

xiii
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>The performance system</td>
<td>10</td>
</tr>
<tr>
<td>Figure 1.2</td>
<td>Financial literacy: towards a coordinating interface</td>
<td>11</td>
</tr>
<tr>
<td>Figure 1.3</td>
<td>Mitroff’s systems view of problem solving</td>
<td>23</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>RDP objectives and the priorities of the five Cabinet clusters</td>
<td>37</td>
</tr>
<tr>
<td>Figure 3.1</td>
<td>Model of a financial information system</td>
<td>82</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>Communication in an open system</td>
<td>85</td>
</tr>
<tr>
<td>Figure 3.3</td>
<td>Towards a financial literacy interface</td>
<td>91</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Knowledge management for routine and structured information processing</td>
<td>111</td>
</tr>
<tr>
<td>Figure 4.2</td>
<td>Knowledge management for nonroutine and unstructured sense making</td>
<td>112</td>
</tr>
<tr>
<td>Figure 4.3</td>
<td>Steps in decision making</td>
<td>119</td>
</tr>
<tr>
<td>Figure 4.4</td>
<td>Components of a conceptual framework (based on the IASC/IASB framework)</td>
<td>123</td>
</tr>
<tr>
<td>Figure 4.5</td>
<td>A hierarchy of information qualities</td>
<td>128</td>
</tr>
<tr>
<td>Figure 4.6</td>
<td>Elements of the MIVC</td>
<td>141</td>
</tr>
<tr>
<td>Figure 6.1</td>
<td>The financial literacy intersection</td>
<td>190</td>
</tr>
<tr>
<td>Figure 6.2</td>
<td>The six levels in the cognitive domain</td>
<td>199</td>
</tr>
<tr>
<td>Figure 6.3</td>
<td>Basic financial literacy levels of learning</td>
<td>205</td>
</tr>
<tr>
<td>Figure 7.1</td>
<td>An information-processing model</td>
<td>216</td>
</tr>
<tr>
<td>Figure 7.2</td>
<td>The simple lens model</td>
<td>219</td>
</tr>
<tr>
<td>Figure 8.1</td>
<td>The knowledge creation process</td>
<td>258</td>
</tr>
<tr>
<td>Figure 8.2</td>
<td>The financial literacy interface model</td>
<td>270</td>
</tr>
<tr>
<td>Figure 10.1</td>
<td>Mean score for questions 18, 19, 20 and 21 (FB1) in relation to the economic sector</td>
<td>303</td>
</tr>
</tbody>
</table>
Figure 10.2 Mean score for questions 20, 22, 26 and 28 (CB2) in relation to the economic sector
Figure 10.3 Mean score for questions 30, 31, 38 and 40 (CC2) in relation to the economic sector
Figure 10.4 Question 25 by decision-making category
Figure 10.5 Question 27 by decision-making category
Figure 10.6 Question 39 by decision-making category
Figure 11.1 The financial literacy interface model
Figure 11.2 Conceptualising the interface between mind and matter

TABLES
Table 2.1 Summary of financial literacy programmes in South Africa
Table 5.1 Organisational-oriented information releases
Table 5.2 Key terms used by standard-setters to characterise users of financial information
Table 8.1 Topics and target consumer groups for financial literacy education
Table 8.2 Subject areas and decision-making levels in the organisation
Table 9.1 List of interviewees
Table 9.2 Summary of respondents of the hard copy questionnaires distributed
Table 10.1 Statement 25
Table 10.2 Statement 27
Table 10.3 Statement 39