UNIVERSITY OF SOUTHAMPTON
FACULTY OF LAW, ARTS AND SOCIAL SCIENCES
SCHOOL OF MANAGEMENT

Financial Disclosure Practices: Theoretical Foundation, and an Empirical Investigation on Jordanian Printed and Internet Formats

by

Khaldoon Al-Htaybat

BSc in Accounting (Mu'tah University, Jordan, 1999)
MSc in Accounting & Finance (Birmingham University, UK, 2002)

Thesis Submitted for the degree of
Doctor of Philosophy

2005

UNIVERSITY OF SOUTHAMPTON
FACULTY OF LAW, ARTS AND SOCIAL SCIENCES
SCHOOL OF MANAGEMENT

ABSTRACT

Doctor of Philosophy

Financial Disclosure Practices: Theoretical Foundation, and an Empirical Investigation on Jordanian Printed and Internet Formats

By Khaldoon Al-Htaybat

This thesis proposes a theoretical framework of financial disclosure practice as a step to fill the gap in the theoretical background of financial disclosure research. Codification theory, Dye's (1986) theory and disclosure transformation theory are proposed in this framework as explanatory theories of the mandatory and voluntary financial disclosure developments in practice. To examine aspects of this proposed framework, this thesis carried out an empirical investigation on the printed and Internet financial disclosure practices in Jordan. This empirical study measures the extent of financial disclosure practices by Jordanian companies before and after the extension of disclosure requirements in 1998, and after the existence of new technology developments in 2000. The study compares the level of printed mandatory, voluntary and overall financial disclosure of 51 Jordanian manufacturing companies listed on Amman Stock Exchange (ASE) in 1997 and 2002, and investigates the relationship between these levels of printed financial disclosure and company characteristics (size, age, profitability, industry type, ownership structure, and auditor size). Also this study examines the level of Internet financial disclosure by Jordanian companies listed on ASE in 2004, and its relationship with printed financial disclosure practices as well as company size.

It was found that the overall level of financial disclosure by Jordanian manufacturing companies improved after the introduction of mandatory disclosure requirements in 1998. However, these companies did not fully comply with mandatory disclosure requirements in 1997 and 2002. On the other hand, they disclosed a considerable level of voluntary information in both years, and the mean level of voluntary disclosure increased in 2002. This is considered empirical evidence supporting Dye's (1986) theory. Also the results reveal a strong association between voluntary disclosure practices in 1997 and new mandatory disclosure requirements in 1998, which provides evidence for codification theory. Furthermore, some improvement in the level of compliance with the generic requirements of International Accounting Standards' (IAS) financial statements was observed between 1997 and 2002 as a result of an increase in company familiarity with these requirements, although this study provides evidence of IAS-lite in 1997 and 2002. None of the company characteristics were positively associated with mandatory disclosure in 1997, whereas after the developments in 1998 company size, company age and auditor size were positively associated. This result provides strong evidence for Environmental-Cause Theory. Also voluntary disclosure in 1997 was positively associated with company size, profitability, and the natural resources and food & clothing industries. In 2002, foreign ownership appears to have affected the level of voluntary disclosure. Moreover, the current findings provide evidence that Jordanian companies have yet to exploit the full potential of Internet financial disclosure. A positive relationship between printed and Internet financial disclosure was found, which provides evidence for disclosure transformation theory. Finally, company size had a positive impact on the level of Internet financial disclosure.

TABLE OF CONTENTS

Abstract.....i
Table of Contents.....ii
List of Tables.....vi
List of Exhibits.....viii
List of Abbreviations.....ix
Declaration of Authorship.....xi
Acknowledgements.....xii

CHAPTER ONE: INTRODUCTION

1.1 Background and Justification of the Current Research 1
1.2 The Research Objectives and Questions.....5
1.3 Research Philosophy and Methodology 7
1.4 Study Structure 8
1.5 Summary.....10

CHAPTER TWO: PRINTED FINANCIAL DISCLOSURE

2.1 Introduction.....11
2.2 The Concept of Financial Disclosure.....11
2.3 Literature Review Focused on Printed Financial Disclosure.....14
2.3.1 Main Angles of Prior Financial Disclosure Practices Studies 17
2.3.2 Main Financial Disclosure Theories Employed in the Prior Studies.....20
2.3.3 Company Characteristics in the Prior Empirical Studies.....22
2.3.4 Inconsistent Results in the Prior Empirical Studies.....29
2.4 Summary.....31

CHAPTER THREE: INTERNET FINANCIAL DISCLOSURE

3.1 Introduction.....33
3.2 Internet Financial Disclosure:.....33
3.2.1 The Basic Dimensions of the Internet Financial Disclosure.....38
3.3 Prior Studies that Focused on Internet Financial Disclosure.....41
3.4 Summary and Evaluation of the Above Studies 55

CHAPTER FOUR: A THEORTICAL FRAMEWORKOF FINANCIAL DISCLOSURE

4.1 Introduction.....58
4.2 A Theoretical Framework of Financial Disclosure.....59
4.2.1 Free Markets Theory.....61
4.2.2 Market Failure.....63
4.2.3 Environmental-Cause Theory (ECT).....65
4.2.4 Regulatory Theory 69
4.2.4.1 Public Interest Theory (PIT).....71
4.2.4.2 Interest Group Theory (IGT) 71
4.2.5 Manager Incentives Theories.....74
4.2.5.1 Agency Theory 75

4.2.5.2 Political Cost Theory 77
4.2.5.3 Capital Needs Theory 78
4.2.5.4 Signalling Theory 79
4.2.5.5 Cost-Benefit Analysis 80
4.2.5 Codification Theory 82
4.2.6 Dye's Theory (1986) 83
4.2.7 Disclosure Transfomation Theory 83
4.2.8 Variation in the Financial Disclosure Practices among Companies 86
4.3 Summary 88

CHAPTER FIVE: JORDAN'S FINANCIAL REPORTING FRAMEWORK

5.1 Introduction 90
5.2 Jordanian Economic Overview 90
5.2.1 First Stage under King Hussein Rule 91
5.2.2 Second Stage under King Abdullah II Rule 94
5.2.2.1 Privatisation 94
5.2.2.2 International Incorporation 96
5.3 The Framework of Jordanian Financial Reporting 97
5.3.1 The Framework of Jordanian Financial Reporting before 1998 98
5.3.2 The Framework of Jordanian Financial Reporting After 1998 101
5.3.2.1 Jordanian Capital Market (JCM) 101
5.3.2.2 The Companies Act 1997 and its Amendments in 2002 105
5.4 Auditing in Jordan 106
5.5 Jordan in the Age of Information Technology 107
5.5 Summary 109

CHAPTER SIX: RESEARCH PHILOSOPHY AND METHODOLOGY

6.1 Introduction 111
6.2 Research Philosophy 111
6.3 Research Methodology 115
6.3.1 Research Objectives, Questions, and Research Hypotheses 117
6.4 The Research Sample 121
6.4.1 Sampled Companies of Printed Annual Reports 122
6.4.2 Sampled Companies of Internet Reporting 124
6.5 Measuring the Level of Financial Disclosure in Companies' Annual Reports 126
6.5.1 Disclosure Indices as Dependent Variables 130
6.5.2 Developing Current Disclosure Indices for Printed Annual Reports: 132
6.5.2.1 Printed Mandatory Disclosure Indices: 132
6.5.2.2 Voluntary Disclosure Indices 136
6.5.3 Validity and Reliability of Disclosure Indices 137
6.5.4 Internet Financial Disclosure 141
6.5.4.1 Developing the Disclosure Index for the Jordanian Companies' Websites 142
6.6 The Independent Variables 143
6.6.1 Company Characteristics 144
6.6.1.1 Company Size 144
6.6.1.2 Ownership Structure 145
6.6.1.3 Industry Type 146
6.6.1.4 Company Performance 147

6.6.1.5 Company Age 148
6.6.1.6 Auditor Size 148
6.7 Statistical Analysis and Tests 149
6.7.1 Univariate and Bivariate Analyses 150
6.7.2 Multivariate Analysis 150
6.8 Summary 151

CHAPTER SEVEN: THE JORDANIAN COMPANIES' FINANCIAL DISCLOSURE PRACTICES: DESCRIPTIVE ANALYSES

7.1 Introduction 152
7.2 Measuring Companies' Compliance with Mandatory Disclosure Requirements in 1997 and 2002 152
7.2.1 A Closer Analysis of Printed Mandatory Disclosure Index Applicable Items 160
7.3 Measuring the level of Companies' Voluntary Disclosure in 1997 and 2002 169
7.3.1 A Closer Analysis of Voluntary Disclosure Index Applicable Items 175
7.4 Measuring the Level of Overall Disclosure in 1997 and 2002 180
7.5 Bivariate Analysis of Mandatory and Voluntary Financial Disclosure 185
7.6 The Jordanian Companies on the Internet 188
7.7 Measuring Financial Disclosure on the Jordanian Companies' Websites 188
7.8 Interaction between Printed and Internet Financial Disclosure 197
7.9 Summary 201

CHAPTER EIGHT: VARIATIONS IN FINANCIAL DISCLOSURE PRACTICES: BIVARIATE, MULTIVARIATE ANALYSES AND RESULTS DESCRIPTION

8.1 Introduction 203
8.2 Dependent and Independent Variables in the Printed Financial Disclosure 204
8.3 The Bivariate Analyses of the Printed Financial Disclosure Variation 205
8.3.1 Continuous Variables 205
8.3.1.1 Company Size 205
8.3.1.2 Company Age 207
8.3.1.3 Profitability 207
8.3.2 Categorical Variables 209
8.3.2.1. Ownership Structure: 209
8.3.2.3. Industry Type 211
8.3.2.4 Auditor Size 213
8.4 The Multivariate Analysis of the Disclosure Variation in the Printed Companies' Annual Reports 215
8.4.1 Regression Analysis 215
8.4.1.1 Building OLS Regression Models 216
8.4.1.2 Fulfilling Multiple Linear Regression Assumptions 219
8.4.2 Transformation in Regression Analysis 220
8.4.2.1 The Rank Transformation Approach 220
8.4.3 Regression Analysis of the Printed Financial Disclosure 222
8.4.3.1 Ranked and Normal Score OLS Regression Analyses 222
8.4.4 Results Discussion of Mandatory Regression Analyses 227
8.4.5 Results Discussion of Voluntary Regression Analyses 231
8.4.6 Results Discussion of Overall Regression Analyses 234
8.5 Companies' Attitude towards Voluntary Financial Disclosure 237
8.6 Company Size and Internet Financial Disclosure 239

8.7 Summary and Discussion 240

CHAPTER NINE: SUMMARY, CONCLUSION, CONTRIBUTION, LIMITATIONS AND RECOMMENDATIONS

9.1 Introduction.....241
9.2 Overview of the Current Research.....241
9.3 Summary of the Current Research Objectives and Methodology 244
9.4 Research Methodology 244
9.5 Summary of the Current Research Findings and its Implications 247
9.5.1 Summary of the Main Findings of Printed Financial Disclosure.....250
9.5.2 Summary of the Main Findings of the Internet Financial Disclosure..... .257
9.6 The Substantive Contributions of this Thesis.....256
9.6.1 Theoretical Contributions 256
9.6.2 Methodological Contributions 257
9.6.3 Empirical Contributions.....258
9.7 Limitations and Future Research 259

APPENDICES

Appendix 1: Prior Studies Focused on Printed Financial Disclosure.....263
A1.1 Empirical Studies in Developed Countries 263
A1.1.1 Overall Disclosure Studies in Developed Countries.....263
A1.1.2 Voluntary Disclosure Studies in Developed Countries 266
A1.1.3 Mandatory Disclosure Studies in Developed Countries 269
A1.2 Empirical Studies in Developing Countries.....271
A1.2.1 Overall Disclosure Studies in Developing Countries 271
A1.2.2 Voluntary Disclosure Studies in Developing Countries 275
A1.2.3 Mandatory Disclosure Studies in Developing Countries.....279
Appendix 2: The JSC's Disclosure Requirements and some Quantitative Information about ASE before and after the New Change in 1998.....283
A2.1. Accounting and Auditing Standards and Conditions No. (1) for the Year (1998) Article No (6) of Disclosure of Periodical Financial Statements.....283
A2.2 Quantitative information about the ASE.....286
A2.2.1 Key Statistics of the ASE from 1997 to 2002.....286
A2.2.2 Figures on the completed privatisation schemes in Jordan.....287
A2.2.2 The entire portfolio of the Jordan Investment Corporation (JIC) on offer for sale.....288
Appendix 3: The current sampled companies classified according to their major industries sectors as follow:.....289
Appendix 4: Sample of the Online Jordanian Companies in 2004.....290
Appendix 5: The Printed Mandatory disclosure checklist for 1997.....291
Appendix 6: The Printed Mandatory disclosure checklist for 2002 292
Appendix 7: The Printed Voluntary disclosure checklist for 1997 295
Appendix 8: The Printed Voluntary disclosure checklist for 2002 297
Appendix 9: Internet Voluntary Disclosure 2004.....298
Appendix 10: The dependent variables in both years 1997 & 2002.....299
References.....300

LIST OF TABLES

Table 1: Prior Empirical Studies of Printed Financial Disclosure.....16
Table 2: Prior Empirical Studies of Internet Financial Disclosure.....43
Table 3: The Jordanian GDP from 1999 until September 2004 97
Table 4: Summary of the Sampled Manufacturing Companies' Annual Reports for 1997 & 2002 123
Table 5: Summary of Sampled Companies According to their Industry Sectors.....124
Table 6: Summary of Mandatory and Voluntary Items in 1997 & 2002.....137
Table 7: ADMI for each Company in 1997 & 2002.....153
Table 8: Descriptive Statistics of ADMI in 1997 &2002 154
Table 9: MIR for each Company in year 1997 & 2002.....155
Table 10: Descriptive Statistics of MIR in year 1997 & 2002 155
Table 11: Wilcoxon test of companies' compliance with IASs and overall mandatory requirements over the period 1997-2002 157
Table 12: Frequency Distribution of MDI among Industry Sectors in 1997 & 2002....159
Table 13: The level of disclosure for each Applicable Mandatory Items in 1997.....161
Table 14: The level of disclosure for each Applicable Mandatory Items in 2002.....162
Table 15: ADVI for each Company in 1997 &2002 170
Table 16: Descriptive Statistics of ADVI in 1997 & 2002.....170
Table 17: VIR for each Company in year 1997 & 2002.....171
Table 18: Descriptive Statistic of VIR for year 1997 & 2002 171
Table 19: Wilcoxon test of the changes in the level of voluntary disclosure over the period 1997-2002 172
Table 20: Frequency Distributions of VDI among Industry Sectors in 1997 & 2002....174
Table 21: The Level of Disclosure for each Applicable Voluntary Item in 1997.....175
Table 22: The Level of Disclosure for each Applicable Voluntary Item in 1997.....179
Table 23: ODI for each Company in 1997 & 2002 181
Table 24: Descriptive Analyses of the ODI in 1997 & 2002.....181
Table 25: Wilcoxon test of the overall financial disclosure practices over the period 1997-2002 182
Table 26: Frequency Distributions of ODI among Industry Sectors in 1997 & 2002....183
Table 27: The Correlation between the Values of Disclosure Indices in 1997 & 2002 .185
Table 28: Summary of the Current Survey for Listed Jordanian Companies Websites in 2004 188
Table 29: AIDI and IDI for each Company in the Sample.....190
Table 30: Descriptive Statistics of the AIDI and IDI for each Sector 190
Table 31: Frequency Distributions of the IDI among Industry Sectors.....191
Table 32: Descriptive Statistics of the Internet Individual Items.....193
Table 33: IDI for each Manufacturing Company in 2004 199
Table 34: Descriptive Statistics of IDI 199
Table 35: Correlation between MDI, VDI, ODI in 2002 and IDI in 2004 200
Table 36: The Independent Variables for both years 1997 & 2002.....204
Table 37: Kendall's tau-b Correlation between Size Proxy's Variables and ODI, MDI, and VDI in 1997 206
Table 38: Kendall's tau-b Correlation between Size Proxy's Variables and ODI, MDI, and VDI in 2002 206
Table 39: Kendall's tau-b Correlation between Age Proxy's Variable and ODI, MDI, and VDI in 1997 & 2002 207
Table 40: Kendall's tau-b Correlation between Profitability Proxy's Variables and ODI, MDI, and VDI in 1997.....208

Table 41: Kendall's tau-b Correlation between Profitability Proxy's Variables and ODI, MDI, and VDI in 2002 208
Table 42: Mann-Whitney test for GO and MDI, VDI, and ODI in 1997 & 2002 210
Table 43: Mann-Whitney test for FO and MDI, VDI, & ODI in 1997 & 2002 211
Table 44: Kruskal-Wallis test for Industry types and MDI, VDI, & ODI in 1997 212
Table 45: Kruskal-Wallis test for Industry Types and MDI, VDI, & ODI in 2002 213
Table 46: Mann-Whitney for Auditor's Size and MDI, VDI, & ODI in 1997 & 2002 ..214
Table 47: Full Rank Regression Model of Mandatory Disclosure in 1997 223
Table 48: Full Rank Regression Model of Voluntary Disclosure in 1997 223
Table 49: Full Rank Regression Model of Overall Disclosure in 1997 223
Table 50: Full Rank Regression Model of Mandatory Disclosure in 2002 224
Table 51: Full Rank Regression Model of Voluntary Disclosure in 2002 224
Table 52: Full Rank Regression Model of Overall Disclosure in 2002 224
Table 53: Normal Score Regression Model of Mandatory Disclosure in 1997 225
Table 54: Normal Score Regression Model of Voluntary Disclosure in 1997 225
Table 55: Normal Score Regression Model of Overall Disclosure in 1997 225
Table 56: Normal Score Regression Model of Mandatory Disclosure in 2002 226
Table 57: Normal Score Regression Model of Voluntary Disclosure in 2002 226
Table 58: Normal Score Regression Model of Overall Disclosure in 2002 226
Table 59: Rank Regression Model of VDI in 1997 and MDI in 2002 231
Table 60: Rank Regression Model of MDI, VDI in 1997 and ODI in 2002 236
Table 61: Rank Regression Model of VDI vs. MDI in 1997 237
Table 62: Rank Regression Model of VDI vs. MDI in 2002 237
Table 63: Rank Regression of IDI in 2004 and VDI in 2002 238
Table 64: Rank Regression of IDI in 2004 and MDI in 2002 238
Table 65: Rank Regression of IDI in 2004 and ODI in 2002 239
Table 66: Rank Regression of Total Assets and IDI in 2004 240

LIST OF EXHIBITS

Exhibit 1: General Structure of the Current Thesis Chapters 8

Exhibit 2: Two Basic Dimensions of the Internet Financial Reporting.....38

Exhibit 3: A List of HTML and PDF Format's Advantages and Disadvantages.....40

Exhibit 4: A Theoretical Frameworkof Financial Disclosure.....60

Exhibit 5: Factors Influence on Accounting's Mandatory and Voluntary Practices.....67

Exhibit 6: Four Paradigms for the Analysis of Social Theory.....113

Exhibit 7: The Path of Disclosure Index Research 128

Exhibit 8: The Scoring Route of the Mandatory and Voluntary Items.....140

Exhibit 9: Histograms Distributions of MDI in 1997 & 2002.....158

Exhibit 10: The Developments in the Level of Compliance with IASs in Jordan 168

Exhibit 11: The Histogram Distribution of Total VDI in 1997 & 2002 173

Exhibit 12: The Histograms Distributions of ODI in 1997 & 2002 183

LIST OF ABBREVIATIONS

ADI	Actual Disclosed Items
ADMI	Actual Disclosed Mandatory Items
ADVI	Actual Disclosed Voluntary Items
AFM	Amman Financial Market
AIMR	Association for Investment Management and Research
AIVI	Applicable Internet Voluntary Items
AmSE	Amsterdam Stock Exchange
AS	Auditor Size
ASB	Accounting Standards Board
ASC	Accounting Standards Committee
ASE	Amman Stock Exchange
BMEI	Building Materials and Equipments
CPA	Certified Public Accountant
CSRC	China Securities Regulation Commission
ECT	Environmental-Cause Theory
EPU	Executive Privatization Unit
EU	European Union
EUFD	Fourth Directive of the European Union
EU-JAA	Europe Union -Jordan Association Agreement
FAF	Financial Analysts Federation
FASB	Financial Accounting Standards Board
FCI	Food and Clothing Industry
FMT	Free Markets Theory
FO	Foreign Ownership
FTA	Free Trade Agreement
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GO	Government Ownership
HK	Hong Kong
HKSE	Hong Kong Stock Exchange
HTML	Hypertext Markup Language
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IDI	Internet Disclosure Index
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IGT	Interest Group Theory
IH	International Harmonisation
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commission
IT	Information Technology
JAA	Jordanian Auditors Association
JACPA	Jordanian Association of Certified Public Accountants
JCM	Jordanian Capital Market
JD	Jordanian Dinar
JIC	Jordan Investment Corporation
JSC	Jordan Securities Commission
JSCG	Jordanian Shareholding Companies Guides

KLSE	Kuala Lumpur Stock Exchange
LSE	London Stock Exchange
MAVI	Maximum Applicable Voluntary Items
MIR	Mandatory Index Ratio
MMA	Maximum Mandatory Applicable Items
MNC	Multinational Companies
MoICT	Ministry of Information and Communications Technology
MSE	Madrid Stock Exchange
NP	Net Profit
NRI	Natural Resources Industry
NYSE	New York Stock Exchange
OIR	Overall Index Ratio
OLS	Ordinary Least Squares
PAT	Positive Accounting Theory
PCI	Pharmaceuticals and Cosmetics Industry
PDF	Portable Document Format
PIT	Public Interest Theory
QIZs	Qualifying Industrial Zones
ROE	Return on Total Equity
SDC	Securities Depository Centre
SSAPs	Statements of Standard Accounting Practices
SSE	Stockholm Stock Exchange
TA	Total Assets
TSE	Tokyo Stock Exchange
UK	United Kingdom
USA	United States of America
VIF	Variance Inflation Factors
VIR	Voluntary Index Ratio
VSE	Vienna Stock Exchange
WTO	World Trade Organisation
WWW	World Wide Web
XBRL	eXtensible Business Reporting Language
XML	eXtensible Markup Language

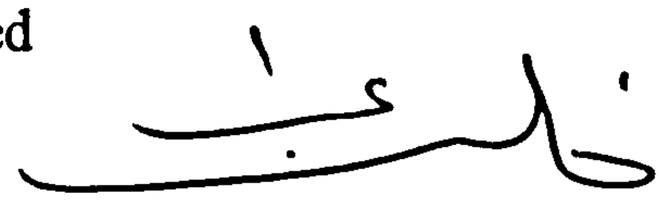
DECLARATION OF AUTHORSHIP

I, Khaldoon Al-Htaybat, declare that the thesis entitled:

Financial Disclosure Practices: Theoretical Foundation, and an Empirical Investigation on Jordanian Printed and Internet Formats

and the work presented in it are my own. I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at this University;
- This work has not previously been submitted for a degree or any other qualification at this University or any other institution.
- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- I have acknowledged all main sources of help;
- None of this work has been published before submission

Signed 

Date 13-02-2006

Acknowledgements

My sincere thanks to Almighty Allah for his blessing and guidance in this life, and completing my PhD thesis.

I would especially like to thank my parents for providing me with the love of learning and providing me with all support and opportunities to learn more over the past years of which I was able to take advantage and be qualified to do my PhD.

Furthermore, I would like to take this opportunity to thank my supervisors, Professor Napier and Dr. Casson, at University of Southampton School of Management, for their supervision and contribution to complete my PhD. I wish also to thank Al-Hussein Bin Talal University in Ma'an, Jordan, for providing for the financial support that made this research possible, and to the Jordanian Securities Commission, Amman Stock Exchange, and Companies' Controller, who offered helpful assistance by providing me with the annual reports, companies' guides, and the disclosure requirements. Many thanks also due to Sue High for her statistical support and advice.

I could not forget my sisters, brothers, and friends, who made my study at University of Southampton more bearable and rewarding by providing support, motivation, and friendship.

I especially want to express my gratitude to my wife, Larissa, for her support, encouragement and love she gave to me during my PhD.

Chapter One

Introduction

1.1 Background and Justification of the Current Research

This thesis has two main aims: first to develop a unified theoretical framework explaining the phenomenon of company financial disclosure, and second to test several aspects of this proposed theoretical framework by undertaking an empirical study of both printed and Internet financial disclosure in a developing country.

Despite the fact that there is a large amount of published and unpublished research in the area of financial reporting practices, there is not yet any generally agreed upon disclosure theory explaining the financial disclosure phenomenon as a whole. This lack of a comprehensive theory has created a gap in the theoretical background and guidance in financial reporting research. In the literature[1] of financial disclosure several financial disclosure theories exist, of which each explains different sub-points of financial disclosure and provides explanations for variation in financial disclosure among companies. These include the agency problem (Jensen & Meckling, 1976) and information asymmetry (Akerlof, 1970), the need for disclosure regulations (Posner, 1974; Cooper & Keim, 1983), the reasons behind managers' incentives for more disclosure (Watts & Zimmerman, 1978, 1986), and the objective to raise company capital as cheaply as possible (Choi, 1973). Also theoretical explanations seek to distinguish the value or quality of a company's product (Akerlof, 1970; Strong & Walker, 1987). Furthermore, prior scholars explained the variations in the financial disclosure practices among countries, by explaining the environmental factors behind financial disclosure differences (Gray, 1988; Cooke & Wallace, 1990; Nobes, 1998; Roberts et al., 1998; Radebaugh & Gray, 2002). Recently, a technological factor, the Internet, was included as a new factor influencing the form and content of financial

[1] For instance McNally et al. (1982), Chow et al. (1987), Cooke (1989, 1991, 1992), Malone et al. (1993), Wallace et al (1994), Ahmed & Nicholls (1994), Hossain et al. (1994), Raffournier (1995), Meek et al. (1995), Wallace & Nasser (1995), Al-Modahki (1995), Inchausti (1997), Al-Mulhem (1997), Suwaidan (1997), Owusu-Ansah (1998), Alrazeen (1999), Curuk (1999), Depoers (2000), Al-Hussaini (2001), Watson et al. (2002), Haniffa & Cooke (2002)

reporting, and this particular technology has been transforming the latter from the printed to the Internet financial reporting format (Xiao et al., 1996; Xiao et al., 2002).

In light of this situation it is deemed necessary in the current study to propose a theoretical framework of financial disclosure. The notion of this framework is to develop a theoretical foundation for financial disclosure, both mandatory and voluntary in both printed and Internet formats, by encompassing existing financial disclosure theories in a comprehensive scope, as a step forward to fill the gap in the theoretical background of financial disclosure research.

The proposed framework first serves to integrate theories explaining financial disclosure under the ideal conditions of the financial market in which it is assumed that accounting information is a public good, and demand and supply forces of this good are considered as an efficient tool to determine the optimal level of financial information. It then serves to integrate theories that recognise actual features and conditions of the financial market - market failure, i.e. the imperfect balance of demand and supply, and information asymmetry, i.e. the inefficient and unequal distribution of information. These provide an explanation for the existence of financial reporting regulations and managerial incentives which control and determine the maximum level of financial information. Environmental factors, meaning external, internal and technological, are regarded as driving forces to change reporting regulation as well as managerial incentives for financial disclosure *within an individual country over time* and also as root cause of existing differences among countries. Also this framework illustrates how the existing technological innovations were exploited for the provision of financial disclosure on the Internet due to managerial incentives.

Developing Dye's hypotheses (1986), this thesis introduced in the proposed framework *Codification Theory* as a further explanatory theory for the changes and developments in mandatory disclosure practices, which states that in practice the developments in mandatory disclosure may depend upon the existence of voluntary disclosure practices (Dye, 1986). Additionally Dye's theory (1986), in which he proposes a positive relationship between increasing mandatory requirements and increasing voluntary disclosure, is incorporated. Furthermore, the relationship between printed financial disclosure practices, i.e. mandatory and voluntary disclosure, and the use of the Internet for financial disclosure is exhibited by the proposed framework in the

form of *Disclosure Transformation Theory*. Finally, the framework outlines the fundamental factors used to explain the variation in the level of financial disclosure practices among companies, which are company characteristics and company familiarity.

To test these aspects of the proposed framework the second part of this study involves an empirical investigation on printed and Internet financial disclosure practices in an environment offering a comparison between pre and post change contexts. The Jordanian financial reporting environment is seen as a rich area to examine several aspects of this theoretical framework, as shall be discussed in the following.

The Jordanian financial reporting system has been confronted recently by the new changes in the Jordanian economic environment and globalisation of Jordanian capital markets in 1998. Also it is confronted by the new developments of technological innovation, and the emergence of the Jordanian network communication in the early 2000s. In the mid-1990s, the Jordanian government commenced a new orientation towards international trade and foreign investments in order to enhance the Jordanian economy through outside trade and by attracting foreign investors. Hence, the government recognised a need for change in regulation to create a more attractive investment climate. In 1998 the government adopted a new reform programme aiming to create new markets and to facilitate international trade with the USA and other countries within Europe and the Middle East.

This reform programme included restructuring and privatisation procedures, and it involved the government in transforming the Jordanian financial market into a modern capital market with a new legal framework. This included new financial disclosure requirements imposed upon companies listed on Amman Stock Exchange (ASE). For the first time, the listed Jordanian companies were required by Jordanian financial market regulations to apply International Accounting Standards (IAS)[2] in their periodic financial statements. The underlying aim of the new accounting regulation in Jordan was to create an attractive investment climate to encourage both domestic and foreign

---

[2] Following the conversion of the International Accounting Standards Committee into the International Accounting Standards Board in 2002, IASs were succeeded by International Financial Reporting Standards (IFRS). In this thesis, IAS is used throughout, and includes IFRS where appropriate.

investors. In addition, as part of the contemporary global technological developments, the Jordanian government has commenced a new process of reforming its telecommunication and postal sectors to create a clear and stable policy environment, within which initiatives and investment can proceed with confidence.

Therefore, the current study targets the Jordanian companies' financial disclosure practices before and after the new developments in 1998. In particular, this study will examine the level of financial disclosure practices in the printed annual reports of the Jordanian manufacturing companies[3] listed on ASE before and after 1998, which includes the levels of mandatory, voluntary and overall financial disclosure in 1997 and 2002. Also this study will examine the level of the Internet usage for financial disclosure by Jordanian companies listed on ASE in 2004.

Although there have been earlier published studies of financial disclosure in Jordan, no previous study has comprehensively examined printed mandatory, voluntary and overall financial disclosure in a single study, before and after the changes in financial disclosure regulations in 1998. Moreover, recently the phenomenon of Internet financial disclosure has gained considerable attention, and has become an urgent investigation in the international financial disclosure research. Although there are several empirical studies in the last few years focused on the USA and European countries[4], the number of published papers on Internet financial disclosure is very limited in the developing countries, and such research is not yet existent with respect to Jordan. Also, an investigation comprising both printed and Internet financial disclosure practices in a single study is not yet existent. Therefore, such study on the printed and Internet financial disclosure practices in a country like Jordan, not having been subject to any comprehensive empirical investigation before and as one of the developing countries with new reform programme and new technological innovation is deemed justified.

---

[3] The manufacturing companies listed on ASE represent the largest group of listed companies.
[4] For instance: (Lymer (1997); Lymer & Tallberg (1997); Ashbaugh et al. (1999); Craven & Marston (1999); Deller et al., (1999); Gowthorpe & Amat (1999); Hedlin (1999); Pirchegger & Wagenhofer (1999); Allam & Lymer (2002); Bonson & Escobar (2002); Ettredge et al. (2002); Debreceny et al. (2002); Oyelere et al. (2003), Marston & Polei (2004)).

The remainder of this chapter will highlight the research objectives and questions, and the research methodology. This chapter also defines the importance and the scope of the study, as well as summarises the chapters of this thesis.

1.2 The Research Objectives and Questions

This thesis is divided into two main parts, firstly the theoretical foundation part, and secondly an empirical investigation part. The former seeks to propose a theoretical framework of financial disclosure, which integrates the theoretical background of financial disclosure practices under ideal and actual conditions of the financial market. The latter part contains an empirical investigation to test several aspects of this proposed theoretical framework. The following will illustrate how the current empirical research objectives and questions draw from the proposed theoretical framework.

The proposed theoretical framework explains first how the form and content of financial disclosure at any time and in any place depends on many environmental factors, which are regarded as root cause of any development and change in the reporting regulation as well as in the managerial incentives for financial disclosure. In the context of this argument as discussed above, in 1998 the Jordanian financial market was transformed into a modern capital market with a new legal framework. This included new financial disclosure requirements imposed upon companies listed on ASE, followed in 2000 by a new process of reforming the Jordanian telecommunication and postal sectors. Therefore, in order to test the above theoretical arguments the first dimension of the current empirical investigation focuses on the printed financial disclosure practices by Jordanian manufacturing companies before and after the reform of the financial system in 1998[5]. This includes measuring and comparing the extent to which Jordanian companies listed on ASE complied with mandatory disclosure requirements before and after 1998; measuring and comparing the extent of voluntary financial disclosure in their annual reports before and after 1998; and measuring and comparing the level of overall financial disclosure before and after 1998. The second

[5] The years 1997 and 2002 were chosen for comparison. 1997 was the last year before the disclosure changes in 1998, while 2002 was the most recent year for which financial statements were available (see chapter six)

dimension of the empirical investigation focuses on the online financial disclosure situation of Jordanian companies listed on ASE in 2004[6].

Based on codification theory, it is argued in the theoretical framework that in practice mandatory disclosure requirements and standards do not develop due to exogenous reasons. The existence of these requirements depends upon the existence of companies' voluntary disclosure practices. The Jordanian financial reporting environment is seen as a rich area to examine this aspect of the proposed theoretical framework. This raises the research question of whether the new mandatory disclosure requirements by the JSC in 1998 were associated with voluntary financial disclosure practice in 1997.

Following Dye's (1986) hypothesis, it is assumed that increasing mandatory disclosure requirements will increase the level of voluntary disclosure. The Jordanian financial reporting environment is seen as an appropriate atmosphere to examine the relationship between mandatory and voluntary financial disclosure before and after the developments of mandatory disclosure requirements in 1998. The research question of whether there is any positive relationship between the level of mandatory and voluntary financial disclosure in the Jordanian manufacturing companies' annual reports after the reform of the financial system in 1998, is raised.

Also, the proposed theoretical framework, based on the literature, argued that company characteristics could be used in an attempt to explain the variation in the level of financial disclosure across samples of companies. This also raises the following question: are the levels of mandatory, voluntary and the overall financial disclosure in the Jordanian manufacturing companies' annual reports associated with company characteristics before and after 1998?

Furthermore, the proposed theoretical framework introduces the disclosure transformation theory to explain a positive association between higher printed financial disclosure, both mandatory and voluntary, and engaging in disclosure on the Internet. This positive relationship explains the keen attitude of managers, triggered by

---

[6] Since the new process of reforming the Jordanian telecommunication and postal sectors commenced in 2000 it was decided to give 4 years to the Jordanian companies to follow and adopt these technological innovations.

incentives, towards financial disclosure. As the current study is going to examine the printed and the Internet financial disclosure the following research question arises: is there any positive relationship between Jordanian manufacturing companies' printed levels of financial disclosure in 2002 and Internet financial disclosure in 2004?

Finally, the proposed theoretical framework, based on the literature, argued that company size could also be used in an attempt to explain the variation in the level of Internet financial disclosure across samples of companies. This raises the following question here: is the level of Internet financial disclosure associated with company size in 2004?

1.3 Research Philosophy and Methodology

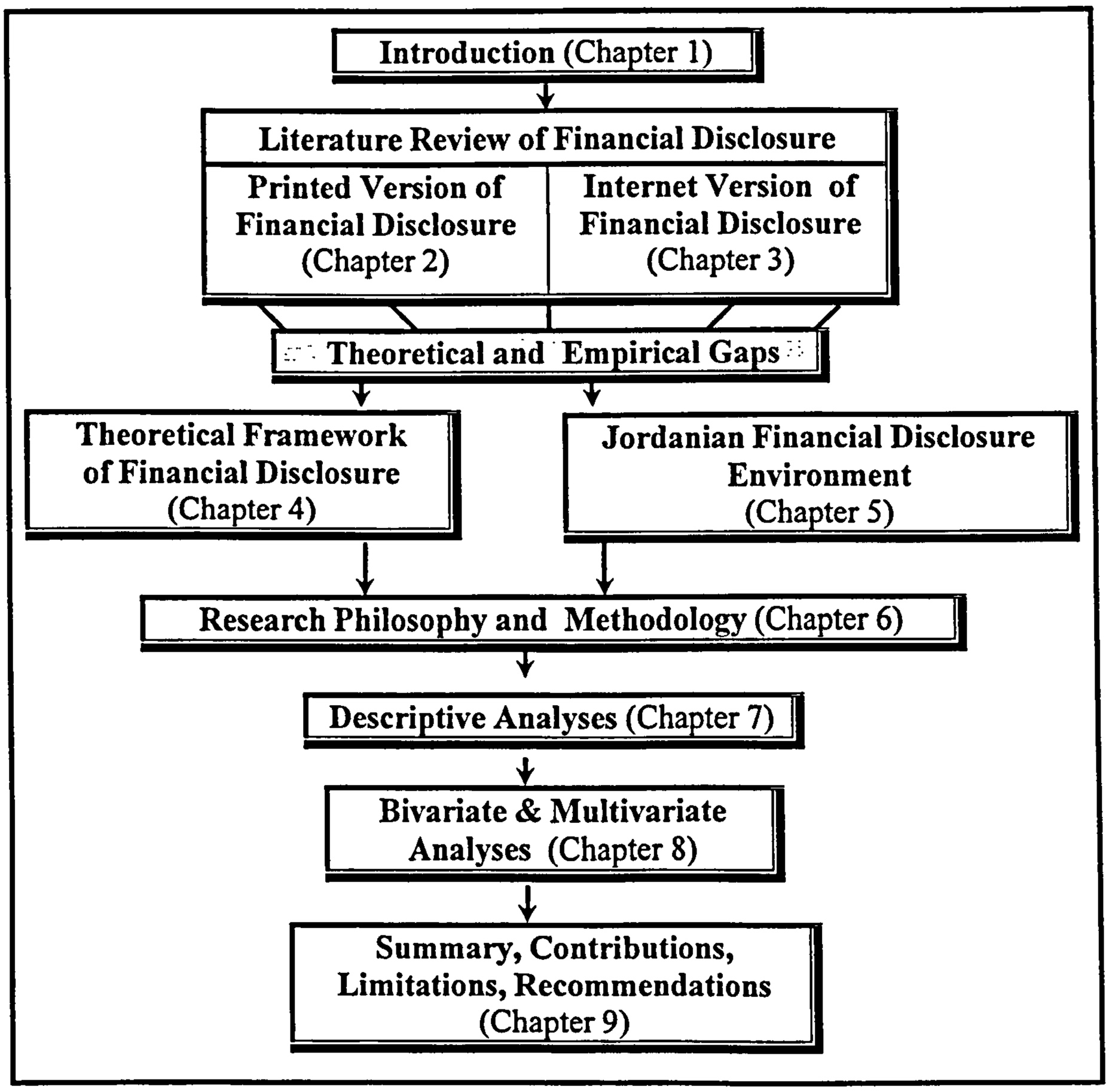
The current research is undertaken within the functionalist research paradigm. The notion of such research is to investigate the status quo and establish the factual existence of structures. Financial disclosure practices in both printed and Internet financial disclosure formats will be measured, and hence the current status quo of such disclosure in Jordan will be defined and analysed. Within the same notion, this study seeks to examine the causal relationship between independent variables and dependent variables. The former are company characteristics used as explanatory variables, and the latter are the levels of printed mandatory, voluntary and overall financial disclosure. Furthermore, the interactive relationship between the levels of printed mandatory and voluntary financial disclosure, and the interactive relationship between printed and Internet financial disclosure will be examined.

For data collection, the research instruments adopted are un-weighted disclosure indices. For printed financial disclosure two different indices, mandatory and voluntary, will be developed to reflect the different mandatory disclosure requirements and voluntary disclosure practices in both 1997 and 2002. Levels of disclosure will be computed by using the printed version of the annual report for a sample of 51 Jordanian manufacturing companies listed on ASE in both years. For Internet disclosure a disclosure benchmark will be established representing a complete image of the online situation of the Jordanian companies listed on ASE in 2004.

1.4 Study Structure

Exhibit 1 outlines the general structure of the chapters in this thesis as follows:

Exhibit 1: General Structure of the Current Thesis Chapters



Chapter 1: This chapter provides a general introduction into financial reporting as a rich area for research resulting from the identified gap in its theoretical fundament and within the context of technological developments, and provides the rationale for the choice of Jordan for the empirical investigation. In addition, this chapter introduces the current research objective, questions and methodology.

Chapters 2 and 3: The second and the third chapters of this thesis will provide general overviews of the printed and Internet financial disclosure concepts, and related issues. Also they will review the prior empirical studies regarding printed financial disclosure, i.e. mandatory, voluntary and overall disclosure, and Internet financial disclosure. Also the studies that have examined the relationship between the level of

financial disclosure and company characteristics will be highlighted. This review will identify the gap in the theoretical background and guidance of these studies, and the empirical gap in the literature to carry out the current empirical investigation

Chapter 4: The fourth chapter sets out to propose a theoretical framework of financial disclosure practices, mandatory, voluntary and overall disclosure, by encompassing existing financial disclosure theories in one scope as a step to fill the gap in the theoretical background of financial disclosure research. This framework, designed to point out some guidance on minimum theoretical background, could add significant value to the development of financial disclosure research.

Chapter 5: This chapter will provide a general background to the evolution of the Jordanian economy, and the new developments in the Jordanian financial reporting environment after 1998 that make Jordan a suitable environment for the current investigation.

Chapter 6: The sixth chapter will explain the research philosophy and methodology of this study, how the Jordanian printed and Internet financial disclosure practices will be measured, how the research tool to collect the data for this study will be constructed, the research samples, the objectives and hypotheses in this research, and the description of the statistical analyses which will be used to analyse the data in the subsequent chapters.

Chapter 7: This chapter presents the descriptive analyses of printed and Internet financial disclosure practices by the Jordanian companies listed on ASE. The level of printed mandatory, voluntary and overall financial disclosure in two different years, 1997 and 2002, will be measured, and the mean, standard deviation, minimum and maximum values will be utilised to explain the level of printed financial disclosure in the Jordanian companies' annual reports. Also this chapter will present the descriptive analysis of the level of Internet financial disclosure.

Chapter 8: The variation in the level of financial disclosure in 1997 and 2002 will be explained by using company characteristics through bivariate and multivariate statistical analyses. The association between Internet disclosure and printed voluntary disclosure as well as company size will be examined by using regression analysis.

Chapter 9: will summarize the findings, and implications thereof, and conclude the study. The limitations of the study will be set out, and recommendations for future research will be proposed.

1.5 Summary

This thesis will propose a theoretical framework of financial disclosure towards filling the gap in the theoretical background and guidance in financial reporting research. In a bid to test aspects of this framework, and confronted by the developments of technological innovation, it is deemed necessary in the second part of this thesis to carry out an empirical investigation on the printed and the Internet financial disclosure practices in Jordan. This chapter set out to provide a general overview of the current study, by providing a general background, followed by the rationale and the scope of the current study. A summary of the main research objectives and questions was provided, followed by the underlying philosophical fundament of the current research methodology. Finally, the subsequent chapters were outlined via content summaries.

Chapter Two

Financial Disclosure

2.1 Introduction

Several communication channels are available to company managers to deliver financial information to external users, for instance companies' printed and Internet annual reports, management forecasts, analysts' presentations and conference calls, press releases, and others. In addition, there are information intermediaries, such as financial analysts, industry experts and the financial press, which disclose company information. However, companies' printed annual reports are considered the most common tool for disclosing companies' financial information (Marston & Shrives, 1991), and Internet financial reporting is increasingly more common among companies (Jones & Xiao, 2003), and is regarded as a method with significant impact on companies' financial information communication system (Xiao et al., 2002). Therefore, both printed and Internet financial reporting formats are the scope of the current study. This chapter sets out to provide a general overview of aspects related to printed financial disclosure, and the next chapter will focus on Internet financial reporting.

This chapter will present an explanation of the concept of financial disclosure, including a definition of the concept of mandatory and voluntary financial disclosure, and it will review prior empirical studies that concentrated on financial disclosure practices to identify the apparent gaps in these studies. Also this review will provide an empirical background to the current empirical objectives and to the findings of the current investigation to increase the understanding of relevant variables related to the current study. In the context of reviewing prior research, financial disclosure research methods applied will be discussed so as to provide a preliminary explanation of the current research method and methodology and furthermore a justification for the use thereof, which, however, shall be explored in detail in Chapter 6.

2.2 The Concept of Financial Disclosure

Disclosure in general is defined by the Oxford Dictionary as *"information or a fact that is made known or public that was previously secret or private"* (pg. 357). The

definitions of the concept of financial disclosure are less easily specified and, additionally, have experienced changes and developments over time. In the 1970s Choi (1973, pg. 160) outlined the ultimate goal of financial disclosure by defining it as *"a publication of any economic information relating to a business enterprise, quantitative or otherwise, which facilitates the making of investment decisions"*. Choi (1973) in this definition suggested that financial disclosure took place to provide economic information about the company's financial position to support investors' financial investment decision-making process. Also in this context Wallace (1987) defined financial disclosure as *"the publication by a profit-seeking enterprise of any information relating to its activities with the hope of influencing the judgements and decisions of the users of such information"* (pg. 133). This definition illustrates that financial disclosure provides a means of generating capital and profits by influencing investors' financial investment decision-making process.

Furthermore, the nature of business activities developed during the 1980s and these developments were important with regard to the establishment of competition among companies to attract new investors and funds as cheaply as possible. The need for companies' disclosure rose sharply, companies sought channels to communicate with investors and financial information was disclosed much more widely than before. In the context of the financial reporting development, Lee (1981) argued that the purpose of companies' annual financial disclosure has developed since the early nineteenth century from the simple design of the traditional printed balance sheet, aiming to show the legality of a company's dividends for the benefit of its bankers and creditors, to a more complicated design of the contemporary printed annual financial disclosure, aiming to satisfy varying users' needs.

In the 1990s the definitions of financial disclosure by the accounting scholars focused on the nature of financial information, for instance Gibbins et al. (1990, pg.122) defined financial disclosure as *"any deliberate release of financial information, whether numerical or qualitative, required or voluntary, or via formal or informal channels"*. In addition, Cooke (1992) offered the following definition of financial disclosure "As *consisting of both voluntary and mandatory items of information provided in the financial statements, notes to the accounts, management's analysis of operations for the current and forthcoming year and any supplementary information."* (pg.231).

The latter definitions suggest that financial disclosure could be in the form of numerical and/or qualitative information in mandatory and/or voluntary format. At this point, companies' financial disclosure can be divided broadly into mandatory requirements demanded to be fulfilled by formal accounting authorities (such as securities commission, stock exchanges and company law), and additional voluntary disclosure motivated by economic cost-benefit analysis (Ettredge et al., 2002).

Mandatory disclosure is the requirement to disclose information under statutes, professional regulations and listing requirements of stock exchanges (Marston & Shrives, 1991, pg.196). In this context Owusu-Ansah (1998) explained that disclosure is described as mandatory if companies are obliged, under a disclosure regulatory regime to disclose insofar as applicable to them. In other words any public shareholder company should disclose to its stakeholders a certain level of company information which is subject to requirements of disclosure regulation in any individual country. Thus the managers of public shareholder companies are expected to disclose such information in order to comply with a country's disclosure requirements so as to give a clear picture of a company's financial position to interested users (Tai et al., 1990).

Voluntary disclosure is regarded as in excess of disclosure requirements. Meek et al. (1995) define such disclosure as "*disclosures in excess of requirements, representing free choices on the part of company's management to provide accounting and other information deemed relevant to the decision needs of users of the annual reports*" (pg. 555). A further definition is offered by Watson et al. (2002) as "*disclosure in excess of those required by laws, accounting standards or stock exchange listing requirements regulations*" (pg. 289). Thus voluntary disclosure means, for the purpose of this thesis, any information in companies' annual reports in addition to the information that is legally required in any individual country at that time. Companies' managers disclose such information for personal reasons and incentives, as shall be discussed later in this chapter and in Chapter 4.

To summarise the above, financial disclosure started as in the form of a traditional, printed balance sheet and other financial statements to become a document with different elements. These elements comprise the primary financial statements, the notes to financial statements and accompanying information, according to the ASB's Statement of Principles for Financial Reporting (1999). Also, companies provide

regulated and voluntary financial information through these elements of the financial report (Healy & Palepu, 2001).

Financial disclosure is part of a company's communication information system which provides financial information to a wide spectrum of stakeholders[7] with direct and indirect interests to facilitate their financial decision-making. The printed financial disclosure, among other delivery mechanisms and channels which can be used to disclose both mandatory and voluntary financial information, is considered as one of the main sources for detailed financial information about a company available to all capital market stakeholders. In this context, Marston & Shrives (1991) argued that the printed financial reporting considers the most common tool of disclosing companies' financial information. Also, Haasbroek (2002) added that the printed annual report is the most important source of providing detailed financial information about a company in a standardised form, and is the first source consulted by stakeholders when searching for company information. Therefore, the printed financial disclosure is part of the scope of the current study. Although there have been many studies in financial disclosure, the remainder of this chapter seeks to review prior empirical studies that concentrated on the printed financial disclosure practices by using the disclosure index, to identify the apparent gaps in these studies.

2.3 Literature Review Focused on Printed Financial Disclosure

This section reviews literature that examined different aspects of printed financial disclosure practices. Table 1 contains a list of previous empirical studies on financial disclosure that used a disclosure index approach. These studies are classified according to whether they focus on a single developed or developing country, or across countries. The table indicates in the fourth, and fifth columns whether the studies concentrated on mandatory and/or voluntary disclosure with distinguishing them, while the sixth column

---

[7] There is wide range of capital market stakeholders, users, both internal and external to the company. The Financial Accounting Standards Board (1978) classified twenty-seven kinds of user groups as follows: the owners, lenders, suppliers, potential investors and creditors, employees, management, directors, customers, financial analysts and advisors, brokers, underwriters, stock exchanges, lawyers, economists, taxing authority, regulatory authorities, legislators, financial press and reporting agencies, labour unions, trade associations, business researchers, teachers and students, and the public. These different user groups have widely differing needs, beliefs, knowledge, preferences and interests.

included studies covering both aspects of disclosure without distinguishing them. In addition, the table indicates whether a weighted or an un-weighted disclosure index was used in each study. In this chapter an analytical overview of the literature listed in Table 1 is provided and the details of the individual studies and their findings are discussed in Appendix 1.

Table 1: Prior Empirical Studies of Printed Financial Disclosure

Year	Authors	Countries	M D	V D	O D	W. Index	Un W. Index
A: Studies in developed countries							
1961	Cerf	USA			✔	✔	
1971	Singhvi & Desai	USA			✔	✔	
1975	Buzby	USA			✔	✔	
1979a,b	Firth	UK		✔		✔	
1980	Firth	UK		✔		✔	✔
1982	McNally *et al.*	New Zealand		✔			✔
1989	Cooke	Sweden			✔		✔
1991	Cooke	Japan		✔			✔
1992,93	Cooke	Japan	✔	✔			✔
1993	Malone *et al.*	USA	✔	✔		✔	
1994	Wallace *et al.*	Spain	✔			✔	
1995	Raffournier	Switzerland		✔			✔
1997	Inchausti	Spain			✔	✔	
2000	Depoers	France		✔			✔
2002	Street & Gray	USA	✔				✔
B: Studies in developing countries							
1967	Singhvi	India			✔	✔	
1987	Chow & Wong-Boren	Mexico		✔		✔	✔
1988	Wallace	Nigeria	✔	✔			✔
1990	Tai *et al.*	Hong Kong	✔				✔
1993	Mutter	Jordan	✔				✔
1993	Abayo *et al.*	Tanzania	✔	✔			✔
1994	Ahmed & Nicholls	Bangladesh	✔				✔
1994	Hossain *et al.*	Malaysia		✔			✔
1994	Solas	Jordan	✔				✔
1995	Wallace & Naser	Hong Kong	✔				✔
1995	Al-Modakhi	Saudi Arabia	✔	✔			✔
1997	Al-Mulhem	Saudi Arabia			✔		✔
1997	Suwaidan	Jordan		✔			✔
1997	Patton & Zelenka	Czech Republic	✔			✔	
1998	Naser	Jordan		✔			✔
1998	Owusu-Ansah	Zimbabwe	✔				✔
1999	Alrazeen	Saudi Arabia	✔	✔		✔	✔
1999	Curuk	Turkey	✔	✔	✔		✔
2000	Naser & Al-Khatib	Jordan		✔			✔
2001	Al-Hussaini	Kuwait	✔	✔		✔	✔
2002	Chau & Gray	Hong Kong and Singapore		✔			
2002	Haniffa & Cooke	Malaysia		✔			✔
2003	Naser & Nuseibeh	Saudi Arabia	✔	✔		✔	✔
2004	Alrazeen & Karbhari	Saudi Arabia	✔	✔		✔	✔
C: Studies across countries							
1975,76	Barrett	USA, UK, Japan, France, West Germany, Netherlands, Sweden			✔	✔	
1995	Meek *et al.*	USA, UK and continental Europe		✔			✔
2001	Cairns	Global Survey	✔				✔

(MD: Mandatory disclosure; VD: Voluntary disclosure; OD: Overall Disclosure; W: Weighted)

As illustrated from Table 1 prior studies in the area of printed financial disclosure have been undertaken since the early 1960s until most recently, which have left a large

amount of published and unpublished research in the area of financial reporting practices. They were predominantly focused on carrying out empirical studies to describe the level of financial disclosure practices at a particular point or period of time, and examined its association with one set of factors, company characteristics, that may explain the variation in the level of such practices among their sampled companies. Those prior empirical studies in both developed and developing countries that have theoretical bases have used: agency theory, signalling theory, capital need theory, political cost theory, also the cost-benefits analysis, to explain the reasons why some companies disclose more voluntary information than others. The best way to review the prior empirical studies in the following sections is to discuss these according to their main themes as follows: the main angles taken in these studies, the main theories employed, the main variables examined and the main differences among these studies. Also, the main research methodology applied, and the main statistical analysis techniques which have been used in these studies will be reviewed.

2.3.1 Main Angles of Prior Financial Disclosure Practices Studies

As seen in Table 1, financial disclosure practice has been subject to a large number of prior empirical studies since the 1960s. These studies have examined this practice mainly from three different angles: firstly, researchers measured the overall, *aggregate* level of financial disclosure. Secondly, researchers measured the extent of *voluntary* disclosure in the annual reports. Thirdly, a number of researchers sought to measure the extent of companies' compliance with *mandatory* disclosure requirements (the level of mandatory disclosure).

The overall financial disclosure practices studies are considered the pioneer studies in the area of financial disclosure research, which established a sustained platform for financial reporting research. A number of studies examining overall financial disclosure was undertaken after the initial study by Cerf (1961) in the USA, which has become the starting point for any empirical study in financial disclosure. These empirical investigations were undertaken by applying an aggregate checklist of both mandatory and voluntary items as an attempt to measure the overall level of financial disclosure practices, in some cases distinguishing them, and in some not (see Table 1).

Voluntary financial disclosure practice has been the subject of the prior empirical studies since the late 1970s. It was sought to explain the factors behind the managerial incentives to provide extra information in the annual reports. These studies were undertaken to explain, for instance, the phenomenon of information asymmetry, and how the company managers can reduce the costs associated with this problem. They have applied disclosure theories, i.e. agency theory, signalling theory, capital need theory, political cost theory and the cost-benefit analysis – as shall be discussed in the current chapter and in Chapter 4. These studies listed in Table 1, which examined the practices of voluntary disclosure, were undertaken under the assumption that either there was full compliance with mandatory requirements or there were no mandatory disclosure requirements, and that several company characteristics impacted only upon the level of voluntary financial disclosure. The researchers applied checklists containing sets of voluntary items, not required by any regulation, to show the level of companies' voluntary disclosure.

As discussed earlier, companies also seek to comply fully with the disclosure requirements by any formal accounting authorities such as company laws, securities commission and stock market disclosure requirements. Measuring the level of compliance with these mandatory disclosure requirements is a new orientation in the area of financial disclosure studies, because, as discussed above, prior researchers measured the extent of overall or voluntary disclosure in annual reports, assuming that either there was full compliance with mandatory requirements or there were no mandatory disclosure requirements. Table 1 exhibits prior studies which measured the compliance with mandatory disclosure requirements in companies' annual reports. Prior scholars have constructed their disclosure checklists which contain a mandatory set of items, collected from accounting authorities such as company laws, securities commission and stock market disclosure requirements, to show companies' compliance with the mandatory regulation.

Moreover, the prior studies found that in practice there are variations in the levels of financial disclosure among companies, i.e. there are companies complying fully with mandatory disclosure requirements and there are companies with a low level of compliance with the same disclosure requirements at the same time. Also there are companies disclosing more voluntary financial information than others.

The variation in the level of voluntary financial disclosure practices among the companies has been explained by using the discussion about managers' incentives to disclose extra information to the users. They argued that as managers' incentives are different from one company to another according to several company characteristics variation in the level of voluntary disclosure practices is created. Company characteristics have been used as explanatory variable in prior studies to explain the differences in the levels of voluntary financial disclosure among companies (see for instance: Firth, 1979; McNally et al., 1982; Chow & Wong-Boren, 1987; Cooke, 1991; Abou-Naser, 1993; Hossain et al., 1994; Raffournier, 1995; Suwaidan, 1997; Depoers, 2000; Haniffa & Cooke, 2002).

Also the variation in the level of compliance, i.e. non- or poor compliance, with mandatory disclosure requirements has been documented in prior studies. The literature provides evidence confirming that there is poor compliance with mandatory disclosure requirements in several countries. In this context, Cairns (2001) in his global survey of complying with IAS mandatory requirements summarised 11 categories of companies' compliance in companies' financial statements in countries around the world as follows:

1. Full IAS compliance
2. Full compliance with national standards that comply with IASs
3. Full IAS compliance with exceptions specified in accounting policies
4. Full IAS compliance with exceptions specified in the notes to the financial statements but outside the accounting policies
5. Accounting policies comply with IASs or are based on IASs or the principles in IASs
6. Accounting policies comply with IASs or are based on IASs or the principles in IASs but with specified exceptions from full compliance
7. IASs used only when there are no equivalent domestic standards
8. IASs used only for selected items or when permitted by domestic requirements
9. Reconciliation from domestic GAAP[8] to IASs
10. Summary IAS financial statements
11. Un-quantified description of differences from IAS treatments

[8] General Accepted Accounting Principles

Cairns (2001) referred to non-full compliance with IASs as "IAS lite", which is often associated with accounting in emerging economies, particularly those of Eastern Europe and East Asia. Non-compliance with mandatory disclosure, including with IASs, is hypothesised to be influenced by several company characteristics, such as listing status, size, profitability, industry type and others (Inchausti, 1997; Street & Gray, 2002), which this chapter will discuss later in more detail. In this context, Healy & Palepu (2001) concluded that the degree of mandatory disclosure varies systematically among companies according to their characteristics. In addition, Abd-Elsalam & Weetman (2003) found that non-compliance with IASs in the emerging market took place due to less familiarity with these requirements.

Furthermore, the prior empirical studies were mainly focused on explaining the variations in the level of financial disclosure practices. This was by examining its association with one set of factors, company characteristics, which may explain the variation in the level of such practices among their sampled companies. The scholars justified their research objectives by using agency theory, signalling theory, capital need theory, and political cost theory, including the cost-benefit analysis, to explain the reasons of why there are companies disclosing more voluntary information and/or complying more with mandatory requirements than others. The following section will provide a general overview of these theories; however these will be discussed in more detail in Chapter 4.

2.3.2 Main Financial Disclosure Theories Employed in the Prior Studies

Generally five financial disclosure theories were used in prior studies, each of which aim to explain different reasons behind the manager's choice of disclosing more accounting information to the external users.

Agency Theory is based on the separation between company's ownership from control, and is used by researchers to explain the relationship between the owners and the managers of public shareholder companies (Jensen & Meckling, 1976). Political Cost Theory is used in the prior studies to explain and predict accounting practices with regard to managers' choices of certain accounting procedures or methods, which render lower rather than higher earnings in order to avoid, amongst others, the political cost,

and thereby increase their incentive compensation (Watts & Zimmerman, 1978, 1986, 1990).

Capital Needs Theory is used to explain that companies with growth opportunities in the capital market look for new sources of finance to increase their capital. This requires some kind of competition among these companies in order to obtain financial capital as cheaply as possible under the conditions of uncertainty. Therefore, companies disclose extra information to reduce uncertainty to outside investors in order to inform them about the financial position and to increase the certainty of their future cash flow (Choi, 1973; Meek et al., 1995).

Signalling theory is used in the prior studies to explain that a company seeks to distinguish the value, or the quality, of its product in the market compared to other companies. This is achieved by disclosing more information than is disclosed by companies with lower quality products (Akerlof, 1970). Signalling theory was used in prior empirical research to explain why managers in the company have the incentive to disclose more information in the annual report (Suwaidan, 1997; Haniffa & Cooke, 2002).

These theories suggest that managers have their own reasons to disclose accounting information to the users in order to reduce agency cost, political costs, to raise capital as cheaply as possible, or even to distinguish their companies from other companies. Also these incentives are based on the trade-off between the costs and benefits of providing such information, in which the managers' choices to provide more information are based on a comparison between the costs of information that will be provided and the benefits that might arise from disclosing such information (Cooke, 1992). This is referred to as "cost-benefit theory"[9] (Haniffa & Cooke, 2002, pg.327). Nevertheless managers' incentives are different from one company to another according to several company characteristics which create variation in the level of voluntary disclosure practices and which are used in prior studies to explain the differences in the levels of printed and Internet financial disclosure among companies.

---

[9] In this context, Craven & Marston (1999, pg. 324) argued that cost-benefit analysis cannot be called a disclosure theory as the costs and benefits themselves can be predicted by other theories such as agency theory. Therefore the term "cost-benefit analysis" will be used in this thesis.

2.3.3 Company Characteristics in the Prior Empirical Studies

Company characteristics were used as independent variables in prior studies to explain the variation among companies' level of financial disclosure practice, i.e. overall, mandatory and voluntary financial disclosure. The prior studies listed in Table 1 examined the relationship between the company characteristics and the variation of financial disclosure based on one question: why do some companies disclose more information than other companies? The scholars justified this question, by using the above theories, based on the differences among companies in their structure-related variables, managerial performance and market-related variables, in which the companies will follow different paths on different levels to provide financial information.

The prior empirical studies listed in Table 1 have agreed that there is not yet any generally agreed on theory explaining one set of these explanatory variables as a whole. The selection of these variables is usually justified by reference to information asymmetry and the reasons behind managers' incentives to disclose, and why there is variation in these incentives by referring mainly to the above-discussed four theories - agency theory, signalling theory, capital need theory and political cost theory, including the cost-benefit analysis, to provide a base for their research objectives and a reason for using certain explanatory variables (Haniffa & Cooke, 2002).

Therefore, the number and choice of company characteristics varies among prior studies, reflecting the absence of a clear overall theory as to which company characteristics are likely to determine levels of financial disclosure. The number of independent variables in the above studies range from one variable (ownership form, that is, whether or not family owners are dominant – Chau & Gray, 2002) to fourteen variables (company size, assets in place, industry type, listing age, complexity of business, level of diversification, multiple listing status, foreign activities, gearing, top ten shareholders, foreign ownership, institutional investors, profitability, and type of auditors – Haniffa & Cooke, 2002). Within this context, Ahmed & Courtis (1999) and Oyelere et al. (2003) agreed that Company Size, Profitability, Industry Type and Size of Auditor were the most frequently used in previous studies. Moreover, there are other company characteristics used as independent variables in prior studies to explain the variation among companies' level of financial disclosure practice, e.g. Ownership

structure, Company Age and Familiarity. These shall also be adopted in the current empirical investigation as influential characteristics on financial disclosure practices in Jordan.

Company Size

In most of the prior studies in Table 1 it was argued that larger companies are more likely to disclose a greater number of items than smaller companies, which explains the variation in the level of compliance with mandatory requirements and voluntary disclosure. This variable is based on the argument (from agency theory and political costs theory) that larger companies have more diverse stakeholder groups who will be interested in a wider range of issues, and larger companies will therefore meet these stakeholder demands, subject to constraints such as confidentiality, through providing information to meet their desires.

Singhvi (1968) documented three main reasons for why company size has positive effects on the level of financial disclosure as follows: (1) large number of shareholders in a company brings more attention from the public, and causes more requirements from shareholders and other users such as analyst to disclose extra financial information; (2) large number of shareholders in a company requires provision of more financial information in order to reduce the pressures from regulatory agencies; (3) large number of shareholders in a company requires professional management so that more information will be provided in financial reports.

In the case of mandatory disclosure, it can be argued that larger companies may be more subject to public scrutiny or more sensitive to criticism for falling short of disclosure requirements, and thus may be more likely to aim for maximum compliance. The costs of failure to comply fully may be perceived by such companies as outweighing the benefits from non-compliance, whereas the costs of non-compliance may be relatively less for smaller companies. The same is applicable in the case of voluntary disclosure where there are a number of other reasons in the literature explaining why large companies might disclose more voluntary information than other companies; for instance Singhvi (1968, pg.32) and Singhvi & Desai (1971, pg.131) reported the following reasons:

- Firstly, the cost of collecting financial information for smaller companies is more than for larger companies.
- Secondly, large companies are more likely to realize the possible benefits of better disclosure than smaller companies.
- Thirdly, full disclosure for smaller companies affects the competitive position with large companies in their industry thus they may disclose less information than large firms.

Buzby (1975) added that the gathering and publication of financial information is costly, because disclosing financial information in annual reports incurs costs for a company due to information gathering, management supervision and audit fees. The literature in Table 1 also suggested that larger companies need a large volume of internal data to provide the management with up-to-date information about the company's operations. Thus, information to disclose to the public becomes less costly in this instance as it has already been collated. Also, larger companies are under pressure from governmental bodies, and thus tend to provide more information in order to avoid such pressures (Buzby, 1975).

Firth (1979) noted that larger companies tend to be listed on the stock exchange and they may go to the stock market for finance more often than smaller firms. As a result, they have to provide as much information as possible in their annual reports in order to obtain finance. Cooke (1991) and Meek et al. (1995) stated that larger companies are likely to need more external funds from capital markets and therefore may increase their disclosure level in order to lower their capital cost, and furthermore it was added that large companies are likely to be more complex and have a wider ownership base than smaller companies. Therefore, they may need to provide more information to management in order to meet the needs for managerial control as well as the needs of financiers.

Many of the prior scholars in the printed base financial disclosure literature, such as Hossain et al. (1994), Wallace & Nasser (1995), Al-Modahki (1995), Inchausti (1997), Al-Mulhem (1997), Suwaidan (1997), Owusu-Ansah (1998), Alrazeen (1999), Curuk (1999), Depoers (2000), Al-Hussaini (2001) and Haniffa & Cooke (2002), have used agency theory and political costs theory to examine company size as one of the

explanatory variables for the variation in the level of disclosure among sampled companies. These studies based their hypotheses on the concept of large companies disclosing more information than small companies for both printed and Internet financial reporting. The prior studies agreed that company size is a very important and powerful variable used to explain the variation in the level of financial disclosure, however Solas (1994) found in her study of the compliance with IAS in Jordan that there is no relationship between the level of compliance and the Jordanian company size.

Profitability

Company profitability has been used frequently as an explanatory variable in a number of prior empirical works, such as Abou-Naser (1993), Wallace & Nasser (1995), Meek et al. (1995), Patton & Zelenka (1997), Inchausti (1997), Suwaidan (1997), Naser (1998), Naser & Al-Khatib (2000), Naser & Al-Khatib (2000), Al-Hussaini (2001) and Hanifa & Cooke (2002). The argument for using this variable is based on the separation between the managers and the owners of companies and the difficulties that investors face in order to observe directly the extent and the quality of managers' efforts on their behalf. Investors will depend on reports of managers' performance to monitor their investments and to ensure that managers' effort is directed towards investors' interests. Managers of companies with better performance than others wish to distinguish their performance through a process of signalling this information to the public in both ways through complying with mandatory requirement and disclosing voluntary financial information. However, Patton & Zelenka (1997) and Wallace et al. (1994) found a negative association between company profitability and the level of compliance in the Czech Republic and Hong Kong respectively, for more details see Appendix (1).

Auditor's Size

Auditor's size has been used by researchers to explain disclosure variation in prior studies based on the argument of agency theory, meaning the auditor can monitor the agents' actions. In prior studies it is argued that the auditor's firm reputation and size influences the level of companies' disclosure. For instance, Firth (1979) hypothesised that a large auditor's firm, with high reputation, enhances companies' desire to disclose

more information. In the same way Malone et al. (1993) argued that large audit firms with high reputation associate themselves with clients that disclose a high level of information. The main theme of this hypothesis is that small audit firms are willing to meet the client demand because of the economic consequence associated with the loss of a client. Moreover, other researchers argued that international audit firms have more influence on the level of financial disclosure than local audit firms because international audit firms are larger and have more expertise in auditing (Wallace et al., 1994); international audit firms are more likely to be up-to-date with any international development in accounting (Suwaidan, 1997).

There are several recent studies using auditor's size as an explanatory variable of both mandatory and voluntary disclosure levels, for instance: Abou-Naser (1993),Wallace & Nasser (1995), Meek et al. (1995), Patton & Zelenka (1997), Inchausti (1997), Suwaidan (1997), Naser (1998), Naser & Al-Khatib (2000), Al-Hussaini (2001) and Hanifa & Cooke (2002). The results of these studies are not consistent across countries. As example for the former, auditor's size was used as an explanatory variable by Abu-Nassar (1993), Suwaidan (1997) and Nasser (1998), each undertaking studies regarding Jordan. Suwaidan (1997) confirmed the above hypothesis, but Abu-Nassar (1993), and Nassar (1998) did not find any relation between the auditor's size and the level of financial disclosure. Furthermore, the mix in empirical results among the prior studies was also found when comparing cross-country disclosure levels. For instance, Singhvi & Desai (1971), Patton & Zelenka (1997) and Inchausti (1997) found a significant relationship between the size of an audit firm and the level of disclosure, while Malone et al. (1993), Wallace et al. (1994) and Haniffa & Cooke (2002) found no relation between the audit firm and the level of disclosure, for more details see Appendix (1).

Industry Type

The nature of the industry was examined in several studies in various countries as an explanatory variable for voluntary disclosure variation among companies. These studies based their argument on the level of financial disclosure varying from one industry to another. Meek et al. (1995) note that "proprietary (i.e. competitive disadvantage and political) costs vary across industry. For example, because of the

nature of their products and their research and development, chemical companies are likely to be more sensitive about disclosure to competitors and the public than companies in certain other industries" (pg. 559). Several prior studies, which examined industry type, e.g. McNally et al. (1982), Tai et al. (1990), Chow et al. (1987), Cooke (1990, 1991, 1992), Malone et al. (1993), Wallace et al. (1994), Raffournier (1995), Meek et al. (1995), Wallace & Nasser (1995), Al-Modahki (1995), Inchausti (1997), Al-Mulhem (1997), Suwaidan (1997), Owusu-Ansah (1998), Naser (1998), Alrazeen (1999), Curuk (1999), Al-Hussaini (2001), Watsson (2002), Haniffa & Cooke (2002), hypothesized that there was a significant association between the extent of financial disclosure and the industry type. However, there was inconsistency in the results regarding the relationship with financial disclosure among these studies, see Appendix (1) for more details.

Ownership Structure

Ownership structure as an independent variable usually represents the notion of agency theory. It is argued that companies with a large number of shareholders experience separation between ownership and control. In such situations, managers will face conflicting incentives. They may wish to suppress information in order to conceal situations where they are acting opportunistically. On the other hand, they may prefer to provide information to signal that they are *not* behaving in ways that are inconsistent with the interests of owners. It could be argued that particularly in developing countries, where ownership is more concentrated, holders of large blocks of shares may have inside access (possibly through board membership) to information and may consider that wider disclosure to minority investors is not in their own interests. Where the government is a significant owner, it may be less likely to enforce mandatory disclosure requirements, as it can probably obtain information directly. The presence of substantial foreign owners, who may come from countries where accounting disclosure is more sophisticated, may be associated with increased disclosure to satisfy these investors' expectations.

Ownership structure as an explanatory variable has been examined in a number of different ways using different proxy measures for this variable, for instance: top ten shareholders, family ownership, company insiders' ownership, institutional ownership,

government ownership, foreign ownership or multinational (Malone et al., 1993; Ahmed & Nicholla, 1994; Hossain et al., 1994; Raffournier, 1995; Meek et al., 1995; Wallace & Nasser, 1995; Al-Modahki, 1995; Al-Mulhem, 1997; Suwaidan, 1997; Owusu-Ansah, 1998; Naser, 1998; Alrazeen, 1999; Curuk, 1999; Depoers, 2000; Naser & Al-Khatib, 2000; Chau & Gray, 2002; Haniffa & Cooke, 2002). However, there is no consensus among the accounting researchers regarding ownership, as for example Suwaidan (1997) found that Jordanian companies with government ownership disclose more voluntary information than companies without government ownership because the government encourages the managers to use good disclosure policies. On the other hand, Al-Razeen (1999) found in Saudi Arabia a negative relationship between level of financial disclosure and government ownership.

Company Age and Familiarity

Company age has also been used as an explanatory variable in a number of prior studies. The argument for this variable is based on older companies disclosing more information than younger companies. Mintzberg (1979) argued that the structure and the behaviour of older companies is more formalised than younger ones, which may imply that older companies are more likely to comply with regulations than younger companies. Abu-Nassar (1993) gave two different reasons why older companies might disclose more information than younger companies: (1) availability of information about the past performance in older companies facilitates the prediction of future performance and (2) older companies are more likely than younger companies to realise the benefits of financial disclosure, such as getting finance and marketability of securities. Owusu-Ansah (1998), on the other hand, listed three different reasons for older companies to disclose: (1) the competitive disadvantage compared to younger companies drives them to disclose certain items, (2) the cost and ease of collecting information and disclosing such information is more likely to cause difficulties for younger companies rather than for older companies and (3) younger companies are more likely to lack a 'track record' to rely on for public disclosure.

Also, it can be argued here that older companies are more familiar with financial disclosure practices, and they are more likely to comply more with mandatory disclosure requirements and disclose more voluntary items. Abd-Elsalam & Weetman (2003)

found non-compliance with IASs in their research on Egypt due to less familiarity and language accessibility of these requirements. In the same context, Tai et al. (1990) concluded that non-compliance with the mandatory disclosure requirements in Hong Kong could be attributed to the difficulties of interpreting the disclosure requirements, and to insufficient awareness of the general accounting concepts.

2.3.4 Inconsistent Results in the Prior Empirical Studies

An interesting trend has been identified in the above discussion as most of the results of prior studies were inconsistent with arguments of the discussed theories and with other prior results. In this context, Wallace et al. (1994) noted that the results of prior studies were inconsistent, and attributed this to differences in factors such as sample size, statistical methods, research settings, index construction, and the type and number of company characteristics examined. Ahmed & Courtis (1999) also noted that there was variation in the relationship between independent variables and dependent variables in these studies, and they argued that this variation was due to differences in environmental factors between countries, different items used to construct the disclosure indices, different variables selected, sampling error, different kind of measurements used to identify the variables and different statistical techniques. The following will point out some of these differences and the main causes of inconsistent results among the prior studies.

For the discussed prior studies a disclosure index or indices were constructed, in order to measure the quantity of financial disclosure (which sometimes was stated to be a proxy for disclosure quality) and these have varied from one study to another based on each study's objectives. As illustrated from Table 1 some lists included only voluntary or mandatory items, while other lists included a mix of mandatory and voluntary items. Wallace et al. (1994) argued that there is no agreed theory among the prior studies determining the number and the choices of the items to be included in their disclosure checklists. Thus, there was variation in the number of items included in these checklists. In the studies listed the checklists ranged from a minimum of 17 items by Barrett (1975, 1976) to a maximum of 250 items by Curuk (1999).

Prior studies were undertaken as an attempt to explain the phenomena of information asymmetry by using the above principal disclosure theories. These theories were applied to provide a base for research hypotheses to examine the impact of companies' characteristics on the level of financial disclosure. A wide number of studies examining overall financial disclosure have been undertaken since the 1960s, in which researchers have used two different types of indices – weighted and un-weighted – in their studies. Weighted indices usually reflect the importance of each item as determined by the users of financial reporting by asking a group of users to indicate how important they regard each item according to a given scoring scale. Conversely, Cooke (1989, 1992, & 1993) argued that weighted indices may reflect the subjectivity of either researchers or users rather than the actual relative importance of items, and thus used un-weighted indices.

In this context, Marston & Shrives (1991) explained that un-weighted indices are usually applied dichotomously, with an item scored '1' if disclosed in the annual reports and scored '0' if not disclosed. In those studies where both approaches were used, high correlations between the weighted and un-weighted disclosure indices were generally obtained. Disclosure indices have been used in prior research as dependent variables in order to measure the relationship between the level of financial disclosure and various explanatory variables, company characteristics, as independent variables (Marston & Shrives, 1991).

Furthermore, the inconsistency among the prior studies may be due to company characteristics being measured in differing ways. For instance, company size is measured by no fewer than ten different numbers: total assets, net assets, total sales, number of shareholders, capital employed, market capitalisation, book value of debt, net income, shareholders' contributed capital, and number of employees.

In addition to differences in the independent variables used and in the construction of disclosure indices as dependent variables, prior studies differ in their sample sizes, ranging from a high of 527 companies (Cerf, 1961) to a low of 33 companies (Al-Modahki, 1995). Moreover researchers have applied their indices over different time periods ranging from one to ten years. Studies based on one year are most common, for example Cerf (1961), Singhvi (1968), Cooke (1989, 1991, 1992, 1993), Malone et al. (1993), Aboyo et al. (1993), Suwaidan (1997), Owusu-Ansah (1998), Alrazeen &

Karbhari (2004), and Chau & Gray (2002). Studies covering more than one year may investigate whether disclosure trends change through time across the sample, or whether variation in disclosure levels is better explained by company-specific factors (for example, increased disclosure may be a response to poor performance). The longest time period of ten years was covered by the early comparative studies of Barrett (1975, 1976). None of the studies that examined the development of financial disclosure over a period of time, (e.g. ten years by Barrett (1975, 76); six years by McNally et al. (1982); five years by Wallace (1988); five years Al-Modhaki (1996); three years by Inchausti (1997); five years Curuk (1999); and five years by Watson et al. (2002), came up with a theory explaining or predicting these developments in financial disclosure practices.

Finally, in the context of differences, many studies used different statistical analysis techniques, i.e. a mixture of parametric and non-parametric tests. Scholars based their studies on Wallace et al.'s (1994) argument which states that there is no agreed theory for choosing the suitable approach to examine the relationship between the dependent and the explanatory variables in the financial disclosure studies. In these prior studies (e.g. Cooke, 1989; Cooke, 1991) the basic assumption of normality for employing parametric statistical methodologies to analyse the explanatory variables was ignored, in other words non-parametric data, i.e. not being normally distributed, was analysed by employing parametric tests which require data to be normally distributed. However, parametric tests are only appropriate when the data is normally distributed (Marston & Shrives, 1991; Field, 2000). Many of the studies have been discussed in more detail in Appendix 1.

2.4 Summary

This chapter focused on the printed version of financial disclosure as a traditional communication tool. A fundamental background to the main concept of the current research objectives was established. The chapter commenced with discussing the meaning of financial disclosure and the types of financial disclosure, both mandatory and voluntary, researched and differences between them. Following on it provided an explanation of the nature of printed financial reporting and its objectives. Also this chapter provided a review of prior empirical studies that concentrated on financial disclosure practices. The gaps in the theoretical background in financial disclosure that has been left unsatisfied by these studies were highlighted, namely the lack of *one*

theory explaining the phenomenon of financial disclosure as a whole and the development of financial disclosure. Also the above provided the background to the current empirical investigation of measuring printed financial disclosure by outlining the prior empirical studies in both developed and developing countries according to the areas of overall, voluntary and mandatory disclosure.

As Wallace et al. (1994, pg. 43) have noted:

> *"The changing features of prior studies, such as the number of firms included in the sample, the type and number of firm characteristics examined, the number of information items that formed the basis of the set of disclosure indexes as dependent variable, the different statistical methodologies used to analyse the data and the different settings (i.e., countries) of the study, have jointly or severally contributed to the mixed results from these studies. As a result, an investigation, in other settings, of corporate characteristics that correlate with the extent of disclosure seems justified."*

This quote by Wallace et al. (1994) reflects the justification of the present empirical study. This study seems justified as it investigates financial disclosure practices in a developing country, i.e. Jordan, with new accounting and disclosure regulation, especially after IASs having become mandatory by Jordanian regulations for the first time by Jordanian financial market regulations. Also, it seems justified in a bid to examine aspects of the theoretical framework and contribute towards financial disclosure research. A further newly defined concept of financial disclosure to be investigated is the notion of familiarity as one of the explanatory variables of financial disclosure practices in the developing countries, as suggested by Abd-Elsalam & Weetman (2003).

Chapter Three

Internet Financial Disclosure

3.1 Introduction

New technological innovations and the emergence of network communication around the world, such as the Internet[10], affect all aspects of society (Jones & Xiao, 2003). In light of these developments, the traditional financial disclosure communication system has become less able to satisfy users' needs as it is not as timely, interactive, accessible or detailed enough (Lodhia et al., 2004). As a result the number of companies using the Internet as a financial communication channel is growing rapidly around the world. Recently, the phenomenon of Internet financial disclosure has gained considerable attention and is regarded as in need of an urgent investigation by accounting researchers. Therefore, Internet financial reporting as newly developing financial communication channel is the second dimension of the current study. This chapter sets out to provide a general overview of some issues related to Internet financial disclosure. It will present an explanation of why companies are increasingly making use of Internet financial disclosure. Also this chapter will review prior empirical studies that concentrated on Internet financial disclosure practices to identify the apparent gaps in these studies. This review will provide an empirical background to the current empirical objectives and to the findings of the current investigation, and to increase the understanding of the relevant research method and methodology related to the current study.

3.2 Internet Financial Disclosure

The first generation of company websites can be dated back to the early 1990s, which were used in the area of marketing and advertising, and since then usage has expanded rapidly and has entered many aspects of companies' activities, such as the preparation and dissemination of companies' annual reports since the mid 1990s (Lymer, 1997; Lymer, 1999). In this context, the IASC (1999) argued that due to the fast

---

[10] Lymer (1997, pg.3) defined the Internet as *"a global network of networks of computers that share a common transmission language to enable the sharing of data and applications on a wide scale"*.

growth of networks and the World Wide Web (hereafter website) as communication tools many companies set up their own websites on the Internet as a new instrument to interact with stakeholders. Internet financial reporting is usually located on a company's website, and financial data is reported by companies on the Internet (IASC, 1999).

The impact and influence of the Internet as a financial information communication medium cannot be overstated. It has opened up information exchange on a global scale, offering massive opportunities and advantages to transfer information in a very fast and cost-effective way. In this context, the Financial Accounting Standards Board (hereafter FASB) (2000) listed five motives for companies to use the Internet for disclosing financial information

1. To reduce cost of and time to distribute information
2. To communicate with previously unidentified consumers of information
3. To enhance traditional disclosure practices
4. To increase the amount and type of data disclosed
5. To improve access to potential investors for small companies.

Also, Xiao et al. (2002) argued that the Internet has experienced a tremendous growth affecting all aspects of financial reporting, for instance, the current role of the Internet in financial reporting as a new communication system impacts on the *"communicative aspects of financial reporting, such as access, dissemination, interaction and presentation"* (pg. 251). There are several reasons behind the importance of the Internet technology as an expected future tool of business communication, which have been discussed in the literature, as follows:

Firstly, the Internet offers hyperlinks which are defined as: *"the ability to refer any Internet document to any other document by appropriate cross-references"* (IASC, 1999, pg. 4). As stated above, hyperlinks give the foundation for establishing a vast hyperlinked information resource (IASC, 1999). In this context, Xiao et al. (2002) stated that the website with electronic tools such as hypertext or hypermedia with linking techniques provides a great chance to change the traditional way in which financial information is presented. Also, IASC (1999) argued that hyperlinks improve the readability of the annual report by enhancing the navigation between the various pages and the elements of Internet reporting. This is by providing the user with links to specific elements in the financial statements and their related notes, and to additional

information elsewhere on the website, to stock prices and to various additional online information sources.

Secondly, the Internet provides updated information. The company can regularly update and maintain its websites to provide continuously updated information and reflect new information (Haasbroek, 2002).

Thirdly, the Internet enhances global links and helps to increase the population of users (IASC, 1999). For instance, a website permits interactive information distribution in a way that is not possible via the printed format (Lybaert, 2002), and it provides instant and concurrent access to accounting information from either static pages or dynamically drawn from corporate databases (IASC, 1999). Xiao et al. (2002) also added that it provides the opportunity for interactive user-provider communication of companies' information through various communication types, one-way, two-way and multi-way, instead of the one-way provider-dominated reporting process. Deller et al. (1999) noted that the Internet provides direct communication between the company and target stakeholders by offering individual electronic mailings, online involvement in the company's general meetings and analyst conferences.

Furthermore, the Internet has reduced the cost of producing information (IASC, 1999; Lybaert, 2002), for instance disseminating information on the website is cheaper than via the printed format as the costs of printing and distributing reports are no longer a serious obstacle to the distribution of information (IASC, 1999).

Timeliness of financial information is enhanced because it enables real-time reporting rather than the traditional periodic time of printed reporting (FASB, 2000). Also the possibility to access the Internet from anywhere in the world by anyone at any time allows for the electronic version of accounting information to offer worldwide access (Xiao et al., 2002).

The Internet increases the level of company disclosure by providing nearly unlimited storage capacity, provision of press releases and further information services (Deller et al., 1999). Haasbroek (2002) added that computer memory is cheap and the company website offers almost unrestricted space for disclosing more information which can explain company performance, and users have the ability of downloading any

of the online company's information because companies present their information in spreadsheet format to facilitate downloading. In this context, Hedlin (1999) argues that one of the greatest advantages of digital reporting is that it provides the opportunity for users to download files that can be used as input in computer-based analysis which can be performed as convenient. Finally, the Internet offers the ability to integrate and converge with other technologies such as databases, multimedia and wireless communication (Xiao et al., 2002).

As a result of the abovementioned reasons IASC (1999) predicted that in the following few years companies' reporting to stakeholders would transfer almost entirely from the current primarily printed form to using the Internet as the primary information communication channel, and the printed annual report would be used as the secondary channel. Deller et al. (1999) added that the Internet is increasingly considered as a comprehensive tool for investor relation activities, and as a platform to present companies' annual reports and other financial or non-financial information. Oyelere et al. (2003, pg.38) argued that:

"Internet reporting improves users' access to information by providing information that meet their specific needs, allowing non-sequential access to information through the use of hyperlinks, interactive and research facilities, and allowing the opportunity for providing more information than available in the annual reports. This improved accessibility of information results in more equitable information dissemination among stakeholders".

In the same context, Marston & Polei (2004, pg. 286) stated that:

"The Internet offers companies new opportunities to supplement, replace and enhance traditional ways of investors and stakeholders communication".

Jones & Xiao (2003) found in their study a strong agreement among experts, including academics, accountants, auditors, regulatory bodies and users of accounting information, that, as part of immediate trends, the Internet would advance aspects such as updated company communication and reporting, i.e. the dissemination of information. Substantial changes would be facilitated by website advantages in terms of hyperlinking,

large capacity and high speed, and the Internet would become the standard means of company communication by 2010.

Furthermore, Hedlin (1999) categorised three development generations of the Internet annual report with regard to Swedish companies:

(1) Early Generation, *Establishing a Web presence*: at this stage companies' websites contained general company information of little interest to investors. These websites gave usually unclear ideas about what and to whom they will communicate. The strategy of these Websites focused on the customer rather than the investor. Often these Websites had a form where a printed version of the annual report could be ordered.

(2) Intermediate Generation: *Using the Internet to communicate Investor Information:* this generation of companies' websites was characterized by an assessment of different needs of various groups with which the company wished to communicate. Most of the websites achieved this by adding electronic versions of paper-based annual reports. Under this generation the company's website was seen as an efficient and low-cost distribution medium for information, but little attention was paid to unique advantages of the Internet, which could facilitate innovation in digital annual report presentation.

(3) Advanced Generation: *Taking advantage of the unique features and possibilities of the medium:* in this generation companies' websites are not just alternative tools to distribute traditional print-based annual reports, but the unique, rich features and possibilities of this interactive medium are taken advantage of.

A more sophisticated classification of the development generations of the Internet annual report was provided by the IASC (1999, pp. 48-9). These stages were summarised by Lymer & Debreceny (2003, pg. 105) as follows:

Stage one: companies use the Internet solely to duplicate their printed financial statements by using electronic formats i.e. HTML and/or PDF.

Stage two: companies move ahead of stage one to disclose their information in a form which allows interaction between the web browsers and search engines.

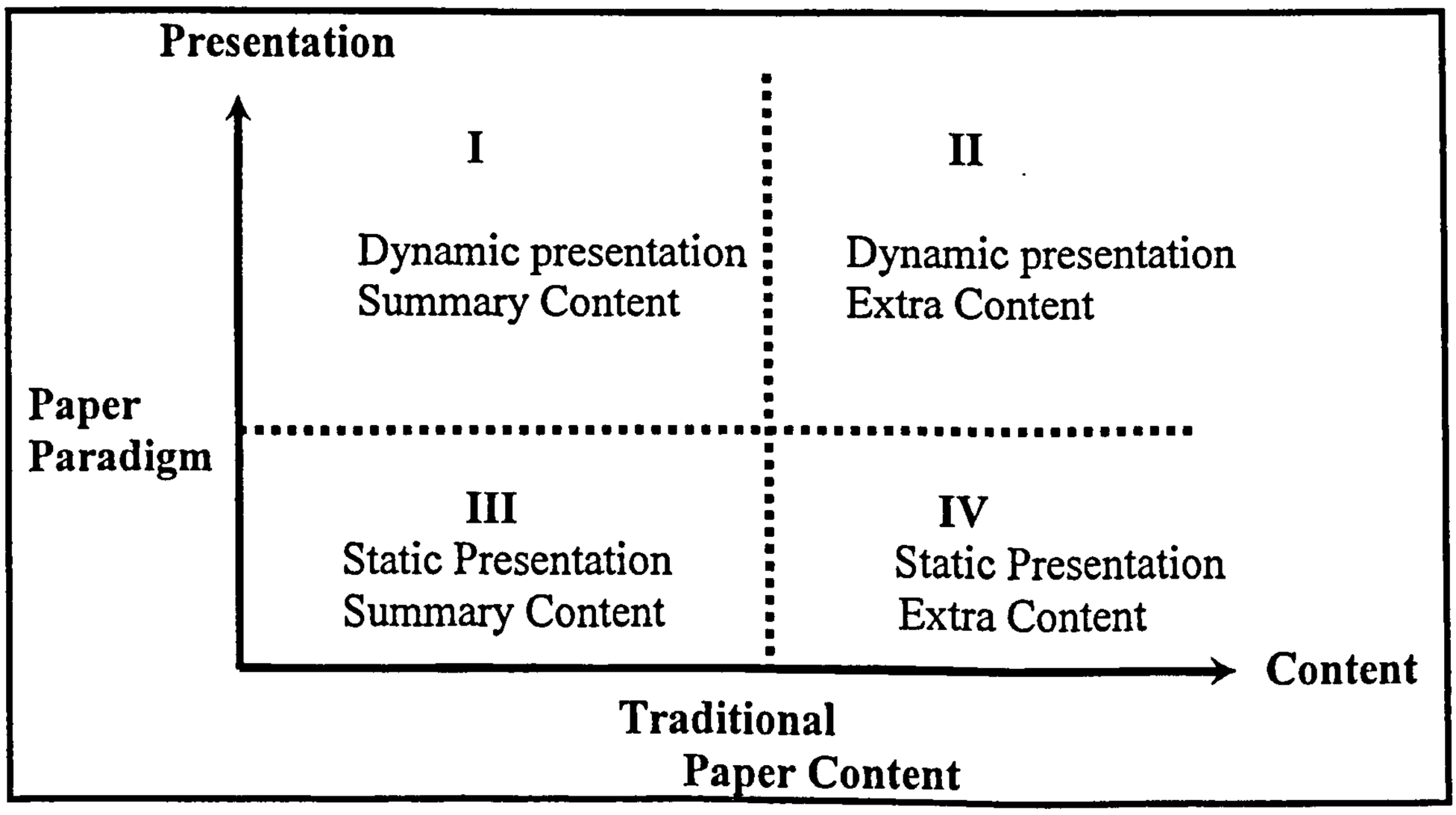
Stage three: companies take advantage of the Internet by providing information which cannot be disclosed cost-effectively in a printed format, and make use of new web technological tools such as RealAudio.

Based on these stages it can be argued that the usage of Internet financial reporting is an overtime development rather than an overnight event - *it is an evolutionary process*, as opposed to a revolutionary change, which reflects the debate between academics and companies in Jones & Xiao (2003) where the former supported the evolutionary process and the latter believed in the revolutionary characteristic, and which is confirmed by Xiao et al. (2002) who provided strong evidence for experts' belief in the evolutionary perspective.

3.2.1 The Basic Dimensions of Internet Financial Disclosure

The FASB (2000, pg. 30) provided the following framework to illustrate two basic dimensions of Internet financial reporting as follows:

Exhibit 2: Two Basic Dimensions of Internet Financial Reporting



Adapted from FASB (2000, pg.30)

This framework is based on two independent dimensions, *Presentation* axis and *Content* axis, representing two primary dimensions of Internet financial reporting. The FASB (2000) explained that within these dimensions the company website could

include all the content of the printed annual reports and the presentation formats of the company website allow dynamic forms of presentation technology that cannot be used in the paper paradigm, such as sound and video. With regard to presentation, in general, companies can provide information on their home pages by using either presentable and/or downloadable formats. The FASB (2000) summarised these formats as follows: portable document format (PDF): a file format for creating documents that are exact representations of the original printed documents in an electronic image. The PDF was written by Adobe Acrobat software and Adobe Acrobat Reader is required to view and print a PDF document; and Hyper Text Markup Language (HTML): this format is the common standard to present information on the Internet and create websites. In this context, Cook (1999), FASB (2000) and Allam & Lymer (2002) suggested that HTML and PDF are the most popular formats for the purposes of presenting the companies' financial information on the Internet. However, the FASB (2000) has summarised a list of relative advantages and disadvantages for HTML and PDF formats as shown in Exhibit 3:

Exhibit 3: A List of HTML and PDF Format's Advantages and Disadvantages

	Advantages	Disadvantages
HTML	Can be viewed directly in the browser – requires no plug-in	Browser may split tables and pages
	Is an open formatting standard	Document printed from browser will probably not look like original document
	Can easily hyperlink into and out of HTML pages	Can require significant work to convert original document to HTML document in terms of layout and design
PDF	When file is printed, it will look exactly like printed document on which it was based	Even though it prints well, because of differences in the aspect ratios of the screen versus printed page, it is difficult to read and navigate through PDF files on screen
	Very easy to create from original document	Requires Adobe Acrobat Reader plug-in that the user must locate, download and install
	Document cannot be inadvertently altered by users	Can hyperlink out of PDF files, but cannot hyperlink *into* specific points inside a PDF file
		Consists of very large files that are slow to download
		Information in PDF files is not indexed by search engines (for example, Alta Vista or Lycos)
		Plug-ins can be a security risk, since they execute automatically when user selects PDF file
		Reader is based on a proprietary format
		Reader is currently free, but may not be free forever

Source: (FASB, 2000, pg.22)

In addition Cook (1999) argued that using the HTML format for financial information provision on the website allows for hypertext links, which facilitate navigation within the home page and between sites rendering financial information more readable. Conversely, many companies present their annual reports in a downloadable PDF format. Such format allows for exact replication of the original printed version;

however data is not able to be imported into spreadsheets directly from HTML or PDF documents, which means that the user cannot process the data any further (Cook, 1999).

Furthermore, IASC (1999) and Allam & Lymer (2002) noted that Acrobat files are also relatively large, and such a file takes a long time to download before it can be viewed. Therefore some companies tend to break down the annual report into many PDF files that are smaller in size hence allowing users to download required information in minimum time. Also they found that companies used a variety of combinations of HTML and PDF formats.

A new generation of Internet presentation languages, eXtensible Markup Language (XML)[11] format, has come into use to facilitate presentation on the web because it has the advantages of both hyperlinking and the ability to manipulate data displayed on the desktop by importing it directly into local applications of the user (Cook, 1999). The major advantages of the next generation, XML, are related to the developments of eXtensible Business Reporting Language (XBRL), which permits easy exchange of information between the web's formats and provides rich research opportunities to find pages and specific financial data on the Internet (Debreceny & Gray, 2001; Beattie & Pratt, 2003).

Recently, the phenomenon of Internet financial disclosure has gained considerable attention, and has become an urgent investigation in the international financial disclosure research. Numbers of published and unpublished accounting studies have examined the two basic dimensions, *Presentation* and *Content*, of Internet financial reporting on the companies' website. The remainder of this chapter will review these prior empirical studies that concentrated on the Internet financial disclosure practices to identify the apparent gaps in these studies.

3.3 Prior Studies that Focused on Internet Financial Disclosure

The second main objective of the empirical investigation is to measure companies' Internet financial disclosure practices, and consequently to measure the general level of Internet disclosure on the part of Jordanian companies. This section will discuss the key prior empirical studies that focused on the Internet financial disclosure, as well as

[11] "the next generation from HTML" (Beattie & Pratt, 2003, pg.159).

empirical studies concentrating on the relationship between the level of Internet disclosure and company characteristics.

Due to the major developments of technological innovation and the emergence of network communication, new opportunities for research in the area of financial reporting have been created (Healy & Palepu, 2001). As one of these developments the Internet has gained importance in the area of financial reporting and research on Internet financial disclosure has increased (Lybaert, 2002). Therefore, there are a number of studies which attempted to evaluate companies' financial disclosure practices on the Internet. These studies were mainly conducted for developed countries, whereas the number of published papers on Internet financial reporting in developing countries is limited (Xiao et al., 2004). Furthermore, such research is not existent with respect to Jordan. Table 2 illustrates significant papers in this area which will be reviewed in this chapter in chronological order.

Table 2: Prior Empirical Studies of Internet Financial Disclosure

Year	Author(s)	Country(s)
1997	Lymer	UK,
1997	Lymer & Tallberg	Finland
1999	Heldin,	Sweden
1999	Gowthorpe & Amat	Spain
1999	Graven & Marston	UK
1999	Deller et al.	Germany, UK, & US
1999	Pirchegger & Wagenhofer	Austria
1999	Ashbaugh et al.	USA
1999	IASC Report	22 different countries in Europe, Asia-Pacific and North and South America
2000	FASB	USA
2000	Ponte et al.	Europe
2001	Ettredge et al.	USA
2002	Allam & Lymer	USA,UK,Canada,Australia, and Hong Kong
2002	Lybaert	Netherlands
2002	Bonson & Escobar	15 different countries in Europe
2002	Ettredge et al.	USA
2002	Debreceny et al.	World sample
2002	Haasbroek	South Africa
2003	Marston & Wu	Japan
2003	Oyelere et al.	New Zealand
2004	Lodhia et al.	Australia
2004	Marston & Polei	Germany
2004	Xiao et al.	China

Many of the studies listed in Table 2 have been analysed by Oyelere et al., (2003) and Marston & Polei (2004), in which they noted that accounting research on the Internet reporting can be classified into: firstly, descriptive studies in the form of survey describe the general overview of the current situation of the companies Internet reporting in single countries or cross-country comparisons (i.e. Lymer, 1997; Lymer & Tallberg, 1997; Deller et al., 1999; Gowthorpe & Amat, 1999; Hedlin, 1999; IASC, 1999; FASB, 2000; Ponte et al., 2000, Lodhia et al., 2004), and secondly, studies went one step further and examined the company characteristics as explanatory factors behind the differences between company Internet reporting (i.e. Graven & Marston, 1999; Pirchegger & Wagenhofer, 1999; Allam & Lymer, 2002; Ettredge et al., 2002; Marston & Polei, 2004; Xiao et al., 2004).

Lymer (1997) carried out a descriptive survey to show the extent to which the top 50 companies listed on London Stock Exchange, use the Internet for company reporting. He focused on the financial and non-financial stakeholder information. This study was conducted for two time periods: firstly end of January and early February 1997, and secondly June 1997. The findings of this research showed that 46 (92%) out of 50 companies had active websites, and most websites provided at least advertising material, contact address and other data about the company's activities. 52% of these companies published their accounts or reports on their websites in the first period compared with 60% in the second period. Additionally, 14% out of the first 52% provided full accounts, compared with 32% out of 60% providing full accounts in the second period. Summary accounts were provided by 12% out of 52%, compared with 22% out of 60%, and un-audited interim accounts were provided by 26% and 34% out of 52% and 60% respectively. With respect to effective use of the web by UK companies it was noted that there was an increase in the range of web facilities available at the sites, that there was an increase in the use of Adobe Acrobat formats for downloading data, and that there was an increase in the amount of un-audited data to be found on sites over the survey period.

Following the above study, Lymer & Tallberg (1997) carried out another descriptive survey to analyse the website usage of 72 companies listed on Helsinki Stock Exchange. The results of this survey showed that there were 65 (90.2%) out of 72 companies with usable websites. These companies ranged from 7 without any financial information, to 14 with few key ratios and numbers. Over 20 companies provided a summary of financial information, 16 companies published online full income statements and balance sheet only, 5 companies published full scanned financial statements, and 3 companies provided full financial statements in PDF format.

Hedlin (1999) conducted an online survey to show which of the earlier discussed three generations of Internet reporting Swedish companies had entered into. Hedlin (1999) analysed 60 Swedish companies' websites listed on Stockholm Stock Exchange (SSE) in September 1998. The survey showed that 99% out of 60 sampled companies had active websites, and 83% of these companies had financial reports online, mostly full annual reports, but some solely summaries of financial statements. Over 50% of these companies provided their reports in the form of the downloadable PDF. Generally,

it was concluded that Swedish companies listed on SSE were located in the second generation of website developments, and that big size companies made the most use of Internet technology.

Internet financial reporting in Spain was targeted by Gowthorpe & Amat (1999). 379 Spanish companies listed on Madrid Stock Exchange (MSE) in 1998 were examined, and only 61, 16%, out of these had accessible websites, of which 27 companies did not communicate any kind of financial or accounting information on their websites. Only 34 companies provided different types of financial information, of which 11 companies provided annual accounts in PDF, 4 companies provided such accounts in HTML format, 12 companies provided up-to-date quarterly information, 8 companies provided both up-to-date quarterly information and annual accounts, and only one company presented current share price on its homepage. Also there were 28 out these 61 companies offering two versions of their websites, both in English and Spanish language. The scholars indicated that industry type was the most significant factor for explaining the variation of using Internet reporting technologies among Spanish companies.

Craven & Marston (1999) measured empirically the level of Internet reporting by the largest 206 UK companies as listed by market capitalization in the *Financial Times*, on 22 January 1998. The relationship between Internet financial disclosure and two independent variables, company size (total assets employed, number of employees, turnover, and average market value) and industry type (divided into six dummy variables) was sought to be explained. The descriptive analysis showed that 153 out of 206 companies had websites, 109 out of these 153 companies disclosed financial information on their homepages, 67 out of these 109 companies disclosed detailed annual reports and the remaining 42 companies disclosed only parts or summaries of their annual reports. The remaining 44 out of 153 companies provided no financial or accounting information at all. The correlation coefficient, Kruskal-Wallist, showed that there was a significant, positive association between all the size variables and the usage of companies' websites. The result of Chi-square showed that there was no significant association between industry types and the usage of Internet reporting.

A comparison survey on the use of the Internet as a medium for investor relations in developed countries included the UK, Germany and the USA conducted in 1998 by Deller et al. (1999). The scholars established and applied a checklist containing 19 items on 300 listed companies, comprising the 100 largest companies listed on each relevant stock market. The findings of this survey showed that 95% of the US companies had a website, compared with 85% of the UK companies and 76% of German companies. In the USA 91% companies used the Internet for their investor relation activities compared with 72% and 71% in UK and Germany respectively. In the context of accounting information provided, U.S. companies offered the most data via the Internet, followed by the UK and lastly Germany. Presentation quality on the Internet was mixed: the UK made more use of the Hyperlinking tool than any other country, in the USA 35% of companies provided corporate reports in PDF format, 35% in the UK and 17% in Germany. Also 71% of companies in the USA used a search engine box, as opposed to only 33% in the UK and 42% in Germany.

Pirchegger & Wagenhofer (1999) analysed empirically Internet financial reporting usage by the 32 largest Austrian companies listed on Vienna Stock Exchange (VSE) in two different time periods (at the end of December 1997 and 1998), and the relationship thereof with 2 company characteristics, company size (annual sales) and companies' percentage of free float. Furthermore, these results were compared with the largest German DAX 30 companies. The search results for the largest Austrian companies' websites showed that there were 20 company websites in 1997 and 26 company websites in 1998. A criteria checklist was applied including four groups namely: content financial reporting, timeliness criteria, technology criteria, and user support criteria. The findings of this paper showed that there was variation among the companies in each year, for instance the highest and lowest mean level for user support criteria and for technology criteria respectively. Also it was noted that most companies improved their usage of the Internet from 1997 to 1998, and the descriptive analyses showed that on average there were similarities between Austrian and German companies in Internet usage. The regression analyses showed a positive significant association between the level of using the Internet in Austrian companies and both company size and percentage of free float, whereas such association was not found among German companies.

Ashbaugh et al. (1999) employed a sample of 290 companies operating in the food, manufacturing, mining and agriculture industries, as identified by the Association for Investment Management and Research (AIMR). The Internet was investigated regarding company websites between November 1997 and January 1998. The descriptive analysis showed that 87% of the sampled companies had a website. Also Ashbaugh et al. (1999) measured the relationship between the usage of Internet financial reporting and the following explanatory variables: company size (total assets), industry type and profitability (measured by market returns and return on total assets). Moreover, the descriptive analysis showed that, in general, companies with websites were larger and more profitable companies, while the regression analyses illustrated company size as the only significant variable affecting companies' Internet situation.

Lymer et al. prepared for the IASC a business report in 1999 (referred to as IASC, 1999). The empirical emphasis of this study was to assess the extent of annual reporting in its various forms. Further details of this specific survey will be provided in Debreceny et al. (2002) later in this Chapter.

Following the IASC, the staff members of the FASB carried out a research project titled electronic distribution of business reporting information in 1999 (referred to as FASB, 2000). A list was generated with 325 attributes divided into two basic groups: (1) attributes related to a company's general website (for example, the company's home page) and (2) attributes related to investor relations. The entire list was applied to 100 sampled companies of the Fortune 500 US companies of January 30 1998. The descriptive statistics showed that 99 out of the 100 companies had websites. 93 out of these included some form of investor relations/financial information component. In terms of general web attributes, the findings showed that 100 % of the websites had some form of graphics, varying from simple, monochromatic logos to complex image maps, 88% had tables of contents, 64% had search boxes to help locate specific information, 21% offered alternative languages to English, nearly 47% were involved in electronic commerce (selling goods and services online), 67% had a link from their home page directly to the investor relations page, 22% had a direct link from their home page to the latest annual report and 27% included stock quotes on their home pages.

Furthermore, with regard to investor relations and financial reporting, the findings showed that 93 out of the 99 companies included some form of investor relations or financial and business reporting websites, 94% used graphics, 4% used sound, and 2% used video. For subsequent contact: 56% provided e-mail addresses, 62% provided phone numbers, 54% included postal addresses, 67% included press releases, 57% showed the latest stock prices, and 57% included quarterly reports. As for the financial reporting components, the most popular item was the chairman's message to the shareholders, which was included on 80% of those sites, followed closely by 78% including financial highlights or summaries, and 73% included the listing of the board of directors and officers. In terms of financial statements, 74% included full versions as the printed annual reports, and 63% included the notes to the financial statements.

The financial content of websites by leading European companies was examined by Ponte et al. (2000). The survey focused on the companies of the Dow Jones Eurostoxx 50 index as of November 1999. It was found that 100% of the sampled companies had active websites and all of them supplied full annual accounts. 90% of the companies provided semi-annual un-audited reports, 62% provided a five-year accounts summary and 38% included financial ratios. There were 20 companies disclosing environmental information, 40 companies provided information on strategy, but only 2 companies offered information about intellectual capital. Conversely, almost all of the sites (94%) provided press releases, 21 companies (42%) offered mailing lists and 84% of the companies provided news.

Marston & Wu (2000) carried out a survey examining Internet financial reporting by the top 99 listed Japanese companies in 1998, and they examined whether those companies with a web site provided an English version. The survey showed that 91 (92%) companies had accessible websites on the Internet, and out of these there were 78 companies with an English version website. Also the scholars constructed and employed a disclosure checklist, based on 10 annual report items, on 78 companies to measure their level of disclosure. The association between the level of Internet disclosure and three company characteristics, company size (capital employed and turnover), profitability (profit and profit as a percentage of capital employed) and industry type, was examined. The findings of this study showed that Internet financial reporting was well established among leading Japanese companies at the time of the survey. Out of 78

companies 68 (69%) disclosed financial information on their web site, out of which 11 presented only highlights and/or summary information whereas the remaining 57 presented more detailed information including at least a balance sheet and profit and loss account. The Spearman's rho and Kruskal-Wallis tests showed that there was some evidence of an association between the level of Internet disclosure and both company size and industry type, but not with profitability. Also the analysis showed that there was no significant association between these characteristics and company websites with an English version.

Using 490 sampled companies drawn from AIMR, Ettredge et al. (2001) investigated Internet financial disclosure practices by evaluating and comparing the level of disclosure of these company websites. The scholars developed and employed a checklist based on 17 items, both accounting and non-accounting financial items, on 89% (402) of these companies as they had websites. The results showed that on average around 38% of accounting data items and 30% of the other financial data items were presented. Moreover, the frequency findings showed that only 45% of the sampled companies provided a complete annual report. The most common accounting items were quarterly reports (54%). The least often presented data item was recent accounting data (such as monthly sales) at only 3%, while financial news was the most common of all items at 80%, and links to stock data were also found more than any accounting data at 57%. Finally the speech by Internet reporting directors was the least disclosed item of non-accounting information at 9%.

Updating the IASC (1999) and FASB (2000) investigations, Allam & Lymer (2002) conducted a wide empirical investigation to measure the level of Internet reporting by the largest 50 companies selected from each of: the USA, the UK, Canada, Australia, and HK at the end of 2001 and early 2002. They developed an un-weighted disclosure index based on 36 items, most of which were collected from FASB and IASC studies, including items of presenting format and annual report elements. Generally, the findings of this study showed that 99% of the sampled companies had websites. The results showed that the US, the UK and Canadian companies were the leaders with respect to Internet reporting, followed by Australian companies with few differences, and finally HK with a considerable gap in both technological and content matters. The association and regression analysis showed that there was variation in the level of

Internet reporting among the five countries. At company level there were also significant differences among companies across countries, except the US and the UK where there were no significant differences. Finally, Allam & Lymer (2002) found that there was no relationship between the size of the companies and the level of Internet reporting.

Lybaert (2002) performed an empirical study in July 2000 to examine the level of Internet financial reporting by Dutch companies listed on Amsterdam Stock Exchange (AmSE). Initially the sampled companies included 188 companies, representing the entirety of companies listed on AmSE. Out of these 152 companies were included in the final sampled companies. Lybaert (2000) developed and employed a list containing 44 questions divided into four groups of assessment criteria: the first group representing the content of published financial information, the second group representing measurement of financial information, its timeliness and its availability, the third group the level of technology features of company websites, and the fourth group the user support. The results of the vertical analysis (items by items) of the content criteria showed that 66 companies disclosed only annual reports as a whole, 53 companies disclosed the whole annual report however disclosed additional parts separately, the remaining chose to disclose items separately. Related to investors' information, press releases and e-mail addresses were the only items appearing on over 90% of the sites. Concerning timeliness the results showed that investors could not find the latest information on the websites and most of the companies were not inclined to present interim information. Furthermore, companies did not use the web's abilities to update data. The analysis of the technology criteria showed that companies did not use the website technology to present their information very well.

Bonson & Escobar (2002) examined the level of Internet financial information provided by leading companies in the following European Union countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Spain, Sweden and the UK. They also examined the impact of several factors (size, industrial sector, and country culture such as were sought to be identified) on Internet reporting. An un-weighted disclosure index was developed based on 23 voluntary items collected from prior studies, which was then applied to 20 companies from each of the above European Union countries in July and August 2001.

The results showed that European countries' companies provided a considerable level of voluntary information on their websites, and the empirical analysis showed that 73% of the sampled companies disclosed the cash flow statement, either in HTML or PDF format, and 86% of the companies disclosed the balance sheet and the income statement as basis of digital reporting. Also 77% of the companies provided an audit report, 71% provided interim financial statements, 69% disclosed historical information, 82% of the companies provided press releases and 58% provided mailing lists. The Kruskal-Wallis test proved that there was a significant relationship between industry type, country culture, company size and the level of information provided via the Internet.

Ettredge et al. (2002) examined the level of mandatory and voluntary financial information provided on the Internet. Incentive theory of voluntarily disclosing information was used to examine several company characteristics - company size (market value of common equity), performance (the company's annual stock return for year 1997), company's access to the capital markets (company's need for external equity capital), information asymmetry (measured by the correlation between annual returns and earnings), and the overall quality of companies' reporting practices (measured as the companies total score in AIMR in 1997). The initial sample consisted of 259 companies identified by AIMR in 1997, and 220 companies were included in the final sample, out of which 193 companies had websites. The scholars developed a checklist including 4 required items and 12 disclosed voluntarily. The findings showed that on average the percentage of the required filing items found on companies' websites was higher than the voluntary items. Three of four required items were disclosed by over 50% of the companies, and only three out of 12 voluntary items were disclosed by over 50% of the companies. The most common voluntary items were financial news releases, which were found on 81% of companies' websites, and stock price links by 50% of companies' websites. In the case of required items the most common were quarterly reports disclosed by 57% and annual reports by 53%. Furthermore, the regression results showed that the extent of required items is positively associated only with company size and the proxy measure for information asymmetry, while the association with voluntary disclosure was found significant with company size, information asymmetry, demand for external capital and traditional disclosure efforts. Finally, Ettredge et al. (2002) found that the incentives motivating traditional voluntary disclosure also explain Internet voluntary information.

Debreceny et al. (2002) sought to analyse the content and presentation of Internet financial disclosure of 660 large companies in 22 countries in 1999, and to identify the company characteristics [namely: company size (market capitalization), foreign listing, US listing companies, industry (technological industry), growth prospects and intangibles, market risk (beta)], and the environmental factors that determine the level of Internet financial disclosure (the level of required financial disclosure in the country, and the Internet penetration in the country). They employed their own measurement scheme for Internet presentation and contents. The results showed that 95 out of 660 companies did not have any websites and 155 companies were not engaged in Internet financial reporting. The lowest level of disclosure was found by the emerging and Latin groups and the highest level by the Nordic and Anglo-American. The regression analyses indicated that company size, listing status and technology industry were significantly associated with the level of Internet disclosure.

Haasbroek, (2002) studied the situation at that time and the extent of the Internet as communication mechanism for disclosing annual reports in the 300 largest listed companies in South Africa in 2001. It was established whether a company website existed and, if so, whether the full annual report was available and electronic format used. The results of this study showed that 227 (75,6%) of the top 300 companies had a website and 179 (59,6%) companies had digital annual reports. 131 (43,6%) had their annual reports in PDF format and 58 (19,3%) in HTML. Only 38 companies (12,6%) presented annual reports in HTML and PDF format on the Internet. This study also examined the relationship between Internet annual reports and two company characteristic, profitability and industry type. The results indicated that there was a significant association between industry sector and profitable companies and the Internet annual reports in South Africa.

Oyelere et al. (2003) examined the determinants of the level of Internet voluntary disclosure on New Zealand companies' websites by examining the association with several company characteristics, namely: company size (market capitalization and total assets), profitability (return on equity and on total assets), liquidity (cash assets by total assets), internationalization, industry type, leverage (debt to equity ratio), and spread of shareholding. The empirical examination of this study covered 229 companies listed on the New Zealand Stock Exchange at the end of 1998. The 229 sampled companies were

classified as follows: 106 companies without websites, 30 companies with websites but not engaging in Internet reporting and 90 companies engaging in Internet reporting. These 90 companies were divided into three categories: 34 companies providing comprehensive annual financial statements, 16 companies providing financial highlights only, and 40 companies providing both comprehensive financial statements and financial highlights. Furthermore, websites' electronic features were examined, and 37 out of 90 companies provided financial information in PDF format, 31 companies used HTML format, 18 companies used both formats, and the remaining companies used other formats, such as Microsoft Words and Excel spreadsheets. The univariate analysis showed that companies engaged in Internet reporting were generally larger, more liquid, more internationalized and more profitable, and had a larger spread of ownership than other companies. Some of these findings were supported by a multivariate logistic regression analysis, which indicated that Internet reporting is highly dependent on company size, liquidity and ownership spread, whereas there was no significant association between profitability, internationalization, industry type and leverage.

Also Lodhia et al. (2004) carried out a descriptive study to provide an overview of Internet financial disclosure by Australian companies. They employed Allam & Lymer's (2002) benchmark on the top 50 Australian companies' websites between September and November 2001. Generally, they found that Australian companies use the Internet for disclosing the printed mandatory requirements with some voluntary disclosure. Also they found that 50% of the sampled companies used some of the Internet facilities such as site map, search engine, email addresses and web-casting facilities.

Marston & Polei (2004) examined the use of the Internet for financial disclosure and investor related information by German companies in the years 2000 and 2003. They assessed the differences between Internet financial disclosure and company characteristics, namely company size (market capitalization), profitability (return on equity), ownership structure (percentage of free float), systematic risk (beta), and foreign listing status. The initial company sample included 100 companies listed on Frankfurt Stock Exchange to provide a general overview, and was then reduced to 50 companies' websites. A weighted checklist based on 53 criteria of content and presentation items was developed to evaluate these 50 websites in 2000, and due to technological developments they added 18 items to evaluate these 50 websites in 2003

by using the dichotomous approach. The descriptive analysis showed that German companies used the Internet considerably, only one company was without any financial information on the Internet, and 89% of the sampled companies provided full annual reports on their websites. Also the results indicated that, on average, the overall level of Internet financial disclosure, i.e. content and presentation, rose from 55% in 2000 to 68% in 2003, while the quantity of content items was higher than the quantity of presentation items in both years. The most common disclosed items of the financial information were the balance sheet and the income statements. The results of the normal score regression analysis showed that company size and percentage of free float contributed to explain the variation in the overall disclosure in 2000, while for 2003 the results showed that the size and foreign listing were significant, and the systematic risk and profitability were insignificant in both years.

Xiao et al. (2004) undertook this empirical study for China as one of the developing economies. The level of both required and voluntary disclosure of Internet reporting by Chinese listed companies was examined and the relationship between the level of such disclosure and several companies' characteristics was assessed, namely share ownership (divided into state shares that held either by government agencies or state-owned corporations, and legal person ownership), independent directors, auditor type, foreign listing or share ownership, industry type, and the influence of the China Securities Regulation Commission (CSRC). An un-weighted disclosure index was developed based on 82 items collected from prior studies, and it encompassed 57 items of disclosure content including 39 required and 18 non-required items by CSRC, and 25 items about presentation format. The sampled companies included 300 Chinese companies listed either on Shanghai or Shenzhen Stock Exchange on December 31, 2001. Of these 203 of the largest listed Chinese companies had accessible websites, and 97 companies either had an inaccessible website or were not engaged at all in Internet disclosure. Xiao et al. (2004) applied their disclosure index by using the dichotomous approach, and they scored the overall disclosure score "0" for companies with an inaccessible or without any Internet disclosure.

The findings of the descriptive analysis showed that 144 (71%) of these companies disclosed financial information on the Internet, 96 (47.3%) had websites in the English language, 35 companies' financial statements were audited by the big-5 auditors, and

there were 14 companies from the IT industry. The average disclosure score for the 57 content items, the 25 presentation format items, the 39 required items and 18 non-required items were 21.43, 4.17, 19.44 and 2.00, respectively. The multivariate analysis provided support for managerial incentive theories in the Chinese context, for instance there was a significant, positive association between Internet disclosure and the following variables: foreign ownership, Big-5 international auditor, legal person ownership, proportion of independent directors and IT industry, while there was a negative association with government ownership. Also this study provided evidence of a significant relationship between mandatory disclosure requirements and Internet disclosure. There was a negative impact on the level of Internet reporting from state ownership.

3.4 Summary and Evaluation of the Above Studies

This Chapter provided a general overview of issues related to Internet financial disclosure as a new communication tool. As seen in this Chapter the Internet allows for more interaction among users and providers of companies' information. Also, it has the ability to integrate and converge with other technologies, such as databases, wireless communication and multimedia. This offers a chance to change the traditional way in which financial information is presented from the printed format to an electronic format. It is a relatively new development however interest is growing rapidly because it appears to be able to provide a stable platform for global dissemination of financial and non-financial information (IASC, 1999).

Also this chapter summarised the key prior empirical studies that measured the level of Internet financial disclosure and other studies concentrated on different aspects of Internet financial disclosure, such as the relationship between the level of Internet disclosure and company characteristics. Also the prior studies that examined the relationship between printed and Internet financial disclosure (i.e. Ettredge et al., 2002; Xiao et al., 2004) were reviewed.

However, there was variation in the level of using the Internet technology for disclosing financial reporting, among companies within an individual country and among countries. Also there was inconsistency in the relationship between

independent variables and dependent variables in these studies. This variation may be due to the differences in the features of the prior studies. As seen above most of the Internet prior studies were undertaken in 1997, 1998 and 1999. Although there is a two year time difference, the variation among these studies can be explained by the different features of the prior studies, such as the differences in their research settings' environment, i.e. there are countries with a well advanced technological environment which can be proven by the differences in the number of online companies included in the prior studies samples. Also the differences in the number of attributes that formed the basis of the disclosure benchmarks as the dependent variable the type and number of companies' characteristics were examined.

The prior investigations on Internet reporting employed a disclosure checklist, disclosure index, as a research instrument to evaluate the extent of the Internet usage for financial disclosure. These checklists were constructed by choosing different types and number of content items. Also items to measure the level of how financial reporting items are presented on the Internet were included. For instance, Allam & Lymer (2002) and Lodhia et al. (2004) used checklists which included 24 financial reporting items and 12 general items related to companies' presentation formats, the availabilities of information items and the accessibility to these items. Also, Xiao et al. (2004) built an index with 57 content and 25 presentation items.

Moreover, all prior studies employed un-weighted disclosure indices by using the dichotomous approach with the exception of Debreceny et al. (2002). The number of items that formed these indices ranged from 117 items by Lymer et al. (1999), 82 items by Xiao et al. (2004), 60 items by Pirchegger & Wagenhofer (1999), to 44 items developed by Lybaert (2002), 36 items as prepared by Allam & Lymer (2002), and 17 and 12 items as constructed by Ettredge et al. (2001& 2002) respectively.

Also there were differences in the number of company characteristics examined in these studies to explain the variation in Internet financial disclosure. The range went from one company characteristic, company size, by Allam & Lymer (2002), to seven company characteristics by Xiao et al. (2004). However, company size was the most frequent variable examined in prior studies, and it appears in the most studies as a significant explanatory variable. In addition the sampled companies ranged from 660

companies by Debreceny et al. (2002) to 50 companies by Bonsón et al. (2000) and Lodhia et al. (2004).

Moreover, as seen in Chapter 2, there are several disclosure theories which have been used in the prior studies of printed financial disclosure to explain why some companies may disclose more voluntary information in their printed annual reports than others. Although these theories, such as agency theory, political cost theory, signalling theory and costs benefits analysis, have been used to explain the reasons why some companies may disclose more Internet financial disclosure than others by referring to several company characteristics, see for instance Craven & Marston (1999), Debreceny et al. (2002), Ettredge et al. (2002), Oyelere et al. (2003), Marston & Polei (2004) and Xiao et al. (2004), these researchers tend to use theoretical ideas weakly and as a side issue than as the main focus of their studies. In this vein, Xiao et al. (2004) argued that the problem in the prior findings is that they provide only a poor level of theoretical background for their analysis. This lack of theoretical background has created a gap in the Internet financial reporting background and guidance in accounting research, which have affected the results of the prior studies and created variation among them. Furthermore, Xiao et al. (2002) stressed the importance and value of future research on a more theory-guided basis, as for instance it offers the opportunity of integrating theory and empirical results. Based on this argument, a study integrating Internet financial disclosure in a theoretical framework as a foundation is worthwhile.

Internet financial reporting is a new method of companies' financial communication, and creates a rich new area for financial disclosure research. Most of the prior studies were undertaken for developed countries, specifically European countries and the USA, whilst the number of published papers in this area is very limited for developing countries and such research is not yet existent with respect to Jordan. Thus, such study in Jordan as one of the developing countries with new technological developments seems justified.

Chapter Four

A Theoretical Framework of Financial Disclosure

4.1 Introduction

As part of the discussion of financial disclosure attention needs to be drawn to its theoretical foundation. Despite the fact that there is a large amount of accounting research in the area of financial disclosure, there is not any generally agreed upon disclosure theory which explains or predicts the financial disclosure phenomenon as a whole (see Verrecchia, 2001). In the literature of financial reporting several financial disclosure theories exist, of which each explains different sub-points of financial disclosure. These include the agency problem, information asymmetry, and factors behind financial disclosure differences among countries, such as environmental, technological and non - technological factors, the need for disclosure regulations, the reasons behind managers' incentives of disclosure, and why there is variation in the level of financial disclosure. Moreover, the prior empirical studies in the preceding chapter discussed mainly five theories, namely: agency theory, signalling theory, capital need theory, political cost theory, and the cost-benefit analysis, to provide a base for their research objectives but it appears that none of them suggested or agreed upon one theoretical framework for financial disclosure which demonstrates the logical relation of these theories in a coherent way. However, in a bid to establish a comprehensive base, Healy & Palepu (2001) provided an initial theoretical platform for future voluntary financial disclosure research. At the heart of this platform lie information asymmetry and the agency problem as the main issues to be considered when undertaking voluntary financial disclosure research.

The current chapter is to be seen within this context as it sets out to develop a theoretical framework for financial disclosure, both mandatory and voluntary, by encompassing existing financial disclosure theories in one scope. Following on from Healy & Palepu's (2001) work, information asymmetry and the agency problem provide a fundamental aspect of this theoretical model. Additionally, the latter has been augmented by further theories associated with financial disclosure.

Also, this chapter will show the developments of Internet financial disclosure as a new way of financial information provision by companies and as a new financial information communication medium. The following will look at the framework and its components in more detail.

4.2 A Theoretical Framework of Financial Disclosure

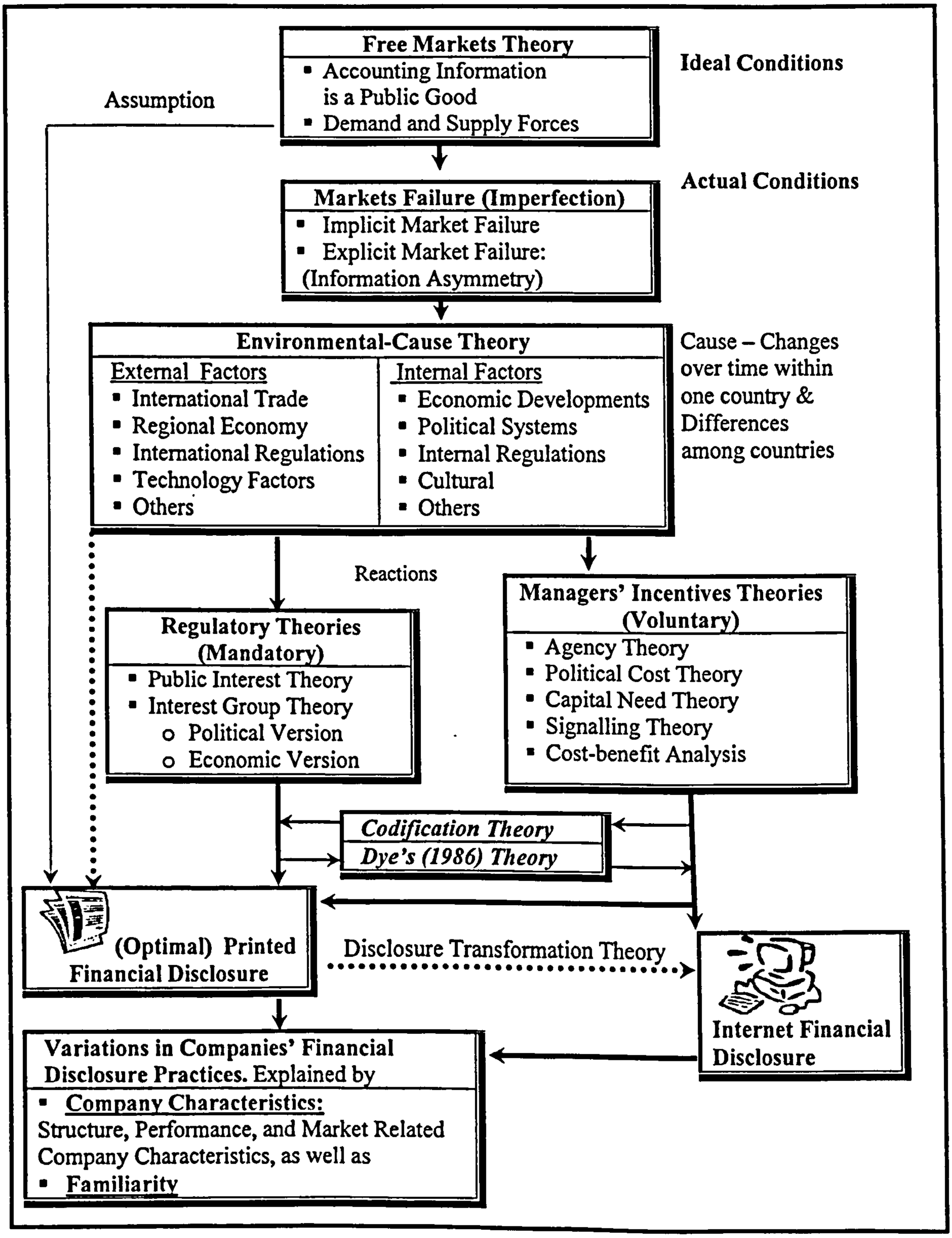
As can be seen in Exhibit 4, the framework first serves to integrate theories explaining financial disclosure under the assumption of the ideal conditions of the financial market in which demand and supply forces of financial information are considered as an efficient tool to determine the optimal level of financial information in order to allocate economic resources (Taylor & Turley, 1986; Riahi-Belkaoui, 2004). The framework then serves to integrate theories that recognise actual features of the financial market - market failure, i.e. the imperfect balance of demand and supply (Healy & Palepu, 2001), and information asymmetry, i.e. the inefficient and unequal distribution of information (Cooper & Keim, 1983). These provide an explanation for the existence of financial reporting regulations and managerial incentives which control and determine the maximum level of financial information. Within this framework information asymmetry is regarded as a root cause, and reporting regulations as well as managerial incentives are resulting reactions.

Environmental factors, as illustrated by Environmental-Cause Theory, determine the context of the financial reporting environment, and consequently are seen to instigate changes in financial disclosure practice within one country over time and serve to explain differences among countries. Also it will be illustrated how financial disclosure practice developed due to new technological innovations.

Furthermore, in a bid to integrate theories of mandatory and voluntary disclosure practices, two explanatory theories, codification theory and Dye's (1986) theory, will be included in the framework and discussed. The former refers to the argument that new mandatory disclosure requirements may indeed represent codified best practice, i.e. embody former voluntary disclosure. The latter implies Dye's (1986) argument of a positive relationship between increasing mandatory requirements and a subsequent increase in voluntary disclosure. In the same vein, a positive relationship between

printed financial disclosure practices and Internet usage for disclosing financial information will be shown in the form of disclosure transformation theory. Finally, this framework comprises the fundamental factors used to explain the variation in the level of financial disclosure practices, which consist of several well-discussed company characteristics and as a newly developed variable, company familiarity.

Exhibit 4: A Theoretical Framework of Financial Disclosure



It is believed that this framework provides useful insights into the existing disclosure theories, which may explain the prior empirical results being inconsistent with the arguments of these theories, as discussed in the literature review, and its rationale in the author's opinion is that there is a great advantage to encompass the issues related to financial disclosure within one scope. This framework seeks to simplify the complex relationships between different notions of the financial disclosure phenomenon, so as to offer future researchers a methodical approach to understand in depth each angle, and possible existing lacks, of comprehensive agreed theory. The rest of this chapter seeks to illustrate the main scope of the framework and integrate its theories in one scope following the structure of Exhibit 4.

4.2.1 Free Markets Theory

The Free Markets Theory (FMT) is based on two fundamental concepts, firstly capital market functions under ideal conditions and secondly financial information as a public good (Cooper & Keim, 1983). The notion of the efficient market is based on the market capability of allocating the resources in effective and efficient ways through a series of decentralised decisions in the context of marginal values relevant to the substitution of goods and services in provision and utilisation (Taylor & Turley, 1986).

The primary role of the capital market was explained by Fama (1970) as an allocation of ownership of the economy's capital stock. In general terms, Fama, (1970, & 1991), Bromwich (1992), and Adelegan (2003) defined an efficient market as a market in which prices fully reflect available information. Capital market functions under ideal conditions comprise that security prices immediately reflect information availability. Fama (1970) rationalised the concept of efficient capital markets as security prices at any time 'fully reflecting' all available information and prices providing accurate signals for resource allocation, so companies can make production-investment decisions and investors can choose among the securities that represent ownership of companies' activities.

In the context of the second concept, financial information being a public good, Riahi-Belkaoui (2004) argued that the basic assumption of FMT is that accounting financial information is an economic public good, the same as other services and goods in the market. The essence of this concept is that the provision of information to a single

user is equally and costlessly available to another user (Cooper & Keim, 1983). Also the consumption by one user will not destroy its value for use by another user (Scott, 2003). Therefore, the use of financial information in the annual reports by one investor will not eliminate the information usefulness to another investor.

Under the ideal financial market conditions, financial reporting is the source of accounting information, and by considering the users of accounting information as the demand force and companies as the supply force, the forces of demand and supply play a major role in determining the quantity of financial information produced by a company to meet demand at a level consistent with the equation of marginal costs and benefits (Cooper & Keim, 1983; Bromwich, 1992; Riahi- Belkaoui, 2004). It is assumed that a large number of rational users, who have equal opportunities to get the same information at the same time at the same cost, interact in a properly working securities market, and that there is not any governmental influence on the quantity of accounting information available in the market. Therefore, the typical accounting reaction to these ideal conditions will be providing an optimal level of accounting information disclosed at an optimal price to meet and satisfy users' needs (Scott, 2003; Riahi- Belkaoui, 2004).

Exhibit 4 illustrates a direct link between market efficiency and the optimal level of financial disclosure, which proves that in a complete and perfect market situation quantity of accounting information is subject to users' needs and subject to managers' incentives to meet these needs.

The abovementioned conditions are applicable to the ivory tower, the perfect and complete world but are inapplicable to the world's actual conditions. In this context, Cooper & Keim (1983), Taylor & Turley (1986) and Riahi- Belkaoui (2004) argued that the ideal conditions of the unregulated accounting information market are not met when the achievement of Pareto efficient resources allocation fails. A complex situation is created for demand and supply forces to allocate the resources in effective and efficient ways through the market price system, which is referred to as market failure. In other words market forces alone fail to meet all the users' needs because the market is inadequate to control and organise the information demanding and supplying process. In the above Exhibit 4, there is a direct link between market efficiency under ideal conditions and market failure under actual conditions.

4.2.2 Market Failure

As discussed unregulated markets fail to produce efficient allocation of resources. In this context, Riahi- Belkaoui (2004) argued that there is implicit and explicit market failure. The former focuses on at least one of the following claims that present defects of the accounting information market: Firstly, the claim of accountants' monopolistic control over management and accounting information, which subsequently affects information provision by company managers, and as a result the market cannot distinguish between the real and accounting effect which causes investors to decide on the wrong company. Secondly, the hypothesis of naïve investors, which claims that there are investors in the market who are unfamiliar with some of the complex accounting techniques and transformations, therefore may be fooled by use of different techniques in their decisions and choices in the market. Thirdly, the claim of investor failure where, under certain conditions, the decision-making processes change in response to a change in the underlying accounting methods that provide them with the data, as results of *functional fixation*. Riahi- Belkaoui (2004) added that the nature of accounting relies on several evaluation bases and allocation procedures, which may cause meaningless or misleading numbers. Also the flexibility of selected accounting methods or techniques to report particular accounting events among companies leading to a lower level of comparability, he referred to as diversity of procedures. The management choice to use one accounting method lacks objectivity, and results in incomparable output (Riahi- Belkaoui, 2004).

Explicit market failure is assumed to happen in the market of accounting information when either the quality or the quantity of accounting information produced differs from the private cost and benefits of that information, in which the market solution results in a non-Pareto optimal allocation of accounting information (Riahi-Belkaoui, 2004). Furthermore, there are two main sources of explicit market failure, the public good and information asymmetry problems (Cooper & Keim (1983).

The public good problem encompasses the joint consumption problem, externalities problem and inability to exclude free riders or non-purchasers (Cooper & Keim, 1983; Taylor & Turley, 1986; Scott, 2003; Riahi- Belkaoui, 2004). In this context Xiao et al. (1996) argued that it is impossible to treat financial information as a public good or as a commodity with exchangeable value because financial information as a

public good is a characteristic not well applicable in practice. Also financial information is proprietary or private before it is disclosed, however becomes available for free to the user after its disclosure; furthermore there is no established economic measure for information, and it is not possible to develop a practical price system. This problem is used to explain the occurrence of market failure in the essence of that financial information not being equally accessible in the capital market as some have to pay for information to cover their need and others obtain the information without paying the cost of such information. They may do so by observing the behaviour of those who pay for information, and this process is likely to generate imperfect information for those obtaining the information indirectly. Thus the price system in the capital market cannot function properly because of those free riders in the market (Cooper & Keim, 1983; Taylor & Turley, 1986).

The information asymmetry problem is based on the fact that some parties undertaking business transactions may have more information than other parties undertaking the same transactions (Cooper & Keim (1983). Information asymmetry occurs out of differences and clashing incentives of providers and investors (Healy & Palepu, 2001) in the form of a relationship between better informed, the former, and less informed, the latter (Fields et al., 2001). Two major parts are included: the first is adverse selection, which refers to insiders such as a company manager and employees, having more information about the company's current situation and its future plan than interested outsiders (Akerlof, 1970). The second is moral hazard, which is related to the problem that arises from the separation of ownership and control of the public shareholder companies, and how bondholders will manage to measure managerial performance (Cooper & Keim, 1983).

The proposed framework, following Healy & Palepu (2001), concentrates on explicit market failure, and at the heart of it lies information asymmetry as the main issue, as has been considered by prior scholars when undertaking financial disclosure research. Information asymmetry is regarded to cause a twofold accountants' reaction, as can be seen in the above Exhibit 4, in a bid to reduce this problem: the first being regulatory theory and the second managers' incentive theories. In this context Inchausti (1997, pg. 45) said that *"Accounting information is subject to two different influences: market pressures and pressure from regulatory bodies"*. Also Foster (1986) added that

financial reporting is determined by the cost of financial information. This suggests that the reaction of introducing accounting regulation results from a market imperfection regarding accounting information to ensure equitable and efficient production and dissemination of companies' financial information (Cooper & Keim, 1983). In the case of a managerial incentives' reaction, managers choose to apply more informative techniques in order to reduce information asymmetry among the users of accounting information (Bartov & Bodnar, 1996). These accountants' reactions shall be discussed in due course.

However, beforehand it is necessary to explain a variety of factors determining the above pathways in accounting systems and influencing the developments of financial reporting systems and practice in countries around the world by referring to the main factors impacting on accounting systems and practice in a country over time. These factors are analysed in the literature within the notion of Environmental-Cause Theory (Cooke & Wallace, 1990) by several scholars (Gray, 1988; Cooke & Wallace, 1990; Roberts et al, 1998; Nobes, 1998; Radebaugh & Gray, 2002). With particular reference to the Internet new technological factors (Xiao et al., 2002) will be considered in the context of Environmental-Cause Theory.

4.2.3 Environmental-Cause Theory (ECT)

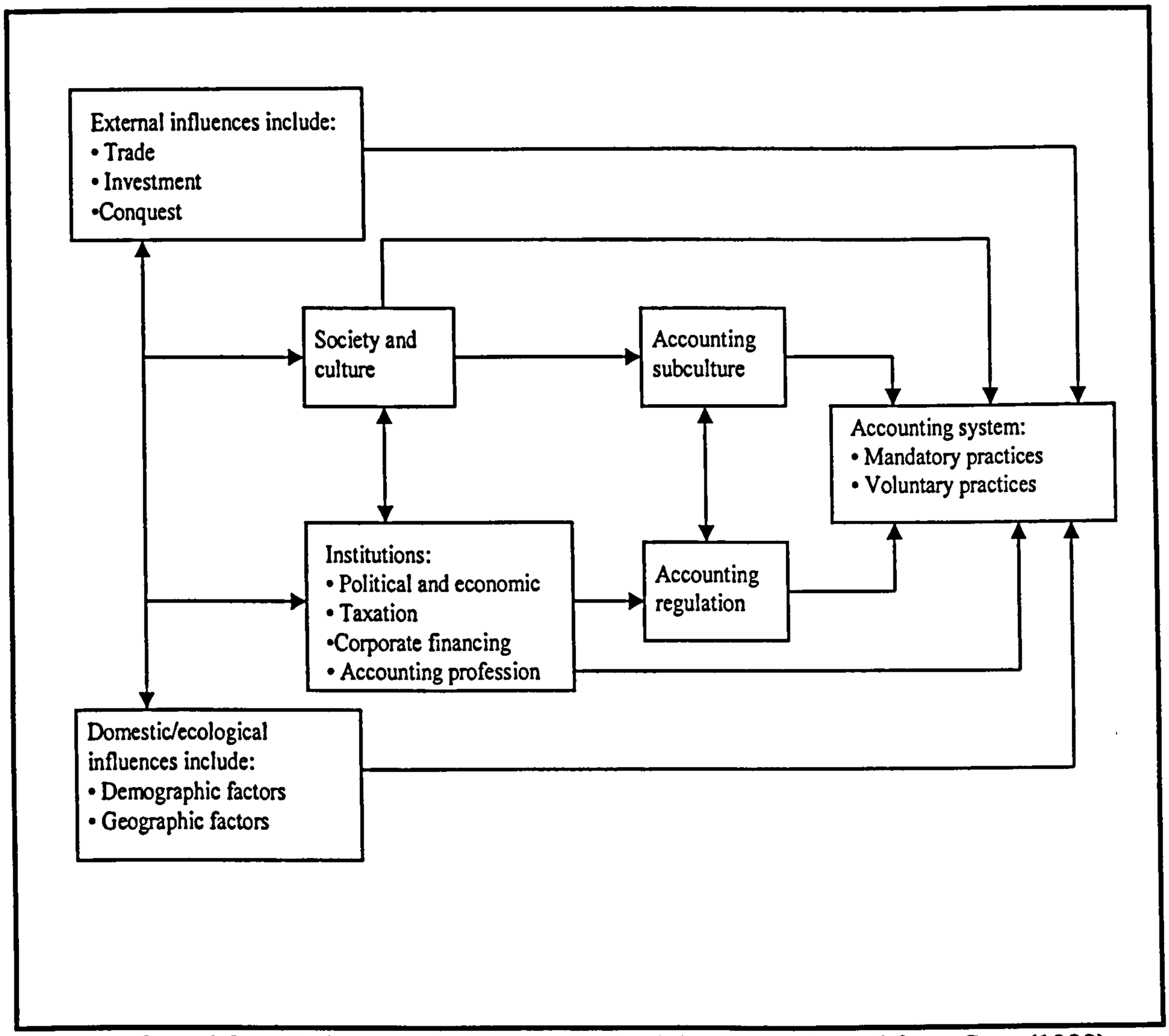
Cooke & Wallace (1990, pg. 79) argued that *"Much of the International accounting literature assumes that accounting and financial reporting in a country is a function of its environment."* In this context, many studies have sought to explain the environmental and the technological factors that may have impacted on the developments of financial disclosure in a country (Gray, 1988; Cooke & Wallace, 1990; Xiao et al., 1996; Nobes, 1998; Roberts et al., 1998; Radebaugh & Gray, 2002). Financial disclosure and accounting information practices are subject to a variety of environmental and technological factors such as e.g. social, economic, culture, political, regulation, international trade and new technology developments, such as digital communication, Internet, mobile phones and other computer software technological developments (Xiao et al., 1996; Radebaugh & Gray, 2002; Xiao et al., 2002).

Cooke & Wallace (1990) combined several of these factors in ECT to explain the relationship between disclosure practices and environmental factors. Curuk (1999), argued that: "*accounting and financial reporting in a country are a function of inherent national characteristics- internal (to the country) environmental factors- (e.g. stage of economic development; legal rules; political system; economic system; level of education; financial press; and culture variables) and since environments differ across countries, financial reporting and disclosure requirements and practices will also differ around the world.*" (pg. 40).

In addition to the aforementioned, and in the context of ECT, the literature provides a broad range of possible factors having an impact upon financial disclosure regulations and practices. These include different environmental business aspects such as the nature of companies' ownership, companies' activities, sources of finance, the stage of development of capital markets, the nature of taxation systems, the existence of accounting professionals and technology, the state of accounting education and research, political systems, the stage of economic development and the rate of inflation, the legal system and the nature of accounting regulation (Gray, 1988; Cooke & Wallace, 1990; Nobes, 1998; Roberts et al., 1998; Radebaugh & Gray, 2002).

It has also been argued that accounting systems, including financial reporting practice, differ from country to country according to the relative influence of these environmental factors (Cooke & Wallace, 1990; Nobes, 1998). In particular, prior scholars described the relationship between the variation in accounting systems and a variety of factors causing such variation on national and international levels, as can be seen in the following exhibit:

Exhibit 5: Factors Influencing Accounting's Mandatory and Voluntary Practices



Source: Adopted from Roberts et al. (1998, p.9) which has been adapted from Gray (1988)

As transpires from this exhibit both internal and external factors interact with each other to influence the accounting system and financial disclosure regulation in a country directly and indirectly. For instance, Cooke & Wallace (1990) explained that internal variables, such as increasing people's education in a country, drive to improve political awareness and demand for company accountability. On the other hand external variables such as international trade and investments also have an impact through requiring a global standardised accounting system. Such is the case in the European Union (EU), where member states' public shareholder companies are required to prepare consolidated accounts in accordance with IFRS by 2005. This is in order to have one standardised/ harmonised accounting system across EU member states. The driving force behind such undertakings is to decrease accounting regulation differences currently existing among member states, and this process is referred to as International Harmonization (IH) (Roberts et al, 1998). Essentially, enhancing a country's economy

by opening up to the global market and international trade will submit the country to related external pressures, for instance in the case of Jordan the developments of opening up to international trade in the 1990s required major reforms, such as privatisation and the creation of a new capital market, and consequently a change in the country's regulation to attract more investment.

Furthermore, Cooke & Wallace (1990) summarised the intensity and effectiveness of financial disclosure regulation in a country as a function of both regulatory requirements and the degree of enforcement of such regulation. Also, as can be seen in Exhibit 5, these factors have not only an impact on the regulation of financial disclosure but also on voluntary disclosure practices regarding the same procedures. This explains the application of two pathways represented in the proposed framework in a country, where ECT affects both regulatory and managers' incentive theories representing mandatory and voluntary disclosure respectively.

Also the developments of technological innovation, the emergence of the Internet as a company financial information communication medium in combination with the above non-technological factors impact upon financial disclosure (Xiao et al., 1996). It has had an intense effect on all the aspects of society, which includes economic, political, and other infrastructures of society, and within the context of financial reporting, the Internet is considered as a method with significant impact on companies' financial information communication systems (Xiao et al., 2002). The latter scholars argued that the impact of the Internet upon companies' financial reporting has experienced a tremendous growth (see Chapter 3). They also argued that the Internet has the ability to integrate and converge with other technologies, such as databases, wireless communication and multimedia. In this context, the Internet may also affect some data processing aspects of financial reporting. For example the convergence of the Internet and database technologies provides the users with the opportunity to access parts of companies' databases to formulate their own reports by using their own preferred accounting methods.

What can be drawn from the above discussion of ECT is that in its essence the theory provides the main driving force behind intra-country developments and changes over time of financial disclosure practices, and explains the differences related to the latter that arise and exist among countries, due to discussed factors. The form and

content of financial reporting at any time and in any place are subject to several environmental factors, which are considered to instigate developments and changes in the reporting regulation as well as in the managerial incentives for financial disclosure within a country (Curuk, 1999). This instance of developments and changes in the financial reporting system within a country shall be explored further in the current study as part of the empirical investigation, because as discussed the case of Jordan will illustrate environmental changes within one country and these factors will be highlighted further in the next chapter. Equally, these environmental factors cause the differences in the financial reporting environment from one country to another, and subsequently financial disclosure and the application of its theories will differ among countries. In this context, Ahmed & Courtis (1999) referred the inconsistent results of the prior studies, with arguments of the financial disclosure theories, to the differences in the environmental factors among countries.

The following sections will discuss the theories on the twofold accountants' reactions in a bid to reduce the information asymmetry problem: the first being regulatory theory in which mandatory disclosure requirements are considered as one part of the remedy and the second managers' incentive theories, in which voluntary financial disclosure is considered as the second part. The following sections of this chapter will discuss these theories in the context of the proposed framework to show how the components of ECT, for instance the economic environment developments in international trade, foreign investments, globalization of capital markets, the developments of technological innovation, and the emergence of the global network communication, can affect the financial disclosure environment in any country, and can interact with each other to impact on the financial disclosure theories in order to predict and explain the change in the practices of financial disclosure practices.

4.2.4 Regulatory Theory

Taylor & Turley (1986, pg. 1) defined accounting regulation as *" the imposition of constraints upon the preparation, content and form of external financial reports by bodies other than the preparers of the reports, or the organizations and individuals for which the reports are prepared"*. In the perfect and complete market there is no need for accounting regulation, whereas in the imperfect and incomplete market the demand for

accounting regulation implies that this is the efficient way of tackling market imperfections (Fields et al., 2001). In the same context Ogus (2002) argued that accounting regulation should only exist when the unregulated market fails to reach the desired outcome. This supported the argument that a regulatory framework for companies' financial reporting exists because of market failure or imperfection. Scott (2003) argued that market failure leads to the accounting regulations' setting as a reaction to the asymmetry problem, which is frequently used to justify the existence of regulations to protect the ordinary investor as well as to improve capital market operations. Furthermore, Cooper & Keim (1983) argued that reporting regulation exists as a result of market failure to ensure equitable and efficient production and dissemination of companies' financial disclosure (the problems of public goods). Also Alrazeen (1999) added that accounting regulations are necessary to regulate financial reporting and financial disclosure and to monitor the quantity and quality of financial information provided to the users of financial reporting because market forces alone do not have the ability to do so. In this context, Riahi-Belkaoui (2004) has listed several reasons to establish accounting regulations, of which one is to provide the outside users with financial information about a company's financial position, managerial performance and company's conduct, which needs to have qualitative characteristics.

Therefore, the existence of disclosure regulation influences the credibility of financial information and as a result public confidence in the capital market increases (Scott, 2003). Also it is reasonable to state that financial reporting regulators exist to prepare and publish reporting standards in order to allow companies to organise and keep disclosed information in the companies' annual reports at an either nationally or internationally generally acceptable level. Ultimately, it can be concluded that reporting regulation exists as a result of market failure and is regarded as the way to make companies disclose their information to interested users according to a uniform set of accounting standards and requirements. As represented in Exhibit 4 regulation theories came as an accounting remedy for market imperfection of accounting financial information. In this vein Scott (2003) argued that accounting information practice is strongly affected by accounting regulations because the government is already involved directly and indirectly in the accounting information system to reduce the problem of information asymmetry between company insiders and information users. Scott (2003, pg. 412) concluded that "... *accounting is a highly regulated area of economic activity.*

Governments are directly involved in this regulation through laws to control the creation of professional accounting bodies and their rights to public practice, and also through minimum disclosure requirements for annual reports and prospectuses, as laid down in corporation acts. Indirect government involvement comes, for example, through the creation of securities commissions".

Regulatory theory contains two main sub-theories: (1) the public interest theory, and (2) the interest group theory, which shall be discussed in the following.

4.2.4.1 Public Interest Theory (PIT)

This theory asserts that accounting regulations are a consequence of public demand for correction of market failures (Posner, 1974), which poses the fundamental point of PIT. Hence there is public demand to form accounting regulations to reduce the general public information disadvantage to maximize social welfare (Riahi-Belkaoui, 2004). The central authority under this theory is called the regulatory body or regulator, which is assumed to have the best interest of society at heart. The theory assumes that regulation is thought of as a cost-benefit analysis mainly between the cost of regulation and its social benefits in the form of improved markets' operation (Scott, 2003). Additionally, under this theory it is very complicated to decide on the right amount of regulation due to the nature of the information and the differences in users' needs. Moreover it is difficult to monitor and force the regulatory agency to act on behalf of the public interest, as monitoring the agency is a costly and lengthy procedure (Scott, 2003).

4.2.4.2 Interest Group Theory (IGT)

Interest Group Theory or Capture Theory (Posner, 1974) is the second part of regulatory theory and is complementary to PIT. This theory suggests that individuals compose a group, referred to as interest group, to protect and maximise their own interest by constituting a lobby for various amounts and types of regulation (Riahi-Belkaoui, 2004). There are two versions of this theory, the economic and the political version (Posner, 1974; Riahi-Belkaoui, 2004). The political interest groups use their political power to gain regulatory control (Riahi-Belkaoui, 2004), i.e. authority could be

considered as an interest group because it has the ability to provide regulation and its main interest lies in retaining power. Therefore regulation will be provided to those constituencies that are considered to be most helpful and useful to retain power (Scott, 2003). Thus, the regulatory body is a vehicle between political authority and constituencies for provision of regulation in order to maximise its own interest while at the same time balancing the demands of various constituencies. On the other hand this theory regards regulation as a commodity subject to forces of demand and supply. This commodity will be allocated to the group predicted to be the most politically effective group to maximise its own welfare (Scott, 2003). The economic interest groups use economic power to gain regulation, such as the manufacturing industry may demand special regulation to protect, and promote, their own industry from foreign competition (Stigler, 1971). These are called demanders of regulation.

In essence, a company's financial disclosure under the above-discussed regulatory theories seeks to comply fully with the mandatory disclosure requirements issued by any formal accounting authorities such as company laws, securities commission and stock market disclosure requirements. There are different sources of disclosure regulation which set, monitor and enforce companies' financial disclosure, and which may vary among countries. These sources are comprised of governmental and private sector regulations, the former mainly represented by government agencies and the latter represented by professional bodies (Riahi-Belkaoui, 2004; Taylor & Turley, 1986). The government agencies and the professional bodies in many developed countries have established their own accounting standards such as the USA and the UK accounting regulation regimes, for instance Holmes et al. (2002) and Riahi-Belkaoui (2004) gave a comprehensive discussion about the UK and the USA accounting regulations regimes structure respectively. In the case of developing countries like Jordan, standard-setting via governmental agencies is the more common approach to accounting regulation, as these agencies have the power to enforce the regulations. Moreover, and based on ECT, it was argued that the form and content of accounting regulations at any time and in any place are subject to the environmental factors that exist at that time and in that place (Cooke & Wallace, 1990). In the context of developing countries[12] that commenced

[12] i.e. countries with a less sophisticated economy, emerging financial markets lacking financial and expertise resources to set and maintain their own reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports

new orientation towards the international trade agreements and investments with industrially and economically advanced countries more pressure may be put on the regulatory agencies to require the application of IASs as a fast, ready made solution (Kapaya, 2000). The rationale behind this is to support the growth of foreign investment, facilitate comparison of multinational companies' statements by entering the international harmonisation drive, increase the reliability of financial statements thus reduce the risks to its international users and the cost of obtaining international funds, and render its status in the international community as legitimate (El-Gazzar et al., 1999; Riahi-Belkaoui, 2004).

Following from the above, it is regarded as necessary in this stage of the proposed framework to introduce the arguments of Kapaya (2000). He argued that even though IASs could be the only cosmetic surgery currently available and affordable by the developing countries to meet their objectives, it is necessary to bear in mind the appropriateness of these standards for each individual developing country, given that these countries are different in their economy, institutional infrastructure, and accounting system and its capability to be appropriate for applying the IASs. In other words, applying IASs in developing countries may be the fast and cheap, however, not the most appropriate of solutions. Kapaya (2000) argued further that adopting accounting standards that are applicable to the specific system in question would be the more appropriate alternative. However, equally he deemed unnecessary to 'reinvent the wheel' (pg. 20), i.e. go through the evolutionary process of devising a completely new accounting system. In fact, the better option would seem to be a rigorous assessment of already-developed systems around the world and pick the most suitable of standards, and the same is argued in reference to IASs. In the context, Riahi-Belkaoui (2004) classified this argument as the '*situationist strategy*' (pg. 152) to standard-setting in developing countries, where accounting standards are developed under the particular environmental context of the developing country. Factors that impact on the system need to be considered and standards that answer to these factors would seem most suitable in the individual country.

It can be derived from the above that IASs, if they are the given choice, should be subject to a review as to how suitable and relevant they are to the particular context of a developing country.

Interestingly, as seen in Chapter 2, Cairns (2001) identified types of non-full compliance with IASs, which he referred to as IAS-lite. These types of IAS-lite could be seen here as different modifications of IASs having been adopted by countries in order to be appropriate to their environment. However, it can be argued that some of the developing countries have the financial means and their business environments are industrialised as well as their accounting system more developed, which allow to them to apply the full version of IAS. Conversely, other countries with less sophisticated economies and business environments as well as accounting systems applied IASs with exceptions specified as necessary, while countries with poor economies and emerging accounting systems and business environments where the local listed companies are purely small and, at best, medium applied the light version of IASs, i.e. the generic requirements of IAS financial statements, as an appropriate version of IASs.

To conclude the above, disclosure regulations provide valuable and relevant information to accounting users in order to reduce information asymmetry between informed and uninformed people (Healy & Palepu, 2001). Also it was argued that the choice of applying one appropriate regulation rather than the other at any time should be subject to a country's environmental factors at that time. Moreover, the absence of market perfection provides the choices and the room to managers' incentives to exceed mandated disclosure and provides additional information to disclose the optimal level of information for investors to reduce information asymmetry in order to satisfy their desires.

4.2.5 Manager Incentives Theories

The proposed framework exhibits the parallel pathway of voluntary disclosure to mandated disclosure as a reaction remedy for the imperfect market of accounting financial information, in which managers disclose information voluntarily according to their own incentives. Core (2001) explained that mandatory disclosure might be of sufficiently high quality to produce low information asymmetry when the company does not have any need for external finance, subsequently has little need for voluntary disclosure. On the other hand for a company with high growth opportunities, mandatory disclosure becomes sufficiently low and information asymmetry is high. Therefore the need for the second group of companies to reduce information asymmetry by providing

an optimal level of voluntary disclosure is high. In the context of mandatory and voluntary disclosure, Dye (1986) suggested that there is a positive relationship between the increase in mandatory disclosure requirements and a subsequent increase in the incentives to provide voluntary disclosure at the same time.

The incentives for providing voluntary disclosure are presented in the literature as part of explanatory theories for the relationship between managers' incentives and users' satisfaction with regard to voluntary financial disclosure. These theories suggest that managers would like to reduce information asymmetry by disclosing more information via financial reporting, which includes printed and Internet financial reporting formats for several reasons. The latter, attributed to respective theories, include: 'Agency Theory', according to which the agency problem arising from the separation between control and ownership and agency cost are sought to be reduced and the market value of the company for wealth increase is sought to be raised; 'Positive Accounting Theory', which seeks to explain and predict managers' choices; 'Capital Needs Theory' seeking to raise the company capital as cheaply as possible; and 'Signalling Theory', which seeks to distinguish the value, or the quality, of the company's product in the market among the other companies. Lastly, 'Political Cost Theory' suggests that political cost arising from political authorities or lobbyers' power in the society is sought to be reduced. These incentives are controlled by the principle of cost-benefit analysis. The following subsections will address each of the above further.

4.2.5.1 Agency Theory

Agency Theory is a common theory in accounting and auditing research and was chosen with regard to managers' incentives for voluntary disclosure. This theory is based on the separation between company's ownership from control, and is used by researchers to explain the relationship between the owners and the managers of public shareholder companies. Jensen & Meckling (1976, pg.308) identified the agency relationship as: *"A contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent."*

According to Jensen & Meckling (1976) the agency relation is regarded as follows: the separation of ownership from control in public shareholder companies could create a conflict between the stakeholders' welfare and the managers' welfare. For instance, the relationship between the owners, shareholders, of a company and those who manage or control the company is called agency relation. Under this relation owners are referred to as principals and managers as agents. If the principals delegate to the agents to control and manage their funds on their behalf, they want to be sure that the agents will act in their interests as opposed to their own interest. Agency theory suggests principals can reduce any potential conflict with agents by giving the agent an incentive to act in the principal's interest, and by incurring monitoring costs designed to limit the aberrant activities of the agent (monitoring costs). Additionally, in some cases the agent is willing to expand resources to ensure that he/she will not take certain actions which would harm the principals or to guarantee that the principal will be compensated if such action is taken (bonding costs). Jensen & Meckling (1976) added also other costs as agency cost (residual loss) which is accrued by reduction in welfare experienced by the principal.

There are two types of incentive contracts between agent and principal: firstly bonus contracts, under which the agent is given a performance-based bonus or salary, and secondly a dividends contract, under which the agent is given shares for equal benefit as other shareholders (Dunn, 1996). In the same vein, Healy & Palepu (2001) argued that these contracts require managers to provide relevant information allowing investors to monitor managers whether they act in their interest. Moreover, scholars, as for instance Watson et al. (2002), added that according to agency theory managers could reduce agency cost and investor uncertainty by disclosing more financial information in annual reports and subsequently increase the confidence of shareholders. In other words, agency cost is reduced through managers' incentives to disclose voluntary information to reduce information asymmetry.

Other expenditure, which, for instance, occurs through the issuance of debt to increase a company's capital, will reduce the market value of the company, and increase the risk and the cost of its capital (Jensen & Meckling, 1976). Healy & Palepu (2001) and Scott (2003) argued that the optimal contract between lenders and managers to disclose relevant information enables lenders to monitor managers' compliance with

contractual agreements. Finally, Healy & Palepu (2001) added that another mechanism to reduce agency problems is electing a board of directors acting on behalf of investors, and by using intermediaries' information such as the information from financial analysts.

4.2.5.2 Political Cost Theory

The absence of market perfection and the development of agency theory provided the platform for positive accounting theory (hereafter PAT) in the late 1970s. The precursors Watts & Zimmerman (1978) sought to explain and predict accounting practices with regard to managers' choices, and PAT has since been used as a basis to explain the factors behind managers' choices to disclose voluntary information in many studies (Milne, 2002). Basically, Watts & Zimmerman (1978) assumed that individuals work to maximize their own utility, e.g. company managers act to increase their wealth. Therefore managers have incentives to choose certain accounting procedures or methods which render lower rather than higher earnings to reduce the real economic value of the company in order to avoid among other the political cost.

In this context, Watts & Zimmerman (1990) explained that the political cost hypothesis in which politicians have the power to impact upon companies' wealth re-distributions, e.g. through taxes and regulations. Political cost hypothesis presents a further manager incentive to disclose information to investors (Milne, 2002). This hypothesis, as referred to in this study as political cost theory, concentrates on the relationship between company and political authorities or any lobbyers' power in the society. The argument of Watts & Zimmerman (1978, pg. 115) is that *"certain groups of voters have incentives to lobby for the nationalization, expropriation, break-up or regulation of an industry or corporation. This in turn provides an incentive for elected officials to propose such actions. To counter these potential government intrusions, corporations employ a number of devices, such as social responsibility campaigns in the media, government lobbying and selection of accounting procedures to minimize reported earnings. By avoiding the attention that "high" profits draw because of the public's association of high reported profits and monopoly rents, management can reduce the likelihood of adverse political actions and, thereby, reduce its expected costs".*

The political cost theory is usually discussed in relation to the company size hypothesis, in which the manager of a big company is more likely to select accounting procedures that defer reported earnings from current to future periods (Milne, 2002). In terms of accounting disclosure this means that the managers of large or very profitable companies are more in the public eye than those of smaller or less profitable companies, thus they have more incentive to disclose voluntary information to reduce political cost, such as tax and other costs, that companies are required by the government to provide in annual reports. Political cost theory was used in several disclosure studies to explain the disclosure variation in the level of financial disclosure among sampled companies through the size hypothesis (Al-Modahki, 1996; Curuk, 1999).

4.2.5.3 Capital Needs Theory

Companies with a varied range of growth opportunities in the capital market look for external finance to support their operations in order to increase capital, either by issuing new shares or by borrowing new loans. In this situation mandated disclosure is considered not sufficient enough to acquire capital as cheaply as possible (Core, 2001). Therefore, such finance requires some kind of competition among these companies in order to obtain financial capital as cost-effectively as possible under the conditions of uncertainty by disclosing more information to outside investors in order to inform them about the financial position and to increase the certainty of their future cash flow (Choi, 1973). In the same context, Meek et al. (1995) argued that companies in the capital market compete with each other on the types of shares offered and on the expected returns promised. Companies disclose extra information to reduce uncertainty about the timing and expected future cash flow that enable investors to make investment decisions, and by doing so enable companies to raise capital in the best way, i.e. as cost-effectively as possible. Similarly, Core (2001) agreed that the need for companies with growth opportunities in the capital market to reduce information asymmetry by providing an optimal level of voluntary disclosure is high. Suwaidan (1997) explained that under market uncertainty and information asymmetry the companies' task to obtain external funding becomes more difficult and costly because investors under these conditions will require high premiums on their investments as they are unaware of the extent of risk regarding their investments. If companies are willing to reduce the

uncertainty situation by disclosing more voluntary information to the public they can reduce the rate of return required by investors as a cost of their investments in these companies.

Under this theory, accounting information is supplied automatically as the companies look for external finance on the market, and financial disclosure leads to reducing the cost of capital. For instance, Firth (1980) argued that a company will still provide additional financial information to its users, especially at the time of raising new finance in the stock market. Three main reasons for this hypothesis were documented as follows: (a) companies seek to raise their capital as cheaply as possible, and (b) high levels of voluntary disclosure may reduce the agency costs of companies, thus companies can raise new capital in the best way, and (c) high levels of financial disclosure provided by companies will reduce investor uncertainty, thus investors will reduce the rate of return on their investments. Healy & Palepu (2001) supported the latter by saying managers will be able to reduce company's cost of capital by dropping information risk through increased voluntary disclosure.

4.2.5.4 Signalling Theory

Signalling theory is a further explanatory theory of information asymmetry. Akerlof (1970) was the first to explain signalling theory in a general product market setting. Strong & Walker (1987) argued that the differences in information between the insiders and outsiders of a company can cause market breakdown. The problem was outlined as follows: buyers in the market are unable to distinguish between the quality of different products, because the products' sellers have not informed the buyers of their products' quality in a perfect way. Thus, there is not any difference in price between the product with high quality and the product with lower quality, especially when the market price of these products is based on the average quality.

Strong & Walker (1987) suggested two potential positions the seller will take in such case: Firstly, the seller of the high quality product, who is not prepared to accept the market price for a better than average product, may withdraw the product from the market. This will tend to reduce the average quality of products in the market, which will have a knock-on effect, and subsequently the next seller with a better than average

quality product may withdraw this product from the market after the reduction of the average market quality due to removing the product with the highest quality, and so on. This will reduce the price of the product in the market until the lowest quality product is priced according to the average quality in the market. Secondly, the seller can inform the buyers by offering more information about their products and their quality. The incentive will be very high for sellers with high quality products to disclose more information than the sellers with lower quality products. Signalling theory was used in prior empirical research to explain why managers in the company have the incentive to disclose more information in the annual report (e.g. Suwaidan, 1997; Haniffa & Cooke, 2002; Watson et al., 2002).

4.2.5.5 Cost-Benefit Analysis

Managers' decisions to provide voluntary disclosure are based on a comparison between the costs of information that will be provided and the benefits that might arise from disclosing such information (Cooke 1992).

This principle is considered in the literature as a significant explanatory factor for managers' financial disclosure decisions. Cooke (1992) argued that companies' disclosure is a costly issue involving information collection costs, supervision costs, auditing costs and legal fees. Foster (1986) classified the costs of financial disclosure as direct and indirect costs:

First- collection and processing costs, which are the direct costs incurred from collecting, preparing, processing and auditing financial information.

Second- competitive disadvantage costs incurred when information is disclosed in annual reports and used as a detrimental tool for competitive advantage. Edwards & Smith (1996) regarded this cost as a sensitive issue as, when the information is disclosed by a company, it becomes useful to competitors.

Third- litigation costs, concerning which Foster (1986) argued that legal suits against the company lead managers to reduce financial disclosure in order to avoid litigation costs, such as refund costs, for any losses they incur to the users from using incorrect financial information.

Fourth- political costs, such as tax and other costs, as required by the government in companies' annual reports.

Moreover, companies' managers are aware financial disclosure is not a costless procedure. Before deciding to disclose information to the public, they are likely to weigh the costs and the benefits associated with any decision. Consequently, they are willing to disclose when benefits exceed total costs of such disclosure (Suwaidan, 1997). Meek et al. (1995) argued that managers have to create a balance between the benefit of lower capital cost, extra information and the costs associated with such disclosure like the cost of providing and preparing information, and have to consider the effects of such disclosure on their competitive status. Managers will provide voluntary information when the benefits of this information exceed its direct and indirect costs. As seen in Chapters 2 & 3 voluntary disclosure can take place via printed and Internet financial reporting, and the latter has several special features, also discussed in Chapter 3, which allow for voluntary disclosure at as little cost as possible. Therefore, it is important to note that, since managerial incentives are based on the costs- benefits calculation, the influence of voluntary disclosure is not only reflected in the printed form of annual reports, but also in the Internet form of financial voluntary practices (Marston & Polei, 2004; Xiao et al., 2004).

As seen above, several financial disclosure theories exist, of which each explains different sub-points of the financial disclosure phenomenon, supporting the divide in the explanation of mandatory and voluntary disclosure practices. However, the applicability of these theories may differ across countries, and in this context Abd-Elsalam & Weetman (2003) concluded that these theories do not have the same strength in the emerging markets, where there are other factors impacting upon these theories, as in the developed market. Similarly, Leventis & Weetman (2000) stated that voluntary disclosure theories should be approached with caution in the setting of emerging markets which have different institutional characteristics from the developed market, the place where most of these theories have been established.

Finally, mandatory and voluntary financial disclosure may correlate in practice. The proposed framework illustrates this integration of mandatory and voluntary disclosure practices from theoretical perspectives as an attempt to develop an explanation of the overall financial disclosure practices comprising mandatory and voluntary practices in one scope. The following sections will present two theories,

codification and Dye's (1986) theories, which explain such integration of mandatory and voluntary disclosure practices.

4.2.5 Codification Theory

The emphasis in this theory is entirely based on voluntary practice forming accounting standards, i.e. mandatory disclosure requirements. It is argued that prepares and auditors of financial disclosure provide an optimal level of financial disclosure to meet users' needs, which will then be codified by regulatory bodies as a mandatory disclosure requirements. In this context, Taylor & Turley (1986, pg.70) said that "*Existing practice obviously provides an input and influence on the standard setting process. What is currently done in practice is likely to represent a large part of experience and knowledge base of the standard setters concerning a particular issue on which standard practice is being considered.*"

Furthermore, Dye (1986) states that in practice mandatory financial disclosure requirements and standards do not develop due to exogenous reasons. The existence of these requirements depends upon companies' voluntary disclosure practices, which lead to changes in mandatory financial disclosure practices by codifying existing voluntary disclosure practices. Mandatory financial disclosure requirement setters might depend upon companies' voluntary disclosure practices, which can be seen in the first main function of the Accounting Standards Committee (ASC) of formulating a series of Statements of Standard Accounting Practices (SSAPs) from 1970s to early 1990s comprising submissions of current practice and simply requirements of standard formats (Taylor & Turley, 1986). Recently, in 2002 and early 2004, the FASB commenced projects to codify the entire generally accepted accounting practice literature into a single authoritative source (FASB, 2004).

Exhibit 4 illustrated this relationship between voluntary disclosure practice and mandatory disclosure requirements by a link launched from the managerial incentives to codification theory, and a link launched from the latter to the regulatory theory, which predicts that the developments in mandatory disclosure practices depends upon voluntary disclosure practices.

4.2.6 Dye's Theory (1986)

Generally, it is assumed that increasing mandatory disclosure requirements will lead to a decline in the level of voluntary disclosure (Dye, 1986). Contrary to this assumption, Dye (1986) proposed that increasing mandatory disclosure leads to an increase in managerial incentives to disclose voluntary information for value maximisation expressed in a company's share price, which subsequently attracts investors. In other words, there is a positive relationship between increasing mandatory disclosure requirements and a subsequent increase in managerial incentives for voluntary disclosure, represented by the return link from mandatory theories to the box of Dye's theory, and for the latter to the box of managerial incentives theory. Based on this theory it can be stated that in practice voluntary financial disclosure develops as a result of homogenous reasons. For instance, the existence of new mandatory disclosure requirements enhances managers' incentives to voluntarily disclose more information to distinguish their companies in the market from others in order to increase their market value so as to increase wealth. In the context, Abayo et al. (1993) and Al-Razeen & Karbhari (2004) provided empirical evidence supporting this positive association between mandatory and voluntary disclosure.

A further association in the form of disclosure transformation theory is made in the proposed framework to explain how the form of financial disclosure is transforming from printed to electronic formats as a result of environmental factors such as the technological innovations and the emergence of network communication. This will be the focus in the following.

4.2.7 Disclosure Transformation Theory

In light of recent technological innovations and the emergence of network communication, the traditional financial disclosure communication system has become less able to satisfy users' needs as it is not as timely, interactive, accessible or detailed enough (Lodhia et al., 2004). In particular, the Internet is regarded as a powerful force to evolve traditional disclosure forward, as it is expected to provide a ground-breaking method of financial communication (Jones & Xiao, 2003). As was discussed in Chapter 3, the Internet as a new way of companies' communication has opened up information exchange on a global scale, offering massive opportunities and advantages to transfer

information in a very fast and cheap way. Also it is considered to provide a new remedy for one of the recent principal problems of printed financial reporting, which is the ability to satisfy users' needs (Xiao et al., 2002; Lodhia et al., 2004). Therefore, following these technological developments over time, companies will transform their printed annual reports into the Internet format, in order to meet users' needs (IASC, 1999), which can be seen in Exhibit 4 by the broken line from the environmental factors, e.g. technological factors, to the printed financial disclosure, and the latter transforming into Internet financial disclosure, as the same broken line illustrates.

This broken line explains also the companies' attitude towards financial disclosure. This link suggests that there is a positive association between higher printed financial disclosure, both mandatory and voluntary, and engaging in voluntary disclosure on the Internet. This positive relationship explains the keen attitude of managers, triggered by incentives, towards financial disclosure. In other words increasing companies' printed financial disclosure practice motivates companies' attitude towards disclosing more financial information on the Internet in order to take advantage of new technological developments, to reduce the agency problem arising from the separation between control and ownership, to reduce agency cost and increase the market value of the company to maximise wealth, to explain and predict managers' choices, to raise company capital as cheaply as possible, to distinguish the value, or the quality, of the company's product in the market among other companies, and to reduce political cost arising from the political authorities or lobbyers' power in the society. This is illustrated by the link between the managerial incentives and Internet disclosure.

In this context, Ettredge et al. (2002) used managerial incentive theory with regard to voluntary disclosure in order to examine the relationship between companies' traditional disclosure reputation, in other words the overall quantity of companies' reporting practices, and the level of Internet financial disclosure. It was found that in regression analyses companies' traditional disclosure reputation is significantly associated with Internet voluntary disclosure. They concluded that the incentives, which motivate traditional voluntary disclosure, can also explain the subsequent dissemination of voluntary material on the Internet.

It is important to note that Internet financial disclosure in practice reflects not only the influence of managerial incentives in the form of voluntary practices of disclosure,

but also the broader influences of mandated requirements in the form of mandatory practices. Mandatory disclosure also has an impact on the level of Internet voluntary disclosure. In this context, Xiao et al. (2004) argued that since the mandated information is already disclosed by companies in printed annual reports limited managerial costs would be required to disclose on their websites, and the Internet provides the ideal communication channel to provide additional voluntary information. Consequently a positive association between the increase in mandatory and the increased incentive to follow the new technological developments in financial reporting can be assumed. In this context, Xiao et al. (1996) and Xiao et al. (2002) reasoned that printed financial reporting is influenced by technological and non-technological factors, which cause new developments in the printed financial reporting system, i.e. the Internet financial reporting system. The Internet has several advantages rendering it a method with significant impact on companies' financial information communication systems (Xiao et al., 2002)., and it can be regarded as a potential remedy for inabilities of printed financial reporting to satisfy users' needs (Xiao et al., 1996; Xiao et al., 2002; Jones & Xiao, 2003).

In conclusion, it is possible to establish a theoretical relationship between companies' attitude towards printed financial disclosure and Internet disclosure. Companies with a high level of mandatory and voluntary disclosure in printed annual reports are more likely to use the Internet for financial disclosure by establishing their own website to disclose financial information to their users. This relationship between printed and Internet disclosure is referred to in this study as disclosure transformation theory.

The above proposed framework has set out the general context of disclosure theories. Environmental factors set the general context of financial disclosure systems, both within an individual country and among countries. Regulatory theories then determine the level of mandatory disclosure required, and managerial incentive theories determine the level of voluntary disclosure provided. Generally, it has been assumed that these apply equally to the disclosure environment within one country setting and have the same impact to reach the optimal level of financial disclosure. However, the prior studies in Chapters 2 & 3 have identified that disclosure levels differ from one company to another, a concept referred to as variation, which is the last component of

the proposed framework to be integrated in the current discussion. In the next section the issue of variation in disclosure practices among companies will be discussed further.

4.2.8 Variation in the Financial Disclosure Practices among Companies

As discussed in Chapters 2 & 3, in practice there are variations in the levels of financial disclosure among companies, i.e. there are companies complying fully with mandatory disclosure requirements and there are companies with a low level of compliance with the same disclosure requirements at the same time. Also there are companies disclosing more voluntary printed and Internet financial information than others. Exhibit 4 illustrates that there is a link between regulation and voluntary disclosure theories and the optimal level of printed financial disclosure, which represents the case of compliance with mandatory requirements, and disclosing voluntary information in the printed annual reports. Furthermore, it appears that there is a link from the optimal level of printed financial disclosure to the financial disclosure variation, which explains the variation in the level of compliance with mandatory disclosure requirements and the level of voluntary disclosure among companies. Similarly, there is a link between the Internet financial disclosure and the financial disclosure variations, which provides an explanation for the differences in the level of the Internet financial disclosure among companies.

As mentioned above there is variation in the level of compliance with mandatory disclosure requirements and Chapter 2 has shown that there is poor compliance with mandatory disclosure requirements in several countries. Low compliance with mandatory disclosure requirements will be referred to in this thesis as compliance-lite, which is similar to the concept of IAS-lite by Cairns (2001). Generally, the variation in the level of compliance with mandatory disclosure is hypothesised, based on the four managers' incentive disclosure theories, to be influenced by several company characteristics, such as size, profitability, industry type and others (Aboyo et al., 1993; Inchausti, 1997; Owusu-Ansah, 1998; Ahmed & Courtis, 1999; Alrazeen 1999; Street & Gray, 2002), of which each explains different reasons behind the manager's choice of complying with the mandatory requirements. In this context, Healy & Palepu (2001) concluded that the degree of mandatory disclosure varies systematically among companies according to their characteristics. Also, company familiarity is a further

variable suggested by Abd-Elsalam & Weetman (2003), who found that non-compliance with IASs in the emerging market took place due to less familiarity with these requirements. For instance, most prior studies based on agency theory argue that in the case of mandatory disclosure, larger companies may be more subject to public scrutiny or more sensitive to criticism for falling short of disclosure requirements, and thus may be more likely to aim for maximum compliance. The costs of failure to comply fully may be perceived by such companies as outweighing the benefits from non-compliance, whereas the costs of non-compliance may be relatively less for smaller companies (see Chapter 2).

In the case of voluntary disclosure, the literature in Chapter 2 showed that company managers have their own reasons to disclose more or to withhold accounting information to/from the users in order to reduce agency cost, political costs, to raise capital as cheaply as possible, and/or to distinguish their companies from other companies. Also, as discussed, these incentives are based on the trade-off between the costs and benefits of providing such information. This appears clearly in the proposed framework when voluntary disclosure is based on managerial incentives to disclose voluntary information, which is joined with mandated information to create an optimal level of financial disclosure. Nevertheless managers' incentives are different from one company to another according to several company characteristics, which create variation in the level of voluntary disclosure practices and which are used in prior studies to explain the differences in the levels of both mandatory and voluntary printed and Internet financial disclosure among companies. These explanatory variables are company characteristics, which have been set out in Chapter 2.

To conclude the above, company characteristics based on managers' incentive disclosure theories were used as independent variables in prior studies to explain the variation among companies' level of financial mandatory and voluntary disclosure practice. These studies examined the relationship between the company characteristics and the variation of financial disclosure based on the differences among companies in their structure-related variables, managerial performance and market-related variables, in which the companies will follow different paths on different levels to provide financial information.

4.3 Summary

This chapter set out to propose a theoretical framework for financial disclosure, both mandatory and voluntary, by encompassing existing financial disclosure theories in one scope. This framework was designed to provide guidance on a theoretical background which could add significant value to the development of financial disclosure research. It is suggested that there is a theoretical scope with respect to financial disclosure. This scope is assumed to start from the optimal level of financial disclosure under the ideal condition of market efficiency and then to move to the situation under the actual conditions. It was explained that demand for financial reporting regulations and managerial incentives arise from market failure and information asymmetry. Within the framework information asymmetry is regarded as a root cause and regulatory as well as managerial incentive theories as a resulting reaction. It was shown how external and internal factors have an impact to change the financial reporting environment within an individual country over time and to cause differences in financial reporting practices among countries. Also this framework integrated further theoretical aspects of financial disclosure, such as codification theory, Dye's (1986) theory and disclosure transformation theory, in a bid to illustrate one complete picture of developments in financial disclosure practices. These theories were introduced in this framework as explanatory theories for the changes and developments in the form and content of mandatory and voluntary disclosure practices. Furthermore, the framework emphasised that there are differences in the level of compliance with mandatory disclosure requirements and in the level of voluntary disclosure among companies. This variation in the levels of financial disclosure may happen due to characteristics inherent to an individual company influencing compliance with mandatory requirements and disclosing voluntary information. It is believed that this framework provides useful insights into the existing disclosure theories and seeks to simplify the complex relationships between different notions of the financial disclosure phenomenon, so as to offer future researchers a methodical approach to understand in depth each angle, and possible existing lacks, of comprehensive agreed theory.

In a bid to test aspects of this framework it is deemed necessary in this study to carry out an empirical investigation on printed and Internet financial disclosure practices in an environment offering a comparison between the pre and post change context. The

Jordanian financial reporting environment is seen as a rich area to examine several aspects of the proposed theoretical framework, as this environment has been confronted by recent changes in the economic environment, followed by developments of and in the Jordanian capital markets. For instance, this included a new legal framework with new financial disclosure requirements imposed upon companies listed on Amman Stock Exchange (ASE). The effects of the internal economic developments, and international trade and technological developments will be discussed in the next chapter as the internal and external environmental factors that have an impact upon the Jordanian companies' financial disclosure.

Chapter Five

Jordan's Financial Reporting Framework

5.1 Introduction

The proposed theoretical framework of financial disclosure, as discussed in the preceding chapter, was developed in a bid to integrate financial disclosure theories and aspects of its practices in one scope and provide a comprehensive background to financial disclosure research. Furthermore, the framework illustrated that the nature, form and content of financial disclosure at any time and in any place reflect the changes in the economic environment, the developments of technological innovation and the emergence of network communication. It is deemed necessary to test aspects of this framework in the second part of this study by carrying out an empirical investigation on printed and Internet financial disclosure practices in an environment offering a comparison between pre and post change context. The Jordanian financial reporting environment is seen as a rich area to examine several aspects of the proposed theoretical framework. Jordan was chosen as a result of the changes in the Jordanian economic environment, the newly established Jordanian capital market and the developments of technological network communication, which provides the suitable environment for the current empirical investigation of this study. The following chapter will discuss aspects of the general framework of Jordanian financial reporting, including the new developments in its legislations and regulations in 1998.

5.2 Jordanian Economic Overview

The Jordanian economy unlike other Arab countries has a low- to middle-income country with relatively few natural resources and its economy has been intricately tied to its relationship with neighbouring Arab countries (Kanaan & Kardoosh, 2002). The economy of Jordan has developed since 1946 when the country became independent from British authority. This economy has a scarcity of natural resources, especially with a chronic shortage of water and oil. The agricultural and industrial sectors are weak because the agricultural production depends on the annual limited rainfall while the industrial sector suffers shortage of natural resources. As a result, the Jordanian

economy has suffered a severe imbalance between resources and population growth (Kanaan & Kardoosh, 2002).

In a bid to relieve the economy Jordan has taken large steps with regard to economic developments, which can be divided into two essential stages in the history of Jordan: the first stage under King Hussein's rule and the second stage under King Abdullah II's rule. Therefore, the following discussion will follow the two stages as essential changing points in Jordan's economy.

5.2.1 First Stage under King Hussein Rule

The early history of the Jordanian economy developments dated back to the period when the young country emerged from the Emirate of Trans-Jordan with West bank. At its initial stage it was faced in 1948 with the tragic effects of the first of five Arab-Israeli wars. The serious challenge was to solve the problem of the sudden influx of Palestinian refugees, however on the other hand, those refugees brought with them their savings and education to support the Jordanian economy by creating new demand in the domestic market for houses and several of goods and services (Kanaan & Kardoosh, 2002).

In the 1950s the Jordanian government entered the stage of planning to guide public investment into projects such as (1) building the country infrastructure of basic public utilities and public services in order to meet the need of the growing population, (2) developing the main natural resources, i.e. potash and phosphates, and (3) pioneering investments in large projects such as cement, the oil refinery and manufacturing. These investments projects were cast within the frame of the development plan, and the first formulation of the economy development plan was the five- year plan in 1960s (1962-1967) (Kanaan & Kardoosh, 2002).

By adopting the techniques of investment planning in Jordanian economic development policies private sector industry advances were encouraged, such as the growth of domestic industry, imposing restrictions on some imports and various lines of industry through licensing requirements to avoid the duplication of investments. All of these resulted in improvements in the economic growth, average of 9% annually in the 50s and 8% in the 60s (Kanaan & Kardoosh, 2002).

During the period between the late 1960's and early 1970's Jordan's economy had suffered from several upsets. For instance, in June 1967 Israel seized the West Bank in war known as the Six-Day War, and by the end of this war the Jordanian economy had lost half of its agricultural land and repeatedly suffered from the influx of Palestinian refugees. Subsequently the Jordanian government faced many problems such as repairing a crushed economy, rebuilding the armed forces and providing the welfare for the refugees. The growth in the Jordanian Gross Domestic Product (GDP) at that time was 1.3% (Kanaan & Kardoosh, 2002). A worsening impact following the war of 1967 was the Battle of Karama on 21 March 1968.

These crises severely influenced the Jordanian economy, nevertheless the Jordanian government benefited from the increase in Arab aid to just over JD 40 million in 1967/1968. This aid was raised repeatedly during the oil boom of the late 1970's and early 1980's to JD 382 million simultaneously with an increase in the numbers of Jordanians working abroad, especially in the Gulf countries (Goussous, 2002a; Kanaan & Kardoosh, 2002).

Additionally in the 1980s the economy's growth was boosted by an improvement in the relationship with Iraq. At that time, Iraq greatly increased economic assistance to Jordan and discussed a possible project for supplying Jordan with water from the Alphrates. Moreover, this relationship increased sharply during the Iranian-Iraqi War in September 1980 as a result of the Jordanian attitude to support Iraq. The growth in the Jordanian GDP at that time was 11.7%, one of the world's highest growth rates at that time (Goussous, 2002a; Kanaan & Kardoosh, 2002).

In the late 1980's the end of the oil boom effect saw a slack period in the region, especially when oil prices declined. As a result the foreign financial assistance from Gulf countries also declined, and the Jordanian government started borrowing money from different countries to refresh the economy from this shortfall. The external Jordanian debt rose sharply, and stood at US$ 7.1 billion comprising 180% of the GDP in the late 1980's. Due to this situation the Jordanian government made its first agreement with the International Monetary Fund (IMF) to implement a five-year reform programme to negotiate debt rescheduling, which aimed also to reinstate the normal situation in the Jordanian economy. Unfortunately, this programme was disrupted by the outbreak of the Gulf War in 1990 (Goussous, 2002a; Kanaan & Kardoosh, 2002).

In addition to the above, the Gulf War impacted on Jordan's economy in differing ways. Jordan's economy was heavily dependent on the aid from Gulf countries and Iraq oil, and on export of agricultural and industrial products to Gulf countries and Iraq. However, after the Iraqi invasion of Kuwait, Jordan had a serious setback as a result of Jordan's political situation towards this invasion. As a consequence the Gulf countries stopped importing Jordanian products and around 300,000 Jordanians were expelled from the Gulf countries and returned home, which influenced the population growth. Consequently demand increased on the country's limited water supplies and infrastructure, and poverty and unemployment were raised (Goussous, 2002a; Kanaan & Kardoosh, 2002).

Nonetheless, Jordan achieved impressive progress, especially for a country that has no oil and few other natural resources. Instead, Jordan relied on the creativity and skills of its people. This creativity and these skills remain as the bedrock of the Jordanian economy as it faces the challenges and opportunities of a new millennium. As a result of strong stabilization and the structural reform programme improvements were achieved in a number of important areas, such as the GDP grew from 1992 to 1997 by 7%. Investment to GDP increased substantially from 22% in 1989 to 33.1% in 1997. National savings increased from a negative amount to 4.7% during the same period. As a result, Jordan has made dramatic progress in boosting exports and reducing imports (Goussous, 2002a; Kanaan & Kardoosh, 2002).

Also the Jordanian government has recognised the continued negative effects of instabilities situation in the Middle East region. Therefore it has shifted the structure of Jordanian economic activity from depending heavily on external relationships and aids, into concentrated more on the restructuring of internal affairs and the consolidation of Jordanian external trade relations with regional and international countries. In 1998 Jordan became a member of the Arab Free Trade Agreement, and has initial signed bilateral free trade agreements with some of the European countries. However, these trade agreements were suspended during the period of illness and death of King Hussein in 1998–99. With the death of King Hussein on February 7, 1999 an important era in the history of the Jordanian economy came to an end.

5.2.2 Second Stage under King Abdullah II Rule

King Abdullah II assumed the throne as King of the Hashemite Kingdom of Jordan on February 7 1999, succeeding King Hussein. He inherited a heavy economic burden considering the fact that the Jordanian economy is remarkably vulnerable to external influences, regional transformation, and also depends heavily on external relationships and aids. Thus, the greater part of the new King's efforts concentrated to continue the new Jordanian orientation towards the external trade relations with regional and international countries.

As a result of this new orientation the Jordanian government signed a free trade agreement with the USA under the umbrella of the World Trade Organisation (WTO) in April 2000. Besides, it increased cooperation with the IMF, World Bank, and EU, US-AID. According to this orientation, the government adopted a new programme known as 'The Economic Reform Program' to deal with this series of economic developments and new relationship with other countries at regional and international levels. The main aims of this new economic programme or (policy) were to create new markets and to facilitate trade with countries within and outside the area. Therefore, this section will discuss contemporary issues in the current Jordanian economy, such as privatisation and international incorporation including a free trade agreement with the US, the WTO, and the EU-Jordan Association Agreement (Goussous, 2002a).

5.2.2.1 Privatisation

Jordan recognizes that the future growth of the economy depends primarily on a more practical role of the private sector and a redefinition of the role of the government in the economy. Therefore, the privatisation programme commenced in 1997 when the Executive Privatization Unit (EPU) was established with aims to enhance enterprise efficiency through reducing the Jordanian government's stake in sectors by selling its shares to technically advanced strategic investors, deepening and developing the financial market through public share offerings and reducing subsidies and consolidating public finances (Goussous, 2002a; Kanaan & Kardoosh, 2002).

The programme primarily covers the Jordanian state-owned enterprises, which are concentrated mainly in the Infrastructure Sectors (Transport, Electricity, Water and Telecommunications) and investments by the Jordanian Investment Corporation (JIC), the state-owned investment agency. The Government has substantial share-holdings in a number of small and medium-sized industrial and service sector companies, including various financial institutions (Goussous, 2002a; Kanaan & Kardoosh, 2002).

The government is currently getting involved in a series of initiatives to reduce its direct participation in the production sectors and allow the private sector to manage these in a more efficient and cost- effective manner. The privatisation process aims to achieve the following objectives:

-Optimising project efficiency, productivity and competitiveness by activating the forces of market and eliminating economic imbalances and distortions.

-Mobilizing domestic savings and attracting more private domestic, Arab and foreign investments by opening up the markets and abolishing state monopolies.

-Facilitating access to technology and modern management techniques much needed to foster competitiveness on the markets and access to new and stable markets.

The programme ranks as one of, if not the most, successful programmes in the Middle East region. The benefits generated from privatisation generated around US$ 1 billion, part of which was used to pay off the country's debts, and the remainder was used to finance investment in the infrastructure projects. There is a large pipeline of current activities, some of which are just starting up and others which are drawing to a close. These operations include: selling 100% of the Royal Jordanian Airlines; selling 26% of the Jordan Phosphate Mining Company; Electricity Sector (selling 100% of distribution and selling 60% of generation); and selling 100% of Royal Jordanian Air Academy. These were scheduled for completion in the latter part of 2003 and the following year (Al- Barmawe, 2003).

5.2.2.2 International Incorporation

Complementary to the Jordanian development plan, in 2000 Jordan became the 136th member of the WTO after having agreed to assume all its WTO obligations upon accession. Through this membership the Jordanian government has applied the economic reforms package to render Jordan's economy more compatible with the global economy and to meet the WTO accession requirements (Goussous, 2002a). As a result of this accession and reform programme the benefits will impact in different ways upon the Jordanian people and government through an increase in the investment opportunities and in the greater employment chances.

Also the Jordanian government started to orientate itself towards international trade agreements and organisations in order to enhance the outside trade. Therefore, this part will discuss the Jordanian international incorporation. In 2000, the Free Trade Agreement (FTA) was signed between Jordan and the USA, aiming at the establishment of a free trade area between the two countries within ten years of its implementation. This includes elimination of duties and commercial barriers in order to liberalise the trade in goods and services, and easing the movement of goods between both countries (Kanaan, 2001). Both countries will initially reduce the customs barriers on nearly 70% of their goods in both directions, and FTA introduced provisions regarding the protection of intellectual property, labour rights, rules of origin, the environment and both countries vowed to avoid imposing customs duties in electronic transactions (Kanaan, 2001). While Jordan already has a full access to the US services market the FTA allows the USA services to access to the main Jordanian services sectors such as education, transportation, energy distribution, and others (Kanaan, 2001).

The association agreement with the European Union, the Europe Union -Jordan Association Agreement (EU-JAA), is the second phase for the Jordanian development plan. This agreement was signed in 1997, but was ratified on January 30, 2002, and it was applied on May 1, 2002. The EU-JAA creates a co-operation between the European countries and Jordan, and facilitates the trade between them in different sectors, such as agriculture and industrial products. The future purpose of this agreement is to establish a free trade area between Jordan and the EU within 12 years (Goussous, 2002a).

After the Jordanian government entered into the peace agreement with Israel in 1994, the USA established the Qualifying Industrial Zones (QIZs) as an intentional incorporation between the two countries. However, negative effects of the Palestinian-Israeli and the recent conflict in Iraq continue to exist. The efforts towards international trade and international markets with the objective to enhance the Jordanian economy through outside were achieved by the Jordanian government and the following table summarises the recent economic performance in figures by showing the GDP from 1999 until September 2004:

Table 3: The Jordanian GDP from 1999 until September 2004

Year (numbers by US$bn)	1999	2000	2001	2002	2003	Sept. 2004
GDP at market prices	8.13	8.46	8.83	9.31	9.86	8.28
Real Growth rate (%)	3.1	4.1	4.9	4.8	3.3	7.4

(Source: MoICT, home page[13], Main Economic Indicators, September, 2004)

Table 3 exhibits Jordan's economic growth accelerated to 7.4% until September 2004. This acceleration has mainly been driven by Jordanian International trade. Also as a result of these international trade activities Jordan is becoming a more open economy and increasingly becoming an attractive market for foreign global trade and investment. There are greater expectations regarding the new developments in the Jordanian economy and the new trade agreements with other countries, such as raising economic settlements. All these developments in the Jordanian government's orientation towards the International trade seriously affected the Jordanian financial reporting systems. The following sections will explain the effects of these developments on the Jordanian regulation of financial reporting.

5.3 The Framework of Jordanian Financial Reporting

The financial reporting environment, including the legislation and the legal regulatory framework of the financial reporting in Jordan, had been developed since 1964 and experienced fundamental changes in 1998. The framework of Jordanian financial reporting before 1998 was entirely different from the framework that emerged

[13] Available at: http://www.moict.gov.jo/MoICT/

in that year. Before 1998, financial reporting regulations mainly came from two sources, the AFM and the Companies Act 1989 (which was amended by the Companies Act 1997). These lacked financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports. Under the Securities Law 1997, a new regulatory system was introduced for what was in effect a new Jordanian capital market. The regulation of the capital market was divided among three institutions, the Jordan Securities Commission, the Amman Stock Exchange, and the Securities Depository Centre. In 1998 the JSC introduced new and more extensive disclosure requirements for companies listed on Amman Stock Exchange. Thus, this section will discuss the major sources of regulation of corporate financial reporting in Jordan before and after 1998.

5.3.1 The Framework of Jordanian Financial Reporting before 1998

Before 1998 there were two fundamental sources of Jordanian financial reporting regulation. The AFM was established in 1976 and started its first day of trading on 1 January 1978. The AFM was the only financial market in Jordan, and it had three main duties: (1) to muster the savings of Jordanian citizens by stimulating investment in securities, and by guiding savings to serve the interests of the national economy; (2) to organise the issuance of and dealing in securities in order to ensure the soundness, ease and speed of transactions to protect national financial interests and small savers; and (3) to prepare and disclose the essential information and statistics about the achievement of the AFM's objectives. Therefore, the AFM was involved in two tasks: the role of a Securities and Exchange Commission and the role of a traditional Stock Exchange. The only AFM disclosure requirements were that listed public shareholder companies should provide AFM with audited financial statements.

The Companies Act in Jordan has been considered as one of the main sources for financial disclosure requirements since the 1960s. Companies Act No (12) of 1964 was the first company act in Jordan and the basis for the legal rules of financial reporting. This Act lacked financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports, and the only disclosure requirements for public shareholding companies were as follows: Every limited shareholding company should prepare, during the first three months of every

year, a true and fair balance sheet, and a true and fair profit and loss account, as well as should provide details about the companies' revenues and expenses during the year, these audited by a certified public auditor. The act also stated that the company must publish its statements in the daily newspaper and send a copy to its shareholders. However, the format and the items for these statements are not specified (Helles, 1992).

As pointed out above, from the 1960s until the early 1980s the Jordanian economy experienced many developments in different aspects and on different levels, which had the effect of incentives to change the legal rules of financial reporting. As a result of a new company act, Company Act No (1) of 1989, succeeded the act of 1964 to recover any shortfalls and to add other financial disclosure requirements in line with new developments that took place in the Jordanian economy. This act included many issues related to different types of the companies, and its registration conditions and requirements, but its essential part is that related to the financial disclosure and reporting requirements to public shareholding companies.

The Company Act of 1989 required that every registered public shareholding company prepare and publish, within three months after the end of the financial year, audited financial statements, a profit and loss account and balance sheet with explanatory notes, comparative with the last year statements, which should be prepared in accordance with GAAP[14]. Companies should also publish statements of changes in financial position. Furthermore, the Act required that companies should disclose accounts reflecting a true and fair view of the real financial position of the company. Furthermore, the Board of Directors should publish further two reports, the director's report and the auditor's report, within one month after the general meeting in the daily newspaper and send a copy to the shareholders. However, the format and the items for these statements were not specified by this Act (Suwaidan, 1997; Abu Nassar, 2000). Also, due to dramatic changes in the Jordanian economy environments from the 1980 to the mid-1990s, a new Company Act No (22) was drafted in 1997 as an amendment to the previous Company Act of 1989. Before 1998, legal regulation of companies took place through the Companies Acts of 1964, 1989 and 1997.

---

[14] Companies Act 1989 does not mention which GAAP

In conclusion, each act came into effect to cover different issues relating to different time periods, different types of companies, registration conditions and requirements. Strictly speaking, none of these Acts added any specific disclosure requirements. However, both the 1989 and 1997 Acts required that any public shareholding company should have and provide within three months after the end of the financial year comparative audited financial statements, consisting of a profit and loss account and balance sheet with explanatory notes, prepared according to GAAP. The Acts did not, however, specify which GAAP should apply. It was also required that the public shareholding company should publish the director's report and the auditor's report (Suwaidan, 1997; Abu- Nassar and Rutherford, 2000).

Also, a professional accounting body was established in Jordan in 1987. The Jordanian Association of Certified Public Accountants (JACPA) had no power to impose or create any local accounting standards. But on 13 March 1989, the JACPA decided to adopt International Accounting Standards (IASs) 'to improve the quality of accounting measurement and information disclosure' (Naser & Al-Khatib, 2000, p. 99). The JACPA achieved this by asking auditors in Jordan to apply IAS when auditing companies' financial statements. There is considerable evidence in the Jordanian accounting literature showing that IAS have been used in Jordan since 1989 (see for instance Mutter (1993), Solas (1994), Naser (1998), and Naser & Al-Khatib (2000)). For example, Mutter (1993) found that a sample of 30 Jordanian companies from different industry sectors listed on AFM complied on average with roughly 80% of IAS disclosure requirements that applied to financial statements for the year ended 31 December 1990.

Furthermore, there is another law related to companies' financial disclosure in Jordan before 1998, the Income Tax Law No (57) of 1985. The law has two types of taxation: corporate tax and personal tax. The former requires that any company pay tax on its taxable income which is calculated by deducting all expenses, allowances, and deductions allowed by the Income Tax Law. Thus the deduction and allowances' items for tax purposes must be included in the financial statement. Suwaidan, (1997) argued that the depreciation of fixed assets under this act means expenses that are used to generate income by using fixed assets. Under this law the company must prepare and record depreciation by one method, straight-line method of depreciation. This is the only

method acceptable by this law to measure depreciation, so the law has determined one method should be used in Jordanian financial statements. Finally, the Tax Law requires that regarding inventory pricing methods the company must use lower cost methods or market price to evaluate its inventory.

5.3.2 The Framework of Jordanian Financial Reporting After 1998

In the late 1990s, the Jordanian government commenced orientation towards international trade and international markets in order to enhance the Jordanian economy through outside trade. The government recognised a need for a change in regulation to create a more attractive investment climate, and adopted a new reform programme aiming to create new markets and to facilitate trade with other countries within and outside the Middle East Area. This reform programme included restructuring and privatisation procedures, and it involved the government in developing a new Jordanian Capital Market (JCM) under the temporary Securities Law 1997 (which was amended by the temporary Securities Law 2002). The aims were to put the JCM onto an international level, to create a fair, efficient market to protect investors and to encourage investment in Jordan. Under the new Securities Law, the JCM was divided into three institutions, namely, the Jordan Securities Commission (JSC), the Amman Stock Exchange (ASE) and the Securities Depository Centre (SDC).

5.3.2.1 Jordanian Capital Market (JCM)

5.3.2.1.1 Jordan Securities Commission (JSC)

The Jordan Securities Commission is one of the three entities established in accordance with Securities Law No (23) of 1997. It is a public regulatory body in the capital market. The main objectives of the JSC are to regulate the environment of the capital market to ensure safe issuance and dealing in securities and to safeguard shareholders, investors and the others from irregular market practices. The JSC undertakes many responsibilities to achieve these objectives such as:

1. It organizes and controls the business activities and operations for the entities that fall under the supervision of the Commission: the ASE; Financial services

companies; the SDC; Shareholding companies; Investment Funds Certified financial professionals.

2. It organizes information disclosure related to securities and their sources and about dealings of insiders, principal holders, and investors.
3. It organizes securities' short sales.
4. It organizes the public shareholding companies' offerings.

One of the important publications of the JSC is *the Directives of Disclosure and Accounting and Auditing Standards and the Conditions to be fulfilled in Auditors of the Entities Subject to the Commission's Monitoring Instructions No. (1) for the Year (1998)*. This was issued in 1998 and came into effect on 1st of September 1998. The objectives of these directives are to preserve reasonable dealing in securities, increase the confidence of investors and to achieve transparency in the market in accordance with International Standards. As mentioned above these directives are applied only on the entities subject to the commission' monitoring instructions and in accordance to article No (20) Securities Law No (23) of 1997. The public shareholding companies are subject to the Commission's monitoring and supervision.

These Directives are divided into two main parts. The first part relates to financial disclosure covering (a) disclosure upon listing, (b) disclosure of periodical financial statements and (c) disclosure of significant matters and important events. Under these requirements, all companies issuing listed securities must disclose, within a maximum period of 45 days from the end of the financial year, preliminary results of their main operations, after the auditor has carried out a review of these results. These primary results must include the following: net revenues; expected net profit before tax; designated income tax for the expected profits; minority rights in the profits; dividends; comparative statements included above items with figures from previous year; and a summary of the results operation for the same company during the financial year (Article No., 5). Also under these requirements each issuing company's Board of Directors must prepare and provide the Commission with an annual report within three months after the end of financial year, which must include specified items, see Article No (6) in Appendix (2). However, the JSC's directives of disclosure and accounting and auditing standard No 1 of 1998, under the Securities Law No (23) of 1997, has not included any penalties related to non-compliance with these disclosure requirements.

The second part relating to accounting and auditing standards sets out requirements for auditors of entities subject to the JSC's monitoring. Article No. 24 of this part required that: the entities subject to the Commission's monitoring shall apply IASs. It is important here to note that this is the first time IASs were introduced directly by the Jordanian regulations, as a result of the developments in the Jordanian financial market, and in response to the new orientation towards the international trade and investments. This is to create an attractive investment climate to encourage the growth of foreign investments, and facilitate international comparison of financial statements of companies listed on different stock markets.

Furthermore, Article 27 provides with the qualifications and the experiences expected of auditors to hold in order to audit any entity subject to the commission's monitoring as follows:

a) The auditor must have a valid license from the Auditing Profession Council.
b) The auditor must be member of the Jordanian Auditors Association.
c) The auditor must be classified in category (A) according to the auditors' classification regulation in force.
d) The auditor must have at least 3 years at full time experiences after he obtains his license to practice auditing.
e) The auditor must have one or more partner or employee who meets the above requirements.

Also Article 28 required that all auditors of any entity subject to the commission's monitoring must comply with the following duties:

1) Apply the international auditing standards.
2) Follow the standards that relate to professional conduct that is provided by Auditing Law and the Jordanian Auditors Association's regulation and directives, and any directives issued by the Commission for this purpose.
3) Attend training courses organized by the Jordanian Auditors Association in order to enhance his qualifications and technical skills, and observe the developments occurring to the profession.

Further articles deal with a variety of issues related to the Jordanian Auditors Association (JAA) tasks such as Article No 29 stating that 'The Jordanian Auditors Association' must set the laws and procedures to ensure the implementation of the requirements in Article 28, and Article 30 requiring that the JAA must prepare and provide the commission, during one month in the beginning of each year, with the names of the auditors who meet the conditions required in Article 27. Finally, Article No 31 required the following items to be included in the company's external auditor report:

a) The report's date.

b) The audit agency's name, and name of the auditor, the auditor's signature, the auditor's license number, the auditor's classification category and address.

c) The company's financial statements.

d) An announcement that the auditing procedures are conducted in compliance with the international auditing standards stipulated pursuant to these Instructions.

e) The auditor's opinion on the truth and fairness of the financial statements.

5.3.2.1.2 Amman Stock Exchange (ASE)

ASE, previously known as Amman Bourse, is the second of the three entities established in accordance with the Securities Law No 23 of 1997. ASE was established on March 11, 1999, and it is a private and not-for- profit organisation, which enjoys administrative and financial independence, Appendix (2) provides some quantitative information about the size of ASE and the changing proportions of share ownership before and after the developments in 1998 in order to provide the reader with insight into the new changes on ASE. Moreover, the Securities Law 1997 Article No 23 added to the above as ASE is the only entity allowed to operate as an official market for trading in securities in Jordan. It may carry out all legal actions including concluding contracts and acquiring and disposing of movable and immovable property, and authorizing a lawyer to act on its behalf in legal proceedings.

5.3.2.1.3 The Securities Depository Centre (SDC)

The SDC was established on May 10, 1999 under the Securities Temporary Law No. 23, 1997. A board of directors from the private sector runs the SDC. The SDC is a not-for-profit institution, independent financially and administratively. It is responsible for registering securities, depositing and transferring ownership of securities traded on the stock exchange, clearing and settling trades on the market.

The SDC, as one of the most important agencies in the Jordanian capital market, has been nominated to develop the Jordanian capital market associated with Amman Stock Exchange in order to create an efficient market. It seeks to attract local and international investment, reduce the cost of investment and raise the efficient settlement system in Jordan, and it has prepared the software that has the ability to achieve these objectives via the following five stages:

1. A Registry System for registering securities.
2. A Depository System records each deal's accounts on the shareholder register.
3. A clearing system that prepares the trade contract between broker-dealers.
4. A Settlement System by trades on the Delivery Versus Payment (DVP) principle.

The SDC provide other supporting services such as securities dealers, securities exporters and monitoring the capital market.

5.3.2.2 The Companies Act 1997 and its Amendments in 2002

Due to the orientation towards international markets, trade and agreements, and under a new reform programme the Company Act 1997 was recently amended by the temporary Securities Law No. 4 and No. 40 in 2002. These amendments reflected the new developments and growth in the Jordanian economy, and included new types of companies such as 'private shareholding companies', 'companies operating in Free Zones', 'civil companies', and 'non-for-profit companies'. The Companies Act 1997 and its amendments came into effect with many new legal issues and disclosure requirements. The most important point in the Act is Article 184, part A, which requires companies' accounts, books and registers to be organised and kept in compliance with IASs.

5.4 Auditing in Jordan

Audit regulation did not exist in Jordan and neither did accounting academic knowledge nor work experience required to be an auditor until the Audit Profession Act No.10 of 1961 was enacted followed by the more modern Audit Profession Law No.32 of 1985 (Abdullatif, 2003). The enactment of the new law in 1985 was as a result of very important steps towards improving the regulations of the qualification of accountants and auditors in Jordan. Suwaidan (1997) summarised that this law required one among several qualifications the accountant should possess to be qualified to practice public accounting:

1. The first accounting degree, Bachelor, or its equivalent in accounting with three years' work experience in accounting including one year at least in auditing.
2. The second degree in accounting, Master, or its equivalent in accounting with two years of work experience in accounting including one year at least in auditing.
3. The third degree in accounting, PhD, with at least one year work experience in accounting and auditing or two years in teaching.
4. Other first degree in the Faculty of Commerce and Law with a minimum work experience of five years in accounting and auditing included one year in auditing.
5. Below Bachelor degree such as College degree in accounting with a minimum of six years' work experience in accounting including two years in auditing.
6. International certificate such as the Certified Public Accountant (CPA).

However, auditing in Jordan today is more organised than any time before because, as pointed out above, the new Jordanian regulations include the Companies Acts and the JSC's requirements with more detail to guide, control, improve and protect the audit profession and the auditors' rights.

The first audit office was George Khader's firm, opened in Jordan in 1944, followed by Saba & Co in 1948 (Abdullatif, 2003). Since that time three of the international audit firms, Deloitte Touche, Arthur Andersen and Grant Thornton had established professional contracts with Jordanian audit companies Saba & Co., Dajani & Ala'eddin & Co. and Talal Abu-Ghazaleh respectively (see Footnote No. 7, Suwaidan, 1997). These three audit firms were considered the largest and the most important audit firms in Jordan. According to Suwaidan (1997) the JACPA provided a list of the big six

and the most well known audit firms in Jordan as follows: (1) Saba & Co., (2) Ibrahim Al-Abbasi & Co., (3) Sha'er & Co., (4) Dajani & Ala'eddin & Co., (5) Certified Arab Office, and (6) Talal Abu-Ghazaleh. However, recently, Sha'er & Co., and Dajani & Ala'eddin created an alliance to be one audit firm working under name the Allied Accountants in Jordan.

5.5 Jordan in the Age of Information Technology

In context of the above discussed developments and technological innovations the Jordanian government has commenced reforming its telecommunications and postal sectors by establishing some measure of competition in specific markets, and to create a clear and stable policy environment within which initiatives, investment and necessary sector regulation can proceed with confidence.

The Jordanian government recognised the importance of IT in the world economies. Huge efforts were undertaken on part of the Jordanian leadership and government to improve the domestic social and economic conditions by creating the appropriate investment environment that can compete with the open global marketplace (REACH's report, 2000 & 2001). These were concentrated on economic reform, true private investment and international trade and created true usage of computer's technology. A key attempt to set the future plan, policy and strategy for IT usage developments was undertaken by King Abdullah II in 1999 when he asked the IT private sector to come up with a realistic strategy and action plan that would develop Jordan's IT sector. This attempt led to five-year plan called "REACH's Initiative" launched in 1999 with the target to be accomplished by 2004, and action plan for the development of the IT industry in Jordan to maximize its ability to compete in regional and global markets so as to ensure a favourable place for Jordan in the Internet based e-economy (REACH's report, 2002).

The REACH's Initiative is organized by the Information Technology Association – Jordan (INT@J). It is the core of a national strategy to develop an export- oriented information technology services sector. The Initiative's strategy contains economic targets planned to be accomplished by 2004. These economic targets were to offer

30,000 new jobs by 2004, $150m foreign direct investment and $550m annual IT exports (REACH's report, 2002, & 2003).

This attempt was followed by a number of important initiatives to enhance information services and technology in Jordan. For instance, in 1999 the Jordanian government launched new programmes such as the E-Government programme and Education Initiative which included modernising and computerising the education process.

E-Government is a national programme initiated in Jordan to transform the traditional way governments work and bring improved access to government facilities and resources for the general public. The programme is intended to enhance the performance of the traditional government in terms of service provision, efficiency, accuracy, time and cost effectiveness, transparency, high level of customer satisfaction, and cross-governmental integration. It started with managing the changes entailed in the new transformations of the e-government. This includes business process re-engineering towards better and more efficient processes, human performance development, organizations re-structuring to have more efficiency (REACH's report, 2002, & 2003).

Education Initiative is being implemented by the Ministry of Education with the main task to equip all public schools in Jordan with computers by 2005 to enhance the learning process. This programme aims to transform the teaching process into a dynamic learning experience that stimulates students to develop their creative, critical and innovative thinking skills. Moreover, training courses on how to use computers, the Internet are involved, which require preceding English language courses in the first stage of the public schools. However, this represents just one step of the entire e-learning process in Jordan (REACH's report, 2002, & 2003).

Also in 2002 the Jordanian government established the Ministry of Information and Communications Technology (MoICT). It is the governmental organisation responsible for articulating policy in the areas of information technology, telecommunications, and post in Jordan (MoICT, home page). The MoICT is currently seeking to develop and support ICT initiatives at a national level, and articulate Jordan's policies and strategies for liberalization of the telecommunications sector in both mobile

and fixed line telephony. Also it is working to formulate national IT policies (MoICT, home page).

The IT industry, expected to develop into one of the cornerstones of Jordan's economy, is one of the sectors highly relying on the human resource factor, its developed private sector and good infrastructure which give Jordan a more competitive edge. Moreover, Jordan has attracted both foreign and local investments, generated high value jobs and produced substantial levels of export.

The success of Jordanian IT companies can be seen in the results of a survey[15] carried out by the Arab Advisors Group on the technology and Internet adoption by 247 small and medium Jordanian companies between December 2002 and February 2003. The results of this survey showed that 78% of the sampled companies utilise computers and 51.6% of these companies have Internet connection.

As seen in Chapter 4, IT developments and the Internet affect the nature and the form of the financial disclosure practices in many countries around the world. As is the case in other countries around the world it is expected that Jordanian companies entered the age of Internet financial disclosure as the new financial disclosure communication channel. It is important to point out that none of the Jordanian regulation so far has mentioned any requirements forcing the Jordanian companies to use the Internet for information provision. Therefore, companies in Jordan are under no obligation to launch a website or to disclose any information on the Internet.

5.5 Summary

The proposed framework in Chapter 4 explains that financial reporting at any time and in any place is subject to many environmental factors, meaning both internal to individual countries and external including technological innovations. These environmental factors are regarded in this framework as root cause of any development and change in the reporting regulation as well as in the managerial incentives for financial disclosure within an individual country over time and differences among countries. The Jordanian financial reporting environment was chosen as a rich

[15] Summary of this survey is available at: http://www.ameinfo.com/19197.html

environment offering a comparison between pre and post developments in financial reporting system in 1998 to examine several aspects of the proposed theoretical framework. This chapter discussed that, as a result of the changes in the Jordanian economic environment in the mid-1990s, in 1998 the government recognised a need for a change in regulation to create a more attractive investment climate and adopted a new reform programme aiming to create new markets and to facilitate trade with other countries within and outside the Middle East Area. This reform programme included restructuring and privatisation procedures, and involved the government in developing a new JCM under the temporary Securities Law 1997 (which was amended by the temporary Securities Law 2002). In 1998 the Jordanian financial market was transformed into a modern capital market with a new legal framework, which included new financial disclosure requirements imposed upon companies listed on ASE. For the first time by Jordanian regulations, the listed Jordanian companies were required to apply IAS in periodic financial statements. The underlying aim of the accounting regulation modifications in Jordan was to create an attractive investment climate to encourage both domestic and foreign investors. In addition, due to the Jordanian government commitment to the WTO in 2000 the Jordanian government has commenced a process reform of its telecommunications and postal sectors. The changes in the Jordanian regulatory and its telecommunications systems result in changes in the contents and forms of the Jordanian financial disclosure environment.

Therefore, the current study targets the Jordanian financial disclosure practices before and after the new developments in 1998. However, despite these recent developments in the Jordanian financial market, the annual report is still the only well-established method for investor relations. Therefore, it is regarded as the main focus of the current empirical investigations with respect to Jordan. In particular, this study will examine the level of financial disclosure practices in the printed annual reports before and after 1998, which includes the levels of mandatory, voluntary and overall financial disclosure in 1997 and 2002. Also this study will examine the level of the Internet usage for financial disclosure by Jordanian companies in 2004. The next chapter will discuss the current research philosophy followed by the research methodology that will be employed to accomplish the current research objectives.

Chapter Six

Research Philosophy and Methodology

6.1 Introduction

The central problem of researchers in social science is to decide on which theoretical and philosophical assumptions they will base their research. A scholar needs to decide within which research philosophy, also referred to as research paradigm (Burrell & Morgan, 1979), his/her research should be carried out. Within the setting of the proposed theoretical framework, and in a bid to test aspects of it, the empirical investigation seeks to measure empirically the level of financial disclosure practices, in printed and in Internet formats, of the Jordanian companies listed on ASE in different time periods. Furthermore, it seeks to examine the relationship between the level of printed financial disclosure and several company characteristics to explain the variation in the level of financial disclosure among the sampled companies, if any. Also the relationship between mandatory and voluntary disclosure before and after the disclosure developments in 1998, as well as the relationship between voluntary disclosure practices in 1997 and mandatory disclosure practices in 2002 will be assessed. Finally, the investigation seeks to examine the interaction between printed and Internet financial disclosure of Jordanian manufacturing companies, as well as its relationship with company size. In this context this chapter sets out to discuss research philosophy followed by research methodology that will be employed to accomplish the current research objectives.

6.2 Research Philosophy

Under the umbrella of social science research, the term of research philosophy, referred to as research paradigm, is associated with an in-depth discussion of the researcher's view of the world before doing research. It is a central notion of researchers to base their research, implicitly or explicitly, on a number of fundamental theoretical and philosophical assumptions in line with their beliefs about the nature of society and the social science world, as well as in line with their knowledge and understanding of the world and research itself, as personal values, beliefs and knowledge will determine the chosen method of investigation (Burrell & Morgan, 1979; Hopper & Powell, 1985).

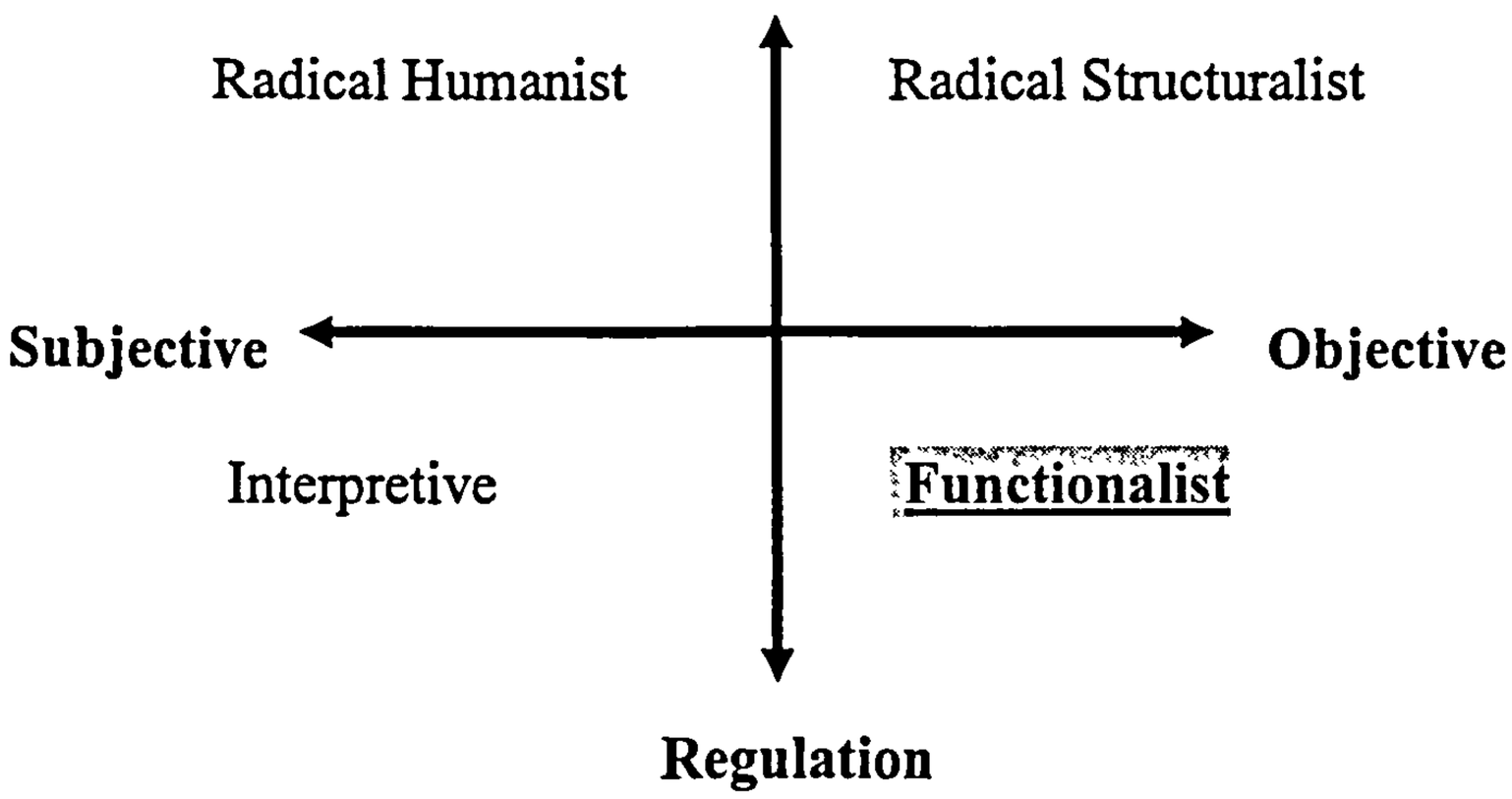
The pioneer work by Burrell & Morgan (1979) suggests that social theory is based on four key philosophies built on different sets of assumptions about the nature of social science and the nature of society. This is referred to as Burrell and Morgan's framework and it is based on two independent dimensions, a subjective - objective axis, representing social science assumptions, and a regulation - radical change axis, representing assumptions about the nature of society. These dimensions result in four mutually exclusive paradigms of the social world.

The subjective – objective dimension is based on four assumptions representing social science: Firstly, ontology - under this assumption the researcher's view of reality and the nature of phenomena is considered. It is discussed whether the reality of social phenomena and its structure can be regarded as independent of the individual cognition, or as a product of individual cognition. Secondly epistemology - this assumption is concerned with the nature of knowledge and how social scientists understand the social world. Furthermore, it is considered through which form of communication this knowledge can be transmitted to others: either in tangible- hard- form or in intangible- subjective- form dependent on personal nature and experience. Thirdly, human nature - this assumption deals with the association between people's behaviour and experiences with their external environment. It is discussed whether human beings can be observed as being totally determined and constrained by their external environment, or they can be regarded as having free will and the capability of creating their external environment. Finally, the assumption regarding methodology is concerned with methods of social science research, which are informed by the above assumptions. For instance, if the social scientist believes in the objectivity of the physical or natural world, then natural sciences' methods such as statistical techniques should be used to test social research hypotheses and to analyse data.

The regulation - radical change dimension refers to two fundamentally different approaches representing society. The regulation approach believes in regulatory structure, order and stability as an explanation why society is likely to be held together, whereas the radical approach believes in separation and division of interest, un-regulatory and conflict structure, and unequal allocation of power, which supply the potential for radical change.

The above dimensions result in four mutually exclusive paradigms of the social world: radical humanist, radical structuralist, interpretive and functionalist. Exhibit 6 shows two axes representing Burrell and Morgan dimensions: a subjective - objective axis and a regulation - radical change axis, and exhibits the location of each paradigm within each dimension.

Exhibit 6: Four Paradigms for the Analysis of Social Theory



Source: cited from Hopper & Powell (1985, pg.432), revised from Burrell & Morgan, (1979, pg.22)

"To be located in a particular paradigm is to view the world in a particular way. The four paradigms thus define four views of the social world based upon different meta-theoretical assumptions with regards to the nature of science and society." (Burrell & Morgan, 1979, pg.24)

In accordance with the above statement and as discussed above each paradigm represents a particular standpoint. The radical paradigms originate from the radical change dimensions and thus question the status quo and strive for fundamental change. Radical humanists regard the world from a subjective point of view and seek to alter societal aspects with regard to human beings' constraints. Radical structuralists equally question the status quo and strive for fundamental change, however contrary to radical humanists regard the world from an objective point of view, thus want to change the universal structure.

At the opposite end, the regulation dimension, the interpretive and functionalist paradigms govern. The former represents the subjective stand where the status quo in its

essence is investigated with consideration to human beings' beliefs and perceptions. In context of the current study the paradigm which will be focused on in the following research is the latter, the functionalist paradigm. The paradigm is formed by the horizontal objective axis and the vertical regulation axis and essentially seeks to provide a rational explanation of existing social affairs and the current status quo. It is concerned with understanding society in a way through which knowledge is generated, and is concerned with effective regulation and control of social affairs to provide practical solution to practical problems.

Furthermore, Burrell & Morgan (1979, pg.26) stated that: "... *functionalist paradigm is rooted in the tradition of sociological positivism*". Positivism as a research philosophy is based on the natural scientist's research philosophy, which works on the basis of social scientists' observation of reality and its explanations, which are grounded on fixed laws. This approach seeks the facts or causes of social phenomena from an objective, process- and structure- oriented stance (Hussey & Hussey, 1997). It is determined by a priori assumptions on part of the researcher (Burrell & Morgan, 1979) and uses a deductive approach, for instance by developing hypotheses and designing a research methodology to test these hypotheses (Hussey & Hussey, 1997). It is sought to determine a law for the occurrence of phenomena, and subsequently to be in the position of predicting their occurrence through casual relationships between e.g. variables of studies (Hussey & Hussey, 1997). Finally, the terms of the functionalist paradigm, objectivism and positivism, and deductive approach are associated with empirical or quantitative research to formulate social science theories including accounting and financial disclosure theories.

In attempting to formulate a comprehensive theoretical basis of accounting, scholars have developed different accounting theories, which have resulted in a debate regarding the accounting methodology approach required to formulate accounting theory. This debate argues normative vs. positive approaches (Riahi-Belkaoui, 2000). The former is concerned with 'what ought to be', such as in financial accounting the debate on the content of financial statements. The positive approach is concerned with 'what accounts do' or 'what is'. Here the practice of accounting as a basis for developing theories is concentrated on (Riahi-Belkaoui, 2000). The researcher observes accounting practices for a generalisable theory, which is referred to as the descriptive

accounting approach. It is focused on explaining the existence of things, as opposed to seeking for the causes of the existence (Riahi-Belkaoui, 2000).

The current study is regarded as set within the functionalist paradigm on the basis of testing theories. The theoretical framework has been proposed and the theories it comprises are tested as part of the empirical investigation. Furthermore, the current empirical investigation is considered to be positivistic research from three points of view: firstly because it seeks to measure financial disclosure practices of both the printed and the Internet financial disclosure formats of Jordanian companies. What is disclosed in the printed annual reports and what is disclosed on the companies' websites of Jordanian companies listed on ASE will be measured. The second aspect for positivism is that it seeks to examine the association between printed voluntary and mandatory disclosure before and after the reform of the financial system in 1998 on one hand, and its relationship with the Internet disclosure on the other hand. Finally, it seeks to explain the variation in the level of financial disclosure among the sampled companies through the causal relationship between independent variables and dependent variables. The former are companies' characteristics, used as explanatory variables, and were selected based on the theoretical background as discussed previously, and the latter is the level of mandatory, voluntary and overall financial disclosure. The rest of this chapter will explain further objectives and how the research hypotheses have been formulated and how they will be tested statistically.

6.3 Research Methodology

Chapter 4 has proposed a framework of the financial disclosure practices' theoretical fundament. The framework integrates and explains the theoretical background of financial disclosure practices under both the ideal and the actual conditions of a financial market. Therefore, it is deemed necessary as the second part of this study to carry out an empirical investigation of the financial disclosure practices to test several aspects of this theoretical framework. As the proposed framework explained that the nature, form and content of the financial disclosure system at any time and in any place reflect many changes at that time and in that place. This investigation is confronted by the new changes in the Jordanian economic environment, and globalization of Jordanian capital markets in 1998. Also it confronted by new the

developments of technological innovation, and the emergence of the new Jordanian network communication in early 2000s. Based on the above the Jordanian financial reporting environment is seen as a rich area to examine several aspects of the proposed theoretical framework. Therefore, the current study targets the Jordanian financial disclosure practices before and after the new developments in 1998.

Consequently, an empirical investigation measuring and comparing the level of financial disclosure practices of Jordanian companies listed on ASE in different time periods will be undertaking. The preceding literature reviews provide that these two main media represent the most systematic and sustained ways, within which companies' financial practices can be assessed. In this context, Debreceny et al. (2002) and Oyelere et al. (2003) argued that the examination of the determinants of printed disclosure in companies' annual reports represents one of the most common mode of accounting research in financial disclosure literature. The Internet in accounting is considered as a method with significant impact on companies' financial information communication systems (Xiao et al., 2002).

The examination of the printed annual reports to measure the financial disclosure practices is considered the first "old generation" approach of empirical financial disclosure studies, which are conducted on traditional printed annual reports. Scholars[16] measured empirically the level of financial disclosure, i.e. mandatory and/or voluntary, of sampled companies in one or several countries. Furthermore, they examined the relationship between the level of financial disclosure and several company characteristics in order to explain the variation in the level of disclosure among companies. The second generation of empirical studies for measuring financial disclosure practices is provided by the new generation of the Internet financial disclosure studies. Scholars[17] measured empirically the level of financial disclosure on companies' websites, and examined its relationship with several company characteristics in order to explain the variation in the level of Internet financial disclosure among companies.

Due to printed disclosure being the original and traditional way and Internet disclosure being the new and future way of financial disclosure practices, both were

---

[16] See Chapter 2 for more details.
[17] See Chapter 3 for more details.

chosen for this study, this is to provide a complete image of the status of financial disclosure practices of Jordanian companies listed on ASE. The main aim of this chapter is to outline the research objectives, develop the research hypotheses to establish the suitable research methods, and to discuss data collection and data analysis.

6.3.1 Research Objectives, Questions and Research Hypotheses

The proposed theoretical framework explains first how the form and content of financial disclosure at any time and in any place depends on many environmental factors, meaning both internal to individual countries and external including technological innovations. These environmental factors are regarded as root cause of any development and change in the reporting regulation as well as in the managerial incentives for financial disclosure among countries. As discussed in the preceding chapter in 1998 the Jordanian financial market was transformed into a modern capital market with a new legal framework. This included new financial disclosure requirements imposed upon companies listed on ASE. For the first time by Jordanian financial market regulations, the listed Jordanian companies were required to apply IASs in periodic financial statements. The underlying aim of the accounting regulation modifications in Jordan was to create an attractive investment climate to encourage both domestic and foreign investors. As part of the changes, in 2000 the Jordanian telecommunication and postal sectors underwent a new reform process.

Therefore, in order to test the above theoretical arguments the objectives of this study can be divided into two dimensions: the first dimension is the printed financial disclosure practices, to examine empirically the extent of overall financial disclosure practices in printed annual reports before and after the new developments in 1998, which includes the extent to which companies complied with the mandatory disclosure requirements applying to companies listed on ASE both before and after the regulatory changes of 1998, and the extent to which companies disclose voluntary information in their annual reports before and after the regulatory changes of 1998, also to explain the variation in the level of compliance, voluntary and overall disclosure by reference to company characteristics.

The second dimension in this study seeks to measure the extent of financial disclosure on the websites of Jordanian companies listed on ASE in 2004, and to explain the variation in the level of Internet disclosure by reference to company size and company attitude towards financial disclosure.

The above objective can be divided into nine main objectives presenting several aspects of the proposed theoretical framework of financial disclosure. The following states the study's objectives, questions and hypotheses, which are intended to examine empirically financial disclosure practices from two different aspects, printed and Internet financial disclosure.

1. **Measuring and comparing the level of mandatory disclosure in the printed annual reports of Jordanian companies before and after 1998.**

It is assumed that listed Jordanian manufacturing companies are complying fully with the mandatory disclosure requirements in force at a given date. To what extent did listed Jordanian manufacturing companies comply with the mandatory disclosure requirements in Jordan before and after the reform of the financial system in 1998? The answer to this question will be provided in Chapter 7 by measuring the level of compliance of Jordanian manufacturing companies before and after the reform of the financial system in 1998.

2. **Measuring and comparing the level of voluntary disclosure in the printed annual reports of Jordanian companies before and after 1998.**

The proposed framework argued under the managers' incentive theories that managers have different incentives to disclose voluntary information to the external users. To what extent does the level of voluntary disclosure in Jordanian manufacturing companies' annual reports differ before and after 1998? The answer to this question will be provided in Chapter 7 by measuring the level of voluntary disclosure by Jordanian manufacturing companies before and after the reform of the financial system in 1998.

3. **Measuring and comparing the level of overall disclosure in the printed annual reports of Jordanian companies before and after 1998.**

It is plausible to argue that the overall financial disclosure in the Jordanian manufacturing companies' annual reports has increased after the new mandatory

disclosure requirements in 1998. To which extent does the level of overall financial disclosure in the Jordanian manufacturing companies' annual reports increase after the reform of the financial system in 1998? The answer to this question will be provided in Chapter 7 by measuring the level of overall financial disclosure of Jordanian manufacturing companies before and after the reform of the financial system in 1998.

4. **Examining the relationship between printed voluntary disclosure practices in 1997 and the level of compliance with the JSC mandatory disclosure requirements in the Jordanian manufacturing companies' annual reports for 2002.**

Based on codification theory, it is argued that in practice mandatory disclosure requirements and standards do not develop due to exogenous reasons. The existence of these requirements depends upon companies' voluntary disclosure practices. The question is whether the new mandatory disclosure requirements by the JSC in 1998 are associated with voluntary financial disclosure practice in 1997. The answer to this question will be provided through testing the following hypothesis:

H1: *There is a positive relationship between the level of companies' voluntary disclosure in 1997 and the level of compliance with the JSC mandatory disclosure requirements in 2002.*

5. **Examining the interaction between the level of voluntary and mandatory disclosure in the printed annual reports of Jordanian companies after 1998.**

Following Dye's (1986) hypothesis it is assumed that increasing mandatory disclosure requirements will increase the level of voluntary disclosure. The question is whether there is any positive relationship between the level of voluntary and mandatory financial disclosure in the Jordanian manufacturing companies' annual reports after the reform of the financial system in 1998. The answer to this question will be provided through testing the following hypothesis:

H2: *There is a positive relationship between the level of companies' mandatory and voluntary disclosure after 1998.*

6. **Examining the relationship between the levels of printed mandatory, voluntary and overall financial disclosure and selected company characteristics before and after 1998.**

The proposed theoretical framework, based on the literature, argued that company characteristics could be used in an attempt to explain the variation in the level of financial disclosure across samples of companies. The question here is whether the levels of mandatory, voluntary and the overall financial disclosure in the Jordanian manufacturing companies' annual reports are associated with company characteristics before and after 1998. The answer to this question will be provided through testing the following hypotheses[18]:

H3: *There is a positive relationship between company characteristics and the level of mandatory financial disclosure before and after 1998.*

H4: *There is a positive relationship between company characteristics and the level of voluntary financial disclosure before and after 1998.*

H5: *There is a positive relationship between company characteristics and the level of overall financial disclosure before and after 1998.*

7. **Measuring the level of voluntary disclosure on Jordanian companies' websites.**

In light of new technological innovations and the emergence of network communication in Jordan in early 2000s, it is argued that the Jordanian companies are using the Internet as a financial communication channel to disclose financial information to their users. The question is, do Jordanian companies listed on ASE in 2004 use websites on the Internet to disclose financial disclosure to their users? The answer to this question will be provided in Chapter 7 by examining the situation of the Jordanian companies' financial disclosure on the Internet in 2004.

8. **Examining the association between the level of printed financial disclosure and Internet financial disclosure.**

The proposed theoretical framework in Chapter 4 discussed disclosure transformation theory, according to which there is a positive association between printed

---

[18] These hypotheses will be divided later in this chapter into several sub-hypotheses, which will be accepted or unaccepted

financial disclosure, both mandatory and voluntary, and engaging in voluntary disclosure on the Internet. This positive relationship explains the keen attitude of managers, triggered by incentives, towards financial disclosure. In other words, increasing companies' printed financial disclosure practice motivates companies' attitude towards disclosing more financial information on the Internet. The question here is, is there any positive relationship between Jordanian manufacturing companies' printed levels of financial disclosure in 2002 and Internet financial disclosure in 2004? The answer to this question will be provided through testing the following hypothesis:

H6: *There is a positive relationship between company's printed financial disclosure in 2002 and the level of Internet financial disclosure in 2004.*

9. Examining the relationship between the level of Internet disclosure and company size.

The proposed theoretical framework, based on the literature, argued that company size could also be used in an attempt to explain the variation in the level of Internet financial disclosure across samples of companies. The question here is, are the levels of Internet financial disclosure associated with company size in 2004? The answer to this question will be provided through testing the following hypothesis:

H7: *There is a positive relationship between company size and the level of Internet financial disclosure in 2004.*

The research sample, the research method as well as the statistical analyses employed in the current study to achieve the above objectives will be explained in remaining sections of this chapter.

6.4 The Research Sample

The current study aims to carry out an empirical investigation measuring and comparing the level of printed financial disclosure practices of Jordanian companies listed on ASE in two different time periods. Also an empirical assessment of the overall situation of the Internet financial disclosure practices of Jordanian companies listed on ASE will be undertaken. Therefore, different research samples of Jordanian companies are required to accomplish the stated objectives – for the printed annual reports part, a

sample of Jordanian manufacturing companies has been chosen at two different points in time, 1997 and 2002. Furthermore, it was decided to include all the Jordanian companies listed on ASE for the Internet financial disclosure part to provide a comprehensive image and general overview of the level of Jordanian companies' usage of the Internet for financial disclosure. The following will discuss the sample selection and the reasons behind this selection.

6.4.1 Sampled Companies of Printed Annual Reports

The first main objective is to measure and compare the level of financial disclosure in the printed annual reports of companies listed on ASE before and after the new accounting developments in 1998. The years 1997 and 2002 were chosen to accomplish this objective. 1997 was the last year before the disclosure changes in 1998 for which annual reports were available, while 2002 was the most recent year for the current investigation. The Jordanian Shareholding Companies Guides (JSCG) of 1997 and 2002 were used to determine the number of listed companies. These guides show that in both years there are four company sectors: Banks, Insurance, Service and Manufacturing companies. The literature review chapter shows that prior studies had suffered from heterogeneous sampled companies. Difficulties occurred because financial companies such as banks, insurances and investment companies have specific accounting issues (and in some cases are subject to particular accounting requirements not relevant for most companies), which could cause statistical problems, e.g. high variation in the range of the level of disclosure among companies from different sectors. As a result the first two sectors have been discarded.

Furthermore, there are differences between the service and the manufacturing industry sector, as the nature of their business varies, which is reflected in the contents of their financial reports. For instance the balance sheet and income statement of manufacturing companies contain many items that cannot be found in the corresponding documents of service companies, e.g. inventory/stock, cost of inventory, market value of inventory, and further. For example, Al-Modahki (1995) provided a variation of the level of disclosure ranging from 33% to 95% for the years 1988, 1989 and 1990. This might be related to the fact that these sampled companies included different sectors.

In order to avoid such problems and to reduce the issue of inapplicable items it has been decided to limit the current investigation to manufacturing companies. Essentially, manufacturing poses the largest sector of the Jordanian listed companies.

According to the JSCG 70 manufacturing companies were listed on AFM in 1997 (out of a total of 139 listed companies) and 91 manufacturing companies were listed on ASE in 2002 (out of a total of 158 listed companies). To allow for comparisons between the two years two criteria were employed on the sampled companies: a company should be listed in both years 1997 and 2002, and a useable copy of each company annual report should be available for both years 1997 and 2002. According to the first criteria all manufacturing companies were newly listed after 1997 were excluded, as well as 4 companies that closed down after 1997 and 3 companies suspended after 1997 were also excluded. Therefore, the initial sample for this research included 63 companies. Only 27 useable sets of companies' annual reports were available in the library of JSC because further annual reports were either totally or partially missing due to the lack of proper filing processes. Additionally, further 24 sets of annual reports were collected by contacting companies directly – in the instance of further companies annual reports dating back to 1997 were not obtainable because they were not kept for more than 4 years, or they refused to give out a copy of their annual report.

Hence a total of 51 sets of useable annual reports for Jordanian manufacturing companies listed in both 1997 and 2002 were obtained. Thus the sample represents 73% of listed manufacturing companies in 1997 and 56% of listed manufacturing companies in 2002. There are not any significant differences in terms of size or industry between the companies included in the sample and those omitted. All of the reports were in the Arabic language. The following table shows the summary of the sampled manufacturing companies' annual reports for both years.

Table 4: Summary of the Sampled Manufacturing Companies' Annual Reports for 1997 & 2002

Summary of the Sampled Companies' Annual Reports	1997	2002
Number of companies listed on ASE	139	158
Number of listed manufacturing companies	70	91
Percentage of total population from the entirety of listed companies	50%	58%
The number of useable annual reports for this research	51	51
Percentage of useable annual reports for this research	73%	56%

At this point it is worthwhile to note that there is not any agreed short classification of industries in Jordan. The short one found in Jordan was provided by the Exporters' Directory which included 22 main industrial sectors: Garment And Textile, Leather Products, Food & Beverage Products, Tobacco & Cigarettes, Agricultural Products, Machinery (Heavy) & Supplies, Handicrafts, Jewellery, Body Care Products & Cosmetics, Mining & Quarrying, Chemicals & Allied Products, Medicals & Pharmaceutical, Household Furniture, Baby Toys & Games , Electrical Products, Rubber & Plastic, Construction & Building Materials, Metal Industry, Automotive Industry, Packing, Packaging & Printing, Engineering Industry, and Paper & Cardboard Products. For the purpose of this study the current sampled manufacturing companies were classified into five main sectors with consideration to the above list: (1) Natural resources and Metal industry (including for instance: phosphate fertilizers and minerals, petroleum products and metal products), (2) Food and Clothing industry (including: food processing and clothing), (3) Pharmaceuticals and Cosmetics industry, (4) Building Materials and Equipments industry, and (5) additional industries including furniture, paints, plastics, paper and cardboard. Appendix (3) classifies the current sampled companies in these major industry sectors, and Table 5 summarises the sampled companies according to their sectors as will be used in this study.

Table 5: Summary of Sampled Companies According to their Industry Sectors

Industry Sectors	Number of Companies in 1997 and 2002
1. Natural Resources & Metal Industry	7
2. Food and Clothing Industry	12
3. Pharmaceuticals and Cosmetics Industry	5
4. Building Materials and Equipments	17
5. Additional Industries	10
Total	**51**

6.4.2 Sampled Companies of Internet Reporting

Internet reporting is a new phenomenon in Jordanian companies, and there are two main objectives in this part: firstly to provide a general overview of the situation of listed Jordanian companies on the Internet and their online financial disclosure. The second objective is to examine the association between printed financial disclosure in the manufacturing companies' annual reports in 2002 and the level of Internet financial

disclosure on their websites in 2004. Consequently, this requires two samples of companies: the first sample of companies to accomplish the first objective of this part, which includes all Jordanian companies listed on ASE until August 2004. This will be done by examining whether these companies had a website on the Internet, and whether they provide financial information on their websites. The second sample is needed to accomplish the second objective included the 51 manufacturing companies in the printed annual part in 2002, which were all listed by the end of August 2004.

At the end of August 2004 there were 190 companies listed on ASE's home page (www.ammanstockex.com). These companies include 16 Banks, 27 Insurance, 62 Services and 85 Manufacturing companies[19]. The researcher employed different sources in order to determine whether these companies have websites or not, and to locate each company's website, if there is any. First of all the Jordanian Exporters' Directory and the Services Companies Directory were used, which include all listed and unlisted export manufacturing companies' names and their websites, and all listed and unlisted service companies' names and their websites. Both directories are available online on the Jordan Export Development and Commercial Centres Corporation website[20]. Secondly the most recent JSCG issued in 2004[21] was used to find more companies' website addresses, which include a summary of companies' contact addresses, both the mailing and electronic address (if any) up to 2003. Also the researcher decided to search for each company's website not found in the above-mentioned approaches, by using the name of the companies, in Arabic and English languages, as listed on ASE through a specialist Jordanian search engine net on the Internet, such as "Jordan on the web" and "JordanLinks.com"[22] (www.jordanlinks.com), and via a specialist Arab search engine, such as Arabia online[23] (www.arabia.com), as well as by using the global search

---

[19] The most recent company listed on ASE was "Al-Janoub Filters Manufacturing Company", the listing date was 26/05/2004.

[20] Available on: www.jedco.gov.jo, and the recent update at the time of this survey was on 2004

[21] Available on: www.jsc.gov.jo

[22] JordanLinks.com is a Jordanian search engine on the World Wide Web. This included a comprehensive directory of Jordanian websites organised by subjects, and using advanced WebSearch Technology to help users to find out the information they're looking for quickly and effectively.

[23] Arabia online is the Arab world's leading online destination. The arabia.com's web search is the first bilingual Arabic and English language integrated search function. It is powered by Google.

engine Google (www.google.com). Jordanian banks were found through a list of all Jordanian bank names and their website were available at JordanLinks.com, while Jordanian insurance companies' websites were located through a list of listed and unlisted Jordanian insurance companies' names and their websites, if any, were provided on the Jordan Insurance Federation homepage (www.joif.orgat). In the case of insurance companies' websites not found by using an insurance federation list the names were double-checked by using the JordanLinks, Arabia and Google search engines to ensure that all insurance companies with websites are included in the current sample. After several times searching the Internet by using the above search engines, the final number of listed companies with accessible Jordanian websites by the end of September 2004 was 55 Jordanian companies listed on ASE. Appendix (4) classifies the current Internet sampled companies according to their major sectors, Banks, Insurance, Services and Manufacturing companies. Chapter 7 will provide more details about this survey.

6.5 Measuring the Level of Financial Disclosure in Companies' Annual Reports

"Financial disclosure is an abstract concept that cannot be measured directly. It does not possess inherent characteristics by which one can determine its "intensity" or "quality" like the capacity of a car" (Wallace, 1987, pg. 431).

The abovementioned statement suggests that financial disclosure is an abstract and broad concept which cannot be measured directly. In attempting to measure the quantity of disclosed information in companies' printed annual reports scholars developed different research methodological approaches. In this context, Beattie et al. (2004) summarised two main methodological approaches employed to analyse companies' annual reports – the subjective approach in which financial analysts' perceptions is the source for analysis, and the semi-objective approach in which content analysis is the main methodology. The former approach provides financial analysts' perceptions of overall financial disclosure, such as the disclosure quality rating provided by AIMR, formerly Financial Analysts Federation (FAF), rather than a direct measure of the actual disclosure. The semi-objective approach refers to the researcher analysing the texts of companies' annual reports by counting the number of items such as the number of words and numbers shown in the accounts or by counting the average number of pages of such disclosure per company (Marston & Shrives, 1991).

Weber (1985) defined content analysis as '*a research method that uses a set of procedures to make valid inferences from text*' (pg. 9). In this context Beattie et al. (2004, pg. 214) explained that content analysis as a research method which involves classifying text units into categories for drawing valid inferences, and it is important for the classification procedure to be reliable. In the textual content analysis, known also as *thematic analysis*, the researcher draws inference from data, themes intrinsic in the message, by systematically classifying data into categories (Jones & Shoemaker, 1994). The thematic analysis, both manual and computer-aided[24], utilises the quantity of disclosed information in companies' annual reports as a proxy of measuring disclosure practice. Often this method requires classifying text units into categories, and using coding procedures to give a score for each category, finally aggregating the scores in all categories to have one measure for employing statistical tests (Beattie et al., 2004).

In effect, manual content analysis as a methodological approach has been adapted by scholars in financial disclosure research in the form of the disclosure index. Beattie et al. (2004) argued that the disclosure index is a well established research method which is based on the general principles of thematic analysis, and it has been used to measure the amount of information in annual reports as a proxy measure of companies' disclosure practices. As emerged from the review chapter, the disclosure index was widely used by prior scholars to measure financial disclosure practices.

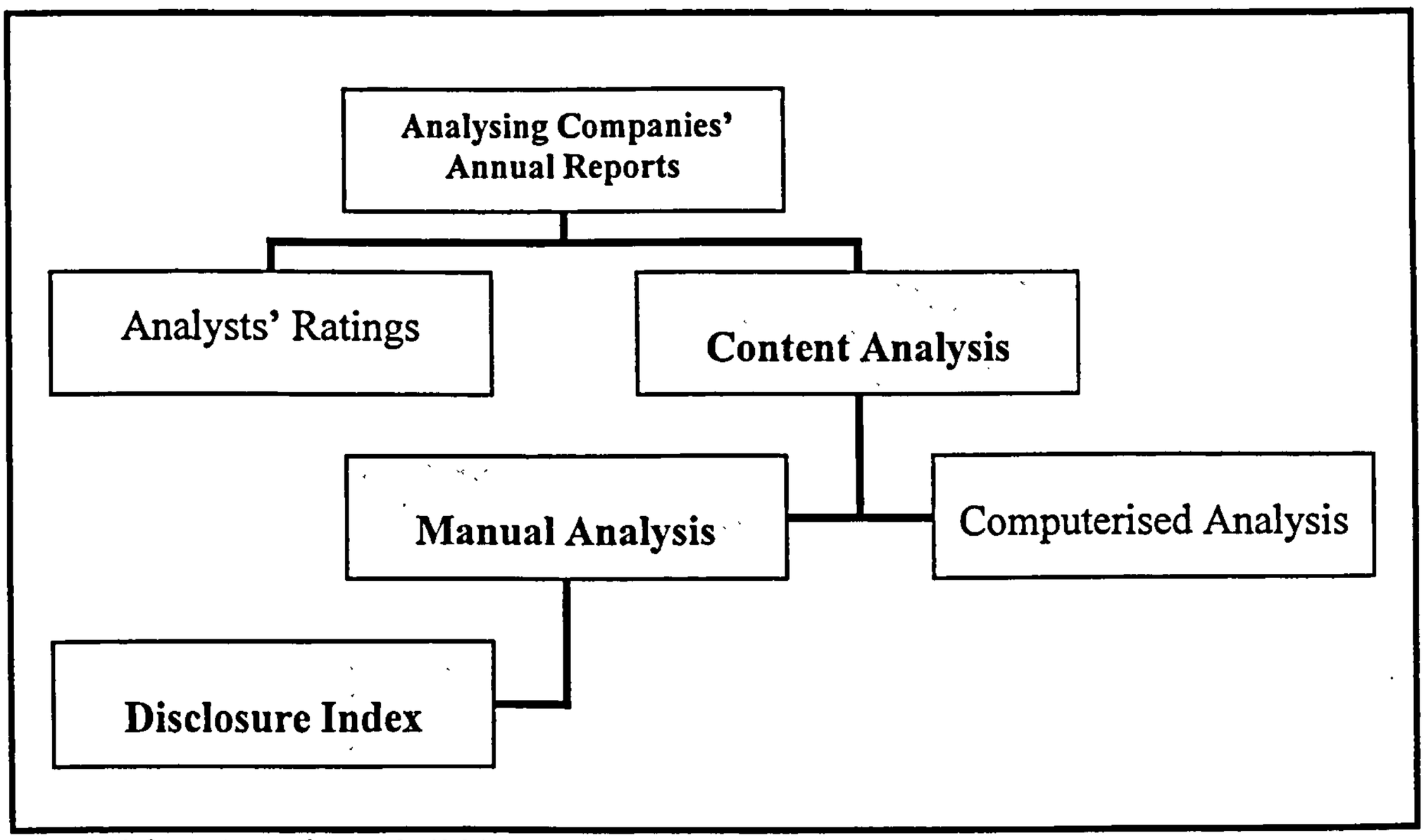
Prior studies in Chapter 2 used the quantity of compliance with mandatory requirements and/or the quantity of voluntary disclosure as proxies to measure the level of printed financial disclosure practices. Some scholars went one step further by using the quantity of information to assess the quality of companies' annual reports. The latter based their arguments on the idea that as far as the annual report is in full compliance with mandatory requirements and/or contains a high level of voluntary information based on their benchmark, it can be regarded as a report with a good quality of financial disclosure (see for instance, Abayo et al. (1993), and Al-Hussaini, (2001)).

---

[24] In which researcher can use a computer software package designed to assist in the analysis of narratives disclosure, by supporting the processes of coding data, searching text and searching patterns of coding (Beattie et al., 2004).

As illustrated above, the disclosure index is a converted version of manual content analysis in the area of companies' annual reports. Exhibit 7 shows the path of how the disclosure index has emerged from content analysis as a research method of analysing companies' annual reports.

Exhibit 7: The Path of Disclosure Index Research



Adapted from Beattie et al. (2004, pg. 209)

The disclosure index, as illustrated in the above exhibit, is defined as one way of undertaking manual content analysis which is converted to analyse structured and/or unstructured narrative and/or non-narrative, regulated and/or voluntary financial and/or non- financial companies' disclosure by classifying a list of particular items and using a specific coding scheme to demonstrate the disclosed and/or not disclosed information in both the main text and/or companies' accounts in the annual reports.

Disclosure index, as a research methodology in the area of companies' annual reports, overcomes the limitations of manual content analysis which excludes regulated and audited financial disclosure. In this context, Marston & Shrives (1991, pg.195) support the existence of the disclosure index as a satisfactory method for measuring the level of companies' disclosure as follows:

"*One research instrument that has been used in numerous publications is an index of disclosure of particular information in company reports. Such an index aims to*

show the level of disclosure in a set of company accounts. It can be used to show compliance with regulations if items in the index are so chosen or conversely it can be used to show the level of voluntary disclosure."

Also Ahmed & Courtis (1999, pg.35) said that:

"The typical methodology employed is to construct a country-relevant disclosure index and to relate the quantity of informational items disclosed to selected corporate characteristics. Depending on the research objective and the country being, the index comprises voluntary information items and/or mandatory items. Disclosure measure may be either weighted or un-weighted."

In addition recently Coy & Dixon (2004, pg.79) stated that:

"Disclosure indices are an often applied method in accounting research, particularly in studies of annual reports, being used to provide a single-figure summary indicator either of the entire contents of reports of comparable organisations or particular aspects of interest covered by such reports."

The context of this thesis is to carry out an empirical investigation to measure Jordanian financial disclosure practices, in order to highlight the level of compliance with the mandatory requirements, the level of voluntary disclosure and of overall financial disclosure. The disclosure index as a form of manual content analysis has been chosen as the superior research method for the following reasons: professional financial analysts' perspectives of the Jordanian companies' annual reports ready for use are not yet available in Jordan. Thus, this research method was excluded in the current research due to unfeasibility. Moreover, the traditional manual content analysis, arguably the most common method with a strong foundation in the area of companies' social and environmental disclosure (Milne & Adler, 2002; Maali et al. 2003), is regarded as not applicable to financial disclosure research as for instance counting items and numbers does not recognise the problem of repetitions in reports and also numbers cannot be considered on their own to provide any explanation without supplementary words (Marston & Shrives, 1991). Also different researchers are needed to code the same text in the same way to ensure that the classification procedure is reliable in the sense of being consistent to make valid inferences (Weber, 1985).

This PhD thesis is an individual project as opposed to a team effort, and financial constraints, i.e. paying professionals a fee to do so was not financially possible, render this method of content analysis inapplicable. In addition, the annual reports for 1997 and 2002 are all available in Arabic printed formats which did not allow for using computer-aided content analysis. Finally, the chief rationale behind the choice of the disclosure index is the aspect of measuring mandatory, voluntary and overall financial disclosure in this empirical investigation, as the index allows for encompassing all three notions in one. Therefore, the following sections will focus on the financial disclosure index as the current research method to analyse the Jordanian companies' financial disclosure.

6.5.1 Disclosure Indices as Dependent Variables

As discussed in the review chapter, a disclosure index is constructed by identifying lists of items that must be, or could be, disclosed in the annual reports under examination, checking which items are actually disclosed and calculating the ratio of items disclosed to the maximum disclosure set. The checklists prepared have varied from one study to another based on each study's objectives. Prior scholars have constructed a disclosure checklist, which either contains a mandatory set of items to show companies' compliance with the mandatory regulation, or contains a voluntary set of items, not required by any regulation, to show the level of companies' voluntary disclosure or overall disclosure, based on their objectives in each study.

The most important step to construct disclosure index or indices is to identify a list of items that represent the financial reporting being examined to construct a reliable and valid index. It is required to decide which financial items will be included in the checklist so as to represent the sample's financial disclosure. It is important to point out that a generally agreed theory on constructing disclosure indices does not exist (Wallace, 1994; Wallace & Naser, 1995). The literature review of the current study supports this notion as the number of items included in the checklists of prior studies varied and ranged from a minimum of 17 items by Barrett (1975, 1976) to a maximum of 250 items by Curuk (1999). Additionally, prior scholars collected their items and constructed their indices in different ways. For instance, several scholars collected their indices' items through consultant professional bodies or organisations (Chow & Wong-Baron, 1989; Tai et al., 1990). Also many of the prior scholars constructed their indices

by collecting items from previous studies' indices, by reviewing the companies' annual reports in their samples, and/or by reviewing the country's regulation requirements. The latter is referred to as a self-constructed index (for instance: Cooke (1989,1991,1992,1993), Ahmed & Nicholla (1994), Solas (1994), Wallace (1994), Wallace & Naser (1995), Al-Mulhem (1997), Owusu-Ansah (1998), and Al-Hussaini (2001)).

Furthermore, in prior studies there are two types of disclosure indices, known as the weighted versus the un-weighted disclosure index (Marston & Shrives, 1991). Table 1, in Chapter 2, shows several prior studies classified according to weighted, un-weighted and both approaches. Weighted indices derive from the importance of each item as has been determined by the users of financial reporting by asking them to rank the importance of each item according to scoring scales (Marston & Shrives, 1991). Un-weighted indices tackle all financial reporting items as equal regarding their importance in order to avoid the subjectivity in weighted indices and to validate indices. In addition, un-weighted indices are applied by using dichotomous procedures, which means that an item scores "1" if disclosed in the annual reports and scores "0" if not disclosed (Marston & Shrives, 1991). In several empirical studies of the disclosure literature both approaches were applied within the same study and it was agreed among these that there are not any differences and in the results correlation was high between the weighted and un-weighted disclosure indices.

The un-weighted disclosure index approach has been chosen in the current study for several reasons: Firstly, the current research does not look at disclosure from the users' perspective, and the researcher cannot solely weigh the importance of each item due to an arising bias issue. Secondly, subjectivity is a concern in the weighted approach, and arises by asking a number of users with clashing needs to assign a score to each item to weigh its importance. As a result different weighted scores for the same item will be given by different users due to differing needs. Also in those studies where both approaches were used, high correlations between the weighted and un-weighted disclosure indices were generally obtained. Therefore, un-weighted disclosure indices will be employed in the current study to assess the practices of both the printed and Internet financial disclosure by using the dichotomous approach. The following sections will outline the construction of the current disclosure indices.

6.5.2 Developing Current Disclosure Indices for Printed Annual Reports

As discussed above, the current study measures the financial disclosure practice in the printed annual reports, including measuring the printed mandatory and voluntary financial disclosure practices before and after financial disclosure regulation developments in 1998. Therefore the following section will discuss in depth how to construct the current disclosure indices for mandatory and voluntary disclosure for the printed annual reports.

6.5.2.1 Printed Mandatory Disclosure Indices

Measuring the level of companies' compliance with mandatory disclosure requirements is the first part of measuring financial disclosure practice in the printed annual reports in the current study. Mandatory disclosure has been used in prior studies as a proxy to measure comprehensive disclosure in several studies, by assessing the degree to which companies comply (individually and on average) with the mandatory disclosure requirements in force at a given date (see for instance Ahmed & Nicholla (1994), Solas (1994), Wallace (1994), Wallace & Naser (1995), Al-Mulhem (1997), Owusu-Ansah (1998), Al-Hussaini (2001) and Abd-Elsalam & Weetman (2003)). The level of compliance has been measured in these studies by using a disclosure checklist including mandatory disclosure requirements collected from accounting regulations, such as companies' acts, accounting standards and stock exchange requirements, in the country being studied.

For the purposes of this study the first step in order to establish valid mandatory disclosure checklists a definition of mandatory disclosure in both years needs to be given. As discussed in Chapter 5, the framework of Jordanian financial reporting regulation before 1998 was entirely different from the framework that emerged in that year. Before 1998, financial reporting regulations mainly came from two sources, the AFM and the Companies Act 1989 (which was amended by the Companies Act 1997). These lacked financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports. Under the Securities Law 1997, a new regulatory system was introduced for what was in effect a new Jordanian capital market. The regulation of the capital market was divided among three

institutions, the JSC, ASE and the SDC. In 1998 the JSC introduced new extensive disclosure requirements for companies listed on ASE.

However, in 1997 the Jordanian regulations, Companies Acts 1989 and 1997, required that every registered public shareholding company should publish the director's report, the auditor's report and audited financial statements in accordance with GAAP, and the latter means IASs as defined by JACPA in 1989. As explained in Chapter 5 IASs have been used in Jordan since the early 1990s[25] and they were addressed directly for the first time as mandatory requirements by Article No (24) in directives of the JSC for 1998. These new regulations came as a result of the new developments in the Jordanian financial market, and responded to the recent improvements in the Jordanian economy and the new orientation towards the international trade and investments, which is to create an attractive investment climate to encourage foreign investment. Consequently, Jordanian companies listed on ASE were required to apply IASs in their periodic financial statements. In this context, the proposed theoretical framework raised the concern of the appropriateness of applying IASs in a developing country, then it discussed IAS-lite and its different types of complying with IASs which were found in emerging economies, particularly those of Eastern Europe and East Asia (Cairns, 2000 & 2001), and suggested these as modification types of applying IASs according to environmental factors of developing countries.

Jordan, as shown in Chapter 5, has an emerging economy with an emerging accounting system and business environment, unlike other developing or Arab countries which have a more sophisticated economy with advanced industrialised business environment. Therefore, it was decided in the current research to use the generic requirements of IAS financial statements, a basic version of IASs suitable for the emerging Jordanian accounting system and the small as well as the medium Jordanian companies listed on AFM. These standards are considered as main guidelines and minimum requirements, which provide a fair presentation of the companies' financial statements and improve comparability of the same company over time and of more than one company within the same timeframe (Roberts et al., 1998).

---

[25] There is considerable evidence in the Jordanian accounting literature showing that IASs have been used in Jordan since 1989 (for instance in Chapter 3: Mutter (1993), Solas (1994), Naser (1998) and Naser & Al-Khatib (2000)).

Therefore, the current mandatory index concentrates on the generic requirements of IAS financial statements, rather than establishing an exhaustive list of IASs disclosure requirements not yet fully applied even in the well advanced industrialised developed countries (see Chapter 2). Furthermore, the JSC has required companies to apply IASs by using a flexible and soft prescriptive verb, i.e. *shall*, to denote an instruction (Article No. 24 required that: the entities subject to the Commission's monitoring shall apply IASs), which may leave the Jordanian companies with plenty of room to interpret it as *shall or shall not* (see Young, 2003 and Masocha & Weetman, 2005 for more details). Although disclosure requirements may be derived from regulatory systems, ensuring that companies comply in full with such requirements may be difficult. This is particularly recognised in the case of IAS, with continuing suspicion that many companies claiming to comply fall short in practice, without censure from auditors – which has been referred to as 'IAS lite', and is often found associated with accounting in emerging economies, particularly those of Eastern Europe and East Asia (Cairns, 2001; Haider, 2004).

However, two separate different mandatory checklists were constructed as expected to present the financial statements of Jordanian companies for both 1997 and 2002. These different checklists have been determined for the years 1997 and 2002 to reflect the different mandatory disclosure requirements of the two years. The checklist for 1997 is based on mandatory items required by the light version of IASs, which contains IAS 1, IAS 5 and IAS 7 in force in 1997[26], while the corresponding part of the checklist for 2002 was based on mandatory items required by the light version of IASs, which contains IAS 1 and IAS 7 in force in 2002[27]. These requirements, the generic financial information to be disclosed in the financial statements, are considered as a suitable light version of IAS for the developing countries with emerging economy and financial market. This is supported by prior studies in developing countries; for example Solas (1994) had accepted IAS 1 and IAS 5 as an approximate model for adequate mandatory disclosure in the annual reports of Jordanian companies. Also, Al-Hussaini (2001) supported a checklist based on items required by the version of IAS 1 and IAS 5

---

[26] IAS 1 Disclosure of Accounting Policies (Issued 1975)
IAS 5 Information to be Disclosed in Financial Statements (Issued 1976)
IAS 7 Cash Flow Statements (Issued 1992)

[27] IAS 5 (Information to be Disclosed in Financial Statements) was combined with IAS 1 in the 1997 revision of IAS 1 (Presentation of Financial Statements), which was effective for periods beginning after 1 July 1998. IAS 7 (Cash Flow Statement) has last been revised in 1992.

as a model of measuring the level of Kuwaiti companies' compliance with IASs as a mandatory disclosure requirement in Kuwaiti regulation. However, the current study expands Solas (1994) and Al-Hussaini (2001) by adding fundamental cash flow statement items under IAS 7.

Therefore, the checklist for 1997 is based on 31 mandatory items required by the version of IAS 1, IAS 5 and IAS 7 in force in 1997, as well as the directors' and the auditor's reports as required by the Companies Act 1989. Subsequently the checklist for 1997 includes 33 mandatory items, see Appendix No (5). The mandatory checklist for 2002 is divided into two parts: the first part, as discussed above, is based on IASs, including IAS 1 and IAS 7, as in force in 2002, including 46 mandatory items. The second part is based on the 45 mandatory items that are required by JSC's disclosure requirements for companies listed on ASE for 1998, which includes the Companies Act's mandatory requirements and subsequently the checklist for 2002 includes 91 mandatory items, see Appendix No (6).

Moreover, it was decided to use the dichotomous approach to avoid problems in assessing whether partial disclosure occurred. The awarding score for each item in the mandatory checklist based scores "1" if disclosed in the annual reports and scores "0" if it is applicable and not disclosed. The awarding score for each inapplicable item was "7" as irrelevant score. For each annual report in both of the two years being studied, two different scores were determined. The first score is the 'Maximum Mandatory Applicable Items' (*MMAI*) and the second score is the 'Actual Disclosed Mandatory Items' (*ADMI*). The Mandatory Index Ratio (M*IR*) is computed for each company's annual report by dividing the *ADMI* by the *MMAI*. More formally:

$$ADMI = \sum_{j=1}^{n} dj$$

where d_j = 1 if the item j is disclosed, and

0 if the item dj is not disclosed

n = the number of items applicable to each company:

for year 1997, $n \leq 33$

for year 2002, $n \leq 91$

$$MIR = \frac{ADMI}{MMAI}$$

6.5.2.2 Voluntary Disclosure Indices

Voluntary disclosure is the second part of measuring the financial disclosure practice in the current study. It was also used in prior studies as a measurement for the comprehensiveness of financial disclosure in printed annual reports (Firth, 1979; McNally et al., 1982; Cooke, 1991; Hossain et al., 1994; Raffournier, 1995; Suwaidan, 1997; Depoers, 2000; Chau & Gray, 2002; Haniffa & Cooke, 2002). Voluntary disclosure was assessed in these studies by using the voluntary disclosure checklist which includes items expected to be disclosed voluntarily in the printed annual reports of the sampled companies. Prior studies collected their checklists' items from different sources as pointed out in the review chapters. Regardless of differing methods of collecting voluntary items in order to construct their own checklists, scholars have agreed that any of these items should not be required by any kind of disclosure regulations in their specific reporting jurisdiction at the time of disclosure.

The current study needs to define voluntary disclosure of Jordanian companies in order to construct a valid voluntary checklist containing items expected to be disclosed by these companies' annual reports. As discussed above, mandatory disclosure is any information required by Jordanian accounting regulations, Company Acts 1989 & 1997 or the new JSC disclosure requirements in 1998 including IASs. As a result voluntary disclosure can be classified as any information not required by these regulations in any investigated year. To undertake items' selection according to this definition the researcher employed three main sources. Firstly, prior checklists of Jordanian voluntary disclosure empirical studies, such as Abu Naser (1993) and Suwaidan (1997), were reviewed. Secondly, the researcher carried out a pilot survey on the current sampled companies' annual reports both in 1997 and 2002. The entire sample of annual reports of both years was examined thoroughly to improve the current checklist, and interestingly this exercise showed that many of the items required by JSC in 1998 were found disclosed voluntarily in the Jordanian companies' annual reports in 1997, and/ or were included in prior checklists of Abu Naser (1993) and Suwaidan (1997). Therefore, these items required by the JSC in 1998 are considered as voluntary items in 1997. The final checklist for 1997 comprises 67 voluntary items, see Appendix (7), and as a result of the new regulation in 1998 the final checklist for 2002 comprises only 21 voluntary

items, see Appendix (8). Table 6 summarises the sources and the changes in the mandatory and voluntary checklists' items for both years of the current research.

Table 6: Summary of Mandatory and Voluntary Items in 1997 & 2002

Items	JSC's Requirements in 1998	Companies Act & IASs Requirements	Items from Prior Studies & Sampled Annual Reports in 1997 & 2002
1997	Voluntary	Mandatory	Voluntary
2002	Mandatory	Mandatory	Some remained Voluntary & Some became Mandatory

Also the dichotomous approach was employed to code whether an item was disclosed or not. For each annual report in both years being studied, two different scores were determined. The first score is the 'Maximum Applicable Voluntary Items' (*MAVI*) and the second score is the 'Actual Disclosed Voluntary Items' (*ADVI*). The Voluntary Index Ratio (V*IR*) is computed for each company's annual report by dividing the *ANDI* by the *MNAI*. More formally:

$$ADVI = \sum_{j=1}^{n} dj$$

Where,

d = scored 1 if the item dj is disclosed, and

0 if the item dj is not disclosed

n = is the number of item applicable to each company

whereas, n for year 1997 = $n \leq 67$, and

n for year 2002 = $n \leq 21$

$$VIR = \frac{ADVI}{MAVI}$$

6.5.3 Validity and Reliability of Disclosure Indices

"In view of the nature of the variable, information disclosure, and the measuring device, a disclosure index, it is necessary to consider two criteria that are typically employed in the social sciences when evaluating measurements. These criteria are reliability and validity." Marston & Shrives (1991, pg.197)

The aforementioned statement suggests that with regard to using the disclosure index as a measurement tool there are two very important issues, validity and reliability of the disclosure index, which should be considered in any research as issues related to the research instrument credibility. Validity means *'the extent to which any measuring instrument measures what it is intended to measure'* (Carmines & Zeller, 1979, pg. 17). In the context of disclosure index, it is concerned with whether the disclosure index as a research instrument measures the level of disclosure of companies' annual reports, and refers to the ability of the index score to measure the actual level of financial disclosure (Marston & Shrives, 1991). Reliability *'concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials'* (Carmines & Zeller, 1979, pg. 11), i.e. to what extent the results of the disclosure index can be reliable if replicated by another researcher (Marston & Shrives, 1991).

Marston & Shrives (1991) show that the reliability of the disclosure index could be affected by several practical problems in awarding index scores to companies: the problem of giving each item in the checklist a partial score, the problem of penalising the companies for inapplicable items as non-disclosed items, and the problem of weighing each item in the checklist according to its importance. Weighted indices usually reflect the importance of each item as determined by selected users of financial reporting by asking them to indicate how important they regard each item according to a given scoring scale. This process does not enhance the reliability of results because it is often a subjective process as different users give different weights to different items, and usually it reflects the perspectives of specific groups of users not the entire population (Cooke, 1989).

Just as reliability, also the validity of the disclosure index could be affected by several practical problems such as: Firstly, research errors, for instance, defining financial disclosure as mandatory when voluntary or vice versa. In other words the measure, disclosure index, does not measure what it is intended to measure, which is required to ensure the validity, which means that the index used by the researcher does actually measure the mandatory or the voluntary financial disclosure. Secondly, index validity can be affected by the penalising problem, which is likely to appear with regard to the heterogeneous sample of companies which includes different sectors of companies such as insurance, banks, service and manufacturing companies. The nature

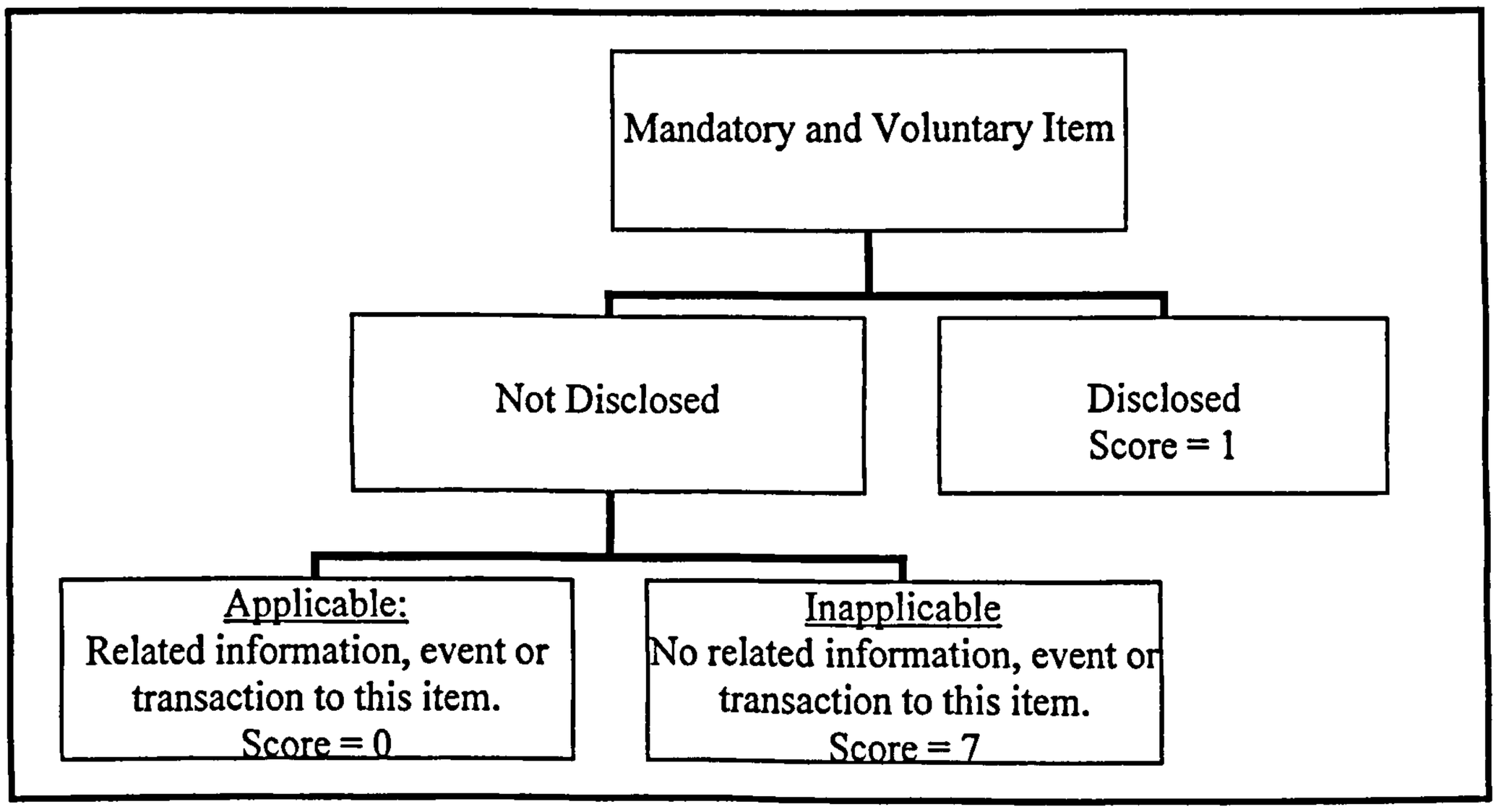
of each sector is different and hence applying one standardised checklist will result in the inapplicability of items. This problem is expected to be reduced among companies from the same sector, especially when considering that certain companies in one sector are subject to a lack of events or transactions causing the existence of such items. Thirdly, index validity can be affected by the issue of subjectivity, which arises when indicating the importance of each item through different users.

The researcher has undertaken several attempts to reduce the effects of the above problems as much as possible. The problem of subjectivity when using the weighted disclosure index has been eliminated due to the choice of the un-weighted disclosure index. Also the dichotomous approach has been employed to code whether an item was disclosed or not disclosed, so as to avoid subjectivity in assessing whether partial disclosure occurred. The problem of inapplicable items across sectors has been reduced by limiting the current investigation to one homogeneous sample, the manufacturing companies' annual reports. In addition, the nature of the current disclosure indices' items reduced the problem of inapplicable items in the same sector, meaning the mandatory index for each year contains the mandatory disclosure requirements in Jordan for each year, while the current voluntary indices include items collected from prior voluntary studies in Jordan, and from the pilot survey of the sampled printed annual reports.

Furthermore, it was considered that there are items included in the checklists which might not be applicable to all of the sample companies, as some companies might not have undertaken particular transactions or been subject to particular events giving rise to such items, such as extraordinary items (i.e. income, charges and credits), income from investments, correction of fundamental errors, any governmental protection or privileges, description of affiliated companies, any donations and grants made by the company, and other items. In this context, Cooke (1989) argued that in cases of such items not found in a company annual report, it is very difficult to determine whether these items are applicable or not to this particular company. This problem can be eliminated by excluding these items from the current checklists, through which, however, the credibility of the current index measuring the financial disclosure practices in Jordan will be affected.

Therefore, it was decided to include these items in the current checklist, and Cooke's (1989) approach was followed by reviewing the annual reports of the entirety of sampled companies to be aware of the items in the checklists that might not be applicable to some companies in the sample. The benefit of this approach is that it reduces the risk of penalising companies for the omission of items that are in fact irrelevant to their operations. The researcher carried out this review in two stages. First, each annual report in the sample was tested by using the appropriate version (1997 or 2002) of the full mandatory and voluntary disclosure checklists. This helped in gaining familiarity with the checklists' items and the annual reports themselves to determine the possible inapplicable items. Then each checklist was reviewed by reference to the company's report to determine whether any items not disclosed were 'not applicable' rather than omissions. The applicability of each not disclosed item has been checked by answering one main question: whether there is any information, event or transaction in any part of the annual report referring to this item. Exhibit 8 shows the scoring routes followed in the awarding score process for the mandatory and voluntary items.

Exhibit 8: The Scoring Route of the Mandatory and Voluntary Item



As illustrated in the above exhibit the scoring process is based on the question of whether the item is disclosed or not disclosed. If a mandatory item is disclosed in the appropriate format, for instance the mandatory financial information of the financial statement should be presented either on the face of the financial statements and/or in the notes to the statements, the awarding score for each item is "1". Similarly, a score of "1"

is awarded if a voluntary financial item is disclosed in the annual report of a company. However, if either of these items is not found in the company report, then the issue of whether this item is applicable or inapplicable to this company should be checked. If the item is applicable, that to say there is information in any part of the annual report referring to this item it is regarded as non-disclosed item and awarded a score of "0". If there is no information in the company annual report referring to this particular item it is regarded as an inapplicable item and is awarded "7" as the inapplicable score for the purposes of the current analysis. All the annual reports were retested by the same procedure after the actual inspection and before computing the index ratio for each company to identify and correct any error or misunderstanding regarding any item in the annual reports. This procedure not only enhanced the validity of the research instrument, by identifying any items that had been inadequately specified on the checklists, but also improved the reliability of the disclosure indices.

6.5.4 Internet Financial Disclosure

Financial disclosure on the Internet is the second dimension of measuring financial disclosure practices in the current study. The concept of Internet disclosure is a new and growing phenomenon in companies' annual reports and there is a consensus among prior studies that currently Internet financial disclosure is a voluntary and un-mandated phenomenon in most of the countries around the world, of which Jordan is one country, as Internet financial disclosure is not yet required by any of the Jordanian regulations.

As outlined in Chapter 3, most of the empirical studies on Internet financial disclosure were conducted in developed countries and with regard to Jordan it appears that no Internet reporting study has been carried out to date. Internet financial disclosure was used in prior studies as a measurement of the usage of the Internet for disclosing financial disclosure (e.g. Allam & Lymer, 2002; Bonson & Escobar, 2002; Debreceny et al., 2002; Lybaert, 2002, Oyelere et al., 2003; Xiao et al., 2004). In these studies voluntary disclosure checklists were used as research tool to evaluate the level of Internet financial disclosure by choosing sets of items which included content of financial reporting and presentation criteria.

6.5.4.1 Developing the Disclosure Index for the Jordanian Companies' Websites

The selection of the disclosure checklist items is the most important step in measuring Internet financial disclosure. As discussed, Internet financial disclosure is a currently not mandated phenomenon in Jordan hence it can be defined as follows: Internet financial disclosure is a voluntary financial disclosure comprises any financial information disclosed by Jordanian companies on their websites.

The FASB (2000) has developed a general framework, as reviewed in Chapter 3, illustrating the basic dimensions of companies' Internet financial disclosure, namely content and presentation items. Also it is important to note that when comprising the checklist it is essential to bear in mind the fact that companies' websites are different in their designs and the way of presenting accounting information (Allam & Lymer 2002).

It is believed that in order to provide a true image and useful insight into existing Jordanian Internet disclosure practices the current checklist should include a set of items representing the current status of Jordanian companies' websites. Therefore, visiting each of the sampled companies' websites collecting the current items is regarded as the best way to create the current benchmark. Also prior Internet disclosure indices, such as those developed by Allam & Lymer (2002), Bonson & Escobar (2002), Debreceny et al., (2002), Oyelere et al., (2003), and Xiao et al. (2004), were used to inform the current checklist. It is important to note that this procedure of constructing the current Internet checklist will not only measure the actual situation of Jordanian companies online but also improve the validity of the current index.

Moreover, it has been decided to divide the current checklist into two main parts, the first part including 10 general items focusing on non-financial issues, such as ensuring the existence of companies' websites (the company website and its name as listed on ASE), taking into account the provision of latest news and/or events, and items looking at how the company presents the first generation of Internet financial disclosure, and facilitating the process of using this information on their websites through giving a site map or even lists of parts and their links, a search engine box, whether information is presented through HTML or PDF formats, language used, i.e. Arabic and/or English, whether further contact details such as e-mail address or mailing address are supplied,

and any further information enquiries that could arise. The second part includes 18 items of the financial reporting items' content, and therefore the final list comprises 28 financial and non-financial un-weighted voluntary items expected to represent the current usage of the Internet by Jordanian companies. Appendix (9) shows the complete set of the current Internet disclosure index.

As seen above the current Internet scoring sheet was established, containing 28 voluntary items selected as an applicable benchmark in order to represent the current online situation of the Jordanian companies. Therefore, the risk of penalising companies for inapplicable items has been eliminated. Also at this stage the dichotomous approach was employed coding a disclosed item with '1' and a not disclosed item with '0', so as to avoid the problems of assessing whether partial disclosure occurred. Weighting of different items was not attempted, given that this is often a subjective process, and, as discussed above, prior research suggests that it does not enhance the reliability of results.

For each company's website being studied, two different scores were determined: the first score is the 'Applicable Internet Voluntary Items (AIVI=28)', and the second score is the 'Actual Internet Disclosed Items' (*AIDI*). The Internet Disclosure Index (*IDI*) is computed for each company's website by dividing the *AIDI* by 28. More formally:

$$AIDI = \sum_{j=1}^{n} dj$$

Where d_j = 1 if the item j is disclosed, and
0 if the item j is not disclosed
n = Internet Index's items = 28

$$IDI = \frac{AIDI}{28}$$

6.6 The Independent Variables

As discussed earlier in Chapter 5, the variation in the level of mandatory and voluntary disclosure can be explained by several company characteristics and company familiarity as independent variables.

6.6.1 Company Characteristics

There is no systematic approach to select company characteristics and determine their number. Empirical findings of prior studies have not yet agreed on one direction of association between the level of financial disclosure and the company characteristics, i.e. company structure, company performance and company ownership structure variables. This may due to the differences among prior studies, for example prior scholars have applied different proxies of measurements for these variables or they have employed different statistical analyses to examine the relationship, and they examined these variables in different settings, developed, less developed and developing. The following sub-section will discuss how the current research will measure the association between dependent and independent variables which is considered to be more related to current research objectives.

6.6.1.1 Company Size

The proposed theoretical framework based on agency theory, signalling theory and cost-benefit analysis argued that larger companies are more likely to disclose more items than smaller companies. The variation in the level of mandatory, voluntary and overall financial disclosure in the current study, if any, could thus be explained by using company size. The latter has been measured by at least ten different measurements, namely total assets, net assets, total sales, number of shareholders, capital employed, market capitalisation, book value of debt, net income, shareholders' paid (fund) and number of employees. In general, there is not any theoretical reason to choose one measure rather than another (Cooke, 1989). Therefore, for the current study total assets, total sales and capital employed were chosen as the frequent proxies' measurement of company size. The following hypotheses will be tested:

H8: *There is a positive relationship between the company size and the level of mandatory disclosure in 1997 and 2002.*

H9: *There is a positive relationship between the company size and the level of voluntary disclosure in 1997 and 2002.*

H10: There is a positive relationship between the company size and the level of overall disclosure in 1997 and 2002.

6.6.1.2 Ownership Structure

The proposed theoretical framework, based on agency theory argued that ownership structure can be used as an explanatory variable of financial disclosure variation among sampled companies. As mentioned earlier Jordanian companies in 2002 are expected to have differing ownership structures from 1997, as the period between these years was marked by a substantial privatisation campaign. Thus it is decided to include this variable in the current study to explain the variation in the level of mandatory, voluntary and overall disclosure, if any. Moreover, in 1997 a very high percentage of government ownership was concentrated mainly in the infrastructure sectors (transport, electricity, water and telecommunications), whereas partial government ownership was found in other sectors, for example in many manufacturing companies. Recently, the Jordanian government has recognised that the future growth of the economy will depend primarily on a more practically involved role of the private sector and foreign investments. Therefore, the government aims to reduce the Jordanian government's stake in these sectors. Bearing in mind the partial impact on manufacturing companies of this variation in ownership structure, two different types of ownership structure will be examined in this study – government ownership and foreign ownership. Ownership structure as an explanatory variable has been examined in a number of different ways (i.e. as a continuous or dummy variable) by using different proxy measures for this variable, for instance top ten shareholders, family ownership, company insiders' ownership, institutional ownership, government ownership, foreign ownership or multinational ownership. Also, ownership is measured by some researchers as a continuous variable (percentage of shares held by relevant groups) and by others as a categorical variable. In this study, following Suwaidan (1997), it is considered that government or foreign shareholders became significant when they held collectively at least 10% of a company's share capital. The following hypotheses will be tested:

H11: There is a positive relationship between government ownership and the level of mandatory disclosure in 1997 and 2002.

H12: *There is a positive relationship between government ownership and the level of voluntary disclosure in 1997 and 2002.*

H13: *There is a positive relationship between government ownership and the level of overall disclosure in 1997 and 2002.*

H14: *There is a positive relationship between foreign ownership and the level of mandatory disclosure in 1997 and 2002.*

H15: *There is a positive relationship between foreign ownership and the level of voluntary disclosure in 1997 and 2002.*

H16: *There is a positive relationship between foreign ownership and the level of overall disclosure in 1997 and 2002.*

6.6.1.3 Industry Type

Based on the political cost and signalling theories' arguments, industry type also can be used as another explanatory variable, which has been used in many prior studies, to help explain cross-sectional variation in levels of disclosure. It is theorised that companies in certain industries may be prepared not to disclose required or voluntary items if they perceive the costs of disclosure greater than the costs (including any penalties) of non-disclosure or than the benefits of disclosing voluntary information. Industry type as an explanatory variable has been examined in the prior studies as a dummy variable. The sample sections will show how for the current study the sampled manufacturing companies were classified to examine this variable. The sampled manufacturing companies in this research are classified into five industry types: (1) natural resources industry, (2) food and clothing industry, (3) pharmaceuticals and cosmetics industry, (4) building materials and equipments and (5) additional industries, and these are represented in the following hypotheses:

H17: *There is a positive relationship between the industry type and the level of mandatory disclosure in 1997 and 2002.*

H18: *There is a positive relationship between the industry type and the level of voluntary disclosure in 1997 and 2002.*

H19: *There is a positive relationship between the industry type and the level of overall disclosure in 1997 and 2002.*

6.6.1.4 Company Performance

Based on the agency and signalling theories' arguments company performance has been increasingly used as an explanatory variable. Agency theory suggests that because of the separation between the managers and the owners of companies and the difficulties that investors face in order to observe directly the extent and the quality of managers' efforts on their behalf, investors will depend on reports of managers' performance to monitor their investments and to ensure that managers' effort is directed towards investors' interests. Managers of companies with better performance than others wish to distinguish their performance through a process of signalling this information. Company performance has been examined by using different proxies such as return on equity, return on total assets, return on total sales and net profit. In the current study the return on total equity (ROE) and net profit (NP) have been used as proxy measures of the Jordanian companies' performance, and the following hypotheses refer to these measures:

H20: *There is a positive relationship between profitability (ROE & NP) and the level of mandatory disclosure in 1997 and 2002.*

H21: *There is a positive relationship between profitability (ROE & NP) and the level of voluntary disclosure in 1997 and 2002.*

H22: *There is a positive relationship between profitability (ROE & NP) and the level of overall disclosure in 1997 and 2002.*

6.6.1.5 Company Age

Company age has also been used as an explanatory variable in a number of prior studies. The theoretical argument here is that older companies disclosing more information than younger companies. It could be argued that the former are more familiar with financial disclosure practices, and they are more likely to comply more with mandatory disclosure requirements, and disclose more voluntary items. It could be examined by using three different proxies: counting the years since the company was established, or since it has been listed, or counting the number of times the company has issued annual reports. The former has been used in the current study. Therefore, the following hypotheses will be tested:

H23: *There is a positive relationship between company age and the level of mandatory disclosure in 1997 and 2002.*

H24: *There is a positive relationship between company age and the level of voluntary disclosure in 1997 and 2002.*

H25: *There is a positive relationship between company age and the level of overall disclosure in 1997 and 2002.*

6.6.1.6 Auditor Size

Based on agency theory, auditor size has commonly been used to explain disclosure variation based on that the reputation and size of the auditor firm influence the level of companies' disclosure. Auditor size has been examined by using dummy variables including if the auditor firm for this company is part of the big five auditor firms or otherwise. According to Suwaidan (1997), such classification for the Jordanian auditor firms existed by the JACPA as follows: (1) Saba & Co., (2) Ibrahim Al-Abbasi & Co., (3) Sha'er & Co., (4) Dajani & Ala'eddin & Co., (5) Certified Arab Office, and (6) Talal Abu-Ghazaleh. Sha'er & Co., and Dajani & Ala'eddin formed an alliance to operate as Allied Accountants. Therefore, there are five big Jordanian auditor firms considered in this study. The following hypotheses refer to these firms:

H26: *There is a positive relationship between auditor size and the level of mandatory disclosure in 1997 and 2002.*

H27: *There is a positive relationship between auditor size and the level of voluntary disclosure in 1997 and 2002.*

H28: *There is a positive relationship between auditor size and the level of overall disclosure in 1997 and 2002.*

6.7 Statistical Analysis and Tests

The objective of this section is to provide a summary of statistical analysis and tests which will be used to examine the research hypotheses related to the practices of printed and Internet financial disclosure of the sampled companies, and related to the relationship between the extent of financial disclosure and company characteristics. However, in order to choose and apply a suitable statistical technique, Hussey & Hussey (1997, pg. 187) suggest considering the following criteria as a ground base to choose the appropriate techniques:

1. The statistical technique will be chosen based on the data nature, i.e. whether the data has a normal distribution or not.
2. The statistical technique will be chosen based on the number of variables which will be used in the analysis at the same time.
3. The statistical technique will be chosen based on the measurement scale of the current data (nominal, ordinal, interval or ratio).

These criteria will be explained in the next chapter in more detail. There are two types of statistical techniques or tests, parametric and non-parametric tests. In this context, Field (2000) argued that parametric tests are more powerful than non-parametric tests, if the former have met several assumptions. In order to apply a parametric test, parametric data is required, of which there are four basic certain assumptions for any data to be considered as parametric, listed as follows:

1. Normally distributed data: the data should be normally distributed.
2. Homogeneity of variance: the data variances should not change systematically.
3. Interval data: the data measurement should be in the interval scale.

4. Independence: data from different subjects should be independent.

Furthermore, non-parametric tests can be used when one of the parametric data assumptions is not tenable, because non-parametric tests are assumption-free (Field, 2000). Finally, Field stated that using parametric tests for non-parametric data is inaccurate. Marston & Shrives (1991, pp. 199-200) summarised that in the following statement:

"Parametric statistical tests are only appropriate when measurement on interval or ratio scale has been achieved and the population is normally distributed. Non-parametric statistical tests should be employed when a nominal or an ordinal scale measurement has been achieved."

In order to choose an appropriate statistical technique it is critical that the above criteria, assumptions and nature of the data are understood, the latter of which will be analysed by using these techniques. The discussion about choosing the appropriate statistical technique will be undertaken in Chapter 8 when the technique employed will be determined.

6.7.1 Univariate and Bivariate Analyses

Univariate analysis will be adopted in this research to report the descriptive analyses which will be used to represent the dependent variables in the form of the mean and standard deviation. The bivariate analysis will be used in this research to show the association between dependent variables themselves and to examine the association between the explanatory variables, company characteristics and the dependent variables, and lastly the extent of both mandatory and voluntary financial disclosure. The bivariate analysis will show whether there is a relationship between company characteristics and the extent of financial disclosure, and if the relationship is positive or negative.

6.7.2 Multivariate Analysis

Multivariate analysis will be used by employing multiple regressions to analyse the relationship between the extent of financial disclosure as dependent variables and simultaneously several company characteristics as independent variables. This analysis

will highlight the extent of each independent variable's impact on the variation of financial disclosure. It seeks to determine to which extent each variable can explain the variation in the level of financial disclosure practices among Jordanian companies listed on ASE.

6.8 Summary

This chapter outlined the research paradigms and summarised the research methodology of the current research including its research objectives and hypotheses. Furthermore, this chapter provided the method of accomplishing these objectives and testing the related hypotheses. The objectives of this study cover two different areas of accounting research, firstly printed financial disclosure and secondly Internet financial disclosure. The chapter states the research hypotheses developed to assess the financial disclosure phenomenon from different points in both formats including: measuring and comparing the level of mandatory and voluntary disclosure in the printed annual reports before and after the accounting regulation developments in 1998, and measuring the level of disclosure on Jordanian companies' Websites. The chapter provided the research tools used to measure the level of printed and Internet financial disclosure and it explained the statistical techniques employed to examine these hypotheses in subsequent chapters.

Chapter Seven

The Jordanian Companies' Financial Disclosure Practices: Descriptive Analyses and Results Discussion

7.1 Introduction

In the methodology chapter, the research hypotheses, instruments that will be used to collect the data and the sampled companies were outlined. Also it explained the type of data analyses employed in this research. The current chapter will present the inspections' process and descriptive analyses of Jordanian companies' practices before and after the reform of the financial system in 1998. This includes measuring the level of printed mandatory, voluntary, and overall disclosure in two different years 1997 and 2002, and measuring the level of Internet financial disclosure on Jordanian companies' websites in 2004. These analyses will use the mean, standard deviation, minimum and maximum values to explain the level of financial disclosure practices for Jordanian companies. Additionally, bivariate analysis will be used when the need arises. The next section of this chapter will evaluate the level of mandatory disclosure in printed annual reports in 1997 and 2002. The third section will measure the level of voluntary disclosure in printed annual reports in 1997 and 2002. The fourth section will examine overall disclosure in 1997 and 2002. The fifth section will analyse Internet voluntary disclosure on Jordanian companies' websites. The final section will use bivariate analysis to examine the interaction between the printed financial disclosure and the Internet financial disclosure.

7.2 Measuring Companies' Compliance with Mandatory Disclosure Requirements in 1997 and 2002

The objective of this section is to measure Jordanian manufacturing companies' compliance with mandatory disclosure requirements of 1997 and 2002 in the printed annual reports. As the research methodology chapter discussed, the mandatory scoring sheet was constructed for 1997 and 2002 included the mandatory disclosure items in force in 1997 and 2002. Also, it was considered that there may be items included in the checklists that might not be applicable to all of the sample companies, as some companies might not have undertaken particular transactions or been subject to

particular events giving rise to such items. Table 7 provides the actual raw score of printed mandatory disclosure which each company received, and the latter's ranking is based on the company's number in the sample. The first set of values in this table represents the total raw scores of the actual disclosed mandatory items for each company in 1997. The second two sets have the values of the total raw scores of the actual disclosed mandatory items, which are based on the requirements of the IASs and JSC respectively, for each company in 2002. It was decided to separate the mandatory items in 2002 in order to provide a comprehensive image of the extent of compliance with these requirements for each part. The third set represents the total raw scores of the actual disclosed mandatory items for each company in 2002.

Table 7: ADMI for each Company in Year 1997 & 2002

Co. No	ADMI Year				Co. No	ADMI Year			
	1997	2002				1997	2002		
		IAS	JSC	Total			IAS	JSC	Total
1	26	40	33	73	27	29	42	25	67
2	31	45	24	69	28	21	29	27	56
3	26	40	34	74	29	28	42	35	77
4	26	38	15	53	30	16	42	36	78
5	29	44	31	75	31	27	41	31	72
6	22	40	25	65	32	23	39	31	70
7	22	40	33	73	33	27	38	17	55
8	26	40	31	71	34	23	41	35	76
9	27	43	37	80	35	26	42	38	80
10	24	41	36	77	36	18	42	36	78
11	24	36	25	61	37	26	43	24	67
12	27	42	38	80	38	18	41	36	77
13	26	39	13	52	39	23	41	23	64
14	23	42	30	72	40	25	40	25	65
15	24	40	15	55	41	25	43	41	84
16	26	37	10	47	42	24	40	29	69
17	26	41	30	71	43	24	42	41	83
18	27	42	26	68	44	23	42	28	70
19	26	41	35	76	45	27	39	41	80
20	26	42	33	75	46	19	40	28	68
21	21	37	31	68	47	22	42	34	76
22	27	40	29	69	48	28	41	37	78
23	27	36	27	63	49	27	42	33	75
24	27	44	41	85	50	23	40	25	65
25	30	44	41	85	51	27	40	33	73
26	17	39	31	70					

Table 8 represents the descriptive statistics of the disclosed raw scores of the mandatory items in 1997 and 2002:

Table 8: Descriptive Statistics of ADMI in Year 1997 & 2002

	Max. possible score	Mean	S.D.	Min.	Max.
Year 1997					
IAS score & Company Act	33	24.75	3.26	16	31
Year 2002					
JSC score	45	30.25	7.39	10	41
IAS score	46	40.53	2.56	29	45
Total	91	70.78	8.74	47	85

Table 9 reports the index ratio of disclosure compliance with the mandatory disclosure requirements, which was received by each of the 51 Jordanian manufacturing companies listed on ASE in 1997 and 2002. The first column of this table represents the number of the companies as listed in the analyses. The second column illustrates the index ratio of the compliance level with mandatory requirements in force in 1997; the set of values of the mandatory index ratio for 2002 was divided into two sets, one representing the compliance with 46 of IASs disclosure requirements in force in 2002 and the second representing the compliance with 45 JSC mandatory disclosure requirements in force in 2002 respectively. This is followed by Table 10, which illustrates the descriptive statistics of the index ratio of the overall compliance with the mandatory disclosure requirements for each year. Again, minimum and maximum values are highlighted.

Table 9: MIR for each Company in Year 1997 & 2002

Co. No.	MIR Year 1997	2002 IAS	2002 JSC	2002 Total	Co. No	MIR Year 1997	2002 IAS	2002 JSC	2002 Total
1	0.84	0.91	0.80	0.86	26	0.59	0.89	0.78	0.83
2	0.94	0.98	0.55	0.77	27	1.00	0.95	0.64	0.81
3	0.79	0.91	0.79	0.85	28	0.72	0.66	0.69	0.67
4	0.90	0.93	0.38	0.66	29	0.97	0.95	0.80	0.88
5	0.94	0.96	0.74	0.85	30	0.55	0.95	0.86	0.91
6	0.73	0.91	0.64	0.78	31	0.93	0.93	0.78	0.86
7	0.76	0.91	0.79	0.85	32	0.79	0.89	0.78	0.83
8	0.90	0.91	0.79	0.86	33	0.93	0.95	0.43	0.69
9	0.90	0.98	0.88	0.93	34	0.77	0.93	0.81	0.87
10	0.80	0.93	0.84	0.89	35	0.81	0.95	0.84	0.90
11	0.80	0.90	0.64	0.77	36	0.62	0.95	0.84	0.90
12	0.93	0.95	0.95	0.95	37	0.87	0.98	0.62	0.81
13	0.90	0.98	0.33	0.66	38	0.62	0.93	0.84	0.89
14	0.79	0.95	0.71	0.84	39	0.79	0.93	0.59	0.77
15	0.83	0.91	0.38	0.66	40	0.86	0.93	0.64	0.79
16	0.87	0.93	0.26	0.59	41	0.86	0.98	0.95	0.97
17	0.90	0.93	0.77	0.86	42	0.83	0.91	0.74	0.83
18	0.84	0.95	0.65	0.81	43	0.83	0.95	0.91	0.93
19	0.87	0.93	0.81	0.87	44	0.79	0.95	0.67	0.81
20	0.90	0.95	0.79	0.87	45	0.93	0.89	0.93	0.91
21	0.75	0.93	0.70	0.81	46	0.66	0.91	0.67	0.79
22	0.90	0.93	0.67	0.80	47	0.76	0.95	0.79	0.87
23	0.93	0.90	0.68	0.79	48	0.97	0.93	0.86	0.9
24	0.90	0.96	0.91	0.93	49	0.90	0.95	0.79	0.87
25	1.00	0.96	0.91	0.93	50	0.79	0.91	0.64	0.78
					51	0.93	0.91	0.77	0.84

Table 10: Descriptive Statistics of MIR in Year 1997 & 2002

MIR	Mean	S.D.	Min.	Max.
Year 1997				
IAS score & Company Act	0.8364	0.10313	0.55	1.00
Year 2002				
IAS score	0.9297	0.04621	0.66	0.98
JSC score	0.7257	0.15728	0.26	0.95
Total	0.8307	0.08176	0.59	0.97

The main findings of this section are that the majority of Jordanian manufacturing companies did not fully comply with mandatory disclosure requirements in 1997 and 2002. Although some shortfall was expected, given that the mandatory disclosure requirements both in 1997 and 2002 were defined (entirely in 1997, in part in 2002) not specifically but indirectly through the requirement to comply with IAS, the relatively

low level of compliance with the disclosure requirements of the JSC in 2002 was surprising, see Tables 8 and 10.

In 1997, the IASs, taken as the basis of the disclosure index, required a total of 33 items, and the companies in the sample disclosed on average about 25 of these items (equivalent to a raw average disclosure rate of 75%, though in practice the disclosure index will be higher as some disclosures will not be applicable to specific companies). As shown in the third row in Table 10, the index ratio of the disclosed mandatory items is on average about 84%. In 2002, as seen in Table 8, on average 40 items out of total 46 IASs mandatory items were disclosed by the companies in the sample (equivalent to a raw average disclosure rate of 88%), including the 2002 mandatory checklist. Although this represents a relative increase in the level of compliance with IASs, the fifth row of Table 10 shows that on average the index ratio of the IASs was 93%, and it was noted that the level of compliance with IASs moved positively over time, from on average 75% in 1997 to 93% in 2002, in the Jordanian manufacturing companies' reports. The introduction of a further 45 disclosure items based on the requirements of the JSC exhibits a much lower compliance equivalent to a raw average disclosure rate of about 67%, and as can be seen in the JSC row in Table 10, on average the level of compliance was low at 72%.

However, the level of Jordanian companies' compliance with mandatory disclosure requirements has changed after the new developments in mandatory requirements in 1998. This can be seen statistically via pairwise comparison between the level of compliance in 1997 and in 2002. Table 11 show the results of the Wilcoxon test[28] for the changes in the level of companies' compliance with IASs overtime, and the overall compliance with mandatory requirements in both years 1997 and 2002.

---

[28] Wilcoxon test is non-parametric, used in situations in which there are two set of scores to compare, and these score come from the same subjects in two different conditions (Field, 2000).

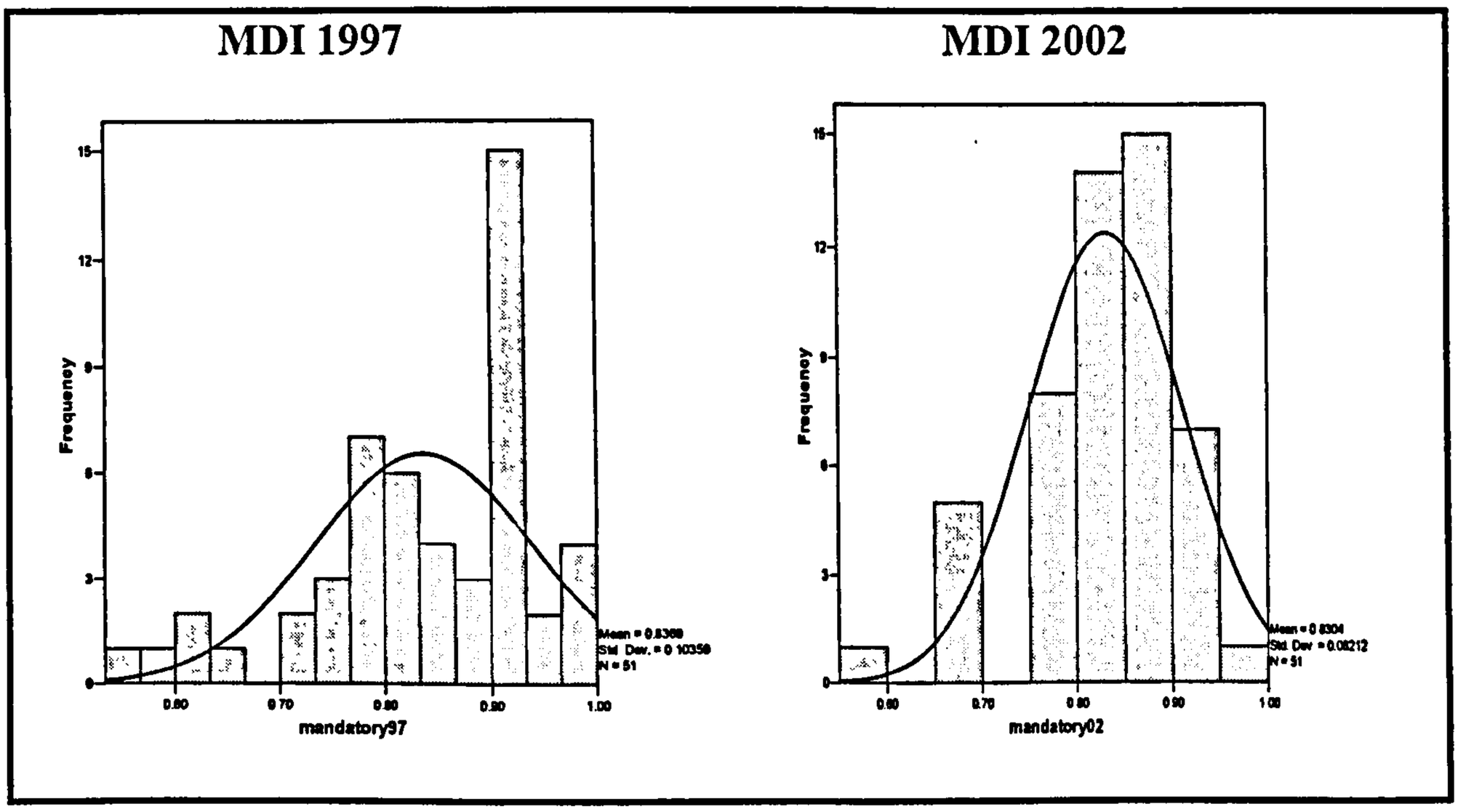
Table 11: Wilcoxon Test of Companies' Compliance with IASs and Overall Mandatory Requirements over the Period 1997-2002

	IASs		Overall Mandatory	
	1997	2002	1997	2002
Mean	0.84	0.93	0.84	0.83
Std. Deviation	0.104	0.046	0.104	0.082
Negative ranks*	8		27	
Positive ranks**	42		22	
Ties***	1		2	
Z (Sig)	-5.293(.000) (a)		-0.480(.633) (b)	

* Compliance in 2002 < compliance in 1997; ** Compliance in 2002 > compliance in 1997
*** Compliance in 2002 = compliance in 1997; (a) Based on negative ranks, (b) Based on positive ranks

Table 11 illustrated that the level of compliance with IASs has increased over the period 1997-2002, though no increase in the overall mandatory disclosure by the Jordanian manufacturing companies was reported over the same period. This is due to shortfalls in compliance with the JSC's requirements by companies listed on ASE in 2002. However, these changes in the disclosure requirements in 1998 cause little difference in the distribution of the MDI between the two years, in both years the distribution is negatively skewed as seen in Exhibit 9. A distribution is skewed if one of its tails is longer than the other. A positive skew means that it has a long tail in the positive direction, on the left hand side of the distribution, whereas a negative skew has a long tail in the negative direction, on the right hand side of the distribution (Field, 2000). In principle, financial disclosure skew could be negative, where a large number of companies come close to perfect disclosure, or positive, where many companies disclose relatively little but there are a few companies that disclose a considerable amount. Negative skew is more likely to occur in the case of a mandatory disclosure, where the usual expectation is that most companies will disclose all or most items required, but positive skew is more likely to occur in the case of voluntary disclosure, where many companies will disclose little but a few exceptional companies will disclose extensively.

Exhibit 9: Histograms Distributions of MDI in 1997 & 2002



At industry level, Table 12 reports the degree of companies' compliance with mandatory disclosure requirements in both years across industry sectors. This table represents the values of descriptive statistics by using the frequency distribution of mandatory disclosure index scores among companies for 1997 and 2002 across five industry sectors namely: (1) Natural resources industry, (2) Food and clothing industry, (3) Pharmaceuticals and cosmetics industry, (4) Building materials and equipments, and (5) Additional industries. The first row in Table 12 shows the frequency distribution range of the disclosure index ratio, including the maximum and minimum index ratio, which was received by the companies. The other rows show the number of companies that received an index score within the range of mandatory disclosure according to the five industry sectors in both years.

As transpires from Table 12, in 1997 there are 21 companies having accomplished a range of 90%-100%, 13 companies having accomplished a range of 80%-89%, 12 companies having accomplished a range of 70%-79%, 3 companies having accomplished 60%-60%, and 2 companies having accomplished a range of 50%-59%. In 2002 there are 11 companies which accomplished a range of 90%-100%, 26 companies accomplished a range of 80%-89%, 8 companies accomplished a range of 70%-79%, 5 companies accomplished 60%-60%, and one company accomplished a range of 50%-59%.

Table 12: Frequency Distribution of MDI among Industry Sectors in 1997 & 2002

1997	Range of Mandatory Disclosure Score %					
Company Sector	**50-59**	**60-69**	**70-79**	**80-89**	**90-100**	**Total**
Natural resources Ind.	0	0	0	0	7	**7**
Food and clothing Ind.	0	0	2	5	5	**12**
Pharmaceuticals Ind.	0	0	2	3	0	**5**
Building materials Ind.	1	0	8	4	4	**17**
Additional Ind.	1	3	0	1	5	**10**
Total	**2**	**3**	**12**	**13**	**21**	**51**
2002						
Natural resources Ind.	0	0	0	3	4	**7**
Food and clothing Ind.	0	2	2	6	2	**12**
Pharmaceuticals Ind.	0	0	1	4	0	**5**
Building materials Ind.	1	2	4	8	2	**17**
Additional Ind.	0	1	1	5	3	**10**
Total	**1**	**5**	**8**	**26**	**11**	**51**

As shown in Table 12, natural resources industry companies are in first place regarding compliance with mandatory disclosure requirements, both in 1997 and 2002. The next is the food and clothing industry, then the pharmaceutical and cosmetics industry, which could be explained through factors that influence the level of companies' compliance in these industries, such as the sensitivities nature of the industry, the size and/or age of the industry. It is plausible to argue that the natural resource industry companies, with comparatively high compliance with mandatory requirements, are the largest companies listed on ASE in both years, so they are more in the public eye than others, and therefore have more incentive to comply with mandatory requirements. In addition, they are involving in a relatively large number of business transactions which resulting a high profit is obvious output. Also they are comparatively old companies in this sector, which could explain why these companies are much closer to full compliance than others in the sampled companies, as they may have become more familiar with mandatory requirements over time. Finally, government ownership in these companies is relatively high, which may enhance companies' compliance with mandatory requirements. The bivariate analyses will show how these factors are associated with the level of compliance in these companies' annual reports.

7.2.1 A Closer Analysis of Printed Mandatory Disclosure Index Applicable Items

In an attempt to investigate the content of mandatory disclosure for 1997 and 2002, this section will explore the level of disclosure of each applicable item. As seen in the methodology chapter the checklists for mandatory disclosure in 1997 and 2002 was divided into several main parts. The mandatory checklist for 1997 was divided into five main parts namely: general information, balance sheet information, income statement information, cash flow statement information and accounting policy information, as well as director and auditors' reports. For 2002 the mandatory checklist was divided into two main parts namely: (1) mandatory disclosure requirements required by IASs in 2002 and (2) mandatory disclosure requirements required by JSC in 1998. Also for 2002 the former part was divided into six major groups namely: general information, accounting policy information, balance sheet information, income statement information, statement of changes in equity information, and cash flow statement information. The mandatory disclosure requirements by JSC included general financial and non-financial information, such as the chairman's speech, and the information that should be included in the board of director's report. The index items, which formed the main parts of mandatory disclosure checklists for both years, were analysed in this section by showing the number of companies to which these items were applicable and the number of companies by which these items were disclosed to explain the level of disclosure for these items by the 51 manufacturing companies in the sample. As each disclosure can take only values of 0 (for non-disclosure) or 1 (for disclosure), the mean for each item is equal to the proportion of companies disclosing that item.

Table 13 illustrates the analysis of the 33 mandatory disclosure items that formed the mandatory disclosure index in 1997.

Table 13: The Level of Disclosure for each Applicable Mandatory Item in 1997

Mandatory disclosure index in 1997	No. of Company disclosing	Applicable No. of Company	Mean
General Information			
1.The company's name	51	51	1.00
2.The country of the incorporation	51	51	1.00
3.The date and the period covered by the financial statements	51	51	1.00
4.Brief description of the nature company's activities	47	51	0.92
5.The legal form of the company	51	51	1.00
6.The report currency	51	51	1.00
7.Corresponding figures for the preceding period	51	51	1.00
Balance Sheet			
8.Current assets classified	26	51	0.51
9.Long-term assets, classified	18	51	0.35
10.Accumulated depreciation	51	51	1.00
11.Intangible assets	9	9	1.00
12.Other assets classified	51	51	1.00
13.Current liabilities classified	22	51	0.43
14. Long-term liabilities, classified	46	51	0.90
15.Other liabilities classified	46	51	0.90
16.Shareholders capital classified	25	51	0.49
Income Statement Items			
17.Sales and other operating revenues	51	51	1.00
18.Amount of depreciation	51	51	1.00
19.Interest income	49	51	0.96
20.Income from investments	29	30	0.96
21.Interest expense	25	51	0.49
22.Tax expense	42	51	0.82
23.Extraordinary charges	4	4	1.00
24.Extraordinary credits	4	4	1.00
25.Significant inter-company transactions	7	7	1.00
26.Net profit or loss	51	51	1.00
Cash Flow Statement			
27.The cash flow from the main company operations activities;	26	51	0.51
28.Cash flow from investments activities	15	30	0.50
29.Cash flow from financing activities classified	15	30	0.50
30.Balances at the beginning and end of the year	48	51	0.94
31.Accounting Policies	51	51	1.00
32.Director's Reports	51	51	1.00
33.Auditor's Reports	51	51	1.00

As can be seen from Table 13 there was considerable variation in the level of companies' compliance with the 33 mandatory items in their annual reports in 1997. On average, the highest and lowest percentage of the companies which disclosed the applicable items of the main parts that formed the mandatory disclosure checklist in

1997 were 100% for accounting policies, auditor's report, and director's report, and 35% for long term assets classified. The highest and lowest average of the companies which disclosed the main parts of the checklist were 98% for the applicable items of general information and 62% for cash flow statement items. Also 92% for the applicable items of the income statement, 71% of the companies disclosed the balance sheet items, and 62% of sampled companies disclosed the cash flow statements items, as well as 99% of sampled companies disclosed the general information items. As seen in Table 13 the classified items in the balance sheet, such as the current and long-term assets classified, the current and long-term liabilities classified, and the shareholders capital classified, received less attention by the Jordanian manufacturing companies in 1997, and less attention was given by these companies to the items content on the cash flow statement.

Also Table 14 shows the analysis of the average level of companies by which each applicable item that formed the mandatory disclosure checklist in 2002 was disclosed.

Table 14: The Level of Disclosure for each Applicable Mandatory Item in 2002

Mandatory disclosure index in 2002			
A) IASs Mandatory Items	**No. of Company disclosing**	**Applicable No. of Company**	**Mean**
General Information			
1. The name of company	51	51	1.00
2. Whether the annual report cover individual or a group companies	51	51	1.00
3. The date of the financial information	51	51	1.00
4. The period covered by the financial information	51	51	1.00
5. The reporting currency	51	51	1.00
6. The level of precision used in the presentation of figures	4	51	0.08
7. The fact of that the comply with IASs	51	51	1.00
8. Comparative figures of the annually financial information	51	51	1.00
Accounting Policy			
9. The basis of preparation of the financial statements	51	51	1.00
10. Any accounting policies selected and applied for significant transactions and events.	51	51	1.00
Balance Sheet Items			
11. Current assets classified	51	51	1.00
12. Fixed assets classified	51	51	1.00
13. Other assets classified	51	51	1.00
14. The accumulated depreciation of the fixed assets and changes occurred	51	51	1.00
15. Intangible assets	12	12	1.00
16. Current liabilities classified	51	51	1.00

17. Non current liabilities classified	51	51	1.00
18. Total amount of other liabilities	51	51	1.00
19. Total amount of provision of taxes payable and other provisions	51	51	1.00
20. Capital, shareholders', and owner's equity Interests classified	51	51	1.00
Income Statement			
21. Sales	51	51	1.00
22. Costs of sales	51	51	1.00
23. Gross profit	51	51	1.00
24. Costs of the operating activities and any expenses (administrative, selling, general, and minority interest)	51	51	1.00
25. Profit or loss from ordinary activities	51	51	1.00
26. Other revenue	50	51	0.98
27. Other expense	50	51	0.98
28. Net profit (or loss) of the period before tax	51	51	1.00
29. Tax expense/ Income taxes	51	51	1.00
30. Net profit after tax	44	44	1.00
31. The amount of dividends per share	43	44	0.98
32. An analysis of expenses using a classification based on either the nature or their function within the company	50	51	0.96
33. Expense for depreciation and staff costs classified by function	51	51	1.00
34. Amortization Expense classified by function	12	12	1.00
Statement of Change in Equity			
35. The net profit or loss for the period	50	51	0.98
36. Each item of income and expense, gain or loss which is recognized directly in equity, and the total of those items	24	51	0.47
37. The cumulative effect of change in accounting policy and the correction of fundamental errors dealt with.	2	9	0.22
38. Capital transactions with owners	16	31	0.51
39. Distributions to owners	38	44	0.86
40. The balance of accumulated profit or loss at the beginning of the period and at the balance sheet date, and movements for the period; and	50	51	0.98
41. Reconciliation between the carrying amount of each class of equity capital	50	51	0.98
42. Each reserve at the beginning and end of the period, separately disclosing each movement.	50	51	0.98
Cash Flow Statement			
43. The cash flow from the main company operations activities classified	51	51	1.00
44. The cash flow from the investments activities classified	51	51	1.00
45. The cash flow from the financing activities classified	51	51	1.00
46. The balances at the beginning and at end of the period	51	51	1.00
B) JSC Mandatory Items			
47. The chairman's speech	44	51	0.86
48. The board of director's report	51	51	1.00
49. Description of any governmental protection or privileges with the period such is applied thereto.	19	19	1.00
50. A description of any patents or concessions that were granted to the company	26	26	1.00

51. Description of any decisions adopted by the government, international organizations or otherwise which has material effect on the company's operations, products or competitive ability.	23	23	1.00
52. To which extend the company abides with the international quality standards	31	51	0.61
53. The company's accomplishments with Figures	44	51	0.86
54. A description of significant events that encountered the company during the fiscal year.	31	51	0.61
55. The competitive status of the Company within the sector of its activities	32	50	0.63
56. The Company main markets its share in the domestic market and in foreign markets if possible	32	51	0.63
57. Degree of dependence on specific providers and/or main customers where such constitutes (10%) or more of aggregate purchases and/or sales or revenues respectively	27	51	0.53
58. The financial effect of extraordinary transactions	13	13	1.00
59. Time chain of incurred profits or losses, distributed profits, the shareholder's net equity and , the prices of securities issued by the Company, for a period of no less than five years	43	51	0.84
60. Analysis of the Company's financial status and actions results during the fiscal year.	38	51	0.75
61. Significant future developments including any expansions or new projects,	48	51	0.94
62. The Company's future plan for at least one coming year	50	51	0.98
63. The expectations of the board of directors of the Company's actions results	29	51	0.57
64. Amount of auditing fees for the company and the affiliates thereof	43	51	0.84
65. Description of the main company's activities, and geographical locations for each activity	31	51	0.61
66. Volume of capital investment in each activity	17	51	0.33
67. Number of employees in each activity	16	51	0.31
68. Description of affiliated companies	11	11	1.00
69. Nature of affiliated companies' work and fields of their activities	10	11	0.91
70. Names of the members of the board of directors	45	51	0.88
71. Names and titles of senior executive managers and a resume of each	34	51	0.67
72. Number of securities issued by the Company	45	51	0.88
73. Company's securities owned by any member of the board of directors and senior executive manager and their relatives, and companies controlled by any of them, compared with the preceding year.	22	25	0.88
74. Privileges and bonuses that the chairman and members of the board of directors and senior executive managers enjoy during the fiscal year, and	47	51	0.92
75. All amounts received by them as wages, fees, salaries, bonuses and others, as well as	46	51	0.90
76. Amounts paid to them as travel and transportation expenses inside and outside the Kingdom.	46	51	0.90

77. Donations and grants made by the company during the fiscal year	16	23	0.69
78. Names of senior shareholders of shares issued by the company	49	51	0.96
79. The number of shares owned by each of senior shareholders where such ownership amounts to 5% or more, compared with the preceding year.	49	51	0.96
80. Organizational structure of the issuing company	34	51	0.67
81. Company appointing policy	19	51	0.37
82. Number of employees	37	51	0.73
83. The employees' qualification categories	25	51	0.49
84. The employees' turn-over ratio	11	51	0.22
85. The employees' rehabilitation and training programs	20	51	0.39
86. Contracts, projects and commitments concluded by the company with the chairman or members of the board of directors, the director general, any employee of the company or their relatives.	23	51	0.45
87. The company's contribution in serving the environment and the local society	22	51	0.43
88. The company's annual financial statements audited by its auditors, compared with the preceding year	51	51	1.00
89. The company's auditor's report on the company's annual financial statements including a statement that auditing procedures have been conducted according to IAS.	51	51	1.00
90. A declaration from the company's board of directors that, according to the board's knowledge and beliefs, there had been no significant matters affecting the continuity of the company during the following fiscal year.	40	51	0.78
91. A declaration from the company's board of directors of its responsibility for preparing the financial statements and for providing effective control system in the company	40	51	0.78

Table 14 exhibits a considerable variation in the level of companies' disclosure with 91 mandatory disclosure items in their annual reports in 2002. On average, the lowest percentage was 8% of the companies which disclosed the level of precision used in the presentation of figures, while, as seen below, many items in the checklist were disclosed by 100% of the companies to which these items were applicable. Also, Table 14 shows the highest and lowest average of the companies by which the applicable items of the main parts of the checklist were disclosed, and as seen the highest percentage of the companies was 100% for disclosed accounting policies, balance sheet, the cash flow statements, and for the directors and auditors reports items, whereas the lowest percentage was 71% for the disclosed statement of change in equity items. Furthermore, 99% of the companies in the sample disclosed the applicable income statements items, 89% disclosed the general information items and 71% disclosed the items of change in equity statement.

Generally, 75% of 51 Jordanian manufacturing companies listed on ASE disclosed the overall JSC applicable items in their annual reports in 2002 and 93% disclosed the overall IASs applicable items. Less attention was given to the items content in the statement of change in equity as opposed to other parts, such as balance sheet, income statement and cash flow statement items. It could be argued that the statement of change in equity is less important to Jordanian companies because the nature of their sources for capital employed are based more on equities, i.e. share holders, rather than on debt holders, and if there are any debt sources it will be long term loans from Jordanian banks[29], which would explain the comparatively low compliance with this item.

Generally, the above findings indicated that there is no full compliance with mandatory disclosure requirements by Jordanian companies in 1997 and 2002. In Chapter 4 no full compliance with mandatory disclosure requirements was referred to as compliance-lite, which is similar to the concept of IAS-lite by Cairns (2001). Compliance-lite raises the issue of why a company does not comply fully with mandatory requirements. Several factors were suggested in Chapter 4, which were also tested in the literature, see Chapters 2, in order to explain compliance-lite. For instance, Street and Bryant (2000) found that on average 84% of U.S. listed companies comply with IASs, and there is a significant relationship between the level of compliance and the auditor's report, good auditing procedures. In the same context, Cairns (2001) suggested that low compliance is caused by poor auditing processes, and Street et al. (2002) found companies being audited by big audit firms are closer to full compliance with IASs. Therefore, auditor size as an influential factor will be tested in the next chapter to assess its effect on the level of compliance by Jordanian manufacturing companies.

Familiarity with mandatory requirements could be another possible explanation for the level of compliance-lite. As seen above, Jordanian companies complied with the generic requirements of IASs financial statements in 1997 on average by over 83%, and they complied in 2002 on average by 93%. Furthermore, the compliance level with JSC mandatory disclosure requirements in 2002 was less than the level of compliance with IASs mandated items in 2002, and within this context it is noted that the JSC introduced

---

[29] Jordanian Banks will monitor the Jordanian companies' accounts directly, when these companies interned into bank loan transaction. this is by asking monthly or quarterly audited financial statements, and this varied based on the bank policy

45 mandated items in 1998 to the listed Jordanian companies. Therefore it is argued that the Jordanian companies needed time to get used to these requirements in order to comply, which was derived from the fact that Jordanian companies were familiar with IASs since 1990, whereas they were less familiar with JSC requirements. Abd-Elsalam & Weetman (2003) carried out their research in Egypt immediately after introduction of IASs and argued in favour of the familiarity with mandatory requirements problem as a reason for a lower degree of compliance with IASs. In the same context, Tai et al. (1990) concluded that non-compliance with the mandatory disclosure requirements in Hong Kong was due to the difficulties of interpreting the disclosure requirements and to the insufficient awareness of the general accounting concepts.

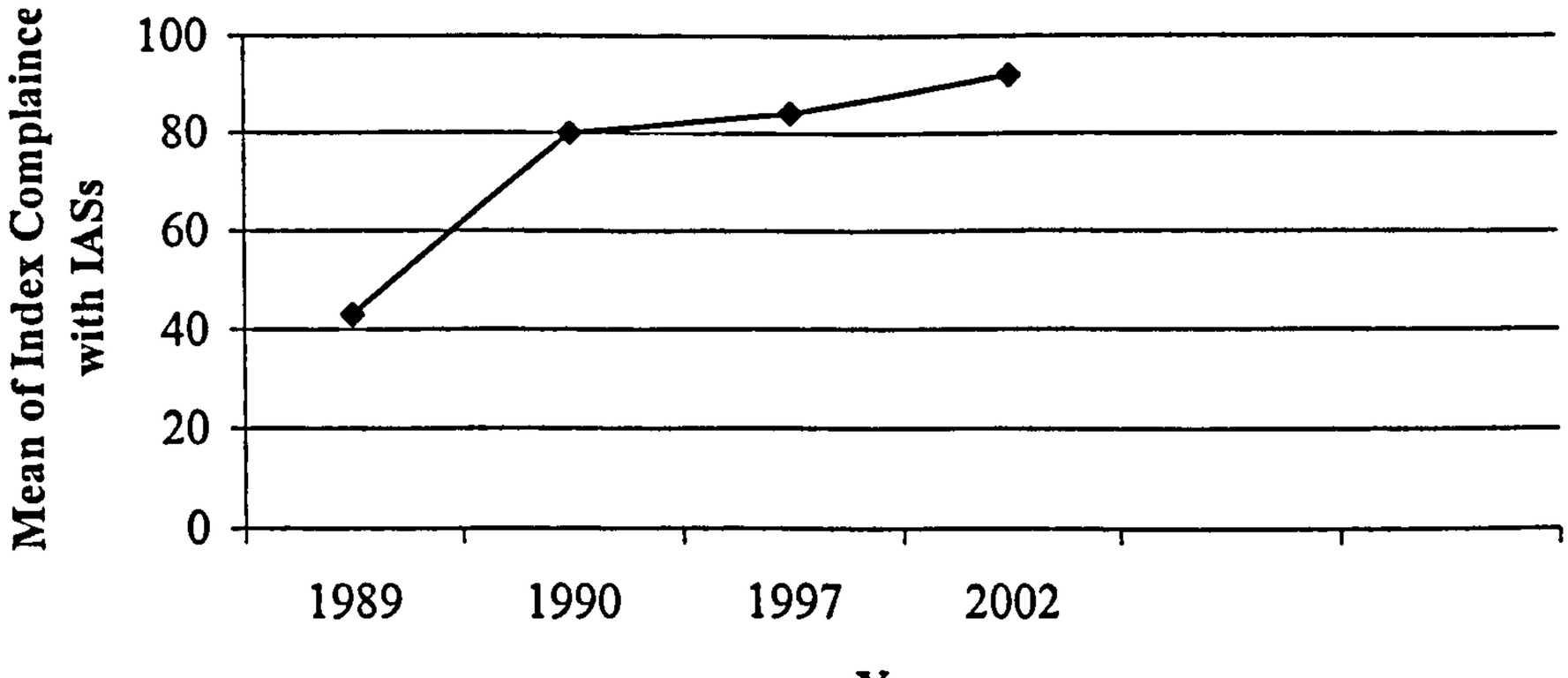
Company familiarity also raised the issue of timing: companies need time to interpret, understand, get used to these requirements in order to comply. This leads to company age as a factor impacting on the level of companies' compliance with mandatory requirements, and as a proxy measure of familiarity. Older companies have developed greater experience in applying the mandatory disclosure requirements. Company age will be an explanatory factor amongst others, as discussed in Chapter 4, such as company size, profitability, ownership structure, and industry type, included in the current bivariate analysis.

Low compliance with mandatory requirements was found in a number of countries. For example, Ahmed & Nicholls (1994) found that none of the companies in Bangladesh disclosed all mandatory items; 58.7% of the mandatory disclosure index items were disclosed on average. Also, Owusu-Ansah (1998) found that there is no full compliance with mandatory disclosure requirements in Zimbabwe, with 74.43% as mean score of companies' compliance. Tower et al. (1999) found variation in the level of companies' compliance in six countries namely: Australia with an average compliance of 94%, Thailand with an average compliance of 93%, Singapore with an average compliance of 90%, Malaysia with an average compliance of 90%, Hong Kong with an average compliance of 89%, and Philippines with an average compliance of 88%. Finally, Glaum & Street (2003) found that 83.7% was the level of compliance with mandatory disclosure requirements in Germany.

It is worthwhile here to compare the level of compliance with IASs by Jordanian companies in the current research with earlier studies on the topic in Jordan. Solas

(1994) measured the level of compliance with IASs in the Jordanian listed companies' annual reports before 1990, in which year the JACPA suggested that listed companies should apply IASs to prepare their financial statements. Solas employed a disclosure index based on 31 items collected from IAS1 and IAS5, and he applied this index to the annual reports of 45 Jordanian manufacturing and service companies for the year ended 31 December 1988. Solas obtained a mean disclosure index of 46.35%, which he considered to be unacceptably low. Mutter (1993, in Arabic) assessed the extent of companies' compliance with IASs by examining the financial statements of 30 Jordanian companies from different industry sectors listed on AFM for the year ended 31 December 1990, as mentioned above the year in which the JACPA suggested that listed companies should prepare their financial statements according to IASs. He showed that Jordanian companies attained what he considered to be a minimum acceptable level of compliance with IAS disclosure requirements, the average disclosure level reaching about 80%, and as seen above the current research reported on average 84% level of compliance in 1997, and 92% level of compliance in 2002 after the IASs became mandatory requirements by the JSC in 1998. The trend in the level of compliance is illustrated in Exhibit 10 below:

Exhibit 10: The Developments in the Level of Compliance with the Generic Requirements of IAS Financial Statements in Jordan



7.3 Measuring the level of Companies' Voluntary Disclosure in 1997 and 2002

The objective of this section is to measure the level of companies' printed voluntary disclosure in 1997 and 2002. As outlined in the methodology chapter two voluntary disclosure scoring sheets were constructed in order to measure voluntary disclosure in the companies' annual reports in each year. The sheet for 1997 included 67 voluntary items, and the scoring sheet for 2002 included 21 voluntary items. The same procedures followed in the inspection of mandatory disclosure were also followed in the inspection of voluntary disclosure. This is in order to be aware of the voluntary items in the checklists that might not be applicable to some companies in the sample. Also to reduce the risk of penalising companies for the omission of items that are in fact irrelevant to their operations.

Table 15 provides the actual raw score of voluntary disclosure which was received by each company, and ranking is based on the number each company in the sample received. It was decided to separate the voluntary items in 1997 into voluntary items in 1997 became mandatory items in 2002, and voluntary items in 1997 and still voluntary in 2002 in order to provide a comprehensive image of the developments in the extent of voluntary disclosure after 1998. The first sets values of this table represent the total raw scores of the actual disclosed voluntary items for each company in 1997. The fourth column represents the values of the total raw scores of the actual disclosed voluntary items in 2002. This is followed by Table 16 which represents the descriptive statistics by using the mean, standard deviation, minimum and maximum values of the disclosed raw scores of the voluntary items for 1997 and 2002.

Table 15: ADVI for each Company in Year 1997 & 2002

Co. No.	ADVI Year 1997 A + B = total			2002	Co. No.	ADVI Year 1997 A + B = total			2002
1	15	19	34	15	27	10	17	27	10
2	10	15	25	11	28	10	12	22	10
3	15	15	30	14	29	2	12	14	8
4	10	16	26	9	30	13	22	35	13
5	19	31	50	19	31	14	17	31	14
6	10	13	23	10	32	11	16	27	10
7	9	12	21	11	33	13	13	26	10
8	14	16	30	18	34	13	13	26	11
9	19	36	55	21	35	17	18	35	17
10	11	15	26	11	36	12	14	26	10
11	11	18	29	11	37	14	16	30	11
12	15	14	29	13	38	13	14	27	13
13	9	14	23	8	39	13	25	38	10
14	14	19	33	16	40	8	15	23	8
15	10	16	26	9	41	16	18	34	16
16	11	13	24	9	42	12	16	28	12
17	9	14	23	12	43	16	21	37	17
18	12	17	29	13	44	15	19	34	17
19	13	16	29	13	45	16	17	33	16
20	15	20	35	19	46	11	16	27	11
21	11	13	24	11	47	15	17	32	15
22	11	13	24	9	48	14	23	37	14
23	13	16	29	10	49	18	19	37	19
24	20	34	54	21	50	12	16	28	13
25	16	33	49	17	51	15	14	29	14
26	9	13	22	8					

A = voluntary items in 1997 and voluntary in 2002
B = voluntary items in 1997 and mandatory items 2002

Table 16: Descriptive Statistics of ADVI in Year 1997 & 2002

ADVI	Max. possible score	Mean	S.D	Min	Max
Year 1997					
A	22	12.82	3.24	2	20
B	45	17.47	5.53	12	36
Total	67	30.29	8.068	14	55
2002					
ADVI	21	12.88	3.559	8	21

A = voluntary items in 1997 and voluntary in 2002
B = voluntary items in 1997 and mandatory items 2002

Table 17 reports the index ratio of voluntary disclosure, which was received by each company in the sample for 1997 and 2002. This table represents one set of

voluntary index ratio values for 1997 and another of the voluntary index ratio values for 2002, followed by Table 18 which reports the descriptive statistics of voluntary index ratio for each year.

Table 17: VIR for each Company in Year 1997 & 2002

Co. No.	VIR Year 1997 A + B = total			2002	Co. No.	VIR Year 1997 A + B = total			2002
1	0.68	0.42	0.54	0.71	27	0.45	0.38	0.43	0.48
2	0.45	0.33	0.41	0.52	28	0.45	0.27	0.36	0.48
3	0.68	0.33	0.49	0.67	29	0.09	0.27	0.23	0.38
4	0.45	0.36	0.41	0.43	30	0.59	0.49	0.57	0.62
5	0.86	0.69	0.77	0.90	31	0.64	0.38	0.51	0.67
6	0.45	0.29	0.38	0.48	32	0.50	0.36	0.44	0.48
7	0.41	0.27	0.34	0.52	33	0.59	0.29	0.43	0.48
8	0.64	0.36	0.49	0.86	34	0.59	0.29	0.43	0.52
9	0.86	0.80	0.86	1.00	35	0.77	0.40	0.56	0.81
10	0.50	0.33	0.43	0.52	36	0.55	0.31	0.43	0.48
11	0.50	0.40	0.45	0.52	37	0.64	0.36	0.49	0.52
12	0.68	0.31	0.48	0.62	38	0.59	0.31	0.44	0.62
13	0.41	0.31	0.38	0.38	39	0.59	0.56	0.59	0.48
14	0.64	0.42	0.54	0.76	40	0.36	0.33	0.38	0.38
15	0.45	0.36	0.43	0.43	41	0.73	0.40	0.56	0.76
16	0.50	0.29	0.39	0.43	42	0.55	0.36	0.46	0.57
17	0.41	0.31	0.38	0.57	43	0.73	0.47	0.58	0.81
18	0.55	0.38	0.48	0.62	44	0.68	0.42	0.55	0.81
19	0.59	0.36	0.48	0.62	45	0.73	0.38	0.54	0.76
20	0.68	0.44	0.57	0.90	46	0.5	0.36	0.44	0.52
21	0.50	0.29	0.39	0.52	47	0.68	0.38	0.52	0.71
22	0.50	0.29	0.39	0.43	48	0.64	0.51	0.61	0.67
23	0.59	0.36	0.48	0.48	49	0.82	0.42	0.58	0.90
24	0.91	0.76	0.81	1.00	50	0.55	0.36	0.46	0.62
25	0.73	0.73	0.73	0.81	51	0.68	0.31	0.48	0.67
26	0.41	0.29	0.36	0.38					

A = voluntary items in 1997 and voluntary in 2002
B = voluntary items in 1997 and mandatory items 2002

Table 18: Descriptive Statistic of VDI for Year 1997 & 2002

VDI	Mean	S.D	Min	Max
Year 1997				
A	0.583	0.148	0.09	0.91
B	0.390	0.123	0.27	0.80
Total	0.4881	0.118	0.23	0.86
Year 2002	0.613	0.170	0.38	1.00

A = voluntary items in 1997 and voluntary in 2002
B = voluntary items in 1997 and mandatory items 2002

The main finding of this section is that Jordanian manufacturing companies disclose a considerable level of voluntary information in their annual reports in 1997 and in 2002. As Table 17 and 18 exhibit, the average of the Jordanian manufacturing companies' printed voluntary financial disclosure was around 49% of 67 voluntary items in 1997, which means the Jordanian companies are disclosing 49% of their applicable voluntary items, considered within the accepted level. As illustrated in Table 18 the lowest 23% and highest 86% index ratio were in 1997, with a range of variation around 63%. The lowest and highest average level of voluntary disclosure among the sampled companies in 2002 were 38% and 100% respectively, with a range of variation 62%. Thus it can be concluded that there is a considerable variation in the level of voluntary disclosure in printed annual reports of the Jordanian manufacturing companies listed on ASE in 1997 and 2002.

Also the introduction of mandatory disclosure requirements in 1998 increased the mean level of voluntary disclosure of the companies in the sample form 58% average level to 61% of 21 items[30]. The increase in the level of Jordanian companies' voluntary disclosure after the new developments in mandatory requirements in 1998 can be seen statistically via pairwise comparison between voluntary disclosure in 1997 and 2002. Table 19 shows the results of the Wilcoxon test for the changes in the level of companies' voluntary disclosure overtime.

Table 19: Wilcoxon Test of the Changes in the Level of Voluntary Disclosure over the Period 1997-2002

	VD		VD	
	1997 A	2002	1997 total	2002
Mean	0.58	0.61	0.49	0.61
Std. Deviation	0.148	0.169	0.118	0.169
Negative ranks*	16		1	
Positive Ranks**	35		46	
Ties***	0		4	
Z, (Sig)	-2.619(.009)(a)		-5.77(.000)(a)	

* Voluntary in 2002 < voluntary in 1997; ** Voluntary in 2002 > voluntary in 1997
*** Voluntary in 2002 = voluntary in 1997; (a) Based on negative ranks,

[30] The same 21 voluntary items has been examined in 1997 and 2002, in order to see how the new mandatory disclosure requirements will influence the incentives of disclosing voluntary information. In this context, Dye (1986) suggested that there is a positive relationship between the increase in mandatory reporting requirements and a possible increase in voluntary disclosure, which will be tested later in the bivariate analysis section.

As illustrated for this table there was an increase in the level of (A) and overall voluntary disclosure over the period 1997-2002, and this is confirming the above analyses. This increase in the level of voluntary disclosure causes little difference in the distribution of the VDI between the two years (in both years the distribution is positively skewed), as transcript from Exhibit 11.

Exhibit 11: The Histogram Distribution of Total VDI in Year 1997 & 2002

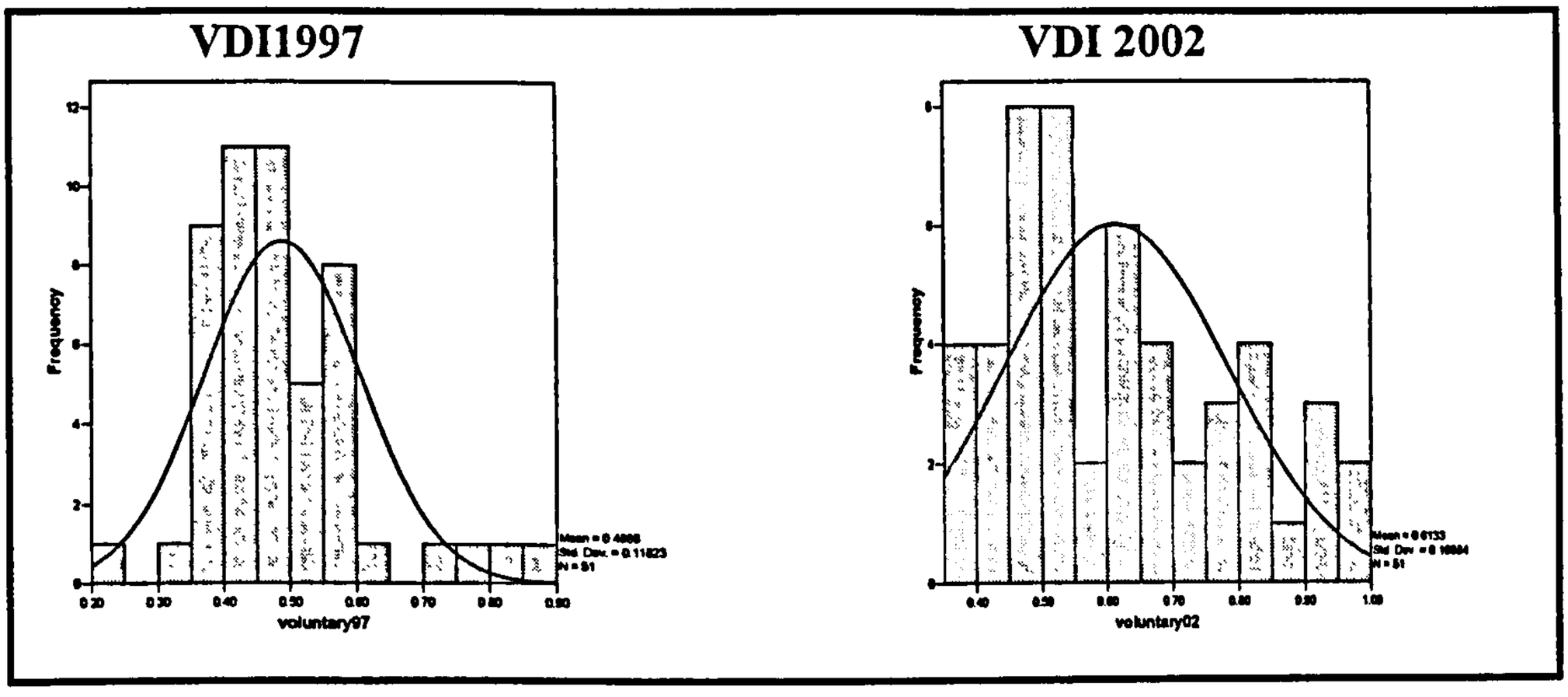


Table 20 reports the level of companies' voluntary disclosure in both years across industry sectors. This table represent the values of descriptive statistics by using the frequency distribution of the companies' voluntary disclosure index ratio for 1997 and 2002 across the five industry sectors. The first row in Table 20 shows a range of frequency distribution of the disclosure index ratio as received by the companies. The other rows show the number of companies that have received an index ratio within the range of voluntary disclosure according to the five industry sectors.

Table 20: Frequency Distributions of VDI among Industry Sectors in Year 1997 & 2002

1997	Range of Disclosure Voluntary Score %						
Company Sector	**Less 50**	**50-59**	**60-69**	**70-79**	**80-89**	**90-100**	**Total**
Natural resources Ind.	2	0	1	2	2	0	7
Food and clothing Ind.	4	8	0	0	0	0	12
Pharmaceuticals Ind.	4	1	0	0	0	0	5
building materials Ind.	11	6	0	0	0	0	17
Additional Ind.	9	1	0	0	0	0	10
Total	**30**	**16**	**1**	**2**	**2**	**0**	**51**
2002							
Natural resources Ind.	1	0	1	0	2	3	7
Food and clothing Ind.	4	3	1	1	1	2	12
Pharmaceuticals Ind.	1	1	2	1	0	0	5
building materials Ind.	6	3	4	2	2	0	17
Additional Ind.	4	3	2	1	0	0	10
Total	**16**	**10**	**10**	**5**	**5**	**5**	**51**

It transpires from this table that in 1997 only five companies accomplished a range over 60%, and they were from the natural resources industry sector. Also it can be seen that 16 companies from different sectors disclosed voluntary disclosure in the range of 50% - 59%, and 30 companies did not pass the range of 50%. In 2002 there were 5 companies (3 out of 5 from natural resources sector and 2 from food and clothing sector), in the range of 90% - 100%, and 30 companies disclosed voluntary disclosure in the range of 50% - 89%. However, only 16 companies did not pass a range of 50% in 2002. As seen from the above distribution the number of companies located above 50% increased from 21 companies in 1997 to 35 companies in 2002. This suggests that Jordanian companies improved their level of voluntary disclosure in 2002 as a result of the new developments in the Jordanian capital market. Also the natural resources and food and clothing industry sectors are the main sectors with a high level of voluntary disclosure in both years. In the context of voluntary disclosure variation among the companies in the sample, in Chapter 4 several company characteristics which can explain this variation were listed. The discussion of these explanatory variables will be undertaken after the bivariate and multivariate analyses.

7.3.2 A Closer Analysis of Voluntary Disclosure Index Applicable Items

This section investigates the level of disclosure by the sampled Jordanian companies for each applicable item in the main parts that formed the voluntary disclosure checklists for 1997 and 2002. The methodology chapter delineated that the printed voluntary checklist for 1997 was based on 67 voluntary items divided into five major parts: general information, notes of balance sheet, notes of income statement, other information, and the disclosure list of the JSC requirements in 1998. The voluntary checklist for the 2002 was based on 21 voluntary disclosure items divided into four main parts, namely: general information, notes of balance sheet, notes of income statement, and other information. Firstly, Table 21 shows the level of disclosure for each applicable item that forms part of the voluntary checklist for 1997.

Table 21: The Level of Disclosure for each Applicable Voluntary Item in 1997

Checklist of Voluntary Disclosure in 1997	No. of Company disclosing	Applicable No. of Company	Mean
General Information			
1. Brief history of company	51	51	1.00
2. General outlook of the economy	19	51	0.37
3. Discussion of major industry trends	8	51	0.16
4. Graphs and photos	11	51	0.22
5. Personal characteristics of directors(age, education)	4	51	0.08
Notes To Balance Sheet			
6. Breakdown the cash into cash on hand and at the bank	26	51	0.51
7. Details on debaters and any accounts receivable	48	51	0.94
8. Breakdown of inventories into raw material, work in process and finished goods	46	51	0.90
9. Any change or movements accrued on the fixed assets during the year	29	31	0.94
10. Any investments of the company	24	25	0.96
11. Details on any creditors and any account payable	38	51	0.75
12. Details on loans of the company	17	51	0.33
13. Information on interests rates	16	51	0.31
14. Total amount of provision of taxes payable and other provisions	25	51	0.49
15. Information about shareholders and dividends reserves	21	51	0.41
16. Information about authorized capital	28	51	0.55
Notes To Income Statement			
17. Breakdown of sales by major product lines, customer classes or geographical locations	6	51	0.12
18. Breakdown of cost of sales	44	51	0.86
19. Breakdown of net income by major product lines, customer classes or geographical locations	8	51	0.16

20. Breakdown of other sources of revenues.	45	51	0.88
21. An analysis of expenses using a classification based on either the nature or their function	49	51	0.96
Other Information			
22. Financial instruments	47	51	0.92
The JSC Items			
23. The chairman's speech	8	51	0.16
24. The board of director's report	50	51	0.98
25. Description of any governmental protection or privileges with the period such is applied thereto.	8	8	1.00
26. A description of any patents or concessions that were granted to the company	6	6	1.00
27. Description of any decisions adopted by the government, international organizations or otherwise which has material effect on the company's operations, products or competitive ability,	9	9	1.00
28. To which extend the company abides with the international quality standards	33	51	0.65
29. The company's accomplishments with figures	50	51	0.98
30. A description of significant events that encountered the company during the fiscal year.	22	23	0.96
31. The competitive status of the company within the sector of its activities	29	51	0.57
32. The company main markets its share in the domestic market and in foreign markets if possible	38	51	0.75
33. Degree of dependence on specific providers and/or main customers where such constitutes (10%) or more of aggregate purchases and/or sales or revenues respectively	4	51	0.08
34. The financial effect of extraordinary transactions	8	8	1.00
35. Time chain of incurred profits or losses, distributed profits, the shareholder's net equity and , the prices of securities issued by the company, for a period of no less than five years	6	51	0.12
36. Analysis of the company's financial status and actions results during the fiscal year.	6	51	0.12
37. Significant future developments including any expansions or new projects,	24	25	0.96
38. The future plan for at least one coming year	49	51	0.96
39. The expectations of the board of directors of the company's actions results	4	51	0.08
40. Amount of auditing fees for the company and the affiliates thereof	50	51	0.98
41. Description of the main company's activities, and geographical locations for each activity	10	51	0.20
42. Volume of capital investment in each activity	5	51	0.10
43. Number of employees in each activity	4	51	0.08
44. Description of affiliated companies	5	5	1.00
45. Nature of affiliated companies' work and fields of their activities	4	5	0.80
46. Names of the members of the board of directors	48	51	0.94
47. Names and titles of senior executive managers and a resume of each	3	51	0.06
48. Number of securities issued by the company	46	51	0.90

49. Securities owned by any member of the board of directors and senior executive manager and their relatives, and companies controlled by any of them, compared with the preceding year.	5	5	1.00
50. Privileges and bonuses that the chairman and members of the board of directors and senior executive managers enjoy during the fiscal year	7	51	0.14
51. All amounts received by them as wages, fees, salaries, bonuses and others	36	51	0.71
52. Amounts paid to them as travel and transportation expenses inside and outside the kingdom.	51	51	1.00
53. Donations and grants made by the company during the fiscal year	9	12	0.75
54. Names of senior shareholders of shares issued by the company	11	51	0.22
55. The number of shares owned by each of senior shareholders where such ownership amounts to 5% or more, compared with the preceding year.	12	51	0.24
56. Organizational structure of the issuing company	3	51	0.06
57. Company appointing policy	3	51	0.06
58. Number of employees	7	51	0.14
59. The employees' qualification categories	6	51	0.12
60. The employees' turn-over ratio	3	51	0.06
61. The employees' rehabilitation & training programs	14	51	0.27
62. Contracts, projects and commitments concluded by the company with the chairman or members of the board of directors, the director general, any employee of the company or their relatives.	1	51	0.02
63. The company's contribution in serving the environment and the local society	9	9	1.00
64. The company's annual financial statements audited by its auditors, compared with the preceding year, which shall include the following: the balance sheet. profits and losses account. cash-flow list, changes in the shareholders equity.	51	51	1.00
65. The auditor's report on the company's annual financial statements including a statement that auditing procedures have been conducted according to IASs.	49	51	0.96
66. A declaration from the company's board of directors that, according to the board's knowledge and beliefs, there had been no significant matters affecting the continuity of the company during the following fiscal year.	1	51	0.02
67. A declaration from the company's board of directors of its responsibility for preparing the financial statements and for providing effective control system in the company	1	51	0.02

Table 21 shows the mean percentage of companies by which the applicable item of the main parts, that formed the voluntary disclosure checklist in 1997, was disclosed. This table exhibits that there is a considerable variation in the number of companies that disclose these voluntary items in their annual report in 1997. Generally, the highest and lowest average of companies disclosing the applicable items that formed the main parts

of the checklist were 92% and 37% companies respectively. The financial instruments were disclosed by 92% companies in the sample. 64% of the sampled companies disclosed notes to the balance sheet and 59% companies disclosed notes to the income statements. Also almost 50% companies disclosed the applicable JSC items, and only 37% disclosed voluntarily the general information items in their annual reports for 1997. As can be seen from the above table, on average, the highest and lowest percentage of companies by which the applicable items were disclosed, 100% for several items, see items number 25, 26, 27 and 34, and 2% of sampled companies disclosed items number 66 and 67.

Table 22 exhibits statistical summaries of the mean percentage of companies that disclosed each applicable item that formed the voluntary disclosure checklist in 2002.

Table 22: Descriptive Statistics of VDI Applicable Items in 2002

Checklist of Voluntary Disclosure in 2002	No. of Company disclosing	Applicable No. of Company	Mean
General Information			
1. Brief history of company	51	51	1.00
2. General outlook of the economy	19	51	0.37
3. Discussion of major industry trends	11	51	0.22
4. Graphs and photos	17	51	0.33
5. Personal characteristics of directors(age, education)	16	51	0.31
Notes to Balance Sheet			
6. Breakdown the cash into cash on hand and at the bank	33	51	0.65
7. Details on debtors and any accounts receivable	50	51	0.98
8. Breakdown of inventories into raw material, work in process and finished goods	49	51	0.96
9. Any change or movements accrued on the fixed assets during the year	51	51	1.00
10. Any investments of the company	51	51	1.00
11. Details on any creditors and any account payable	39	51	0.76
12. Details on loans of the company	17	51	0.33
13. Information on interests rates	18	51	0.35
14. Total amount of provision of taxes payable and other provisions	27	51	0.53
15. Information about shareholders and dividends	24	51	0.47
16. Information about authorized capital	25	51	0.49
Notes to Income Statement			
17. Breakdown of sales by major product lines, customer classes or geographical locations	6	51	0.12
18. Breakdown of cost of sales	47	51	0.92
19. Breakdown of net income by major product lines, customer classes or geographical locations	6	41	0.12
20. Breakdown of other sources of revenues	51	51	1.00
Other Information			
21. Financial instruments	49	51	0.96

As transpires from this table there is also a considerable variation in the number of companies by which the 21 voluntary items were disclosed in their annual report in 2002. On average, the highest and lowest percentage of the companies which disclosed the applicable items were 100% and 12% respectively, and the highest 96% and lowest 45% average of companies disclosed the main parts of the checklist in 2002. Moreover, the financial instrument items were disclosed by the majority of 96% companies in the sample, 68% of the companies disclosed the applicable items in the balance sheet notes, and 62% companies disclosed the applicable items of the notes to the income

statements, and 45% of the companies' annual reports in the sample disclosed voluntarily the general information items in 2002.

In general terms, it is concluded that despite the new disclosure regulation in 1998 Jordanian companies still disclose voluntary information in their annual reports in 2002, and the level of voluntary disclosure by these companies improved from 49% (of 67) voluntary items in 1997 to 61% (of 21) voluntary items in 2002 of the items applicable to it in each year. It is suggested that Jordanian companies have incentives to disclose, after the new mandated information in 1998, further voluntary information in their annual reports in 2002.

For a deeper understanding of these developments in the level of overall mandatory and voluntary financial disclosure in Jordanian companies' annual reports after 1998, the best way was determined to analyse the level of overall financial disclosure in the annual reports of sampled Jordanian companies before and after these developments in 1998, i.e. 1997 and 2002 respectively, in the following section.

7.4 Measuring the Level of Overall Disclosure in 1997 and 2002

As discussed in the methodology chapter, the best way to measure the level of overall disclosure in the annual reports of sampled companies for 1997 and 2002 is to use the following equation:

Overall Disclosure Index (ODI) = [(ADMI + ADVI) / (MMAI + MVAI)]

This equation means, adding the actual mandatory to the actual voluntary disclosure for each company in each year, and dividing them by the sum of the maximum applicable items of mandatory and voluntary disclosure for the same company in the same year. Table 23 provides the actual index ratio of overall financial disclosure as received by each company in 1997 and 2002. The first column represents the order of the companies in the sample. The second column in this table represents the total actual index ratio of overall financial disclosure for each company in 1997. The third column represents the values of the actual index ratio of overall financial disclosure for each company in 2002. The next table, 24, represents the descriptive

statistics by using the mean, standard deviation, minimum and maximum values of the overall index ratio for the whole sample in 1997 and 2002 as follows:

Table 23: ODI for each Company in Year 1997 & 2002

Co. No	ODI Year 1997	2002	Co. No.	ODI Year 1997	2002
1	0.64	0.83	26	0.43	0.74
2	0.60	0.72	27	0.61	0.74
3	0.60	0.81	28	0.48	0.63
4	0.56	0.61	29	0.47	0.78
5	0.82	0.86	30	0.57	0.85
6	0.49	0.72	31	0.64	0.82
7	0.48	0.79	32	0.56	0.76
8	0.62	0.86	33	0.59	0.64
9	0.87	0.94	34	0.54	0.81
10	0.55	0.81	35	0.65	0.88
11	0.56	0.72	36	0.49	0.81
12	0.62	0.89	37	0.62	0.75
13	0.54	0.60	38	0.50	0.83
14	0.62	0.82	39	0.66	0.71
15	0.56	0.62	40	0.53	0.71
16	0.54	0.56	41	0.66	0.93
17	0.54	0.80	42	0.58	0.78
18	0.60	0.77	43	0.66	0.91
19	0.60	0.82	44	0.63	0.81
20	0.68	0.88	45	0.67	0.88
21	0.51	0.75	46	0.51	0.74
22	0.56	0.73	47	0.59	0.84
23	0.62	0.72	48	0.72	0.85
24	0.84	0.95	49	0.68	0.88
25	0.81	0.91	50	0.57	0.75
			51	0.62	0.81

Table 24: Descriptive Analyses of the ODI in 1997 & 2002

ODI	Min	Max	Mean	S.D.
Year 1997	0.43	0.87	0.6012	0.0930
Year 2002	0.56	0.95	0.7869	0.0911

Table 23 shows no company received a score above 90% in 1997 whereas five companies scored above 90% in 2002. Table 24 exhibits the lowest and highest index ratio of the overall financial disclosure for 1997 were 43% and 87%, on a range of 44%, and for 2002 were 56% and 95%, on a range of 39%, respectively. These results indicate a considerable variation in the overall level of financial disclosure in both years. Column

4 in Table 24 shows the average level of the overall disclosure in both years, and it can be seen that the average level of overall financial disclosure by Jordanian manufacturing companies was 60% in 1997. Due to the introduction of the new mandatory disclosure requirements in 1998 the average level of overall financial disclosure was increased to around 79% in 2002. This increased in the overall level of Jordanian companies' financial disclosure practices after the new developments in mandatory requirements in 1998 can be seen via Wilcoxon matched pairs test of overall financial disclosure in 1997 and 2002 in Table 25.

Table 25: Wilcoxon test of the overall financial disclosure practices over the period 1997-2002

	Overall Disclosure	
	1997	2002
Mean	0.60	0.79
Std. Deviation	0.093	0.091
Negative ranks*	0	
Positive ranks**	51	
Ties***	0	
Z (Sig)	-6.22(.000)(a)	

* Overall disclosure in 2002 < in 1997; ** Overall disclosure in 2002 > in 1997
*** Overall disclosure in 2002 = in 1997; (a) Based on negative ranks,

As Table 25 illustrated that the level of overall financial disclosure has increased over the period 1997-2002, and this is confirming the above analyses. Also the new mandatory requirements have moved the distribution of the ODI significantly between the two years. As can be seen in Exhibit 12, the distribution was positively skewed in 1997, because more voluntary information was disclosed in the companies' annual reports in 1997, whilst in 2002 the distribution became negatively skewed, due to there being disclosed more mandatory information than voluntary information.

Exhibit 12: The Histograms Distributions of ODI in 1997 & 2002

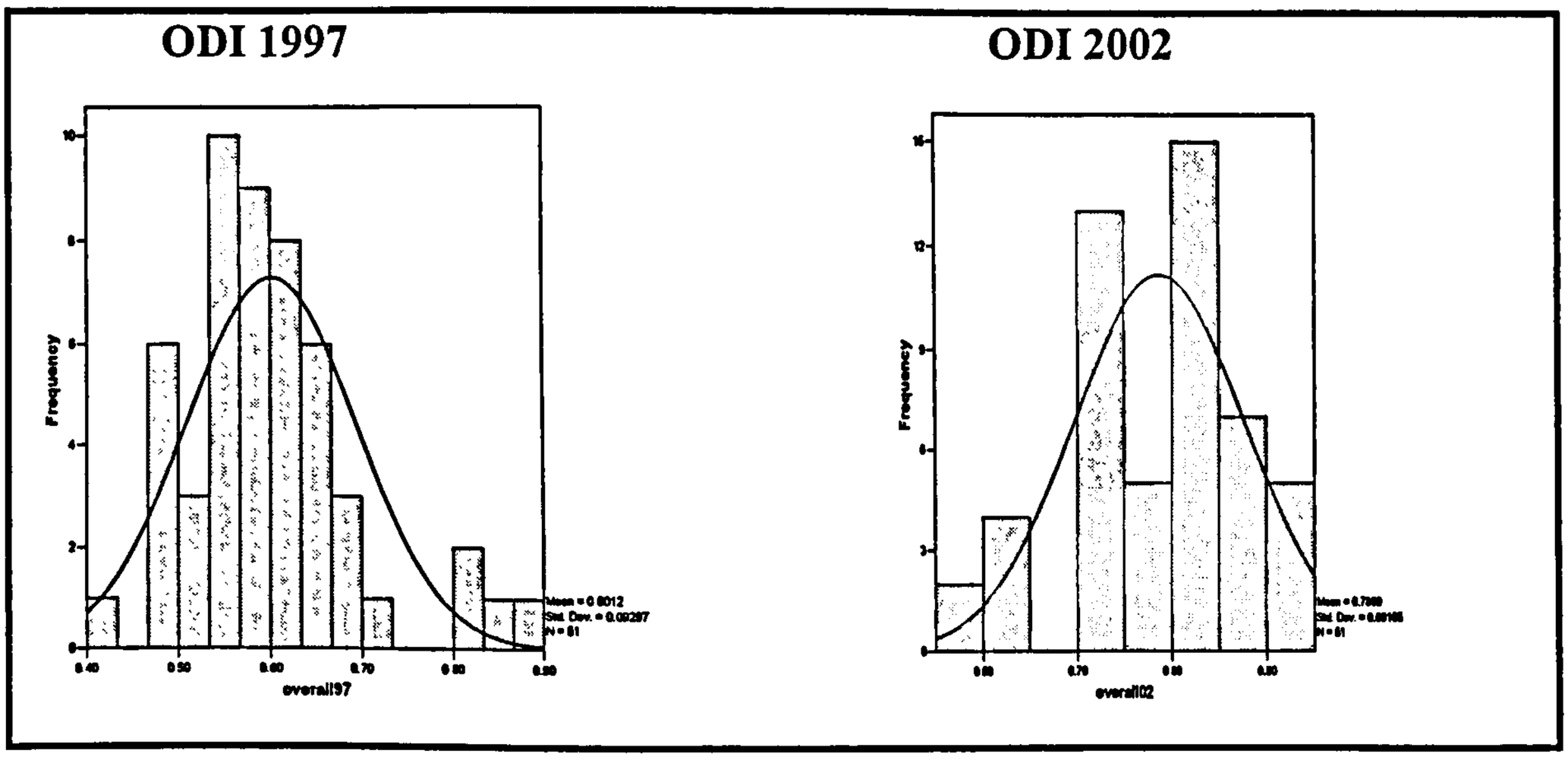


Table 26 reports the level of companies' overall disclosure in both years across industry sectors, and it represents the values of the descriptive statistics by using the frequency distribution of overall index ratio among companies for 1997 and 2002 across the five industry sectors. The first row shows the range of frequency distribution of the overall disclosure index ratio as received by the companies in the sample. The other rows show the number of companies that received a score within the range of voluntary disclosure according to the five industry sectors.

Table 26: Frequency Distributions of ODI among Industry Sectors in 97 & 02

1997	Range of Overall Disclosure Score %						
Company Sector	**Less 50**	**50-59**	**60-69**	**70-79**	**80-89**	**90-100**	**Total**
Natural resources Ind.	1	0	1	1	4	0	7
Food and clothing Ind.	0	5	7	0	0	0	12
Pharmaceuticals Ind.	0	2	3	0	0	0	5
building materials Ind.	3	7	7	0	0	0	17
Additional Ind.	2	5	3	0	0	0	10
Total	**6**	**19**	**21**	**1**	**4**	**0**	**51**
2002							
Natural resources Ind.	0	0	0	1	3	3	7
Food and clothing Ind.	0	0	2	3	6	1	12
Pharmaceuticals Ind.	0	0	0	3	2	0	5
building materials Ind.	0	1	2	7	6	1	17
Additional Ind.	0	0	1	4	5	0	10
Total	**0**	**1**	**5**	**18**	**22**	**5**	**51**

As indicated in Table 26, in 1997 none of the sampled companies accomplished a level of overall disclosure over 90%; only four companies from the natural resources industry sector scored a range of 80%-89%, also one company from the same sector accomplished a range of 70% - 79%. Furthermore, 21 companies from different sectors were located in the range of 60%-69%, and 19 companies came within a range of 50%-59%. Finally, 6 companies did not reach the acceptable level (50%) of overall disclosure in 1997. In 2002 the companies' overall financial disclosure improved, for instance 53% (27 out of 51 companies) of the sampled companies went over 80% of overall level of financial disclosure, also 35% of the companies ranged within 70% to 79%, 5 companies came within the rang of 60%-69%, and one within 50%-59%. Finally, none of the Jordanian companies came under 50%, which suggests that Jordanian companies improved their overall financial disclosure after the new developments in 1998, and this confirms the improvements in the overall level of financial disclosure by the Jordanian manufacturing companies' annual reports from 1997 to 2002.

As transpires, there is a remarkable increase in the level of overall financial disclosure and there is a significant movement in the distribution of this disclosure in the Jordanian companies' annual reports from 1997 to 2002. This is due to the fact that the Jordanian financial reporting regulations before 1998 lacked financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports. Also, as seen above voluntary financial information formed the major part of the Jordanian manufacturing companies' annual reports in 1997. However, in 1998 and under the Securities Law 1997, a new regulatory system was introduced with a new legal framework, which subsequently introduced new disclosure requirements for companies listed on ASE.

This raised the issue of reporting mandatory requirements in practice not changing because of exogenous reasons, for example accounting standards might depend on what disclosures companies provide voluntarily (Dye,1986). Further investigation was required to examine the interaction between voluntary disclosure in 1997 and the compliance with JSC mandatory disclosure requirements in 2002. Also, as pointed out earlier, Dye (1986) established a positive relationship between an increase in mandatory requirements and the level of voluntary disclosure. The latter is considered an important point to be examined empirically in the current research once the average level of

voluntary financial disclosure increased after the new mandatory disclosure developments in 1998. In the following section the bivariate analysis will be employed in order to examine these issues.

7.5 Bivariate Analysis of Mandatory and Voluntary Financial Disclosure

The above analyses and discussion raised two important issues, as previously pointed out by codification theory and Dye's (1986) theory, which are recommended to be statistically investigated further. In this vein, this section sets out to examine and discusses these issues by using bivariate analyses, including the association between the level of mandatory and voluntary disclosure in the companies' annual reports in 1997 and 2002, in order to assess the relationship between mandatory disclosure and voluntary disclosure before and after the developments. Also the association between the level of voluntary disclosure practices in 1997 and the compliance practices with JSC mandatory disclosure requirements in 2002. These associations between the mean levels of mandatory and voluntary financial disclosure will provide a complete image of the developments in the level of financial disclosure after the introduction of the new requirements. Table 27 exhibits the results of Kendall's correlation test for the association between the disclosure indices in 1997 and disclosure indices in 2002.

Table 27: The Correlation between the Values of Disclosure Indices in 1997 & 2002

	MIR 1997	VIR 1997	Total MIR 2002	JSC MIR 2002
VIR 1997	0.164 0.053			0.341(**) 0.000
Total MIR 2002		0.412(**) 0.000		
VIR 2002			0.615(**) 0.000	

** Correlation is significant at the 0.01 level (1-tailed).

In Table 27 a significant, positive relationship between the level of voluntary disclosure practices in 1997 and the level of compliance with the JSC mandatory disclosure requirements in 2002 is highlighted. This relationship suggests that in 1998 the JSC took the existing Jordanian companies' voluntary financial disclosure practices and codified this practice into mandatory disclosure requirements. Based on this result the alternative hypothesis *H1* can be accepted. This results could be considered as

empirical evidence supporting the argument codification theory, in practice, reporting mandatory requirements might depend on what companies disclose voluntarily (Dye, 1986). In summary, voluntary disclosure was the major part of Jordanian companies' annual reports in 1997, and mandatory disclosure became the major part of Jordanian companies' annual reports in 2002. The positive relationship between voluntary practices in 1997 and the JSC mandatory practices in 2002 may explain the change in the distribution of the overall financial disclosure from positively skewed in 1997 to negatively skewed in 2002. Based on the above it can be argued the JSC in 1998 was involved in a role is similar to the ASC role of formulating a series of SSAPs from 1970s to early 1990s, which comprised submissions of current practice and were simply requirements of standard format (see Taylor & Turley, 1986; Dunn, 2001).

Also Table 27 shows that there is no significant relationship between the level of mandatory and voluntary disclosure in 1997, whereas post the 1998 developments the Kendall's correlation test shows a significant and positive relationship between the level of mandatory and voluntary disclosure in 2002. This result is consistent with prior results, e.g. Abayo et al. (1993) found a significant, positive relationship between mandatory and voluntary information in annual reports of Tanzanian companies. Also Al-Razeen & Karbhari (2004) found in the Saudi Arabian environment a significant, positive relationship between mandatory and voluntary, yet more related to mandatory, disclosure[31]. However unlike the current study none of these studies examined this relationship before and after developments in mandatory disclosure requirements. The result shows that there is no relationship before these developments, whereas there is a significant, positive association between voluntary disclosure and the increase in mandatory requirements post 1998. Based on these results the alternative hypothesis *H2* can be accepted. These results should be considered as strong empirical evidence supporting Dye's (1986) theory of a positive relationship between an increase in mandatory disclosure requirements and an increase in the level of voluntary disclosure at the same time.

---

[31] Al-Razeen & Karbhari (2004) divided their disclosure index into three types (1) mandatory items, (2) voluntary items more related to mandatory items, and (3) voluntary items not related to mandatory items.

As a conclusion of the above, under the Securities Law No (23) of 1997, a new regulatory system was introduced for what was in effect a new Jordanian capital market. In 1998 the JSC was involved in the role of organising information disclosure by the listed Jordanian companies, therefore it introduced new extensive disclosure requirements for companies listed on ASE. Jordan's companies faced this new legal system and regulations, in which the Jordanian government attempted to bring up the Jordanian accounting and financial disclosure practices onto an international level, to create a fair, efficient market to protect investors and to encourage investment in Jordan. Under these new developments many specific mandatory disclosure requirements relating to financial reports were introduced through the disclosure requirements of the JSC, as well as to reinforce the general disclosure requirements of IAS for Jordanian companies. This resulted in an increased level of overall financial disclosure, i.e. more compliance with this mandated information, and disclosing voluntary information in the Jordanian companies' annual reports in 2002.

Moreover, the above analysis indicates that there is positive relationship between the increased mandatory requirements and the incentives to disclose voluntary information. As seen in Chapter 3, it has been suggested that the current printed financial reporting has over time become less able to satisfy users' needs, which leads companies to use a different medium, such as the Internet, to disclose financial information voluntarily in order to meet users' needs (Lodhia et al., 2004). In the same context and based on this argument, the proposed framework in Chapter 4 established a theoretical relationship between printed, i.e. mandatory and voluntary, and Internet financial disclosure, which was supported empirically by Ettredge et al. (2002) and Xiao et al. (2004). Therefore, it is deemed necessary to test these aspects of the proposed framework as part of the empirical investigation undertaken. The following section firstly will examine the Internet financial disclosure on the Jordanian companies' websites in order to provide a complete image of the formers' Internet financial disclosure, and secondly will use bivariate analysis to examine the relationship between the printed financial disclosure and the Internet financial disclosure of the sampled Jordanian manufacturing companies.

7.6 The Jordanian Companies on the Internet

As mentioned in the methodology chapter, it was decided to include all (190) Jordanian companies listed on ASE to analyse the usage level of the Internet in Jordan. Multiple approaches have been employed in the current study to determine and allocate the Jordanian websites on the Internet to reduce the possibility of missing any of these companies' websites. Table 28 summarises the results of the current survey of companies' websites for the companies listed on ASE according to industry sectors.

Table 28: Summary of the Current Survey for Listed Jordanian Companies Websites in 2004

Sectors	Total	No websites	%	Non-Jordanian websites	Not found	With active websites	%
Banks	16	0	0	0	1	15	**94**
Insurance	27	8	30	1	4	14	**52**
Services	62	54	87	0	1	7	**11**
Manufacturing	85	60	71	0	6	19	**22**
Total	**190**	**122**	**65**	**1**	**12**	**55**	**29**

This survey found initially 68 website addresses of Jordanian companies listed on ASE during the last quarter of 2004. However, 12 companies' home pages are not found on the Internet by their given website addresses, and it was found that one of the insurance companies' website address, Oasis Insurance, led to a non-Jordanian website, Oasis Insurance Online in the USA. Table 28 shows that 55 (29%) out of 190 companies listed on ASE were with accessible Jordanian website in September 2004. Broken down into, 94% of Jordanian banks were available online, 52% of the Jordanian insurance companies had an accessible website, 22% of the Jordanian manufacturing companies had an active homepage on the Internet, and only 11% of Jordanian companies in the service sector were available on the Internet.

7.7 Measuring Financial Disclosure on the Jordanian Companies' Websites

The objective of this section is to measure the level of financial disclosure on the Jordanian companies' websites during the last quarter of 2004. In the methodology chapter a scoring sheet was established, containing 28 items selected as an applicable benchmark in order to represent the current online situation of the Jordanian companies.

Therefore, the risk of penalising companies for inapplicable items has been eliminated. Also at this stage the dichotomous approach was employed coding a disclosed item to avoid the problems of assessing whether partial disclosure occurred.

After the initial inspections of the Jordanian companies' websites during August and September 2004 to collect items for the current checklist, an inspection of the sampled companies' website took place in October 2004, starting on 1st ending on 30th of October 2004, which entailed a double check of the same website in the same month. The first check for each company's website was undertaken by using the current Internet voluntary checklist, and it lasted two weeks. Then it was decided to revisit the 55 companies' websites within the second half of the same month by using the same procedure again, so as to, before computing the final score for each company, identify and correct any error or misunderstanding regarding any item in a company's website. On November 15th 2004, the researcher decided to revisit for the fourth time and recheck the sampled companies' websites by using the same procedures again. The general findings of this revisit show that there is no change has occurred on the Jordanian companies' websites over two different months[32]. These findings not only enhance the validity of the Internet disclosure checklist by representing the actual information provided on the Jordanian companies' website, but also improve the reliability of the Internet disclosure checklist. Table 29 shows the total score of Internet disclosure for each company and their index ratio. The scores' rank is based on the number of the company as in the sample, as disclosed in the methodology chapter, i.e. the name of each company and its number. Table 30 shows the descriptive statistics of AIDI and IDI for each company in each sector.

[32] According to FASB (1999, p.17) the Internet-months are like years in the sense that things change so quickly. It has been said that 18 Internet weeks = 1 normal year. This may raise the issue of timeliness as one of the website information features. It could be one of the future investigations in the area of the Internet Financial Reporting in Jordan.

Table 29: AIDI and IDI for each Company in the Sample

Banking	AIDI	IDI	Service	AIDI	IDI
1	28	1.00	30	8	0.29
2	18	0.64	31	10	0.36
3	27	0.96	32	9	0.32
4	27	0.96	33	10	0.36
5	28	1.00	34	27	0.96
6	26	0.93	35	11	0.39
7	14	0.50	36	26	0.93
8	24	0.86	**Manufacturing**	**AIDI**	**IDI**
9	27	0.96	37	17	0.61
10	15	0.54	38	12	0.43
11	27	0.96	39	17	0.61
12	25	0.89	40	10	0.36
13	16	0.57	41	9	0.32
14	28	1.00	42	11	0.39
15	17	0.61	43	9	0.32
Insurance	**AIDI**	**IDI**	44	25	0.89
16	12	0.43	45	13	0.46
17	11	0.39	46	10	0.36
18	8	0.29	47	6	0.21
19	11	0.39	48	8	0.29
20	12	0.43	49	10	0.36
21	10	0.36	50	8	0.29
22	8	0.29	51	11	0.39
23	13	0.46	52	12	0.43
24	8	0.29	53	8	0.29
25	10	0.36	54	7	0.25
26	10	0.36	55	10	0.36
27	11	0.39			
28	10	0.36			
29	11	0.39			

Table 30: Descriptive Statistics of the AIDI and IDI for each Sector

Bank	N	Min.	Max.	Mean	S.D
AIDI	15	14	28	23	5.40
IDI	15	0.50	1.00	0.80	0.270
Insurance					
AIDI	14	8	13	10	1.550
IDI	14	0.29	0.46	0.37	0.053
Service					
AIDI	7	8	27	14	8.30
IDI	7	0.29	0.96	0.52	0.295
Manufacturing					
AIDI	19	6	25	11	4.430
IDI	19	0.21	0.89	0.40	0.160
All Sectors					
AIDI	55	6	28	15	7.120
IDI	55	0.21	1.00	0.52	0.256

The second column in Table 29 exhibits the actual disclosed items and the third one shows the index ratio received by each company in each sector in the sample. Table 30 summarises the descriptive statistics of actual disclosed items and index ratio for the companies in each sector. The findings of this section show that the average level of overall Internet voluntary financial disclosure, as measured by the mean, was 52% by the Jordanian companies listed on ASE, which is considered relatively at accepted level. Also Table 30 shows the lowest, 21%, and highest, 100%, index score received by the companies in the sample.

At sector level, it appears that the banking sector included 15 banks which scored the highest level, on average 80%, of voluntary disclosure on the Internet, followed by 7 companies in the service sector which scored on average 52% of the voluntary disclosure, and 40% on average of the Internet voluntary disclosure was scored by 19 companies in the manufacturing sector, and finally the insurance sector scored on average 37% of the Internet voluntary disclosure.

As seen the highest and lowest average level of the Internet disclosure across sectors, were 80% for the banking and 37% for insurance sector respectively, on a range of variation around 43%. Consequently it is noted that there are considerable variations in the level of Internet voluntary disclosure across industry sectors. For further understanding Table 31 shows the frequency distribution of the companies' Internet voluntary disclosure according to their sectors:

Table 31: Frequency Distributions of the IDI among Industry Sectors

Range of Disclosure Internet Voluntary Score %							
Company Sector	**Less 50**	**50-59**	**60-69**	**70-79**	**80 -89**	**90-100**	**Total**
Bank	0	3	2	0	2	8	**15**
Insurance	14	0	0	0	0	0	**14**
Service	5	0	0	0	0	2	**7**
Manufacturing	16	0	2	0	1	0	**19**
Total	**35**	**3**	**4**	**0**	**3**	**10**	**55**

This table shows that 35 out of 55 companies listed on ASE did not even pass the average of 50%, including 100% of the insurance companies, 84% of the manufacturing companies, and 71% of the services companies, while there were 36% of the sampled companies which scored above 50%. 13 companies scored above 80%, which includes

67% of banking companies, 29% of the service companies, and only one company from the manufacturing companies.

For further understanding of the Internet financial disclosure level by the Jordanian companies, the best way has been identified as analysing the Internet voluntary disclosure checklist, item by item, by company disclosure in the sample, which provides a complete image of the Jordanian companies' financial disclosure situation on the Internet. As discussed earlier, there are two major components of the Internet voluntary checklist, namely: general information about the company's website containing 10 items, and financial reporting information with 18 content items. The mean percentage of companies which disclosed each individual item of the Internet voluntary checklist components is reported in Table 32.

Table 32: The Level of Disclosure of the Internet Individual Items

The Internet Voluntary Checklist	No. of Company disclosing	Mean
General Information		
1. company's name	55	1.00
2. company's news and events	28	0.51
3. list of the site parts and link to any part	51	0.93
4. search engine box	13	0.25
5. e-mail contact	55	1.00
6. mailing contact	55	1.00
7. presentation formats by HTML	55	1.00
8. presentation formats PDF	16	0.29
9. two versions of the site Arabic and English	19	0.35
10. information inquires service	29	0.53
Financial Reporting Information		
11. complete annual report as one document	13	0.24
12. names of the board of directors' members	28	0.51
13. the chairman's speech	19	0.35
14. the board of director's report	15	0.27
15. company's profile	51	0.93
16. brief summary of company's history	50	0.91
17. brief summary about top managers	27	0.49
18. brief summary about company's human rescores	21	0.38
19. the company's product or services	50	0.91
20. company accomplishments of last year with figures	18	0.33
21. the company's future plan for at least one coming year	18	0.33
22. organizational structure chart of the company	16	0.29
23. auditors' report	15	0.27
24. balance sheet	23	0.42
25. income statement	20	0.36
26. cash flow statement	15	0.27
27. statement of changes in equity	15	0.27
28. notes and accounting policies	15	0.27

The table shows in the financial part that on average 13 out of 55 (24%) companies provided a full annual report in one document by providing a clear direct link, 23 (42%) companies provided a balance sheet, and 20 (36%) provided an income statement with the corresponding figures for the preceding year, 15 (27%) provided a cash flow statement, a statement of change in equity, and notes and accounting policies. The auditor's reports were only disclosed by 15 (27%) companies, which included the 13

companies providing the full annual reports. However, not any of these companies provide a link to the auditor's website.

Most of the online Jordanian companies also disclosed an archive containing their financial annual reports or a summary of their financial statements over the past two years or more years, for instance the Arab Bank provides an archive containing its annual reports since 1933. Generally, it was noted that the current online Jordanian companies provide obvious links to their online financial information by providing a direct "*Annual Report Link* or *Financial Information Link*", or by using a clear graph of its annual report. For un-audited items on average the highest and lowest percentage of companies disclosing these were 93% and 27% respectively. 51 out of 55 companies disclosed a company profile, and only 15 companies disclosed the board of director's report on the Internet.

Also as part of a closer analysis of the general items in the Internet disclosure checklist, Table 32 shows that 55 companies in the sample provided on their home page their names as listed on ASE, their e-mail and postal contact addresses. Furthermore, 28 out of 55 companies (51%) provided their latest news summaries on their homepages. In the context of presentation formats, 51 out of 55 (93%) companies provided a clear list of the parts included on their websites and with direct link to each part. Also 13 (24%) provided a search engine box to facilitate the process of finding any information available on the website. It was found HTML formats is the most common among the Jordanian companies used for presenting different kinds of information, such as director's report, chairman's speech, news updates, company profile and, in some instances, financial statements. Also, one company in the service sector (Jordanian telecom) used HTML for presenting the full document of its annual report by using flash screen resolution. Only 16 out of 55 companies (30%) used PDF for presenting different kinds of their financial information on the Internet. Additionally, 29 (53%) of the Jordanian companies provided the service of answering further inquiries by providing other information inquiry services. Finally, the findings show that 19 (35%) of the Jordanian companies have two versions of their websites in Arabic and English language. As can be seen there is a considerable variation in the level of disclosure of the general information items, which is understandable because there is variation among

companies in the way of establishing the websites and the information that can be provided on these websites.

As can be seen above, the mean of the level of companies' Internet voluntary disclosure for the items that formed the annual reports ranges from as low as 25% for the full document of annual reports to as high as 93% for the companies' profile, with a range of variation around 69%. Also, the level of the Internet voluntary disclosure for the general items, on average 68%, ranged from the lowest average, 24%, for the search engine box to the highest average, 100%, for contact information. Generally, the above analysis shows that online Jordanian companies are engaging in Internet financial disclosure by providing different parts of their financial reporting. This may suggest that the online Jordanian companies can be located in the first stage of using the Internet as they are not only using the Internet for advertising their products and services, but also they are using it as another communication channel to duplicate their printed financial statements by using electronic formats i.e. HTML and/or PDF (see Hedlin 1999; IASC, 1999; Lymer & Debreceny; 2003). Consequently, the main finding of this section is that online Jordanian companies are utilising the Internet for financial disclosure, in line with the new developments in the Jordanian capital market after 1998.

Also the usage of the Internet by the Jordanian companies varies among sectors, for instance in the case of the banking sector, Jordanian banks are almost at the end of the first stage of using their websites as a tool of communication with their customers and investors. Also they provide online a full recent document of their printed annual reports with an archive containing annual reports of at least the past two years, they provide a summary of their latest news, and they provide other useful links for the investors, such as the homepage of ASE for their current share price, the central bank and other financial institutions. Interestingly, the Export & Finance Bank[33] provides a wide range of research studies on the Jordanian economy, on many of the Jordanian companies' financial situations and on investment opportunities in different Jordanian sectors.

---

[33] Available at: http://www.efbank.com.jo

In conclusion the findings of this section indicate that 55 out of 190 (29%) of Jordanian companies listed on ASE in 2004 had accessible and active home page on the Internet, which is similar to the situation of online European companies six years ago. For instance, Gowthorpe & Amat (1999) found that in 1998 18% of 379 companies listed on Madrid Stock Exchange had a homepage on the Internet. Also Oyelere et al. (2003) found 54% of 229 companies listed on New Zealand Stock Market in 1998 had websites on the Internet. It is expected that over the years many of the Jordanian companies will enter into the Internet financial business as is the case with many companies around the world.

Furthermore, this section reported that online Jordanian companies are using their websites to disclose a considerable level of accounting information on their websites, which is proven by the average level of 52% of the Internet financial disclosure items that formed the current checklist, achieved through disclosing either an entire document of annual reports or parts of their audited financial statements. However, in absolute terms the overall current situation of the online financial disclosure by Jordanian companies is also similar to Internet financial reporting by companies in European countries six year ago. For instance, Lymer (1997) at the end of January in 1997 found that 52% of 46 online companies listed on LSE published their accounts or reports on their websites. Also, Gowthorpe & Amat (1999) reported that 34 out of 61 (55%) companies listed on Madrid Stock Exchange in 1998 were involved with Internet financial reporting. It is suggested that Jordanian companies are following European countries' developments with regard to Internet financial reporting but with a six year time lag, which should be considered as a good indication for the future of Internet financial reporting in Jordan. Xiao et al. (2002) and Jones & Xiao (2003) concluded in their studies that their group of experts predicted the Internet's significant impact on financial reporting by 2010. Consequently, it is expected that over time the Internet will have a significant impact on Jordanian financial reporting, if the expected situation applies. The impact of the Internet may be stronger through Jordanian international incorporations, for instance international trade agreements with the USA and many of the European Union countries.

7.8 Interaction between Printed and Internet Financial Disclosure

The objective of this section is to examine the interaction between printed and Internet financial disclosure. From a theoretical perspective, the disclosure transformation theory in the proposed framework explained a positive relationship between printed financial disclosure - both mandatory and voluntary, and Internet financial disclosure. This relationship was supported by prior empirical findings, such as by Ettredge et al. (2002) and Xiao et al. (2004). The argument here is based on the managerial incentive, in which companies with high level of printed financial disclosure are more motivated to disclose more information to their users on the Internet. On the other hand companies with a low level of financial disclosure are more secretive and reserved to disclose information on the Internet. Based on that, it is understandable to argue that the Jordanian manufacturing companies with a high level of printed financial disclosure in 2002 are more likely to follow the new technology developments in Jordan and disclose financial information to their external users in 2004 via their website. Companies with less printed financial disclosure are less likely to have websites to disclose financial information. Therefore, this section attempts to examine this relationship between a high level of printed financial disclosure in 2002 and the level of using the Internet to disclose financial information in 2004. Specifically, this section will test Hypothesis 6:

H6: *There is a positive association between company's printed financial disclosure in 2002 and the level of Internet financial disclosure in 2004.*

This relationship between the printed and the Internet financial disclosure is considered a proxy measure of the companies' attitude towards financial disclosure practices in Jordan. Are the Jordanian companies, which provide a high level of printed financial disclosure, keen to follow the new developments of Internet financial disclosure? If the following analysis shows a positive association between high printed financial disclosure in 2002 and the usage of the Internet to disclose financial disclosure on the Jordanian manufacturing companies' websites, it should be considered as proof to establish a positive relationship between printed disclosure and Internet disclosure in the form of disclosure transformation theory, and accept that the existence of a high volume of voluntary disclosure in printed annual reports leads to taking the advantage of the Internet to disclose more information voluntarily.

In order to examine the association between the printed financial disclosure in 2002, and Internet usage and financial disclosure in 2004, it is required to eliminate the current analyses on the 51 Jordanian manufacturing companies in 2002[34]. It is important to note that this section attempts to examine both the Internet usage and financial disclosure, and as seen above the current Internet checklist includes 10 general items focussing on the availability and usage of the companies' websites by rewarding any company for very basic online information such as the name, contact details, company profile, and their products. If any company has a home page on the Internet and only provides its name, email and post address, as well as information on its operations and a list of products in HTML format, it will score 21% of Internet disclosure (6 out of 28). The relationship between printed financial disclosure and both Internet usage and financial disclosure would support the assumption of whether companies with high level of printed financial disclosure in 2002 are keen to follow gradually Internet financial reporting. The rationale behind this assumption is that companies with websites on the Internet are more likely, although not yet, sooner or later to disclose financial information on their websites.

Table 33 listed the 51 Jordanian manufacturing companies and their score of Internet usage and financial disclosure.

[34] All 51 manufacturing companies listed in 2002 were found to also be listed on ASE in August 2004.

Table 33: IDI for each Manufacturing Company in 2004

Company No	IDI 2004	Company No	IDI 2004
1	0.61	26	0.00
2	0.00	27	0.00
3	0.00	28	0.00
4	0.00	29	0.00
5	0.00	30	0.36
6	0.00	31	0.21
7	0.00	32	0.00
8	0.43	33	0.00
9	0.61	34	0.00
10	0.00	35	0.00
11	0.00	36	0.00
12	0.36	37	0.00
13	0.00	38	0.00
14	0.00	39	0.00
15	0.00	40	0.00
16	0.00	41	0.29
17	0.00	42	0.00
18	0.32	43	0.00
19	0.39	44	0.36
20	0.00	45	0.00
21	0.00	46	0.00
22	0.00	47	0.00
23	0.32	48	0.00
24	0.89	49	0.00
25	0.46	50	0.29
		51	0.00

Table 34: Descriptive Statistics of IDI

	No.	Min.	Max.	Mean	S.D.
IDI	14	0.21	0.89	0.42	0.176

As seen in Table 33 and 34 there are 14 Jordanian manufacturing companies out 51 (27%) found on the Internet with accessible active websites. Following Xiao et al. (2004) it was decided to assign a score "0" for each company of the sample without website on the Internet. Table 31 shows that there is variation in the level of Internet usage and financial disclosure by these companies in 2004. Internet usage ranged from zero for companies not using the Internet at all to 89% for companies using the Internet

and disclosing financial information. Subsequently Internet financial disclosure ranged from 21% to 89%, a range of 68%.

This variation in Internet usage and financial disclosure can be referred to as the original companies' attitude towards disclosing financial information to their users in the first place, which can be explained by examining the relationship between the companies' printed financial disclosure in 2002 and their situation on the Internet as listed in the above table. The first step to examine this relationship is by measuring the correlation between them. Table 35 shows Kendall's correlation coefficient between the values of the printed financial disclosure in 2002 (mandatory, voluntary and overall disclosure), and the Internet usage and financial disclosure in 2004, along with their significant levels.

Table 35: Correlation between MDI, VDI, ODI in 2002 and IDI in 2004

Kendall's tau_b		MDI 2002	VDI 2002	ODI 2002
IDI 2004	Correlation Coefficient	.284	.383	.369
	Sig. (1-tailed)	.006	.000	.000
	N	51	51	51

** Correlation is significant at the 0.01 level (1-tailed).

The table exhibits a significant and positive relationship between the Internet usage and financial disclosure in 2004 and each of the printed mandatory, voluntary and overall financial disclosure in 2002. Based on these results the alternative hypothesis ***H6*** can be accepted. This result supports the above argument of an increase in mandatory and/or voluntary financial disclosure in the printed annual reports affecting managers' incentives to make use of the Internet and to disclose voluntary information to their external users. Also this evidence supports the current argument of companies' attitude towards financial disclosure, e.g. open and unreserved companies are more likely to have Internet websites, and are keen to keep following the new developments in the financial reporting system such as the Internet voluntary disclosure to meet the heterogeneous needs of users. This result provides evidence of disclosure transformation theory and it is consistent with findings by Ettredge et al. (2002), and Xiao et al. (2004). However, Kendall correlation coefficient has not shown the extent to which each type of printed financial disclosure has effects on the level of Internet usage and financial disclosure. Thus, in the next chapter the extent to which printed mandatory and

voluntary disclosure in 2002 and Internet usage and voluntary information in 2004 are related, will be examined by using multivariate analyses.

7.9 Summary

This chapter has shown the descriptive analyses of financial disclosure practices in Jordanian in two different media: Firstly: in the companies' printed annual reports, i.e. mandatory, voluntary and overall disclosure. The main findings of this part can be divided threefold:

(1) In terms of printed mandatory disclosure, Jordanian manufacturing companies did not fully comply with mandatory disclosure requirements in 1997 and 2002, and generally, this part reports little difference in the distribution of the MDI between the two years, and reported considerable variation in the level of compliance among the companies in the sample in both years. The mandatory index in 1997 and partially in 2002 concentrated on the more generic disclosure requirements of IAS1 and IAS5, and did not attempt to cover the specific disclosures embedded in standards addressing particular accounting issues. Hence, full compliance was expected, while less than full compliance has been found, which can be interpreted as evidence of 'IAS lite' in Jordan. The level of compliance with IAS requirements increased in 2002, but a relatively low level of compliance with the JSC disclosure requirements in the same year was observed. This chapter referred to this non full compliance as compliance-lite, and it suggested several factors that might affect the level of compliance with mandatory requirements. Also this chapter reported the developments in the level of compliance with IASs by the Jordanian companies since 1989.

(2) In terms of printed voluntary disclosure: this chapter found a considerable level of voluntary information in the sampled companies' annual reports in 1997 and in 2002. Also there was a relatively significant variation in the level of voluntary disclosure among the sampled companies in both years, and an increase in the average level of voluntary disclosure in 2002 was reported.

(3) In terms of overall level of financial disclosure: this chapter reported that the overall financial disclosure increased after the disclosure developments in 1998, and these developments moved the distribution of the ODI significantly between the two

years from positively skewed in year 1997 to negatively skewed in 2002. In this context, this chapter provides empirical evidence to Dye' (1986) argument of the reporting mandatory requirements possibly depending on what companies disclose voluntarily, and voluntary disclosure possibly creating a demand for codification. Further empirical evidence supporting Dye's theory is that there is a positive relationship between increasing mandatory disclosure requirements and increasing voluntary disclosure.

Secondly: regarding Internet financial disclosure, this chapter provided a general overview of the Jordanian companies' situation online. The main findings of this part were as follows: 55 out of 190 companies listed on ASE have accessible activated websites; also there was a considerable level of Jordanian companies disclosing voluntary information online on their websites. It was found that Jordanian companies' websites presented the companies' products and services with a summary of financial information. For those companies that disclosed less than their printed annual report, they disclosed on their websites some of the financial statements, such as income statement, a summary balance sheet, and a letter from the chairman of the board, however the majority missed the auditor reports. Also few companies provided their printed annual reports in PDF format. This section established that increasing the level of overall disclosure, i.e. mandatory and voluntary disclosure in the printed annual reports increases the level of the Internet voluntary disclosure.

Chapter Eight

Variations in Financial Disclosure Practices: Bivariate, Multivariate Analyses and Results Description

8.1 Introduction

Chapter 7 reported the descriptive analyses of financial disclosure practices in Jordan, including: firstly, of the extent of printed financial disclosure practices before and after the new disclosure developments in 1998, and secondly, of the extent of the Internet financial disclosure practices in 2004. As seen in Chapter 7, there is a variation in the level of printed financial disclosure practices, i.e. variations among the Jordanian companies in the level of mandatory, voluntary, and overall financial disclosure in both 1997 and 2002. Also Chapter 7 reported a considerable variation in the level of Internet usage and financial disclosure among the Jordanian companies. This requires further investigation to determine the factors that might explain disclosure variation. The proposed theoretical framework (discussed in Chapter 4) explained a theoretical background for several factors, company characteristics, which explain such variation. Therefore, this chaptér seeks to examine the relationship between financial disclosure practices and company characteristics- by using bivariate analyses- and also to highlight to which extent each of these factors can explain the variations in the financial disclosure practices among the sampled Jordanian companies- by using multivariate analyses.

The analysis in Chapter 7 also found a positive association between increasing mandatory requirements and increasing voluntary disclosure in 2002, and a positive relationship between mandatory disclosure requirements in 2002 and voluntary disclosure practices in 1997. Moreover, Chapter 7 reported a positive association between printed financial disclosure (mandatory, voluntary and overall financial disclosure), and the Internet usage for financial disclosure. This chapter will use the multivariate analyses to show the extent to which an increase in mandatory disclosure requirements can explain increases in voluntary disclosure in 2002, also to which extent the voluntary disclosure practices in 1997 can explain the mandatory disclosure practices in 2002, and to show to which extent the level of printed financial disclosure in 2002 can influence the Internet usage for financial disclosure in 2004.

8.2 Dependent and Independent Variables in the Printed Financial Disclosure

Statistically, the first important step to start the analysis is to identify the dependent and independent variables. The dependent variables in the printed financial disclosure are the levels of mandatory, voluntary and overall financial disclosure for 1997 and 2002. Appendix (10) exhibits these variables for each company in the sample in both years 1997 and 2002. The independent variables in this study are the company characteristics, and as seen in Chapter 6 there are seven of these characteristics in the current study for 1997 and 2002. They are divided as follows: four structure related variables namely: company size, company age, government ownership and foreign ownership; one performance related variable: profitability: and two market related variables namely: industry type and auditor's size. These independent variables and its proxy measures are listed in Table 36.

Table 36: The Independent Variables for both years 1997 & 2002

The Independent Variable	The Proxy Measures
1. Company Size	Capital employed, Total Assets, and Total sales
2. Company Age	Number of years since established
3. Government Ownership	10% or more is considered influential
4. Foreign Ownership	10% or more is considered influential
5. Profitability	Net profit, and Return on Equity
6. Industry Type	Five industry types
7. Auditor's Size	Big five auditing firm

The second important step in the analysis is to choose and apply an appropriate statistical technique to these dependent and independent variables. As discussed in section 6.7, the choice of appropriate statistical techniques should be based on three key criteria: the data distribution, the measurement scale of the data and the number of variables which will be used in the analysis at the same time. These criteria are very important to determine whether the data is parametric or non-parametric (Field, 2000).

However, the Skewness & Kurtosis normality tests and histograms for each of the dependent and independent variables show that the dependent and independent variables were not distributed normally[35]. The measurement scale of the current dependent variables- the financial disclosure indices- is an ordinal measurement scale more than an

[35] The normality problem and how it was sought to reduce it in the current study will be discussed in the multivariate analyses section.

interval scale (Marston & Shrives, 1991). The current independent variables can be classified under two types of the measurement scale, namely continuous variables and categorical (nominal) variables as follows:

1. Continuous Variables: Company's Size; Company Age, and Company Profitability.
2. Categorical (Nominal) Variables: Government Ownership, Foreign Ownership, Industry Type, and Auditor's Size.

As seen in the methodology chapter, several assumptions should be applicable to parametric analysis, such as normality and interval data, which are not applicable to the current data. In this context, Marston & Shrives (1991) argued that non-parametric statistical tests should be employed when the data have violated the assumptions of parametric analysis. Therefore, non-parametric bivariate statistical tests will be employed to avoid incorrectly rejecting or accepting any of the current research hypotheses.

8.3 The Bivariate Analyses of the Printed Financial Disclosure Variation

The following sub-sections will show statistically the possible relationship between company characteristics and the level of disclosure among the Jordanian companies in both 1997 and 2002. The current explanatory variables include continuous and categorical variables. The discussion of the results and the comparison with the prior studies will be undertaken after the multivariate analyses employed.

8.3.1 Continuous Variables

8.3.1.1 Company Size

Company size was proxied by capital employed, total assets and total sales to examine the possible relationship between company size and the level of financial disclosure in each year. Kendall's rank correlation coefficient (tau) was employed to examine the association between the levels of financial disclosure and proxy measures of company size, as one of the non-parametric tests for continuous variables in the current study for certain reasons as follows: (1) it is a better estimate of the correlation in the population, (2) it can draw more accurate generalizations than Spearman's test,

and (3) its value is a more accurate gauge of what the correlation in the population would be (Field, 2000, pp. 92-93). Table 37 and 38 show the results of Kendall's tau_b test for each of the size's proxy variables for mandatory, voluntary and overall disclosure in 1997 and in 2002 as follows:

Table 37: Kendall's tau-b Correlation between Size Proxy Variables and ODI, MDI, and VDI in 1997

1997		ODI	MDI	VDI
Total Assets	Correlation Coefficient	0.471(**)	0.183(*)	0.471(**)
	Sig. (1-tailed)	0.000	0.034	0.000
	N	51	51	51
Total Sales	Correlation Coefficient	0.381(**)	0.078	0.441(**)
	Sig. (1-tailed)	0.000	0.219	0.000
	N	51	51	51
Capital Employed	Correlation Coefficient	0.514(**)	0.203(*)	0.446(**)
	Sig. (1-tailed)	0.000	0.023	0.000
	N	51	51	51

* Correlation is significant at the 0.05 level (1-tailed), ** Correlation is significant at the 0.01 level (1-tailed).

Table 38: Kendall's tau-b Correlation between Size Proxy's Variables and ODI, MDI, and VDI in 2002

2002		ODI	MDI	VDI
Total Assets	Correlation Coefficient	0.506(**)	0.376(**)	0.643(**)
	Sig. (1-tailed)	0.000	0.000	0.000
	N	51	51	51
Total Sales	Correlation Coefficient	0.575(**)	0.413(**)	0.666(**)
	Sig. (1-tailed)	0.000	0.000	0.000
	N	51	51	51
Capital Employed	Correlation Coefficient	0.440(**)	0.291(**)	0.581(**)
	Sig. (1-tailed)	0.000	0.002	0.000
	N	51	51	51

** Correlation is significant at the 0.01 level (1-tailed).

Table 37 and 38 exhibit that there is a significant and positive association between each of the company size variable and the level of overall, mandatory, and voluntary financial disclosure in both 1997 and 2002. Based on these results the alternative hypotheses ***H8, H9, and H10*** can be accepted at significant correlation level of 1% and 5%.

8.3.1.2 Company Age

Company age was proxied by number of years since a company was established, and the association between this variable and the levels of financial disclosure was tested using Kendall's rank correlation coefficient (tau). The results are shown in Table 39.

Table 39: Kendall's tau-b Correlation between Age Proxy Variable and ODI, MDI, and VDI in 1997 & 2002

1997		ODI	MDI	VDI
Company Age	Correlation Coefficient	0.153(***)	0.044	0.186(*)
	Sig. (1-tailed)	0.061	0.329	0.032
	N	51	51	51
2002				
Company Age	Correlation Coefficient	0.338(**)	0.375(**)	0.217(*)
	Sig. (1-tailed)	0.000	0.000	0.017
	N	51	51	51

* Correlation is significant at the 0.05 level (1-tailed), ** Correlation is significant at the 0.01 level (1-tailed), *** Correlation is significant at the 0.1 level (1-tailed).

It shows that company age was significant regarding voluntary disclosure in 1997 at a level of 5%, and it appears with some effects on the overall disclosure at a level of 10%. In 2002 company age appears with a significant relationship with the level of overall and mandatory financial disclosure at 1%. Also it was associated significantly with the level of voluntary disclosure at a level of 5%. Resulting, the alternative hypotheses **H23**, and **H24** for both years and the alternative hypothesis **H25** for 2002 are accepted.

8.3.1.3 Profitability

Profitability was proxied by return on equity and net profit, and Kendall's rank correlation coefficient (tau) was employed to examine the association between these variables and levels of financial disclosure in both years. The results are exhibited in Table 40 and Table 41:

Table 40: Kendall's tau-b Correlation between Profitability Proxy Variables and ODI, MDI, and VDI in 1997

1997		ODI	MDI	VDI
Net Profit	Correlation Coefficient	0.383(**)	0.086	0.460(**)
	Sig. (1-tailed)	0.000	0.202	0.000
	N	51	51	51
Return on Equity	Correlation Coefficient	0.131(***)	-0.052	0.206(*)
	Sig. (1-tailed)	0.090	0.301	0.018
	N	51	51	51

* Correlation is significant at the 0.05 level (1-tailed), ** Correlation is significant at the 0.01 level (1-tailed), *** Correlation is significant at the 0.01 level (1-tailed).

Table 41: Kendall's tau-b Correlation between Profitability Proxy Variables and ODI, MDI, and VDI in 2002

2002		ODI	MDI	VDI
Net Profit	Correlation Coefficient	0.371(**)	0.498(**)	0.496(**)
	Sig. (1-tailed)	0.000	0.000	0.000
	N	51	51	51
Return on Equity	Correlation Coefficient	0.253(**)	0.217(*)	0.203(*)
	Sig. (1-tailed)	0.005	0.013	0.022
	N	51	51	51

* Correlation is significant at the 0.05 level (1-tailed), ** Correlation is significant at the 0.01 level (1-tailed),

Table 40 shows that there is a positive association between the net profit and both the level of voluntary and overall disclosure in 1997 at significant 1%, while there was no significant relationship between the net profit and the level of mandatory disclosure. In the same year return on equity appears significant with voluntary disclosure at a level of 5%, and with overall disclosure at a level of 10%, but return on equity appears not significant with mandatory disclosure in 1997. Table 41 shows that there is a positive association between the net profit and each of overall, mandatory, and voluntary disclosure at a level of 1%, and also return on equity appears significant with overall disclosure at a level of 1%, and with mandatory as well as voluntary disclosure at a/the level of 5%. Based on the result of a positive association between the level of voluntary and overall disclosure, and profitability in 1997 and 2002, the alternative hypotheses ***H20*** and ***H21***, can be accepted for both years. For hypothesis ***H22***, a positive association between the level of mandatory disclosure and profitability can be rejected for 1997 and accepted at significant correlation level of 5% in 2002.

8.3.2 Categorical Variables

8.3.2.1. Ownership Structure:

Two types of ownership structure are explored in this study: government ownership (GO) and foreign ownership (FO). A total shareholding of 10%[36] or more by government or foreign shareholders is likely to be influential in explaining a company's disclosure practices. Mann-Whitney test [37] was employed to measure the differences in the mean level of MDI, VDI, and ODI of the sampled companies in 1997 and 2002. Companies were split in this test into two groups for both the GO and FO, depending on whether the particular category of ownership was or was not considered influential (1= Ownership not influential (GO or FO); 0= Ownership influential (GO or FO)). It has been noted that, in 1997, there were relatively few companies in the sample that had more than 10% GO, while FO was more frequent in both years (and more companies had at least 10% FO in 2002 than in 1997, consistent with the increasing international profile of ASE).

Table 42 and 43 show the results of Mann-Whitney test with value of 1-tailed probability[38]. As illustrated in Table 42 the GO was statistically significant with MDI in 2002 at a level of 5%, and it had an effect on the level of overall financial disclosure at 10% in 2002. Also Table 43 reports a significant relationship between foreign ownership in 2002 and the level of compliance at a significant level of 5%, and it was significantly associated with the level of voluntary disclosure in both years. Furthermore, a significant relationship between foreign ownership and the level of

---

[36] It was decided to consider 10% or over influential percentage following Suwaidan (1997, pg, 146) " The choice of 10% was based on the Companies Act 1989, which provides that the share of each promoter must not exceed 10% of the company capital except if the shareholder is the government or a government agency (Article 102)".

[37] The Mann-Whitney test is used for testing differences in mean levels of financial disclosure between two groups of GO and FO Ownership (influential and not influential). The result of this test based the disclosure index scores being ranked from lowest to highest, and it indicates whether there is an association between ownership structure variables and the levels of financial disclosure.

[38] The Mann-Whitney test on the SPSS programme provides only 2-tailed probability. The current hypotheses were established with prediction to their direction, which requires 1-tailed probability. It suggested that this problem will be solved by dividing the 2-tailed probability by two to get the value of 1-tailed probability. For more details about this issue see Field (2000, pg.53). Therefore, all Mann-Whitney 2-tailed probability was divided by 2 in order to report the 1-tailed value.

overall disclosure in both years is reported. It is suggested that the mean rank of companies with 10% or more foreign ownership is significantly different from the mean rank of companies with less than 10% foreign ownership (indeed, the implication is that foreign ownership in 2002 is associated with higher mandatory disclosure).

Table 42: Mann-Whitney test for GO and MDI, VDI, and ODI in 1997 & 2002

GO	**GO Year 1997**		**GO Year 2002**	
MDI	**1**	**0**	**1**	**0**
No of cases	43	8	45	6
Mean rank	25.05	31.13	24.70	35.75
Mann-Whitney U	131.000		76.500	
Z value	1.064		1.711	
Sig. (1-tailed)	0.143		0.044	
VDI	**1**	**0**	**1**	**0**
No of cases	43	8	45	6
Mean rank	25.70	27.63	25.49	29.83
Mann-Whitney U	159.000		112.000	
Z value	0.337		0.676	
Sig. (1-tailed)	0.368		0.250	
ODI	**1**	**0**	**1**	**0**
No of cases	43	8	45	6
Mean rank	25.76	27.31	25.00	33.50
Mann-Whitney U	161.000		90.000	
Z value	0.272		1.316	
Sig. (1-tailed)	0.378		0.094	

1= Ownership not influential; 0= Ownership influential

Table 43: Mann-Whitney test for FO and MDI, VDI, & ODI in 1997 & 2002

FO	**FO Year 1997**		**FO Year 2002**	
MDI	**1**	**0**	**1**	**0**
No of cases	36	15	30	21
Mean rank	24.94	28.53	22.47	31.05
Mann-Whitney U	232.000		209.000	
Z value	0.787		2.029	
Sig. (1-tailed)	0.2155		0.021	
VDI	**1**	**0**	**1**	**0**
No of cases	36	15	30	21
Mean rank	22.63	34.10	20.90	33.29
Mann-Whitney U	148.500		162.000	
Z value	2.515		2.945	
Sig. (1-tailed)	0.006		0.015	
ODI	**1**	**0**	**1**	**0**
No of cases	36	15	30	21
Mean rank	23.01	33.17	21.23	32.81
Mann-Whitney U	162.500		172.000	
Z value	2.224		2.737	
Sig. (1-tailed)	0.013		0.03	

1= Ownership not influential; 0= Ownership influential

Therefore, due to these results in Table 39 the hypotheses ***H11 (GO with MDI)***, ***H13*** in 2002 *(GO with ODI)* can be accepted, while they cannot be rejected for 1997. Furthermore, these results prove the hypothesis ***H12 (GO with VDI)*** can not be accepted for both years. The results in Table 40 allow to accept the hypotheses ***H15 (FO with VDI)***, ***H16 (FO with ODI)*** in both years, while they allow to reject hypothesis ***H14*** (FO with MDI) for 1997, and to accept it for 2002.

8.3.2.3. Industry Type

As discussed previously the current sampled manufacturing companies were classified into five industry types, and these industry types were examined in this section by classifying them as five dummy variables:

(A) 1 if the company is in the natural resources industry, 0 otherwise

(B) 1 if the company is in the food and clothing industry, 0 otherwise

(C) 1 if the company is in the pharmaceuticals and cosmetics industry, 0 otherwise

(D) 1 if the company is in the building materials and equipment industry, 0 otherwise

(E) 1 if the company is in any other industry ('additional industries'), 0 otherwise.

In order to examine these dummy variables the Kruskal-Wallis test was employed to measure the association between industry type variables with mandatory, voluntary and overall disclosure indices for both years. The analyses reported in Table 44 and 45 show that the only statistically significant association is between mandatory, voluntary and overall disclosure and the natural resources industry at a level of 0.01, which applies in both 1997 and 2002. It is likely, however, that this result reflects the fact that natural resources companies in the sample tended to be larger and older than companies in other industries. Hence, the hypotheses ***H17, H18***, and ***H19*** can not be accepted for the various industry types, except for the natural resources industry.

Table 44: Kruskal-Wallis test for Industry types and MDI, VDI, & ODI in 1997

MDI 1997	**A**		**B**		**C**		**D**		**E**	
	1	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	43.1	23.3	27.0	25.7	19.1	26.8	22.0	28.0	23.2	26.7
Chi-Sq.	10.748		0.066		1.200		1.854		0.459	
d.f.	1		1		1		1		1	
Sig.	0.001		0.798		0.273		0.173		0.498	
VDI 1997	**A**		**B**		**C**		**D**		**E**	
	1	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	40.1	23.8	30.1	24.7	22.1	26.4	23.0	27.5	18.2	27.9
Chi-Sq.	7.352		1.210		0.382		1.019		3.473	
d.f.	1		1		1		1		1	
Sig.	0.007		0.271		0.537		0.313		0.062	
ODI 1997	**A**		**B**		**C**		**D**		**E**	
	1	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	39.7	23.8	29.1	25.1	22.6	26.4	23.4	27.3	18.8	27.8
Chi-Sq.	6.925		0.677		0.291		0.775		2.926	
d.f.	1		1		1		1		1	
Sig.	0.008		0.411		0.590		0.379		0.087	

Table 45: Kruskal-Wallis test for Industry Types and MDI, VDI, & ODI in 2002

MDI 2002	A		B		C		D		E	
	1	0	1	0	1	0	1	0	1	0
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	40.0	23.8	25.7	26.1	22.0	26.4	20.7	28.7	27.6	25.6
Chi-Sq.	7.200		0.006		0.402		3.236		0.135	
d.f.	1		1		1		1		1	
Sig.	0.007		0.938		0.526		0.072		0.713	

VDI 2002	A		B		C		D		E	
	1	0	1	0	1	0	1	0	1	0
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	41.7	23.5	25.8	26.1	22.4	26.4	21.6	28.2	24.4	26.4
Chi-Sq.	9.070		0.02		0.325		2.217		0 .135	
d.f.	1		1		1		1		1	
Sig.	0.003		0.965		0.569		0.137		0.713	

ODI 2002	A		B		C		D		E	
	1	0	1	0	1	0	1	0	1	0
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	39.4	23.9	26.2	25.9	24.9	26.12	24.6	26.7	19.4	27.6
Chi-Sq.	6.626		0.03		0.031		0.233		2.518	
d.f.	1		1		1		1		1	
Sig.	0.010		0.955		0.861		0.630		0.113	

8.3.2.4 Auditor Size

In order to examine this variable dichotomous classification was used to split the companies in the sample into two groups, depending on whether the company was audited by one of the big five auditing firms or was audited by any other:

1= if the company audited by one of the big five companies, **0** = Otherwise

Table 46 shows the Mann-Whitney test which has been employed to measure the association between auditor size and the extent of mandatory, voluntary and overall disclosure in 1997 and 2002.

Table 46: Mann-Whitney for Auditor's Size and MDI, VDI, & ODI in 1997 & 2002

	Auditor's Size Year 1997		Auditor's Size Year 2002	
MDI	**1**	**0**	**1**	**0**
No of cases	24	27	22	29
Mean rank	28.21	24.04	25.66	26.26
Mannney U	271.000		311.500	
Z value	1.002		1.43	
Sig. (1-tailed)	0.158		0.4435	
VDI	**1**	**0**	**1**	**0**
No of cases	24	27	22	29
Mean rank	27.63	24.56	29.36	23.45
Mann-Whitney U	285.000		245.000	
Z value	0.737		1.416	
Sig. (1-tailed)	0.2305		0.0785	
ODI	**1**	**0**	**1**	**0**
No of cases	24	27	22	29
Mean rank	28.52	23.76	27.05	23.24
Mann-Whitney U	263.500		239.000	
Z value	1.142		1.522	
Sig. (1-tailed)	0.1265		0.064	

1= Big auditing companies; 0= Otherwise

As shown by the above analyses auditor size had only a limited effect on the level of voluntary and overall financial disclosure in 2002 at a level of 10%, and consequently the above results do not allow acceptance of the Hypotheses ***H26, H27, H28*** in both years at a level of 5%. This suggests that there is no statistical significant relationship between the levels of mandatory, voluntary and overall disclosure and auditor size in both years, which may explain the compliance-lite with mandatory requirements, and the variation in the level of voluntary disclosure among the Jordanian companies.

It is argued that the poor level of compliance with mandatory requirements and wide range of variation in the level of voluntary information in companies' annual reports could be a result of poor auditing for these annual reports. The latter could be a result of too small a responsibility for auditors, who are responsible for evaluating only the financial statements. These constitute one part of financial reporting, while other parts of financial reporting, such as the directors' reports, which includes a massive amount of financial information, is not one of the auditors' responsibilities to examine. From the analysis was derived that the compliance with JSC's requirements, mainly director's reports items, was less than the compliance with IASs, mainly financial

statements items. Also in this study it is argued that Jordanian companies listed on ASE represent a fundamental part of the Jordanian economy which attracts foreign investment in line with new orientation of the Jordanian government. The role of Jordanian auditors, which is to express their opinion on the companies' financial statements as to whether they are prepared in accordance with an identified financial reporting regulation framework, is influenced by these issues in Jordan. Abdel-Qader (2002) summarised four factors that impact upon the audit independence in Jordan:

1) the management influence on the selection of the auditor and deterring audit fees
2) the competition among auditors in the Jordanian market
3) the average of auditors fees is not sufficiently high to compensate for work and responsibility involved
4) the conflict between the consulting and the auditing service.

Therefore, it is understandable to argue that auditors' independence to express their opinion is eliminated by these factors in Jordan, which may add to understanding why Jordanian companies do not fully comply with mandatory requirements, as well as why they do not disclose a wide range of voluntary information in their annual reports.

8.4 The Multivariate Analysis of the Disclosure Variation in the Printed Companies' Annual Reports

As seen above the descriptive and bivariate analyses have already shown the dependent variables, and their variations among the Jordanian companies. Also the association between each dependent and independent variable was examined for both 1997 and 2002. This section seeks to examine the extent to which the independent variables, company characteristics, can explain the disclosure variation among the Jordanian companies, and to find out which of these characteristics can explain the variation more than others by using multivariate analysis, i.e. regression analysis.

8.4.1 Regression Analysis

The current multivariate analysis employed is a multiple linear regression analysis, the Ordinary Least Squares (OLS) regression. OLS was a common statistical technique used by the majority of the prior studies, see Chapter 3, to regress the dependent

variable with the independent variables. In this vein Hutcheson & Sofroniou (1999, pp. 55-6) said that:

"OLS regression is one of the most popular statistical techniques used in the social sciences. It is used to predict values of a continuous response variable using one or more explanatory variables". "OLS regression is a powerful technique for modelling continuous data, particularly when it is used in conjunction with dummy variables coding and data transformation."

OLS is employed in this study to find the linear combination of independent variables that correlate maximally with the dependent variables. The following section will show how the current study builds the current regression models.

8.4.1.1 Building OLS Regression Models

As illustrated above there are three dependent variables for printed financial disclosure in 1997 and 2002, namely MDI, VDI, and ODI. Also it is important to note that there are two main types of the independent variables, continuous and categorical variables, for each regression model for 1997 and 2002. The continuous variables are company size, company age and profitability. The categorical variables are government ownership, foreign ownership, industry type, and auditor size. Therefore, three multiple regression models were built for this study representing each dependent variable for 1997 and 2002, each of which included the above independent variables.

The following regression equations were built for both years by entering company total assets as proxy for company size, and return on equity as proxy measure for company profitability. The motivation for choosing total assets as proxy measure for company size, and choosing return on equity as proxy for profitability to enter into the regression models is derived from two reasons: firstly, these proxies were the most commonly used for these variables in the prior studies, and secondly, one proxy measure for each independent variable was decided upon to avoid the problem of collinearity[39]

[39] Multicollinearity is considered as a modelling problem in the multiple regressions when there are two or more independent variables are highly correlated between each other in same regression model. Fortunately, there are several ways in the SPSS programme to check out whether the multicollinearity problem is exist among the independent variables; this is by either

among the proxy measures for the same explanatory variable. Also company age had one continuous variable as proxy (the number of years) within the regression models. The categorical variables included government ownership with one variable (take values 1 if the company has 10% of the government ownership and 0 otherwise), foreign ownership with one variable (take values 1 if the company has 10% of the foreign ownership and 0 otherwise), industry type with five dummy variables, thus only four dummy[40] variables are used in the current regression model (additional industry variables were not included in the model, to avoid the collinearity problem that would otherwise arise if dummy variables for all five mutually exclusive and exhaustive categories were in the regression), and auditor size with one variable (take values 1 if the company audited by one of the big audit firms and 0 otherwise)[41].

examining the association among the independent variables by using a correlation matrix or by using the variance inflation factor (VIF). The VIF provide whether or not there is high linear coloration between the independent variables in the regression model. If the value VIF is greater than 10 then there is cause for concern that multicollinearity is a problem among the independent variables [(Field, 2000) and (Hutcheson & Sofroniou, 1999)]. The issue of multicollinearity will be tested in the first run of the full regression.

[40] Field (2000,pg. 246) " as a general rule there will always be one less dummy variable than there are categories of the Independent variable".

[41] Enter method was employed to enter the independent variables into the SPSS programme for building the multiple linear regression models.

(1) $\mathbf{MDI} = \beta_0 + \beta_1 \mathbf{Size\ (TA)} + \beta_2 \mathbf{GO} + \beta_3 \mathbf{FO} + \beta_4 \mathbf{AS} + \beta_5 \mathbf{Profitability\ (ROE)} + \beta_6 \mathbf{NRI} + \beta_7 \mathbf{FCI} + \beta_8 \mathbf{PCI} + \beta_9 \mathbf{BMEI} + \ell$

(2) $\mathbf{VDI} = \beta_0 + \beta_1 \mathbf{Size\ (TA)} + \beta_2 \mathbf{GO} + \beta_3 \mathbf{FO} + \beta_4 \mathbf{AS} + \beta_5 \mathbf{Profitability\ (ROE)} + \beta_6 \mathbf{NRI} + \beta_7 \mathbf{FCI} + \beta_8 \mathbf{PCI} + \beta_9 \mathbf{BMEI} + \ell$

(3) $\mathbf{ODI} = \beta_0 + \beta_1 \mathbf{Size\ (TA)} + \beta_2 \mathbf{GO} + \beta_3 \mathbf{FO} + \beta_4 \mathbf{AS} + \beta_5 \mathbf{Profitability\ (ROE)} + \beta_6 \mathbf{NRI} + \beta_7 \mathbf{FCI} + \beta_8 \mathbf{PCI} + \beta_9 \mathbf{BMEI} + \ell$

Where,

MDI = Mandatory Disclosure Index.

VDI = Voluntary Disclosure Index.

ODI = Overall Disclosure Index.

β_0 = the intercept of the regression line and it is constant value

TA= Total Assets

GO = Government Ownership

FO = Foreign Ownership

AS= Auditor's Size

ROE= Return on Equity

NRI = Natural Resources Industry

FCI = Food and Clothing Industry

PCI = Pharmaceuticals and Cosmetics Industry

BMEI = Building Materials and Equipments

ℓ = the difference between the predicted and observed value of the dependent variables, the residual.

In order to undertake the linear regression analysis there are five main conditions the variables in the models should meet, namely normality, linearity, non-multicollinearity, homoscedasticity and no outliers. In the context of regression analysis' problems in disclosure studies, Cooke (1998) suggested that researchers undertaking

empirical studies on disclosure issues should pay attention to several problems in their data, namely distribution problems, outlier problems and non-linearity problems. These problems are considered important issues in any multiple regression analysis, and if they exist in any regression model, they should be eliminated before the run of the model. The following discussion will show how the current researcher tested and eliminated these issues.

8.4.1.2 Fulfilling Multiple Linear Regression Assumptions

Firstly, normality assumption, under this assumption all continuous variables in the regression model must be normally distributed (Field, 2000). Several approaches were employed in this study to assess the normality of the data distribution, namely histograms, normal distribution plot and the Kolmogorov-Smirnov (K-S) normality test. All showed that the current continuous variables, i.e. the dependent and independent variables, were not normally distributed, which suggests a normality problem in the current data.

The second assumption is the linearity assumption, which means that the relationship between the dependent and independent variables should be a linear relationship. For this reason the linear regression equation is most likely in the form of a straight line equation. This equation shows a direct linear relationship between dependent and the independent variables, and the gradient of this line can be described as unit change in dependent variables which is associated with unit change in independent variables (Hutcheson & Sofroniou, 1999). Such direct linear relationship between the dependent and independent variables is not clear yet in financial disclosure studies (Cooke, 1998). In order to check whether the assumption of linearity has been met it is required to examine the relationship between the dependent and independent variables by using regression scatter plots. The test did not indicate any linear relationship between the current dependent and explanatory variables. Consequently, non-linearity is the second problem in the current data.

Thirdly, homoscedasticity (constant variance) means that the residual at each level of the independent variables should be constant (Field, 2000). In order to examine this assumption, a graphs plots of the residual for each model in each year has been

undertaken by using regression plots via the SPSS programme, by plotting the standardized predicted values of the dependent variable against the standardized residuals (see Field, 2000). This test indicated that there is no constancy in variance across the residuals, which means homoscedasticity has not been met either in the current data. Also this test confirmed the normality and linearity problems in the current data. Additionally this test showed that there is the outlier problem, which is a case of observing substantial differences from the main trend of the data, and that means those cases with large residuals from the main trend (Field, 2000). Outliers may affect the values of the estimated regression coefficient, and may affect the fit of the regression model (Hutcheson & Sofroniou, 1999). However, this problem in the current study will be with limited impact, given that the current approach of data transformation, rank regression, is relatively insensitive to outliers problem (Cheng et al., 1992; Cooke, 1998).

8.4.2 Transformation in Regression Analysis

Data transformation in regression analysis is a traditional way of dealing with regression modelling problems, such as normality, linearity and constant variance (Hutcheson & Sofroniou, 1999). In this context Cooke (1998, pg. 210) argued that: *"Transformation of data is useful in regression analysis when the relationship between the dependent and independent variables is inherently non-linear, when the distribution of the errors is not approximately normal, and where there are problems of heteroscedasticity or non-independence of the error terms".*

In the statistical world there are several methods for data transformation. In the context of financial disclosure, Cooke (1998) explained rank transformation as one of the most powerful approaches to be used in financial disclosure studies. Also he suggested the normal score transformation approach as an extension of the rank approach. These approaches will be discussed in due course.

8.4.2.1 The Rank Transformation Approach

Iman & Conover (1979) explained that rank transformation is a very simple procedure where the data are merely ranked in order and replaced with their

corresponding ranks (i.e., assign rank 1 to the smallest observation and continue to rank N for the largest observation). Also Cooke (1998) argued that rank regression yields distribution-free test statistics (non-parametric) and is therefore potentially useful when the relationships between independent and dependent variables are not linear, when the distribution of errors is not approximately normal and where there are problems of heteroscedasticity. Furthermore, he added that rank transformation is insensitive to the problem of outliers. In the same vein, Cheng et al., (1992, pg. 587) summarised that:

> *"The rank transformation replaces the variables with the value of its rank and also generalizes the functional form since it is invariant under the entire class of order-preserving transformations, which include power transformations such as the square root as a special case. Furthermore, it is relatively insensitive to outliers".*

Furthermore, Cooke (1998) suggested the normal score approach as an extension of rank approach, and he added that under this method the transformation proposed is from actual observation (R) to the normal distribution by dividing the distribution into the number of observation (n) plus one region (n+1) on the basis that each region has equal probability. This approach was referred to as the Van der Waerden approach [R/(n+1)].

Moreover, the rank approach was widely used in the prior financial disclosure studies, for instance Lang & Lundholm (1993); Wallace et al. (1994); Wallace & Naser (1995); Naser (1998), Owusu-Ansah (1998), Naser & Al-Khatib (2000) and Abd-Elsalam & Weetman (2003). Comparatively, the normal score approach was adopted only by Haniffa & Cooke (2002) and Marston & Polei (2004). It has been decided for the purposes of this study, and following Cheng et al. (1992), to use the ranked scores for the regression analysis by using the following formula[42]: the ranked values (N) divided by the number of observation plus one (n+1) so that the maximum ranked scores has a value of [N/ (n+1)] and the minimum ranked score has a value of [1/ (n+1)]. Furthermore, normal score transformation will be used also in the regression analysis alongside the rank transformation approach, and the results will be discussed by using both approaches.

---

[42] Cheng et al. (1992) argued that this formula standardises the ranks by the number of the observations + 1, which effectively produce a coefficient with the desirable property of being independent of the observations.

8.4.3 Regression Analysis of the Printed Financial Disclosure

8.4.3.1 Ranked and Normal Score OLS Regression Analyses

Full rank and normal score OLS regression models were run for each dependent variable (MDI, VDI, and ODI) for 1997 and 2002 based on all ten independent variables[43]. The Enter method was used to include these variables. These tests were meant to show how the independent variables contribute to explaining the variation in each of the dependent variables, and whether there is an association between the independent variables in both years, as well as to check out the validity of the regression model conditions. For the letter histograms and normal distribution plot were employed again to assess the normality of the residuals' distribution. Both show that the rank residual for each model was to a great extent normally distributed. Also the values of leverage indicated no influence on part of the outlier on the rank regression models in both years. Therefore, Tables 47, 48 & 49 report a summary of the rank regression analysis' results of MD, VD, and OD for 1997 respectively, and Tables 50, 51, & 52 show the results of the full rank regression analysis of MD, VD, and OD for 2002 respectively. Furthermore, Tables 53, 54 & 55 illustrate a summary of the results of the normal score regression analysis of MD, VD, and OD for 1997 respectively, and Tables 56, 57 & 58 a summary of the results of the full normal score regression analysis of MD, VD, and OD for 2002 respectively.

---

[43] It should be noted that there are five industry dummy variables; three continuous variables as proxy measures for the company size, and two for the company profitability. In order to avoid the collinearity problem that would otherwise arise if dummy variables for all five mutually exclusive and exhaustive categories were in the regression, or if the three size proxy variables or even the two profitability variables. Therefore, one of five industry dummy variables has not been included in the model, additional industries. Also since all size and profitability proxy variables are significant one proxy variable, total assets, was included as a proxy variable for company size, and return on equity was included as a proxy for company profitability.

Table 47: Full Rank Regression Model of Mandatory Disclosure in 1997

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.557	0.311	0.138	0.091	0.311	1.803	0.092

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.192	0.043		4.495	0.000		
RTA	0.196	0.149	0.239	1.310	0.198	0.519	1.927
RROE	-0.211	0.091	-.379	-2.331	0.025	0.653	1.532
RCA	0.083	0.146	0.097	0.571	0.571	0.594	1.684
AS	0.018	0.029	0.093	0.634	0.530	0.796	1.256
GO	0.031	0.049	0.117	0.634	0.530	0.506	1.974
FO	0.006	0.030	0.028	0.199	0.843	0.843	1.186
NRI	0.078	0.059	0.278	1.339	0.188	0.399	2.508
FCI	0.024	0.043	0.106	0.567	0.574	0.489	2.045
PCI	0.008	0.052	0.025	0.158	0.875	0.666	1.501
BMEI	0.009	0.039	0.046	0.242	0.810	0.481	2.081

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 48: Full Rank Regression Model of Voluntary Disclosure in 1997

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.794	0.630	0.538	0.08363	0.630	6.815	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.054	0.039		1.359	0.182		
RTA	0.497	0.138	0.483	3.616	0.001	0.519	1.927
RROE	0.163	0.083	0.232	1.952	0.058	0.653	1.532
RCA	0.013	0.134	0.012	0.094	0.926	0.594	1.684
AS	0.036	0.026	0.149	1.384	0.174	0.796	1.256
GO	0.053	0.045	0.158	1.170	0.249	0.506	1.974
FO	0.045	0.028	0.167	1.597	0.118	0.843	1.186
NRI	0.125	0.054	0.354	2.322	0.025	0.399	2.508
FCI	0.098	0.039	0.342	2.489	0.017	0.489	2.045
PCI	0.000	0.048	0.001	0.008	0.994	0.666	1.501
BMEI	0.014	0.036	0.055	0.393	0.696	0.481	2.081

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 49: Full Rank Regression Model of Overall Disclosure in 1997

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.725	0.525	0.406	0.102	0.525	4.422	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.097	0.048		2.012	.051		
RTA	0.647	0.168	0.581	3.844	.000	0.519	1.927
RROE	-.032	0.102	-.042	-.312	.757	0.653	1.532
RCA	0.109	0.164	0.094	0.664	.511	0.594	1.684
AS	0.020	0.032	0.075	0.614	.542	0.796	1.256
GO	0.023	0.055	0.063	0.410	.684	0.506	1.974
FO	0.022	0.034	0.075	0.636	.528	0.843	1.186
NRI	0.074	0.066	0.194	1.123	.268	0.399	2.508
FCI	0.084	0.048	0.271	1.739	.090	0.489	2.045
PCI	0.014	0.059	0.032	0.241	.810	0.666	1.501
BMEI	0.005	0.044	0.019	0.118	.907	0.481	2.081

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 50: Full Rank Regression Model of Mandatory Disclosure in 2002

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.717	0.514	0.393	0.07676	0.514	4.232	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.122	0.036		3.413	0.001		
RTA	0.239	0.114	0.339	2.096	0.043	0.463	2.159
RROE	0.085	0.065	0.162	1.298	0.202	0.778	1.286
RCA	0.271	0.121	0.314	2.235	0.031	0.614	1.628
AS	0.055	0.025	0.278	2.202	0.034	0.762	1.312
GO	0.009	0.047	0.029	-.186	0.854	0.512	1.952
FO	0.033	0.025	0.165	1.291	0.204	0.740	1.352
NRI	0.016	0.053	0.056	0.301	0.765	0.346	2.892
FCI	0.014	0.033	0.060	0.416	0.679	0.580	1.723
PCI	0.041	0.044	0.125	0.926	0.360	0.671	1.491
BMEI	0.042	0.033	0.205	1.289	0.205	0.482	2.074

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 51: Full Rank Regression Model of Voluntary Disclosure in 2002

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.839	0.704	0.630	0.0406	0.704	9.512	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.017	0.019		0.908	0.370		
RTA	0.349	0.060	0.731	5.783	0.000	0.463	2.159
RROE	0.038	0.035	0.108	1.106	0.275	0.778	1.286
RCA	0.011	0.064	0.018	0.167	0.868	0.614	1.628
AS	0.001	0.013	0.010	0.099	0.921	0.762	1.312
GO	0.018	0.025	0.087	0.725	0.472	0.512	1.952
FO	0.023	0.013	0.171	1.713	0.095	0.740	1.352
NRI	0.006	0.028	0.031	0.214	0.832	0.346	2.892
FCI	0.030	0.018	0.193	1.708	0.095	0.580	1.723
PCI	0.001	0.023	0.006	0.056	0.956	0.671	1.491
BMEI	0.004	0.017	0.027	0.214	0.832	0.482	2.074

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 52: Full Rank Regression Model of Overall Disclosure in 2002

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.777	0.603	0.504	0.0935	0.603	6.080	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.113	0.044		2.596	0.013		
RTA	0.449	0.139	0.473	3.235	0.002	0.463	2.159
RROE	0.142	0.080	0.201	1.777	0.083	0.778	1.286
RCA	0.234	0.147	0.201	1.584	0.121	0.614	1.628
AS	-.037	0.030	-.140	-1.231	0.226	0.762	1.312
GO	-.031	0.057	-.075	-.539	0.593	0.512	1.952
FO	0.040	0.031	0.148	1.278	0.208	0.740	1.352
NRI	0.043	0.065	0.112	0.658	0.514	0.346	2.892
FCI	0.016	0.041	0.052	0.400	0.691	0.580	1.723
PCI	-.032	0.054	-.073	-.604	0.549	0.671	1.491
BMEI	-.044	0.040	-.159	-1.109	0.274	0.482	2.074

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 53: Normal Score Regression Model of Mandatory Disclosure in 1997

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.628	0.394	0.242	0.0017	0.394	2.600	0.016

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.015	0.001		22.524	0.000		
NSTA	0.000	0.000	0.068	0.350	0.729	0.401	2.495
NSROE	-.229	0.066	-.528	-3.488	0.001	0.661	1.513
NSCA	0.002	0.002	0.196	1.012	0.317	0.403	2.484
AS	0.000	0.001	0.080	0.553	0.584	0.722	1.385
GO	0.001	0.001	0.121	0.731	0.469	0.557	1.794
FO	0.000	0.001	0.022	0.157	0.876	0.790	1.266
NRI	0.002	0.001	0.373	1.938	0.060	0.409	2.444
FCI	0.001	0.001	0.168	0.964	0.341	0.498	2.007
PCI	0.000	0.001	0.053	0.362	0.719	0.695	1.438
BMEI	0.000	0.001	0.111	0.648	0.520	0.513	1.948

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 54: Normal Score Regression Model of Voluntary Disclosure in 1997

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.816	0.666	0.583	0.00147	0.666	7.988	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.008	0.001		12.929	0.000		
NSTA	0.001	0.000	0.581	4.028	0.000	0.401	2.495
NSROE	0.106	0.056	0.214	1.902	0.064	0.661	1.513
NSCA	0.001	0.001	0.156	1.086	0.284	0.403	2.484
AS	0.000	0.000	-.102	-.951	0.347	0.722	1.385
GO	0.003	0.001	0.429	3.509	0.001	0.557	1.794
FO	0.001	0.001	0.126	1.227	0.227	0.790	1.266
NRI	0.002	0.001	0.358	2.510	0.016	0.409	2.444
FCI	0.002	0.001	0.391	3.024	0.004	0.498	2.007
PCI	0.001	0.001	0.067	0.611	0.545	0.695	1.438
BMEI	0.001	0.001	0.138	1.084	0.285	0.513	1.948

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 55: Normal Score Regression Model of Overall Disclosure in 1997

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.797	0.636	0.545	0.0012	0.636	6.981	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.010	0.000		21.035	0.000		
NSTA	0.000	0.000	0.471	3.123	0.003	0.401	2.495
NSROE	0.003	0.046	0.008	0.065	0.948	0.661	1.513
NSCA	0.002	0.001	0.210	1.396	0.170	0.403	2.484
AS	0.000	0.000	-.060	-.536	0.595	0.722	1.385
GO	0.002	0.001	0.329	2.577	0.014	0.557	1.794
FO	0.000	0.000	0.115	1.071	0.291	0.790	1.266
NRI	0.002	0.001	0.442	2.965	0.005	0.409	2.444
FCI	0.002	0.001	0.400	2.958	0.005	0.498	2.007
PCI	0.001	0.001	0.087	0.759	0.452	0.695	1.438
BMEI	0.001	0.001	0.163	1.227	0.227	0.513	1.948

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 56: Normal Score Regression Model of Mandatory Disclosure in 2002

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.645	0.416	0.270	0.0013	0.416	2.847	0.009

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.014	0.001		19.932	0.000		
NSTA	0.000	0.000	0.088	0.427	0.672	0.343	2.916
NSROE	0.070	0.049	0.186	1.439	0.158	0.870	1.149
NSCA	0.003	0.001	0.366	2.437	0.019	0.647	1.547
AS	-.001	0.000	-.196	-1.411	0.166	0.754	1.327
GO	0.001	0.001	0.177	1.024	0.312	0.487	2.052
FO	0.001	0.000	0.317	2.357	0.023	0.806	1.241
NRI	0.001	0.001	0.219	1.067	0.292	0.346	2.887
FCI	0.000	0.001	-.034	-.213	0.832	0.567	1.764
PCI	0.000	0.001	-.062	-.428	0.671	0.692	1.445
BMEI	0.000	0.001	-.099	-.581	0.565	0.504	1.985

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 57: Normal Score Regression Model of Voluntary Disclosure in 2002

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.763	0.582	0.478	0.0024	0.582	5.573	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.008	0.001		6.202	0.000		
NSTA	0.001	0.000	0.535	3.064	0.004	0.343	2.916
NSROE	0.146	0.086	0.186	1.695	0.098	0.870	1.149
NSCA	0.002	0.002	0.133	1.047	0.301	0.647	1.547
AS	0.000	0.001	0.060	0.512	0.612	0.754	1.327
GO	0.003	0.001	0.323	2.207	0.033	0.487	2.052
FO	0.002	0.001	0.286	2.509	0.016	0.806	1.241
NRI	0.002	0.002	0.234	1.348	0.185	0.346	2.887
FCI	0.002	0.001	0.243	1.792	0.081	0.567	1.764
PCI	0.001	0.001	0.059	0.479	0.635	0.692	1.445
BMEI	0.001	0.001	0.187	1.297	0.202	0.504	1.985

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

Table 58: Normal Score Regression Model of Overall Disclosure in 2002

R	R^2	Adjusted R^2	Std. Error of the Estimate	R Square Change	F Change	Sig. F
0.832	0.691	0.614	0.0011	0.691	8.963	0.000

Coefficients	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	0.010	0.001		17.312	0.000		
NSTA	0.001	0.000	0.803	5.354	0.000	0.343	2.916
NSROE	0.033	0.041	0.077	0.817	0.419	0.870	1.149
NSCA	0.001	0.001	0.055	0.501	0.619	0.647	1.547
AS	0.000	0.000	0.070	0.697	0.490	0.754	1.327
GO	0.002	0.001	0.326	2.589	0.013	0.487	2.052
FO	0.000	0.000	0.075	0.767	0.447	0.806	1.241
NRI	0.001	0.001	0.197	1.319	0.195	0.346	2.887
FCI	0.001	0.000	0.234	2.007	0.051	0.567	1.764
PCI	0.000	0.001	0.021	0.195	0.846	0.692	1.445
BMEI	0.000	0.000	0.054	0.436	0.665	0.504	1.985

Significant level of t-test it could be *P* at 0.1; 0.05; and at 0.01

8.4.4 Results Discussion of Mandatory Regression Analyses

The results of the ranked OLS regression model for the mandatory disclosure in both 1997 and 2002 are shown in Tables 47 and 50. The ranked score regression explained around 14%, as measured by adjusted R^2, of mandatory disclosure variation in 1997, with F-ratio[44] (F=1.8) at significant level of 10%. The t-test showed none of the independent variables had a positive significant association with the level of mandatory compliance in 1997, which confirmed the results of the bivariate analysis with exception of the company size and natural resources industry which were significantly associated in the bivariate analysis. The t-statistic test of ROE appeared with negative association, which is also different from the bivariate analysis.

Table 53 represents the results of the normal score OLS regression model for the mandatory disclosure in 1997. This model explained 24% as measured by adjusted R^2, of mandatory disclosure variation in 1997, with the F-ratio of this model increased with normal score to (F=2.6) at significant level of 5%. The former illustrates the natural resources industry with significantly positive association as in the bivariate analysis. Repeatedly, the only independent variable whose coefficient can confidently be considered as different from zero is the normal score of company profitability. It was significantly negatively associated with the level of companies' compliance. Confirming the ranked model, none of the other company characteristics in this model appear with significant power to explain the variation in mandatory disclosure in 1997. It can be concluded that, except for the natural resources industry, none of the independent variables have a significantly positive association with the level of companies' compliance with the mandatory disclosure requirements in 1997.

For 2002, Table 50 illustrates the results of the ranked OLS regression model for the mandatory disclosure, and around 40%, as measured by adjusted R^2, of mandatory disclosure variation was explained by the current independent variables. The F-ratio (F=4.2) was at significant level of (0.000). The results of the t-test showed, that among other explanatory variables, company size, company age and auditor size were with significantly positive association with the level of mandatory disclosure at significant level of 5%. This model found the other explanatory variables without any significant

---

[44] F-ratio is a measure of the goodness -of- fit of the model, adjusted R^2, and a good model should have more than 1 at least (Field, 2000).

power to explain the variation in the mandatory disclosure among the sampled companies, and these results differed from the results of the bivariate analysis. Table 56 exhibits the results of the normal score regression model for the mandatory disclosure in 2002, and 27%, as measured by adjusted R^2, of mandatory disclosure variation was explained by the current independent variables, which is slightly lower than the rank model. The t-test showed that the only significant variables were, again, company age, and the food industry as a new variable with significantly positive power to explain the variation in the level of compliance in 2002. However, neither company size nor auditor size appears with significant association in this model. Also these results have departed severely from the bivariate analysis.

Such variation in the results between bivariate and multivariate analyses can be explained by the minor association between the independent variables in the multivariate analyses. Theoretically, it is plausible to explain that age will be associated with size and performance – older companies are likely to be larger and larger companies are likely to be more profitable. This association may be stronger when using normal score not the original values and it may cause the multicollinearity problem. As seen in the above tables the inspection of variance inflation factors (VIF) suggests that there is not a potential problem of multicollinearity affecting these three variables. The Pearson correlations[45] matrix between the variables RCA and RCE, RCA and RNP, and RCE and RNP are less than 0.5. It important to note that a correlation smaller than 0.8 may not cause a concerning level of multicollinearity, but it may cause problems for the regression procedures (Hutcheson & Sofroniou, 1999), as it may cause the differences in the results between bivariate and multivariate results. Curuk (1999) reported such differences between bivariate and multivariate results

These results indicated that, company age was in 2002 the only significant variable in both types of regression analyses, which suggests that there is a tendency for older companies to come closer to full compliance with mandatory disclosure requirements. Also the ranked regression indicated that the level of companies' compliance increased with the auditor size. It is suggested that a big company audited by big audit firms in Jordan is closer to full compliance with the mandatory disclosure requirements.

---

[45] Hutcheson & Sofroniou (1999) suggested that 0.8 as a level of correlation between the explanatory variables indicates a concern level of multicollinearity.

The normal score regression shows that the foreign ownership positively influenced the level of compliance with mandatory disclosure by the Jordanian companies listed on ASE in 2002. These results are consistent with the theoretical arguments of agency theory and signalling theory, and with many of the prior empirical findings. For instance, Owusu-Ansah (1998) found company age, company size, profitability and ownership structure were statistically significant and positively affected the level of companies' compliance in Zimbabwe. Tai et al. (1990) found the level of compliance increased with the company size in Hong Kong, and Wallace et al. (1994) found a significant relationship between the level of compliance and the company size measured by total assets in Spain. Finally, Wallace & Naser (1995) found a significantly positive association between the comprehensive mandatory disclosure and the company size and auditor size in Hong Kong.

In terms of the explanatory power of the independent variables in both the rank and the normal score regression, as measured by adjusted R^2, these were found low in both years. A possible explanation is that there are other factors possibly impacting on the level of compliance due to the fact that Jordan is one of developing countries and thus the companies operate in one of the emerging markets with limited financial resources. The low level of companies' compliance can be explained by companies being less familiar with the disclosure requirements. In this context Tai et al. (1990) concluded that several reasons caused non-compliance with the mandatory disclosure requirements in Hong Kong amongst which one was difficulty of interpreting disclosure requirements and the insufficient awareness of general accounting concepts. Also Abd-Elsalam & Weetman (2003) suggested that the lack of familiarity in Egypt took place because of language differences leading to a low level of compliance.

As discussed, company age was in 2002 the only significant variable for both types of regression analyses among other explanatory variables in these models. These results raise the issue that company age could be a proxy measure of the company familiarity with disclosure requirements. In other words, it might be considered a matter of time for Jordanian companies to interpret and understand the mandatory disclosure requirements in order to comply with mandatory disclosure requirements. This finding can be observed in the developments in the level of compliance with IASs over time since 1989. As discussed in Chapter 2 Solas (1994) obtained a mean disclosure index of

compliance with the generic requirements of IAS financial statements in 1989 of 46.35%, Mutter (1993, in Arabic) reported a level of companies' compliance with the generic requirements of IAS financial statements in 1990 of about 80%, and the current study found on average a 84% level of compliance in 1997 and a 92% level of compliance in 2002 after the IASs became mandatory as required by the JSC in 1998. The trend in the level of compliance is illustrated in Exhibit 10. As seen in this exhibit the level of Jordanian companies' compliance with the generic requirements of IAS financial statements has increased since 1989 to 2002. This result is similar to the result obtained by Owusu-Ansah (1998), who found in his research that mandatory disclosure in Zimbabwe increased significantly with company age.

Furthermore, familiarity with the mandatory requirements could be based on what companies used to disclose voluntarily which is explained by Dye (1986), who argued that mandatory requirements of financial reporting might depend on what companies disclose voluntarily. Consequently, voluntary disclosure practices can be used as another proxy measure of the company familiarity with the JSC mandatory disclosure requirements. It is argued that as far as the Jordanian companies are familiar with the JSC mandatory disclosure requirements, because they used to disclose this information voluntarily in 1997 before it became mandated information in 1998, they are more likely to have a high level of compliance with these requirements in 2002. Also, Chapter 7 provided a significant indication for a positive relationship existent between voluntary disclosure practices by Jordanian companies in 1997 and the JSC mandatory disclosure practices in 2002 in line with the above argument. Therefore, the level of voluntary disclosure of the Jordanian companies in 1997 will be used as a proxy measure of familiarity with the new mandatory disclosure requirements in 2002. It is required to utilize multivariate analysis in order to show the extent to which the voluntary disclosure practices by Jordanian companies in 1997 can explain the variation in the level of mandatory disclosure practices by the same companies in 2002. Table 59 shows the ranked simple regression analyses between voluntary disclosure in 1997 and mandatory disclosure in 2002.

Table 59: Rank Regression Model of VDI in 1997 and JSC MDI in 2002

VDI in 97 and JSC MDI in 02	R	R^2	Adjusted R^2	F	Sig.
	0.536	0.288	0.273	19.774	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	0.121	0.024		5.062	0.000
RVDI in 1997	0.429	0.097	0.536	4.447	0.000

As seen, 29% of the variation in the level of compliance with the JSC mandatory disclosure requirements in 2002 was explained by the ranked voluntary disclosure in 1997 by the F-ratio (F = 19.8, Sig. = 0.000). The t-test also showed a strong and positive association between voluntary disclosure in 1997 and mandatory disclosure on 2002. Therefore, it is possible to conclude that familiarity of the companies with mandatory disclosure requirements appears to be an important explanatory variable for the variation in the level of mandatory disclosure among the Jordanian manufacturing companies' annual reports. This should also be considered as empirical evidence supporting the findings of Chapter 7 and codification theory of mandatory requirements which are depending on what companies used to disclose voluntarily.

8.4.5 Results Discussion of Voluntary Regression Analyses

The results of the ranked OLS regression model for the voluntary disclosure for both 1997 and 2002 are shown in Tables 48 and 51. The ranked score regression explained around 54%, as measured by adjusted R^2, of voluntary disclosure variation in 1997, by the F-ratio (F=6.8, Sig. = 0.000). The t-test showed among other explanatory variables four significantly positive variables, which are company size (Sig. = 0.001), profitability (Sig. = 0.1), natural resources and food & clothing industries (Sig. = 0.05). None of the other company variables appear with significant power, which is confirmed by the results of bivariate analysis with the exception of company age. The latter was associated positively with the level of voluntary disclosure. In 2002, 63% of voluntary disclosure variation explained rank regression model by the F-ratio (F= 9.5, Sig. = 0.000). The t-test showed a very strong relationship between voluntary disclosure and company size (t = 5.8, Sig. = 0.000), and for the first time foreign ownership was found to have some effect on the level of voluntary disclosure at a level of 10%. Also the food and clothing industry appears with significantly positive impact at a level of 10%.

The results of the normal score OLS regression model of voluntary disclosure for both 1997 and 2002 are shown in Tables 54 and 57. For 1997 the normal score regression models, including the current explanatory variables, explained, as measured by adjusted R^2, over 58% of the variation in the normal score voluntary disclosure, which is slightly higher than the results of the rank model regression. Among other explanatory variables, company size was found again to be the strongest explanatory variable (Sig. = 0.000), and again profitability was significantly associated with the level of voluntary disclosure at 10%. Government ownership appeared for the first time significantly associated with the level of voluntary disclosure at 1%, and also there were two dummy variables within the explanatory variable of industry type, i.e. natural resources and food & clothing industry, with a significant association of 5%. These results regarding the size, profitability, and natural resources and food & clothing industry were similar to the results in the rank regression. Government ownership appeared significant in normal score while without any effect in the rank model. In comparison, foreign ownership was significant in the rank and not in the normal score model. Also the results of both regression types reported different results from the bivariate analysis related to a company age impact on the level of voluntary disclosure in 1997.

For 2002 Table 57 shows the current normal score explanatory variables, which explained, as measured by adjusted R^2, 48% of the variation in the normal score voluntary disclosure in 2002, which is slightly lower than in the rank model. Amongst others, company size and government ownership had a significant association at level of 5%, and companies' profitability experienced a move towards impacting upon the level of voluntary disclosure at a significant level of 10%. Foreign ownership appeared in 2002 with a significant association at level of 5%, also the food & clothing industry was found to affect the level of voluntary disclosure at level of 10%. The above analysis suggested that company age, auditor size and other dummy variables within the industry type were not associated with the level of voluntary disclosure in the Jordanian manufacturing companies' annual reports in 2002.

In the rank and normal score regression models of voluntary disclosure, company size had the strongest significant explanatory power for both years, which confirmed the results of the bivariate analyses. It is suggested that the level of voluntary information in

the Jordanian companies' annual reports significantly increased with company size, which is consistent with the arguments of agency theory that big companies tend to disclose more voluntary information to reduce agency and political costs. Furthermore, this is consistent with many of the prior empirical findings, for instance, Firth (1979) found a significant relationship between the level of voluntary disclosure and company size in the UK, McNally et al. (1982) found the same significant association in New Zealand, and Chow & Wong-Boren (1987) reported also a significant relationship between company size and the level of voluntary disclosure in Mexico. In the context of the association between voluntary disclosure and company size Cooke (1989) and Cooke (1989) provided significant evidence of such association for Japan and Sweden respectively, and finally, Hossain et al. (1994) found that size has a significant impact on the level of voluntary disclosure in Malaysia.

Company profitability, measured by ROE was also significantly associated with the level of voluntary disclosure in both years, which is a stronger result than that given by the bivariate analysis. This result suggested that the level of voluntary disclosure increases in the annual reports of old, highly profitable companies, which is consistent with the theoretical argument of signalling theory, i.e. the managers of profitable companies have more incentive to disclose voluntary information and good news to distinguish their company from others. Prior studies provided the same empirical findings for prior voluntary disclosure, for instance Singhvi (1968), Singhvi & Desai (1971), Patton & Zelenks (1997) and Hassan et al. (2004), however in conflict with others, such as Malone et al. (1993) and Suwaidan (1997).

Government ownership as explanatory variable appeared with a significantly positive effect on the level of voluntary disclosure in the normal score regression models for 1997 and 2002. This result, differing from the results of bivariate analyses, suggested that companies with influential government ownership have the financial ability to fund the procedures of financial disclosure more than other companies. The government cares a lot to improve the public image of their companies so the financial support to disclose voluntary information for building such image is provided. Also given that big companies in Jordan are with more influential government ownership than small companies. A significant relationship between government ownership and voluntary disclosure in Jordan was reported by Suwaidan (1997). In addition, and as expected,

rank and normal score voluntary regression models recorded a significantly positive association between the level of voluntary disclosure and foreign ownership in 2002. This was expected in Jordan after 1998, which is the starting point of the new orientation towards attracting more foreign investors to Jordan. The other explanatory variables, such as company age, auditor size and other industry types, were not statistically significant with the level of voluntary disclosure in both regression types for both years.

The significant association between the food & clothing industry and the level of voluntary disclosure for both years is understandable, because theses companies are more in the public image than any other sector due to industry nature. As far as the food & clothing industry is concerned it is plausible to believe that this is a highly profitable sector as large amounts of transactions in both the domestic and foreign markets. Therefore the financial ability is given to disclose more voluntary disclosure.

The natural resources industry was found to have a significantly positive association in 1997, but was absent in 2002. This result can be explained due to the fact that this sector contains the largest companies in the sample (i.e. Jordan Cement Factories, Jordan Petroleum Refinery, Arab Potash, and Jordan Phosphate Mines) with the largest portion of government ownership in 1997 and, as discussed, in 2002 the Jordanian government reduced its portion of ownership in these companies, thus these companies have now less governmental financial support to disclose more voluntary information above the new mandatory requirements.

8.4.6 Results Discussion of Overall Regression Analyses

Tables 49 and 52 exhibit the results of the ranked OLS regression model of the overall financial disclosure for both 1997 and 2002. The ranked score regression explained around 53% as measured by adjusted R^2, of overall financial disclosure variation in 1997 by F-ratio (F= 4.4, Sig. = 0.000). The t-test proved company size to have a significantly positive association with the level of overall financial disclosure in 1997 at (Sig. = 0.001). Also the food & clothing industry appeared to have an effect at level of significance (Sig. = 10%). None of the other company variables appeared with significant power, which confirmed the results of the bivariate analysis with respect to company size, age, profitability, government ownership and auditor size, but there was a

difference regarding foreign ownership, the food & clothing and natural resources industry.

For 2002, the ranked score regression explained around 50% of overall financial disclosure variation by F-ratio (F= 6.08, Sig. = 0.000). Via the t-test company size was repeatedly found the only explanatory variable positively associated with overall financial disclosure at (Sig. = 0.005), and company profitability appeared to impact upon the level of overall disclosure at level (Sig. = 10%). Also food and clothing industry appears with some significant and positive impact at level 10%. None of other company explanatory variables appear with significant power help to understand the variation in the level of overall financial disclosure in 2002, which severally different from the univariate analyses.

Tables 55 and 58 illustrate the results of normal score OLS regression model of overall disclosure for both 1997 and 2002. As can be seen in Table 55 the explanatory variables included in the regression model for 1997 explained, as measured by adjusted R^2, over 54% of the variation in the overall disclosure by F- ratio (F=7.0, Sig. = 0.000), which is slightly higher than the ranked regression. The normal score model proved company size, government ownership, as well as two dummy variables of the industry type, natural resources industry and food & clothing industry statically significant regarding the level of overall disclosure at 0.05. None of the other explanatory variables appeared statistically significant with the overall financial disclosure of 1997. In Table 58, the normal score regression model illustrates that over 61% (F = 9.00, Sig. 0.000) of variation in the overall disclosure was explained by the current explanatory variables of 2002, which is considerably higher than the ranked regression. Company size was repeatedly the strongest independent variable significantly affecting the level of overall disclosure at level of 1%. Government ownership and the food & clothing industry were also again with significant association at level of 5%.

The above analyses reported that familiarity on part of the company is one of the significant variables impacting on the level of mandatory disclosure in 2002. As far as the overall financial disclosure is concerned it is plausible to believe that company familiarity also had an effect on the overall level of financial disclosure because mandatory disclosure formed a huge portion of the overall financial disclosure in 2002. Therefore, the level of mandatory and voluntary disclosure of the Jordanian companies

in 1997 will be used as proxy measures of company familiarity in order to explain the variation in the overall financial disclosure in 2002. Table 60 represents the multivariate analysis rank regression to show the extent to which the mandatory and voluntary disclosure practices by Jordanian companies in 1997 can explain the variation in the level of overall disclosure practices by the same companies in 2002.

Table 60: Rank Regression Model of MDI, VDI in 1997 and ODI in 2002

MDI, VDI in 97 and ODI in 02	R	R^2	Adjusted R^2	F	Sig.
	0.706	0.498	0.478	23.850	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	0.116	0.039		2.996	0.004
RMD in 1997	-.058	0.144	-.042	-.400	0.691
RVD in 1997	0.773	0.114	0.716	6.756	0.000

As seen, around 50% of the variation in the level of overall disclosure in 2002 was explained by the ranked voluntary disclosure in 1997, F-ratio (F = 23.85 8, Sig. = 0.000). The t-test also showed a strong, positive association between voluntary disclosure in 1997 and overall disclosure in 2002, and showed no association between mandatory disclosure in 1997 and overall disclosure in 2002. This result is not surprising and may be due to mandatory disclosure representing only a minor part, which focussed only on financial statements, while voluntary disclosure formed a major part of Jordanian companies' annual reports in 1997. Therefore, it can be concluded that familiarity of the companies with financial disclosure is an important explanatory variable for the variation in the level of overall financial disclosure among the Jordanian manufacturing companies' annual reports. Moreover, generally, as discussed in Chapter 7, the overall level of financial disclosure improved, from 87% in 1997 to 95% in 2002. This increase in the overall financial disclosure moved the distribution of the overall disclosure from positively skewed in 1997 to negatively skewed in 2002.

Dye (1986) argued that increasing mandatory reporting requirements increases the incentives for voluntary disclosure. It is argued that this study has the ideal data and conditions, one year before and one year after the new developments in mandatory disclosure requirements, to examine Dye's (1986) theory, and as seen in Chapter 7, there is an indication for such relationship. Multivariate regression analysis is required in this section to assess to which extent the introduction of mandatory disclosure increased the

voluntary disclosure in 2002. Therefore, Tables 61 and 62 reported the results of two rank regression models, MD vs. VD in 1997 and 2002.

Table 61: Rank Regression Model of VDI vs. MDI in 1997

RVD in 1997	R	R^2	Adjusted R^2	F	Sig.
	0.264	0.070	0.051	3.671	0.061
	B	Std. Error	Beta	t	Sig.
(Constant)	0.137	0.044		3.090	0.003
R MD in 1997	0.332	0.173	0.264	1.916	0.061

Table 62: Rank Regression Model of VDI vs. MDI in 2002

RVD in 2002	R	R^2	Adjusted R^2	F	Sig.
	0.631	0.398	0.385	32.334	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	0.021	0.018		1.210	0.232
RMD in 2002	0.427	0.075	0.631	5.686	0.000

Table 61 illustrates that there is a very weak relationship between mandatory and voluntary disclosure in 1997, the year before the developments, as measured by R^2 0.07, and the t-test found this relationship not significant at 5%. As exhibited in Table 62 a significantly positive relationship was found between mandatory and voluntary disclosure in 2002, the year after the new mandatory disclosure developments. The t-test identified a significant and positive relationship between increasing mandatory disclosure and a subsequent increase of the incentives for voluntary disclosure, which confirmed the results of correlation analysis in Chapter 7. This relationship proved relatively strong as measured by R^2 at 38%. This finding provided a strong evidence supporting Dye (1986), and this result was consistent with Abayo et al. (1993) and Al-Razeen & Karbhari (2004).

8.5 Companies' Attitude towards Financial Disclosure

The section will examine companies' attitude towards financial disclosure by examining the interaction between increasing the printed mandatory and voluntary disclosure and increasing financial disclosure on companies' websites. Chapter 7 reported a positive association between increasing the printed financial disclosure in 2002, and Internet disclosure in 2004. Therefore, it plausible to believe that there is a

positive association between increasing mandatory disclosure and an increase in the incentive to follow new technological developments in financial reporting, i.e. increasing level of usage the Internet in 2004. Theoretically, disclosure transformation theory suggested that due to the new technological developments, meaning Internet financial reporting, financial disclosure is in process of using the Internet format to disclose more accounting information. It is possible to argue that there is a relationship between Jordanian companies' attitude towards printed financial disclosure and Internet disclosure. In other words, companies with a positive level of mandatory and voluntary disclosure in 2002 are more likely to follow the new developments of the Internet financial disclosure and establish their own website to disclose voluntary financial information to their users. Within this context, the current section conducts three models of rank regression analyses, the first model examining the relationship between printed voluntary disclosure in 2002 and Internet voluntary disclosure in 2004, the second and third models examining the relationship between the printed mandatory and overall financial disclosure in the printed annual reports in 2002 respectively and the Internet voluntary disclosure. Tables 63, 64 and 65 show the results of the above regression models as follows:

Table 63: Rank Regression of IDI in 2004 and VDI in 2002

RIVD in 2004	R	R^2	Adjusted R^2	F	Sig.
	0.503	0.253	0.238	16.584	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	-.695	0.516		-1.345	0.185
RVD in 2002	16.128	3.960	0.503	4.072	0.000

Table 64: Rank Regression of IDI in 2004 and MDI in 2002

RIVD in 2004	R	R^2	Adjusted R^2	F	Sig.
	0.377	0.142	0.124	8.098	0.006
	B	Std. Error	Beta	t	Sig.
(Constant)	-.627	0.674		-.930	0.357
RMD in 2002	8.188	2.877	0.377	2.846	0.006

Table 65: Rank Regression of IDI in 2004 and ODI in 2002

RIVD in 2004	R	R^2	Adjusted R^2	F	Sig.
	0.495	0.245	0.230	15.933	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	-1.027	0.598		-1.717	0.092
ROD in 2002	7.989	2.001	0.495	3.992	0.000

There is a significant, positive relationship between each of the printed mandatory, voluntary and overall disclosure in 2002 and voluntary disclosure on the Internet in 2004, as indicated by the t-test indicated. The strength of this relationship varied from relatively strong, as measured by R^2, around 24% and 23% for the voluntary and overall financial disclosure respectively, to relatively weak as R^2 showed 12% for printed mandatory disclosure. These results established that there is a positive relationship between an increase in printed financial disclosure and the Internet voluntary disclosure, including mandatory and voluntary disclosure in the Jordanian companies' annual reports. These results provide a strong evidence of disclosure transformation theory, which are consistence with results in Chapter 7, and with Ettredge et al. (2002), and Xiao et al. (2004) findings.

8.6 Company Size and Internet Financial Disclosure

Most prior studies on Internet voluntary disclosure, such as Ashbaugh et al. (1999), Craven & Marston (1999), Pirchegger & Wagenhoger (1999), Ettredge et al. (2001) and Marston & Polei (2004), argue that larger companies are more likely to have greater voluntary disclosure on the Internet than smaller companies, which is often explained in terms of agency theory and cost and benefits analyis. Larger companies have more diverse stakeholder groups who will be interested in a wider range of issues, and larger companies will therefore meet these stakeholder demands through taking the advantage of the Internet and providing more voluntary disclosure to reduce the monitoring costs and agency costs.

This section seeks to examine the effects, if any, of company size on the level of Internet voluntary disclosure. Table 66 shows a simple model of rank regression

analysis regarding the level of Internet voluntary disclosure in 2004 and company size, measured by total assets[46].

Table 66: Rank Regression of Total Assets and IDI in 2004

RIVD in 2004	R	R^2	Adjusted R^2	F	Sig.
	0.497	0.247	0.232	16.093	0.000
	B	Std. Error	Beta	t	Sig.
(Constant)	-.353	0.451		-.783	0.437
RTA in 2004	7.604	1.896	0.497	4.012	0.000

It is suggested that there is a significant, positive association between company size and the level of the Internet voluntary disclosure explain 23% of the variation among the Jordanian companies. This result suggests that the level of the Internet voluntary disclosure increases with the size of the companies, which is consistent with agency theory and signalling theory, as well as with many of the prior studies, such as Ashbaugh et al. (1999), Craven & Marston (1999), Pirchegger & Wagenhoger (1999), Ettredge et al. (2001) and Marston & Polei (2004).

8.7 Summary

In this chapter the results of the bivariate and multivariate analyses of the Jordanian companies' financial disclosure practices were illustrated. This chapter examined the current research hypotheses, stated in Chapter 6, and explained the variation, reported in Chapter 7, in the level of financial disclosure practices among the Jordanian companies. This is by reporting the initial indication of the bivariate association between the dependent and explanatory variables, and also by determining to which extent each of these variables can explain the variations in the financial disclosure practices among the sampled Jordanian companies- by using multivariate analyses. A summary of the current research hypotheses and findings will be discussed in the following chapter in light of the proposed theoretical framework.

[46] The source of the Information the Jordan Companies Guide in 2004

Chapter Nine

Summary, Conclusion, Contribution, Limitations and Recommendations

9.1 Introduction

This study proposed a theoretical framework of financial disclosure practice, which explains the financial disclosure phenomenon as a whole in a comprehensive way in one scope, as a step to fill the gap in the theoretical background of financial disclosure research. In a bid to test aspects of this framework, and confronted by the new developments of technological innovation, an empirical investigation was carried out to measure the extent of financial disclosure practices by Jordanian companies before and after the extension of disclosure requirements in 1998, and after the existence of the new technology developments in the early 2000s.

This chapter will summarise the overview and findings of the current study by representing the background of the current research, summary of its objectives, and a discussion of the current findings with respect to the developed theoretical framework. Also this chapter will conclude the current research and then present the main research contributions and identify its limitations as well as provide recommendations for future research.

9.2 Overview of the Current Research

The literature reviewed in Chapter 2 and Chapter 3 highlighted that there is a large amount of published and unpublished research in the area of financial disclosure and that there is not any generally agreed upon disclosure theory, which explains the concept of financial disclosure as a whole. With the objective to fill this gap Chapter 4 proposed a comprehensive theoretical framework of the financial disclosure theoretical foundation. The framework first serves to integrate theories explaining financial disclosure under the ideal conditions of a financial market in which it is assumed that accounting information is a public good, and demand and supply forces of this good are considered as an efficient tool to determine the optimal level of financial information. It then serves to integrate theories that recognise actual features and conditions of financial

market- market failure, i.e. the imperfect balance of demand and supply, and information asymmetry, i.e. the inefficient and unequal distribution of information. Within this proposed framework information asymmetry provides an explanation for the existence of financial reporting regulations and managerial incentives which control and determine the maximum level of financial information. Environmental factors, meaning external, internal and technological, are regarded as root cause of the differences in the reporting regulation as well as in the managerial incentives for financial disclosure and also developments over time of the same among countries and within one country. Also this framework illustrates how the existing technological innovations were exploited for the provision of financial disclosure on the Internet due to managerial incentives.

This framework summarised that the form and content of financial reporting at any time and in any place depends upon the environmental factors that exist at that time and in that place. These factors are not static but change through time. As Gray (1988), Cooke & Wallace (1990), Roberts et al. (1998) and Radebaugh & Gray (2002) argued, the regulations themselves, changes in the regulations, and the actual accounting and reporting practices to be found are subject to many factors, both internal to individual countries and external. Also they noted that the accounting system in practice reflects not only the influence of regulation in the form of mandatory practices of accounting and disclosure, but also the broader influences of society and culture in the form of voluntary practices. In the same context, Xiao et al. (1996), Healy & Palepu (2001) and Xiao et al. (2002) added the technological factors that may also impact on financial disclosure practices. Recently, the Internet has experienced a tremendous growth affecting all aspects of society (Xiao et al., 2002). Within the context of financial reporting, the Internet is considered as an expansion with great potential which catapulted traditional methods of communicating financial information towards a method with significant impact on companies' financial information communication systems (Xiao et al., 2002).

Also the integration between mandatory and voluntary disclosure practices was shown in this framework. Dye (1986) argued that the existence of a great amount of voluntary disclosure leads to changes in the financial disclosure practices, and generates codification for the existing voluntary disclosure practices, which is referred to as codification theory. For instance, mandatory financial disclosure requirement setters

might depend upon companies' voluntary disclosure practices. Furthermore, Dye's theory (1986) is incorporated in the proposed framework, in which he argued that increasing mandatory disclosure reporting leads to an increase in the managerial incentives to disclose voluntary disclosure. Also this framework showed that there is a relationship between companies' attitude towards printed financial disclosure and Internet disclosure. In other words, companies with a high level of printed mandatory and voluntary financial disclosure are more likely to follow the new developments of Internet financial disclosure and establish their own website to disclose more financial information to their users. Finally, this framework illustrated the factors behind the variation in the level of financial disclosure.

In a bid to test aspects of this framework, this study carried out an empirical investigation on the printed and the Internet financial disclosure practices in Jordan as a suitable environment to examine aspects of this framework. This empirical study measured the extent of financial disclosure practices by Jordanian companies before and after the extension of disclosure requirements in 1998, and after the existence of the new technology developments in early 2000. As stated in Chapter 5, in the mid-1990s the Jordanian government commenced orientation towards international trade and international markets in order to enhance the Jordanian economy through outside trade. The government recognised a need for a change in regulation to create a more attractive investment climate. The government adopted a new reform programme aiming to create new markets and to facilitate trade with other countries within and outside the Middle East Area. This reform programme included restructuring and privatisation procedures, and in 1998 the Jordanian financial market was transformed into a modern capital market, JCM, under the temporary Securities Law 1997 (which was amended by the temporary Securities Law 2002), with a new legal framework. This included new financial disclosure requirements imposed upon companies listed on ASE. For the first time by Jordanian financial market regulations, all companies listed on ASE were required to apply IAS in periodic financial statements. The underlying aim of the accounting regulation modifications in Jordan was to create an attractive investment climate to encourage both domestic and foreign investors. This would have a significant impact on the Jordanian companies' financial disclosure. Also, due to this new governmental orientation towards international trade and international markets, a new process of reform of Jordanian telecommunications and postal sectors has commenced

in 2000. The Jordanian government has recognised the importance of IT on the domestic economy, and as is the case in almost every country in the world the Internet has affected the Jordanian companies' financial communication channels.

9.3 Summary of the Current Research Objectives and Hypotheses

The overarching objective of the empirical investigation was to test aspects of the proposed framework, which subsequently resulted in several empirical objectives. The two primary empirical objectives for this study were measuring financial disclosure practices in the printed version of Jordanian companies' annual reports, i.e. the extent of compliance with mandatory disclosure requirements and the extent of voluntary and overall disclosure by listed Jordanian manufacturing companies before and after the extension of disclosure requirements in 1998, and measuring the level of Internet usage and voluntary financial disclosure by Jordanian companies listed on ASE in 2004. Chapter 6 divided these into nine sub-objectives of the current research. The following will summarise the current research objectives and relevant hypotheses:

The proposed theoretical framework explained that environmental factors, meaning both internal to individual countries and external including technological innovations, impact upon financial disclosure. In order to achieve the objective of testing this aspect of the proposed framework, the extent of mandatory, voluntary and overall financial disclosure in printed annual reports before and after the new developments in 1998 has been measured and compared empirically, as has the level of Internet usage and voluntary financial disclosure on Jordanian companies' websites.

Furthermore, codification theory and Dye's theory (1986) were introduced in the proposed framework as further explanatory theories for the changes and developments in mandatory and voluntary disclosure practices. Based on codification theory, it is argued that in practice mandatory disclosure requirements and standards do not develop due to exogenous reasons. The existence of these requirements depends upon the existing companies' voluntary disclosure practices. This raises the following research question: whether the new mandatory disclosure requirements by the JSC in 1998 are associated with voluntary financial disclosure practice in 1997. The following objective and hypothesis covered the research question: Examining the interaction between the

compliance practices with JSC mandatory disclosure requirements in 2002 and the printed financial voluntary disclosure practices in 1997.

Hypothesis: *There is a positive relationship between the level of companies' voluntary disclosure in 1997 and the level of compliance with the JSC mandatory disclosure requirements in 2002.*

Dye's (1986) theory proposed that increasing mandatory disclosure requirements will increase the level of voluntary disclosure. This aspect was covered by the following research objective: Examining the interaction between the level of mandatory and voluntary financial disclosure in the printed annual reports of Jordanian companies after 1998. The hypothesis to this objective was:

Hypothesis: *There is a positive relationship between the level of companies' mandatory and voluntary disclosure after 1998.*

Moreover, the proposed theoretical framework included company characteristics to explain the variation in the level of financial disclosure practices across samples of companies. Examining the relationship between the levels of printed mandatory, voluntary and overall financial disclosure, and selected company characteristics before and after 1998, was one of the objectives in this study. Also examining the relationship between company size and Internet financial disclosure was included as a further objective of this study. The related hypotheses of these objectives were as follows:

Hypothesis: *There is a positive relationship between company characteristics and the level of mandatory financial disclosure before and after 1998.*

Hypothesis: *There is a positive relationship between company characteristics and the level of voluntary financial disclosure before and after 1998.*

Hypothesis: *There is a positive relationship between company characteristics and the level of overall financial disclosure before and after 1998.*

Hypothesis: *There is a positive relationship between company size and the level of Internet financial disclosure in 2004.*

Finally, the theoretical framework in Chapter 4 discussed disclosure transformation theory, according to which there is a positive association between printed financial disclosure, both mandatory and voluntary, and engaging in disclosing financial information on the Internet. This aspect was covered by examining the association between the level of printed financial disclosure and Internet financial disclosure, and testing the following hypothesis:

Hypothesis: *There is a positive relationship between company's printed financial disclosure in 2002 and the level of Internet financial disclosure in 2004.*

9.4 Research Methodology

Levels of printed financial disclosure are computed by means of a disclosure index. Two different indices for the printed mandatory and voluntary financial disclosure indices were determined for both 1997 and 2002 to reflect the different mandatory disclosure requirements and voluntary disclosure practices of the two years. Levels of disclosure were calculated for a sample of 51 Jordanian manufacturing companies listed on ASE in both years. Moreover, the study compared the level of printed mandatory, voluntary and overall financial disclosure of 51 Jordanian manufacturing companies listed on ASE in 1997 and 2002, and investigated the relationship between these levels of printed financial disclosure and company characteristics (size, age, profitability, industry type, ownership structure and auditor size).

Furthermore, this study examined the level of Internet financial disclosure of Jordanian companies listed on ASE in 2004 by means of an Internet disclosure index. Therefore, a disclosure benchmark was established to represent a complete image of the online situation of Jordanian companies listed on ASE in 2004. Also, the Jordanian companies' attitude towards financial disclosure after the new developments in the disclosure regulation was examined. Moreover, this study sought to explain the variation in the level of Internet financial disclosure through companies' attitude towards printed financial disclosure, and company size.

Univariate analysis was adopted in this research to report the descriptive analyses which will be used to represent the dependent variables in the form of the mean and

standard deviation. The bivariate analysis was used to show the association between dependent variables themselves and to examine the association between the explanatory variables, company characteristics and the dependent variables, and lastly the extent of both mandatory and voluntary financial disclosure. The bivariate analysis showed a positive or negative relationship between company characteristics and the extent of financial disclosure. Multivariate analysis was used by employing two transformation approaches, rank and normal score data transformations, in the multiple regressions to analyse the relationship between the extent of financial disclosure as dependent variables and simultaneously several company characteristics as independent variables. This analysis highlighted the extent of each independent variable's impact on the variation of financial disclosure. Also, it determined to which extent each variable explained the variation in the level of financial disclosure practices among Jordanian companies listed on ASE.

9.5 Summary of the Current Research Findings and its Implications

This thesis illustrated theoretical and empirical findings. The theoretical findings were provided in this thesis by developing a theoretical framework for financial disclosure in both printed and Internet formats in a comprehensive scope. The immediate implication of this framework is to offer a chance to explain the developments of financial disclosure practices in different country settings. Also, this proposed framework may provide a cornerstone to the future researcher in the area of financial reporting to establish one disclosure theory which explains and predicts the concept of financial disclosure in practice.

The empirical findings in this thesis were illustrated in Chapter 7 and 8, which have shown the descriptive, bivariate and multivariate analyses of Jordanian financial disclosure practices in two different media. The first medium comprised financial, i.e. mandatory, voluntary and overall, disclosure of the Jordanian companies' printed annual reports, and the second medium was the Internet financial disclosure. The following will discuss the main findings of printed financial disclosure followed by the main findings of the Internet financial disclosure:

9.5.1 Summary of the Main Findings of Printed Financial Disclosure

The main findings of printed financial disclosure can be divided into three main parts as follows:

Firstly, the printed mandatory disclosure, the descriptive analyses in Chapter 7 showed that Jordanian manufacturing companies did not fully comply with mandatory disclosure requirements in 1997 and 2002. In 1997, companies disclosed on average about three-quarters of items required by IAS, though there were some companies that disclosed more fully. In 2002, compliance with disclosure requirements of IAS had improved, though there were still significant omissions on the part of some companies. Curiously, the level of compliance with JSC requirements was lower. The proposed theoretical framework referred to non- full compliance with mandatory disclosure requirements as "compliance-lite", which is similar to the concept of "IAS-lite" by Cairns (2001). Also the proposed framework suggested several factors which could explain compliance-lite and which were tested by using bivariate and multivariate analyses in Chapter 8.

The results of the bivariate analyses in Chapter 8 suggested that for 1997 a positive effect of the natural resources industry on the level of compliance was identified. Company profitability had a negative association, and none of the other variables contributed to explaining the variation in the level of companies' compliance in 1997. These results were inconsistent with theoretical prediction of agency, signalling, political and capital need theories. Also these results were inconsistent with many of the prior findings in the mature market, for instance Cerf (1961) and Singhvi & Desai (1971) who found a positive relationship between the level of financial disclosure, including mandatory disclosure, and company size and profitability in the USA. Cooke (1992) found a positive relationship between level of financial disclosure and industry type as well as company size in Japan.

However, the results were consistent with many of the prior findings in the emerging markets; for instance, Solas (1994) found that in Jordan there was no association between mandatory disclosure and asset size, rate of return, numbers of shareholders and earnings margin. Also company size and industry type were found not significant by Patton & Zelenka (1997) in Czech Republic. Wallace et al. (1994) found

asset size was negatively associated with the level of mandatory disclosure in Spain in 1991, and Wallace & Naser (1995) found a negative association between company profitability and the level of compliance in Hong Kong. Abd-Elsalam & Weetman (2003) found that there was no relationship between company's profitability and company's compliance in Egypt. Lastly, auditor size was found without any significant effects on the level of companies' compliance in Hong Kong by Tai et al. (1990).

Consequently, it is understandable to argue that these theories failed to predict the Jordanian mandatory disclosure practice in 1997. So it is plausible to say that these theories have limited explanatory power in an emerging market, such as the Jordanian financial market, which lacked at the time financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports, and also lacked an enforcement mechanism. This was explained in the proposed theoretical framework by the relationship between the environmental factors, both internal to individual countries and external, and the financial disclosure theories. This relationship was regarded as a cause of the differences in the applicability of these theories among countries. Therefore, these theories should not be applied naively in any country setting without bearing in mind that there are differences between countries, for instance lacking disclosure requirements in the emerging market and detailed requirements in the mature financial market.

For 2002, the multivariate analyses in Chapter 8 reported that company size, company age and auditor size contributed significantly in the ranked regression to explain the variation in the level of compliance with the mandatory disclosure requirements. Company age appeared to have a significant effect on the mandatory disclosure in 2002 in the normal score regression, alongside the food & clothing industry. These results were consistent with the theoretical predictions of agency, signalling, political and capital need theories. This might be due to the new developments in the Jordanian financial reporting environment. As seen in Chapter 5, the Jordanian government commenced orientation towards international trade and international markets in order to enhance the Jordanian economy through outside trade. The government recognised a need for a change in regulation to create a more attractive investment climate. The reform programme embarked upon included restructuring and privatisation procedures, and it involved the government in developing a new Jordanian

Capital Market (JCM) under the Securities Law 1997. A new regulatory system was introduced for what was in effect a new JCM. The regulation of the capital market was divided among three institutions, the Jordan Securities Commission (JSC), the Amman Stock Exchange (ASE) and the Securities Depository Centre (SDC). In 1998 the JSC introduced new and more extensive and detailed disclosure requirements for companies listed on ASE.

It is plausible here to argue that as a result of the new development in the JCM and increasing the international profile of ASE after 1998, disclosure requirements and guidance for what should be disclosed and how companies should prepare their annual reports were increased. The Jordanian financial reporting environment became more suitable for these theories explaining the variation in the level of financial disclosure among companies. This is consistent with the argument of Environmental-Cause Theory in the proposed theoretical framework, in which the form and content of financial reporting regulation at any time and in any place depends upon internal and external factors that exist at that time and in that place.

These results were also consistent with many of the prior empirical findings. For instance, Owusu-Ansah (1998) found company age, company size, profitability and ownership structure were statistically significant and positively affected the level of companies' compliance in Zimbabwe. Al-Hussaini (2001) found that the level of compliance increased with the company size and industry type in Kuwait, and Wallace et al. (1994) found a significant relationship between the level of compliance and the company size measured by total assets in Spain. Finally, Inchausti (1997) found a significantly positive association between the comprehensive mandatory disclosure and the auditor size in Spain.

The implications of the above findings are that Jordanian listed manufacturing companies have yet to attain full compliance with mandatory requirements. This is particularly important in the context of the requirement to follow IASs – though some improvement between 1997 and 2002 was observed, there are still gaps in compliance on the part of companies. The mandatory index concentrated on the more generic disclosure requirements of IAS1, IAS5, and IAS7 and did not attempt to cover the specific disclosures embedded in standards addressing particular accounting issues. Hence, virtually full compliance was expected, and the less than full compliance

observed can be interpreted as evidence of 'IAS lite'. Low compliance with mandatory requirements might be due to the problem of flexibility of using a soft prescriptive verb, i.e. *shall*, to denote a mandatory requirement. Therefore, urgent action is needed from the Jordanian standard-setters to use more forceful prescriptive verbs, such as *must* or *have to,* to refer to the mandatory requirements in the Jordanian regulation. Also low compliance might be due to the absences of both formal penalties for not full compliance and strict enforcement mechanisms to monitor the implementation of these mandatory disclosure requirements and impose penalties on less full compliance. A formal enforcement mechanism, which includes specialist Jordanian governmental and/or private sectors departments to monitor and enforce the companies to comply fully with the mandatory disclosure requirements, should be considered an urgent issue to reduce the level of non-compliance. This requires urgent involvement from the Jordanian government to put greater efforts into establishing a formal enforcement mechanism, and this is consistent with public interest theory as in the proposed framework. Also low compliance could be caused by poor auditing processes or poor level of familiarity with mandatory requirements. Thus, the auditing process in Jordan and the auditors could be another possible area to be monitored by specialist Jordanian or international agencies.

Secondly, the printed voluntary disclosure, Chapter 7 reported that Jordanian manufacturing companies disclosed a considerable level of voluntary information in their annual reports in 1997, and the introduction of mandatory disclosure requirements in 1998 increased the mean level of voluntary disclosure in 2002. As Table 20 exhibited in Chapter 7, the average of the printed voluntary financial disclosure has increased from 58% average level to 61% of the same 21 items. In the proposed theoretical framework based on Dye's theory (1986), it is argued that increasing mandatory reporting requirements may positively affect voluntary disclosure, and lead to an increase in the level of voluntary disclosure. Therefore, this could be considered as an early indication of supporting Dye's theory.

In Chapter 8 the multivariate analyses, the ranked regression models, of the printed voluntary financial disclosure for 1997 illustrated that company size, profitability, natural resources and food & clothing industries were significantly, positively associated with voluntary disclosure. None of the other company variables appeared with

significant power to explain the variation of voluntary disclosure in 1997. For 2002, the ranked regression showed repeatedly a strong relationship and for the first time foreign ownership had some effect on the level of voluntary disclosure. Moreover, the results of the normal score regression for 1997 confirmed company size and profitability to be significantly associated with the level of voluntary disclosure. Furthermore, government ownership, natural resources and food & clothing industries were significantly associated with the level of voluntary disclosure. None of the other explanatory variables contributed to explain any of the variation in the level of voluntary disclosure in 1997. For 2002 the normal score model showed company size, government ownership, company profitability, foreign ownership and the food & clothing industry to have some effect on the level of voluntary disclosure. Repeatedly, the normal score regression suggested that company age, auditor size and other dummy variables did not affect the level of voluntary disclosure in the Jordanian manufacturing companies' annual reports in 2002.

In the rank and normal score regression models of voluntary disclosure, company size had the strongest significant explanatory power for both years, which confirmed the results of the univariate analyses. It is suggested that the level of voluntary information in the Jordanian companies' annual reports significantly increased with company size, which is consistent with the arguments of agency theory that big companies tend to disclose more voluntary information to reduce agency and political costs. Furthermore, this is consistent with many of the prior empirical findings, for instance, Firth (1979) found a significant relationship between the level of voluntary disclosure and company size in the UK, McNally et al. (1982) found the same significant association in New Zealand, and Chow & Wong-Boren (1987) reported also a significant relationship between company size and the level of voluntary disclosure in Mexico. In the context of the association between voluntary disclosure and company size Cooke (1989) and Cooke (1992) provided significant evidence of such association for Japan and Sweden respectively, and finally, Hossain et al. (1994) found that size has a significant impact on the level of voluntary disclosure in Malaysia. Company profitability was also significantly associated with the level of voluntary disclosure in both years. This result is consistent with the theoretical argument of signalling theory, i.e. the managers of profitable companies have more incentive to disclose voluntary information and good news to distinguish their company from others. Prior studies provided the same

empirical findings for prior voluntary disclosure, for instance Singhvi (1968), Singhvi & Desai (1971), Hossain et al. (1994) and Patton & Zelenka (1997), however in conflict with others, such as Malone et al. (1993) and Suwaidan (1997).

Government ownership was significantly associated with the level of voluntary disclosure in the normal score regression models for 1997 and 2002. The current result suggested that the government pays more attention to improve the public image of their companies so the financial support to disclose voluntary information for building such an image is provided. Also, in Jordan the government owns a larger proportion of big companies than small companies. This is consistent with political cost theory and agency theory, which argued that monitoring costs and political costs exist in situations where there is a separation between ownership and control (Jensen & Meckling, 1976; Watts & Zimmerman, 1978). A significant relationship between government ownership and voluntary disclosure in Jordan was reported by Suwaidan (1997).

In addition, rank and normal score voluntary regression models showed a significantly positive association between the level of voluntary disclosure and foreign ownership in 2002. This was expected in Jordan after 1998, as the Jordanian government commenced new orientation towards attracting more foreign funding and investors to Jordan. This is consistent with agency theory, which argued that the separation between ownership geographically and control required companies to provide more information to their owners around the world.

Thirdly, the overall level of printed financial disclosure, the results reported in Chapter 7 by the Jordanian manufacturing companies showed that the overall level of financial disclosure was improved, from 87% in 1997 to 95% in 2002. The new mandatory disclosure requirements in 1998 increased the overall financial disclosure and moved the distribution of the ODI positively skewed in 1997 to negatively skewed in 2002. For 1997, the ranked regression analyses proved company size and the food & clothing industry to impact upon the level of overall disclosure to some extent; however none of the other company variables appeared with significant power. For 2002, the ranked score regression highlighted again company size as the only explanatory variable to have a positive association with overall financial disclosure. Also company profitability and the food & clothing industry affected to some extent the level of overall

disclosure. None of the other company explanatory variables contributed to understanding the variation in the level of overall financial disclosure in 2002.

Furthermore, the proposed theoretical framework in Chapter 4 introduced codification theory and Dye's theory (1986) as integration links between mandatory and voluntary financial disclosure practices, of which the former raised the issue of mandatory requirements depending on what companies disclose voluntarily, and the latter illustrated the relationship between increasing mandatory disclosure and voluntary disclosure. Therefore, the relationship between companies' voluntary financial disclosure practices in 1997 and the JSC mandatory financial disclosure in 2002 was examined as a proxy measure for codification theory in Chapter 8. The results of the multivariate analyses, rank regression, documented that 29% of the variation in the level of mandatory disclosure in 2002 was explained by the ranked voluntary disclosure in 1997 by the F-ratio (F = 19. 8, Sig. = 0.000). The t-test also showed a strong and positive association between voluntary disclosure in 1997 and mandatory disclosure in 2002. This relationship suggests that in 1998 the JSC took the existing Jordanian companies' voluntary financial disclosure practices and codified this practice into mandatory disclosure requirements. As a result, this could be considered as empirical evidence supporting codification theory. In this context, Dye (1986) concluded that reporting mandatory requirements in practice does not change for exogenous reasons, for example, accounting standards might depend on what disclosures companies provide voluntarily, which is consistent with codification theory.

Then, Dye's theory via the relationship between mandatory and voluntary disclosure in each year, 1997 and 2002, was examined in Chapter 8. The multivariate ranked regression analysis showed a very weak relationship between mandatory and voluntary disclosure in 1997, the year before the developments, as measured by R^2 0.07, and the t-test found this relationship not significant at 5%, whereas a significant, positive relationship between mandatory and voluntary disclosure was found in 2002, the post-development time frame. This relationship proved relatively strong as measured by R^2 at 38%. This finding provided strong evidence for Dye's (1986) theory, i.e. a positive influence of increased mandatory requirements on incentives to provide more voluntary disclosure, which is consistent with Abayo et al. (1993) and Al-Razeen & Karbhari (2004).

9.5.2 Summary of the Main Findings of the Internet Financial Disclosure

The result of the Internet disclosure investigation was that 55 (29%) out of 190 Jordanian companies listed on ASE in August 2004 had active, accessible websites. The analysis of the Internet voluntary disclosure checklist showed that the average was 52% disclosure of the 28 items provided. The banking sector scored on average the highest level of Internet disclosure, followed by companies in the service, manufacturing and the insurance sector in ascending ranking order. Generally, the online Jordanian companies can be located in the first stage of using Internet reporting (see Hedlin, 1999; IASC, 1999; Lymer & Debreceny; 2003).

Furthermore, the proposed framework in Chapter 4 explained the relationship between printed and Internet financial disclosure in the form of disclosure transformation theory. This relationship was tested in the current empirical investigation by examining the association between the Jordanian manufacturing companies' printed financial disclosure in 2002 and their situation with regard to disclosing financial information online in 2004. Bivariate and multivariate analyses were adopted on the 51 Jordanian manufacturing companies' printed voluntary disclosure in 2002 and Internet disclosure in 2004. The results indicated a positive association between increasing financial disclosure in the printed companies' annual reports in 2002 and the level of Internet usage for financial disclosure in 2004. The relationship was relatively strong, as measured by R^2, at 27%. This result supports the positive relationship between increasing printed financial disclosure and increasing the motivation to use the Internet for financial disclosure, which is consistent with disclosure transformation theory, and the prior finding by Ettredge et al. (2002) and Xiao et al. (2004).

Finally, the regression analysis in Chapter 8 reported that there is a significant and positive association between company size and the level of the Internet financial disclosure in 2004. This result suggests that the level of the Internet financial disclosure increases with the size of the companies, which is consistent with agency theory, and with many of the prior studies, such as Ashbaugh et al. (1999), Craven & Marston (1999), Pirchegger & Wagenhofer (1999), Ettredge et al. (2001) and Marston & Polei (2004).

9.6 The Substantive Contributions of this Thesis

The current thesis constitutes substantive contributions to knowledge of financial disclosure in several areas. The presentation of these contributions is divided into three areas, theoretical contributions, methodological contributions and empirical contributions.

9.6.1 Theoretical Contributions

This thesis provides several theoretical contributions to the knowledge of financial disclosure. These can be broken down into its main theoretical contribution, the theoretical framework encompassing financial disclosure theories in one scope, and components of the framework, i.e. Dye's theory, codification theory and disclosure transformation theory, which will be discussed in the following.

The main theoretical contribution of this thesis derives from its objective to propose a theoretical framework of financial disclosure practice. The notion of this framework is to develop a theoretical foundation for financial disclosure, both mandatory and voluntary in both printed and Internet formats, by encompassing existing financial disclosure theories in a comprehensive scope. It is believed that the proposed theoretical framework of financial disclosure provides useful insights into the existing disclosure theories. Its rationale, in the author's opinion, is that there is a great advantage to encompass the existing financial disclosure theories and factors behind differences in their applicability in different settings within one scope, so as to offer future researchers a methodical approach to understand in depth each angle, and possible existing lacks, of comprehensive agreed theory. This proposed framework seeks to simplify and increase the understanding of the complex relationships between different notions of the financial disclosure phenomenon in both emerging and more mature markets.

Further theoretical contributions appear within the theoretical framework. Codification theory and Dye's (1986) theory were integrated in the proposed framework as explanatory theories of the relationship between mandatory and voluntary financial disclosure practices. Codification theory predicts that the developments in mandatory disclosure requirements in practice depend on the already existing voluntary disclosure

practices. Also, the proposed framework included Dye's (1986) theory which explains that the change in the voluntary disclosure practice may be due to the change in the mandatory practice. Taken as a whole, the proposed framework provided a general prediction of the developments in the overall financial disclosure practices by illustrating the link between the mandatory and voluntary disclosure practices.

A further theoretical contribution that emerged in the proposed framework was disclosure transformation theory, which sought to answer the call for more theory-guided research with regard to Internet financial reporting (Xiao et al., 2002). It seeks to explain financial disclosure developments over time; for instance it hypothesises that there is a positive relationship between printed financial disclosure - both mandatory and voluntary, and Internet financial disclosure. The argument is based on the managerial incentive theories, in which companies with high level of printed financial disclosure are more motivated to have websites on the Internet in order to disclose more information to their users. On the other hand, companies with a low level of financial disclosure are more secretive and reserved to have Internet websites to disclose more information.

9.6.2 Methodological Contributions

The methodological contributions of this thesis are summarised in the following points – this study:

1. Provided to the literature of developing countries a new mandatory disclosure checklist based on the fundament of IASs mandatory disclosure requirements.
2. Added to the international literature two new separate indices, both a mandatory disclosure index and a voluntary disclosure index.
3. Provided to the Jordanian literature, for the first time, two separate disclosure checklists for mandatory disclosure requirements before and after the mandatory disclosure developments in 1998.
4. Provided to the Jordanian literature also two separate disclosure checklists for voluntary disclosure before and after the mandatory disclosure developments in 1998.
5. Provided to the literature of developing countries a new Internet disclosure checklist.

9.6.3 Empirical Contributions

The major empirical contributions of this thesis are summarised in the following points – this study:

1. Provided evidence for ECT in Jordan, which argues that the form and content of financial reporting at any time and in any place depends upon internal and external factors that exist at that time and in that place.
2. Provided evidence for IAS-lite from listed Jordanian companies' annual reports at two different points in time, as one of the developing countries.
3. Provided evidence supporting codification theory in a developing country like Jordan, which is based on Dye's (1986) argument of mandatory disclosure depending upon existing voluntary disclosure practices, and subsequently a high level of voluntary disclosure could generate a demand for codification.
4. Provided new evidence from a developing market supporting Dye's (1986) theory, which suggests a positive relationship between an increase in mandatory disclosure and a subsequent increase in voluntary disclosure at the same time.
5. Provided evidence consistent with disclosure transformation theory, which states that there is a positive relationship between printed financial disclosure and Internet disclosure.
6. Provided new evidence considering company familiarity as a strongly influential factor for companies' compliance with mandatory requirements in developing countries.
7. Provided a complete picture of the level of Jordanian companies' printed financial disclosure practices, which included mandatory, voluntary and overall financial disclosure before and after 1998.
8. Provided new evidence for the relationship between Jordanian companies' characteristics and the level of financial disclosure. Remarkably, levels of mandatory disclosure were associated most closely with company age, suggesting that older companies are more familiar with the process of complying with accounting disclosure requirements.
9. The present study drew a complete picture and provided for enhancing our understanding of the financial disclosure situation of Jordanian companies on the Internet, and it can also be considered as a pioneer comprehensive work with respect to the developing countries generally, and to Jordan particularly.

10. Provided new evidence for the relationship between company size and the level of Internet voluntary financial disclosure, suggesting that Internet voluntary financial disclosure increases with company size in Jordan.

9.7 Limitations and Future Research

This study is subject to several limitations associated with the way of interpreting the current findings:

Firstly, the current empirical findings in the printed financial disclosure are based on 51 Jordanian manufacturing companies listed on ASE representing 71 and 90 manufacturing sector' companies listed in 1997 and 2002 respectively which represent 50% in 1997 and 58% in 2002 of the total population of listed companies. Also, only a small number of the Jordanian manufacturing companies were found on the Internet. Therefore, these findings should be carefully generalised in reference to the Jordanian environment, and consequently in reference to the proposed theoretical framework. More replica studies of testing the proposed framework in different financial market settings in both developed and developing countries is deemed necessary, so to examine this framework with regard to different financial market conditions over time and/or among different country settings.

Furthermore, the current study did not examine financial disclosure practices in both formats from the users' perspective, therefore future research could focus on the users in relation to both printed and Internet financial disclosure so as to examine the following: To what extent do the different users groups impact upon the level of printed and Internet financial disclosure in the country of study? To what extent do user groups depend on Internet financial disclosure on companies' websites in the country of study? And, what is the standing of companies' Internet financial reporting compared to other sources of financial information, such the printed annual reports, with regard to different users groups in Jordan or any country around the world?

Moreover, the companies' websites are considered a second medium for publishing and distributing company financial information: this is the first study undertaken on Internet financial disclosure in Jordan, and it is one study among a very limited number of studies in the developing countries. By 2010 the Internet is expected

to have become the standard means of company communication, and thus it is expected for more Jordanian companies to involve in Internet financial disclosure. Therefore, in a few years' time further examination of Jordanian companies' websites and their online financial reporting is suggested as valid research. Also, to catch up and fill this existing gap in the literature more research is needed in the area of Internet financial reporting in different developing countries.

Moreover, the use of Internet financial disclosure raised several issues, such as: To which extent do the Jordanian auditors monitor this activity? To which extent will the Jordanian regulatory bodies monitor this activity in the near future? Is there any difference between the printed, audited, financial statements and the Internet, un-audited, financial statements? Furthermore, there are a wide range of explanatory variables previously applied in printed disclosure studies which can be used to explain the variation in the level of Internet financial disclosure.

Although the current research focused on two media of disclosing financial information, printed and Internet financial disclosure, companies' managers have several delivery mechanisms and channels which can be used to disclose both mandatory and voluntary information, for instance management forecasts, analysts' presentations and conference calls, press releases, and others. In addition, there are information intermediaries, such as financial analysts, industry experts and the financial press, which disclose company information. These sources are a rich area for future research, given that the nature of the proposed framework is also applicable to these sources, and it would provide more robustness by testing its aspects.

Surprisingly, Dye's theory has been ignored in the literature for a long time which may due to mandatory disclosure studies being considered a new orientation in the area of financial disclosure. Most recently, Einhorn (2005) argued that prior studies on voluntary disclosure ignored the existence of mandatory disclosure and considered voluntary disclosure the only available disclosure. The paper then uses the modelling approach to examine how mandatory disclosure has an effect on companies' strategies to disclose voluntary information. The interaction between mandatory and voluntary disclosure is considered a new arena of research and it needs additional studies to test this relationship.

The final limitation of the current study relates to its methodological approach. Its fundamental basis is the functionalist paradigm, and thus is biased towards quantitative research techniques. The study could have benefited from adopting qualitative techniques, such as exploratory interviews in which preparers of financial statements could have been asked about their disclosure choices, which would have added further insight into financial disclosure in Jordan. For future research a qualitative stance could be taken towards exploring financial disclosure, as for instance Holland (2005) did through developing a grounded theory of disclosure, in addition to a quantitative methodology, by adopting a multiparadigmatic research approach.

APPENDICES

Appendix 1: Prior Studies Focused on Printed Financial Disclosure

Prior empirical studies on printed financial disclosure will be examined according to whether they focused on developed countries or developing countries, and whether the studies concentrated on mandatory or voluntary disclosure, or covered both aspects of disclosure.

A1.1 Empirical Studies in Developed Countries

A1.1.1 Overall Disclosure Studies in Developed Countries

Cerf (1961) conducted this study to identify the relationship between the level of financial disclosure of U.S. companies and selected company characteristics, he established his pioneer weighted disclosure index (weighted indices derive from the importance of each item as has been determined by the users of financial reporting by asking them to rank the importance of each item according to scoring scales) based on 31 items which constituted the first step to establish the financial disclosure index as measurement tool for financial disclosure. The index was applied on annual reports of 527 companies' listed on U.S. Stock Exchanges. The results of the regression analysis reported that company size, number of shareholders and profitability were significantly, positively associated with the level of financial disclosure.

Following Cerf's (1961) newly developed method Singhvi and Desai (1971) carried out the second study for the USA to identify the relationship between the quality of financial disclosure and company characteristics. A disclosure index based on 34 mandatory and voluntary items was applied on 100 companies listed on New York Stock Exchange (NYSE) and 55 unlisted companies in 1965. The results of the multivariate analysis, i.e. linear regression, illustrated that there was a positive relationship between the quality of financial disclosure and all the examined variables.

Buzby (1975) carried out the third study on the U.S.A. measuring the relationship between asset size, listing status, and the level of voluntary financial disclosure. A weighted disclosure index based on 39 items was employed on 44 manufacturing companies listed on U.S. Stock Markets and 44 unlisted companies. The results of the

bivariate and univariate analyses reported financial disclosure to be positively related to asset size and not related to listing status.

Widening the scope, Barrett (1975) conducted an empirical study on the level and the quality of financial disclosure of 15 companies from each the USA; the UK; Japan; France; West Germany; Sweden, and 13 companies from the Netherlands. He applied a weighted disclosure index, based on 17 items collected from previous studies, on his sample over a time period of 5 years. The descriptive results showed that U.S. companies were superior in level of financial disclosure, and the Spearman rank coefficient provided that there was a slight difference between the USA and the UK in the extent of disclosure, but that they disclosed more than others. On the opposite end of the range, the results showed also that France had the lowest level of disclosure. Barrett's study (1976) titled 'Financial Reporting Practices: Disclosure and Comprehensiveness in an International Setting' applied the same data, statistical analysis, and even the same tables, and analysis' figures from the above previous study. It appears he published the same paper in two journals in two different years.

A turning point regarding the above discussed index type took place when Cooke (1989) argued that weighted indices may reflect the subjectivity of either researchers or users rather than the actual relative importance of voluntary items. Therefore, Cooke (1989) applied an un-weighted disclosure index in order to assess the relationship between company characteristics, [quotation status; company size (total assets, sales, and number of shareholders), and parent company relationship], and the level of voluntary financial disclosure in Sweden. The index was based on 224 mandatory and voluntary items, and Cooke (1989) used the dichotomous approach (dichotomous procedures, which means that an item scores "1" if disclosed in the annual reports and scores "0" if not disclosed, commonly used for un-weighted indices) in its application on 90 companies' annual reports from 1989, including 33 listed and 38 unlisted companies on the Swedish Stock Exchange, and 19 companies listed on the latter with at least one foreign quotation. The results of the multiple regression analysis, Stepwise method, showed that 60% of the disclosure variation among the sampled companies was explained by the above variables, and the t-test showed that listing status/multiple listed and company size were significant with regard to the level of financial disclosure.

A further empirical study by using the same methodology was performed by Cooke (1992) for Japan in order to measure the relationship between the level of financial disclosure in Japanese companies' annual reports and some selected company characteristics namely: company size measured by eight measures (capital stock; turnover; number of shareholders; total assets; current assets; fixed assets; shareholders' fund; and bank borrowings), listing status - either on domestic market or in international market - and the industry type, whether manufacturing industry or other industry types. An un-weighted disclosure index was constructed based on 165 items including separate mandatory and voluntary items, and Cooke (1992) applied this index on 35 companies' annual reports from 1988 by using the dichotomous approach. The results of the descriptive analysis showed that there was a high level of companies' compliance with disclosure requirements. The findings of the regression analysis showed that 60% of the disclosure variation among the sampled companies was explained by the above company characteristics, and the t-test showed that large companies, multiple listed companies and manufacturing companies disclose more than other companies.

Using the same methodology a further study by Cooke (1993) examined the effect of listing status, i.e. listed, unlisted and multi-listed status, of 35 companies listed on Tokyo Stock Exchange, including10 multiple companies and 13 unlisted companies in 1988, on the level overall financial disclosure. A disclosure index based on 195 separate mandatory and voluntary items was applied on the sampled companies by using the dichotomous approach. The results of the t-test and Mann-Whitney analysis showed multiple listed companies disclosed more voluntary information than other companies.

Conversely, Malone et al. (1993) applied a weighted disclosure index to investigate the relationship between the level of financial disclosure in the American oil and gas industry and ten company characteristics, i.e. debt/equity ratios, number of shareholders, total assets, industry type, rate of return, earning margin, audit company, listing status, foreign operation, and proportion of outside directors. They employed an index based on 129 mandatory and voluntary items on 125 American oil and gas companies' annual reports for 1986. These companies were divided into 41 listed companies, and 84 unlisted companies. The stepwise multiple regression model showed that 29% of disclosure variation was explained by the independent variables and the t-test showed that there was a significant and positive relationship between the level of

financial disclosure and three company characteristics, listing status, debt/equity ratio and number of shareholders. However there was no relationship between financial disclosure and other company characteristics.

Inchausti (1997) empirically conducted her research in Spain to identify the relationship between the level of financial disclosure and some selected company characteristics during the period from 1989-1991. She selected seven company characteristics in her study, namely: company size (total assets and sales), stock exchange cross listing, profitability, leverage, auditing, industry, and dividend policy. An un-weighted disclosure index based on 50 mandatory and voluntary items was employed on the annual reports of 49 companies of 1989, 47 companies of 1990, and 42 companies of 1991 listed on Valencia Stock Exchange. The results of the logistic regression analysis, stepwise method, showed that 43% from the disclosure variation among the sampled companies was explained by independent variables, and there was a statistically significant positive relationship between the level of financial disclosure and size, auditing company, and the listing status. There was no relationship between financial disclosure and profitability, leverage, industry type, and the dividend policy. Finally, the result showed also that financial disclosure was significantly, positively related to Spanish legislation.

A1.1.2 Voluntary Disclosure Studies in Developed Countries

A wide range of prior empirical studies examined the impact of several company characteristics on voluntary financial disclosure practice. Among these studies Firth (1979) identified the relationship between the level of voluntary financial disclosure and three company characteristics, company size (sales turnover and capital employed), share listing and the auditors, in the UK. A weighted disclosure index based on 48 items of 180 annual reports from 1976 was applied. The sample included 40 unlisted companies, 40 listed companies combined with unlisted companies, and 100 companies listed on London Stock Exchange (LSE). The results of the univariate analysis illustrated that a positive relationship existed between company size, listed status and the level of voluntary disclosure. Auditor type was found insignificant.

Using the weighted disclosure index McNally et al. (1982) conducted this study in New Zealand to examine the association between voluntary financial disclosure practices and company characteristics, namely: financial characteristics, company size (total assets, net income, and shareholder funds), rate of return (net income/total assets; net income/shareholders' funds), growth (growth in total assets & net income; growth in two rate of return), auditors and industry groups. The constructed index included 41 voluntary items collected from previous studies, and it was applied to 103 annual reports of listed companies between 1974 and 1979. The Spearman's *rho* test reported that company size is the company characteristic most significantly associated with voluntary disclosure practice in New Zealand. The remaining explanatory variables were insignificant.

Cooke (1991) conducted an empirical examination by using an un-weighted disclosure index, applied dichotomously, to identify the relationship between the extent of voluntary financial disclosure and selected company characteristics in Japan, namely: company size (total assets, number of shareholders, and turnover), listing status and industry type. The index was constructed based on 106 voluntary items collected from previous studies, and was applied to 48 companies' annual reports including 25 listed and 13 unlisted companies on Tokyo Stock Exchange (TSE), and 10 companies listed on TSE as well as on other international stock markets in 1988. The results of the stepwise regression showed that company size, listing status and manufacturing companies, as industry type, were positively significant with the level of voluntary disclosure.

Following the above methodology, Raffournier (1995) examined the impact of eight company characteristics [namely: company size (total assets, total sales), leverage (Debt/assets), profitability (net profit/ equity), ownership structure, internationality, auditor size, percentage of fixed assets, and industry type] on the level of voluntary financial disclosure in the annual reports of companies listed on Geneva Stock Exchange. The index was applied on 161 listed companies' annual reports of 1991 based on 30 voluntary items. The results of the stepwise regression explained 36% of variation in the level of voluntary disclosure; company size, level of internationality, percentage of fixed assets, size of auditors were significantly associated with level of voluntary disclosure, and less significant association appeared with industry type and profitability. Leverage and the ownership structure were statistically insignificant.

Using the same approach, Meek et al. (1995) conduct a study with a broader scope including companies of different countries, i.e. the USA, the UK, France, Germany, and the Netherlands to examine the impact of selected multinationals' company characteristics [company size (revenue), leverage (long-term debt to equity ratio), multi-nationality (ratio of sales from outside companies' home countries to total sales), profitability (ratio of return of sales), country/region, industry type, and listing status] on the level of voluntary disclosure. The index was constructed based on 85 voluntary items, and was applied to 226 multinational companies. The results of the regression analysis explained 35% of the voluntary disclosure variation. Company size, country/region, industry type and international listing status were the most significant explanatory variables, other company characteristics appeared insignificant.

Also in the context of agency theory, signalling theory, and cost-benefit analysis, Depoers (2000) carried out an empirical investigation in France, to examine the relationship between the level of voluntary disclosure and the following seven company characteristics: company size (sales), foreign activity, ownership structure, leverage (debt on total assets), auditor size, proprietary costs related to competition, and labour pressure. An un-weighted disclosure index was constructed based on 65 voluntary items, and was applied dichotomously on the annual report of 102 industrial and commercial companies listed on Paris Stock Exchange in 1995. The result of the stepwise regression provided an explanation for 64% of voluntary disclosure variation. Company size, foreign activity and proprietary costs were significantly associated with voluntary disclosure, while there was no relationship with ownership structure, leverage and auditor size.

Watson et al. (2002) undertook an empirical study to identify the relationship between the voluntary disclosure of ratios in UK companies' annual reports and certain company characteristics: profitability (operating profit margin, and return on capital employed), return on investment (dividend per share), company size (total assets), gearing (ratio of debt to equity), liquidity (ratio of current assets to current liabilities), company efficiency (sales per employee), and industry type. In order to achieve this objective, annual reports over five years, from 1989 to 1993, of 313 large companies listed on LSE were examined by using the dichotomous measure of ratio disclosure (companies categorized either as ratio disclosure or non-disclosure). The result of the

descriptive analysis showed that the majority of companies disclosed ratios. The results of the logistic regression analysis, stepwise model, reported that there is a considerable relationship between ratio disclosure and company performance, company size and industry type.

A1.1.3 Mandatory Disclosure Studies in Developed Countries

As already discussed company's mandatory financial disclosure seeks to comply fully with the disclosure requirements by any formal accounting authorities such as company laws, securities commission and stock market disclosure requirements. Measuring the level of compliance with these mandatory disclosure requirements is a new orientation in the area of financial disclosure studies, because, as discussed above, prior researchers measured the extent of overall or voluntary disclosure in annual reports, assuming either that there was full compliance with mandatory requirements or that there were no mandatory disclosure requirements.

A number of prior studies measured the compliance with mandatory disclosure requirements in companies' annual reports. Among these, Wallace et al. (1994) assessed the level of compliance by Spanish companies with the mandatory requirements in Spain, and a relationship with three groups of company characteristics [firstly, structure-related variables which included: company size (measured by total assets, and total sales), gearing (measured as debt\equity ratio); secondly, performance-related variables which included the liquidity ratio (measured as earnings return, and profit margin); finally market-related variables which included industry type, listing status, and audit type]. An un-weighted disclosure index based on 16 mandatory items was applied on 50 non-financial Spanish companies both unlisted and listed on Madrid and Valencia Stock Exchanges in 1991. A 51% range of variation in the level of compliance between a minimum of 29% and maximum of 80% was reported, and the ranked OLS explained 65% of this variation through the above independent variables. It was reported that asset size and listing status were positively associated while liquidity was negatively associated with the level of mandatory disclosure in Spain.

Patton & Zelenka (1997) employed an un-weighted disclosure index consistent of 66 mandatory financial reporting items for 50 Czech joint- stock companies listed on

Prague Stock Exchange in 1993. The level of compliance with the mandatory requirements was measured, and the impact of several company characteristics [company size (as total assets), performance (as return on equity), risk factors (as percentage of intangible assets and leverage), listing status, number of employee, the, at that time, big six international audit firms and industry type] on the level of compliance was examined. A less than 60% average level of companies' compliance with mandatory requirements was reported, and the logarithm regression explained only 25% of the variation in the level of companies' compliance. Statistically, company size, industry type and leverage were not significantly associated with mandatory disclosure, whereas type of auditor, profitability, number of employees and listing status were significantly associated.

Given the growing importance of harmonisation in the mid-1990s a new orientation of financial disclosure studies, focus on the compliance with IASs, was established, and within this context, Street & Bryant (2000) carried out an empirical investigation to measure the extent to which companies comply with the IASs across several countries, and to identify the relationship between the level of compliance and company size (total assets), profitability (as ratio of net income before tax to total equity), industry type, auditors' way of addressing opinions, and listing status. Street and Bryant (2000) employed a disclosure index based on items collected from IASs which covered the financial statements and the footnotes on 82 companies' annual reports from 1998. The findings of this study show that the U.S. listed companies' compliance with IASs was on average 84% - higher than that of not U.S. listed companies, which is on average 77%. Also greater disclosure was noted in the accounting policies footnotes. The stepwise regression reported that the auditors' way of addressing opinions about the financial statements also had a positive effect on the level of compliance with IASs.

Street & Gray (2002) assessed the level of compliance with IASs in the financial statements and footnotes of a sample of international companies referring to the use of IASs and the factors associated with the level of compliance, which are company size (measured as total assets, total sales, and market capitalization), profitability (as net income before tax/equity), industry type, country of domicile, size of home stock market, auditor size, type of auditing standards, and the way in which the auditors

express their opinions. A disclosure index was employed regarding the content of IASs in financial statements and its footnotes on 279 sampled companies. The findings yielded that there was a significant extent of non-compliance as the level of compliance with IAS was on average 74%. There was also a significant relationship between the level of compliance of companies listed in the U.S, specifically companies in commerce and transportation, and companies audited by big audit firms.

A1.2 Empirical Studies in Developing Countries

A1.2.1 Overall Disclosure Studies in Developing Countries

The first overall financial disclosure study in developing countries was undertaken by Singhvi (1968). He examined the impact of company characteristics on the quality of financial disclosure in India. Cerf's (1961) research methodology, the weighted disclosure index, was followed and the index, based on 34 items, was applied to 45 companies listed on Indian Stock Exchanges. The results of the statistical analysis showed a strong positive relationship between the quality of financial disclosure and asset size, rate of return, earnings and type of management. Singhvi (1968) documented three main reasons for why large companies have positive effects on the level of financial disclosure: (1) a large number of shareholders in a company results in more attention from the public, thus causes more requirements from shareholders and other users, such as analysts, to disclose extra financial information, (2) a large number of shareholders in a company requires provision of more financial information in order to reduce the pressures from regulatory agencies, and (3) a large number of shareholders in a company requires professional management so that more information will be provided in financial reports. Finally, a negative relationship between the fluctuations in the securities prices and quality of financial disclosure was identified.

Both the weighted and the un-weighted disclosure index were used by Wallace (1988) when he performed an empirical investigation to evaluate financial disclosure in light of user needs and regulations in Nigeria. The indices were established based on 120 mandatory and 65 voluntary items covering different parts of the annual report. Wallace applied these indices on 47 companies listed on the Nigerian Stock Exchange from 1982 to 1986. The findings of the descriptive analysis showed that the overall level

of financial disclosure in Nigerian companies' annual reports was below 50% in each year. He explained the low level of financial disclosure through a number of environmental factors influencing financial disclosure in Nigeria in that time period, such as the military rule having a positive effect on the quality of financial disclosure in 1984. In terms of methodology, Wallace (1988) documented that there was no significant differences between the results of weighted and un-weighted disclosure indices.

Abayo et al. (1993) used four different measures to assess empirically the quality of financial disclosure in the annual reports of Tanzanian companies. These were 1) measuring the degree of compliance with mandatory disclosure requirements, 2) identifying the level of voluntary disclosure, 3) identifying the type of the audit report received, and 4) the timeliness of the annual reports. The scholars constructed two new indices relevant solely to their sampled companies, of which the first index was based on 88 mandatory items collected from Tanzanian accounting regulation. The second index was based on 44 voluntary items specified by user needs. They applied these indices on 51 companies' annual reports of 1990. The result of the descriptive analysis showed that the quality of companies' annual reports in Tanzania was very low because the average of compliance with mandatory disclosure was 52.6%, and the average of the level of voluntary disclosure was 15.8%. Moreover, Abayo et al. (1993) examined the relationship between voluntary and mandatory disclosure indices and they found a weak, positive relationship between voluntary disclosure and mandatory disclosure.

Al-Modahki, (1995) examined empirically the relationship between the level of both mandatory and voluntary financial disclosure, and five company characteristics. An un-weighted disclosure index was constructed based on 121 items, including 50 mandatory items collected from the Saudi reporting standards requirements and the Ministry of Commerce and Industry, and 71 voluntary items collected from previous research. This index was applied on the annual reports of 33 listed financial and non-financial companies over the period from 1986 to 1990. The results of the non-parametric statistical analysis (Wilcoxon matched-pair signed-ranks, and Mann-Whitney analyses) showed that there was a significant increase in the level of financial disclosure in Saudi companies' annual reports over the five years regarding both disclosure types. On the other hand, the results showed that there was a significant and

positive relationship between mandatory disclosure and two types of industry, namely banking, and manufacturing and cement industries, for 1986, 1987 and 1988. Furthermore, there was a significant and positive relationship between the level of financial disclosure and capital paid-in as a measure for company size. Finally there was no significant relationship between the level of financial disclosure and company age, foreign investment and auditor type.

Following Al-Modahki (1995), a further investigation on Saudi Arabia was performed by Al-Mulhem (1997) to examine the association between the variations of mandatory and voluntary financial disclosure and selected company characteristics. The company characteristics were company size (total assets and annual sales), listing status, industry type, profitability ratios (rates of return and earning margin) and type of Audit Company. An un-weighted disclosure index was constructed based on 77 mandatory and 86 voluntary items collected from the Companies Act and some items from the Ministry of Commerce disclosure requirements, as well as items collected from previous studies. Al-Mulhem found variation in the level of financial disclosure, but the stepwise regression analysis explained only 19% of disclosure variation by the independent variables included in the model. The t-test showed that there was a significant, positive relationship between financial disclosure and company size, rate of return, and listing status, while there was no association with industry types and type of audit company. Finally the result showed that none of the companies fully complied with the mandatory disclosure requirements and the important items for different users.

Naser (1998) assessed the comprehensive level of financial disclosure by Jordanian companies in 1993, and the relationship with several company characteristics (including industry, size of audit firm, and market capitalization, profit margin, return on equity, and liquidity, assets, sales, leverage and ownership). An un-weighted disclosure index based on 74 items collected from the sampled companies' annual reports was used and applied dichotomously on annual reports of 54 non-financial companies listed on Amman Financial Market (AFM) in 1993. The descriptive analyses showed that there was an improvement in the level of financial disclosure in Jordan after 1990, and the results of both ranked & unranked regression analysis explained 83% and 53% of variation respectively. Comprehensive financial disclosure in Jordan was found to have

a significant positive relationship with large companies, high return on equity and high leverage.

Curuk (1999) examined the level of financial disclosure practices in the annual reports of Turkish companies. The scholar firstly identified the impact of two external environmental factors, the Fourth Directive of the European Union (EUFD) and IASs, and secondly examined the impact of the following company characteristics: company size (total assts), listing status, industry type, and foreign ownership of the level of financial disclosure practices. A disclosure index was constructed based on 250 mandatory and voluntary items and was applied on annual reports of 32 listed and 29 unlisted companies over a time period of 5 years by using dichotomous procedures. According to the results of statistical analyses both EUFD and IASs significantly influenced financial disclosure practices in Turkey, and EUFD had a greater influence than IASs. Variation was found in the level of financial disclosure by Turkish companies over this time period, and the analyses showed that company size, industry type and listing status contributed significantly to explain this variation. Also Curuk (1999) indicated that the explanatory power of the company characteristics increased over time, which might have been due to the increase in company management concerns at that particular time.

Al-Hussaini (2001) used the quantity of financial disclosure to assess empirically the quality of companies' financial reporting practices in Kuwait. This study used the level of financial disclosure in companies' financial reporting as a proxy measure of the quality. Al-Hussaini divided the level of financial disclosure into three types of disclosure: pure mandatory disclosure, voluntary disclosure related to mandatory disclosure, and pure voluntary disclosure. Furthermore, the relationship between the three levels of financial disclosure and company characteristics [profit margin, and liquidity, company size (assets; sales and number of employees, and gearing), industry type, market capitalization, and audit company status] was examined. Three disclosure indices were constructed for measurement – the first index based on 27 mandatory items collected from IASs (No 1 & 5); the second index based on 18 voluntary items related to mandatory requirements, and the third index based on 13 voluntary items not related to the mandatory disclosure. He applied these indices on the annual reports of 38 non-financial companies listed on Kuwait Stock Exchange. The results of the univariate and

multivariate analyses showed that Kuwaiti companies had significantly high compliance with mandatory requirements, on average 96%, while there was a lower level in the voluntary disclosure related to mandatory disclosure, on average 61%, and there was a low level of voluntary disclosure, on average 36%. The results of multivariate analyses showed a significant, negative relationship between industry type, compliance with mandatory disclosure and level of voluntary disclosure. Liquidity and company sales (company size) were positively related to the level of compliance with mandatory disclosure. Finally liquidity, industry type, company size measured by assets and the number of employees were significantly, positively associated with both voluntary related to mandatory disclosure and voluntary disclosure.

Alrazeen & Kabhari (2004) examined empirically the relationship between the level of mandatory and voluntary disclosure in Saudi Arabian companies' financial reports, and applied a similar division into mandatory, voluntary, and voluntary more related to mandatory disclosure. Three disclosure indices were constructed; the first index with 23 mandatory items collected from Saudi disclosure standards, the second index with 15 voluntary items expected to be disclosed, and the third index with 18 voluntary items related to mandatory requirements. These indices were applied on 55 listed and 13 unlisted companies in 1996. The results showed that Saudi companies in general complied with mandatory requirements, on average by 88%, and that there was a low level of voluntary related to mandatory disclosure and voluntary disclosure, on average 32%. The Pearson's correlation coefficient showed a significant, positive relationship between mandatory disclosure and voluntary more related to mandatory disclosure, and a weak relationship between voluntary disclosure and the other two indices.

A1.2.2 Voluntary Disclosure Studies in Developing Countries

In the context of voluntary disclosure, Chow & Wong-Boren (1987) undertook an empirical investigation in Mexico to identify the relationship between the level of voluntary disclosure and three company characteristics - company size (market value of equity plus the book value of debt), financial leverage (the book value of debt divided by size), and assets in place (dividing the book value of fixed assets, net of depreciation, by total assets). Both a weighted and an un-weighted disclosure index based on 24

voluntary items collected from prior studies were applied. The scholars applied both indices on the annual reports of 52 manufacturing companies listed on the Mexican Stock Exchange in 1982. The result of the multiple regression showed that the adjusted R^2 for the weighted index was 14% and for the un-weighted index was 15%; the t-test for both indices indicated that company size was significantly associated with the level of voluntary disclosure in Mexico, and leverage and assets in place were insignificant regarding the level of voluntary disclosure. Chow & Wong-Boren (1987) reported also no differences in the results between the weighted and un-weighted disclosure index.

Abou-Naser (1993) conducted an empirical research in Jordan in 1993 to measure the usefulness of financial reporting practices in Jordan from the users' perspectives. For the purpose of the study, voluntary financial disclosure in Jordanian companies' financial reports was measured, and a relationship with seven company characteristics, company size (total assets, turnover, and number of shareholders), profitability (rate of return, net income, and return on equity), age of the company, equity ratio, dividends (total dividends, dividends pay ratio, and yield share ratio), type of industry, and percentage of individual shareholder ownership, was identified. Both a weighted and an un-weighted disclosure index were developed based on 81 items, including voluntary financial disclosure items collected from previous studies, in order to capture the above objective. He applied these indices on the annual reports of 96 companies listed on Amman Financial Market in 1990. The results showed that the amount of disclosed financial information in Jordanian companies' annual reports was inadequate to cover users' needs. The descriptive analysis showed that the level of financial disclosure varied widely among companies. The actual score achieved among the sample ranged from 17.08% to 60.72%. The Sperman Rank-correlation and stepwise regression analyses identified a negative relationship between the level of financial disclosure and the percentage of individual shareholder ownership, and no relationship with company age. The remaining variables were significantly associated with the level of financial disclosure. Finally, the results showed that the best variable to explain 21% of the variation of financial disclosure was the dividends one.

Based on agency theory, Hossain, et al. (1994) sought to identify empirically the relationship between six company characteristics and the level of voluntary disclosure in an emerging capital market, represented by Kuala Lumpur Stock Exchange (KLSE) in

Malaysia. The six characteristics examined in this study were company size (market capitalisation), ownership structure (the number of shares held by the top 10 shareholders), leverage (as ratio, based on the book value, of long-term debt to owners' equity), assets-in place, real assets, (as ratio, based on book value, of fixed assets to total assets), Audit Company, and foreign listing status. They developed an un-weighted index based on 78 voluntary items selected from prior research, and the index was applied to 67 non-financial companies listed on KLSE in 1991. The results of the univariate analysis showed that there was a significant association between voluntary disclosure and company size, the big six audit firms and companies' ownership structure. A marginally positive relationship with leverage was found, while there was no significant relationship with assets-in-place. The multiple regressions explained only 28% of the disclosure variation by these variables and the t-test showed different results from the univariate analysis – company size and ownership structure were significantly associated with voluntary disclosure and the remaining variables were insignificant.

The second study on Jordan with regard to voluntary financial disclosure was carried out by Suwaidan (1997) to measure the extent of voluntary disclosure of Jordanian companies in 1992, to examine the behaviour of companies voluntary disclosure level during the time of raising equity capital, and to identify the relationship between the level of voluntary disclosure and selected company characteristics, namely company size (total assets, market capitalisation, sales/revenues, net income), number of shareholders, institutional ownership ratio, government ownership, industry type, size of auditing firm, international contacts of auditing company, profitability (return on assets and return on equity), and frequency of external financing. Suwaidan (1997) developed an un-weighted disclosure index based on 75 voluntary items collected from previous studies (e.g Abou-Naser, 1993), and he applied this index on the annual report of 102 companies listed on Amman Financial Market in 1992, including banks, insurance, service, and industrial companies.

The results of the univariate analysis, showed that there was a significant and positive relationship between the level of voluntary disclosure and company size, industry type, number of shareholders, government ownership, size of auditing company, international contact of auditing company, and frequency of external financing. A negative relationship was identified with regard to two variables -

profitability and institutional ownership ratio. However, the results of multiple linear regressions (OLS) explained 64% of the voluntary disclosure variation among the sampled companies by the independent variables. The t-test proved a negative relationship between the level of voluntary disclosure and the number of shareholders, audit company, international contracts, profitability and the external financing ratio, and positive relationship with other variables. It was concluded that company size variable provided the best explanation for the variation in the voluntary disclosure level of Jordanian companies.

Naser & Al-Khatib (2000) assessed the depth of voluntary disclosure in the board of directors' statements as a proxy for determining the quality of financial disclosure in these statements. Furthermore, a relationship between the depth of voluntary disclosure and seven company characteristics - company size (assets, and number of employees), profitability (profit margin and return on equity), ownership variables (percentage of government ownership and percentage of individual ownership), capital structure variables (gearing ratio) - was identified. The scholars developed an un-weighted disclosure index based on 30 items expected to be disclosed voluntarily in the board of directors' statements. This index was applied on the annual report of 84 companies listed on Amman Financial Market in 1996 by using dichotomous procedures. The results of the descriptive statistics showed that the level of voluntary disclosure in the board of directors' statements ranked above the average 50% of the total disclosure index. Also the result of the ranked regression showed that 41% of the depth of voluntary disclosure variation among the sampled companies was explained by the variables in the model, and the t-test showed that there was a significant and positive relationship between the depth of voluntary disclosure and size of company, profit margin, and gearing ratio. In addition a significant and negative relationship with individual shareholders was reported and the remaining variables were insignificant.

Chau & Gray (2002) measured the relationship between the level of voluntary disclosure and the ownership structure, family ownership and control in Hong Kong (HK) and Singapore companies. The scholars constructed an un-weighted disclosure index based on 113 voluntary items relying mainly on Meek et al's (1995) disclosure index items, and they applied this index on annual reports of 60 companies listed on Hong Kong Stock Exchange (HKSE) and 62 companies listed on Singapore Stock

Exchange in 1997. The results of the regression analysis explained the variation in the level of voluntary disclosure by 42% for HK and 72% for Singapore. The results suggested that there was a significant, positive relationship between wider ownership and the level of voluntary disclosure in both HK and Singapore companies, and there was a negative relationship between family ownership or control and the level of voluntary disclosure.

Haniffa & Cooke (2002) measured the relationship between voluntary disclosure and differing groups of factors: corporate governance, cultural variable and company characteristics, of which the latter were divided into: structure characteristics (size measured by the book value of total assets, leverage, diversification, complexity, assets-in-place), ownership structure (top ten shareholders, foreign ownership, institutional investors), performance (profitability), and market-related variables (industry type, multiple listing status, auditor type, listing age, foreign activities). Haniffa & Cooke developed an un-weighted disclosure index based on 65 voluntary disclosure items collected from previous studies, and they applied this index on 139 companies listed on KLSE by using the dichotomous approach. The results of the regression model showed that 46% of voluntary disclosure variation among the sampled companies was explained by the regression model, and the t-test showed that there was a significant, negative relationship between the level of financial disclosure and the chairperson being a non executive director. Conversely, there was a significant, positive relationship between the level of voluntary disclosure and assets in place, the proportion of share held by top ten shareholders and foreign ownership. The results of the reduced regression showed that there was a significant and positive relationship with Malay directors on the board as a cultural factor.

A1.2.3 Mandatory Disclosure Studies in Developing Countries

A number of empirical studies had been undertaken to measure the level of compliance with mandatory disclosure requirements in developing countries. Among these studies, Tai et al. (1990) carried out an empirical investigation to measure the level of companies' compliance with mandatory disclosure requirements in HK. A mandatory checklist was used to review the financial statements of 76 companies listed on HKSE in 1987. The result for this review showed that on average the level of compliance was

78%. Several company characteristics, size (shareholder fund), the business sector of the company and the audit firm, were utilised to explain the non-compliance among companies. The findings for the statistical analysis (chi-sequare) showed that company size was significantly associated with mandatory disclosure. In contrast there was no significant relationship between the business sector or audit companies and the compliance with mandatory disclosure requirements. Tai et al. (1990) concluded that this non-compliance with the mandatory disclosure requirements may be due to the difficulties of interpreting disclosure requirements and insufficient awareness of general accounting concepts.

Ahmed & Nicholls (1994) examined the relationship between the level of company compliance with mandatory disclosure requirements in Bangladesh and non-financial company characteristics: company size (total assets and total sales), total debt, multinational company, professional qualifications accountants, and the size of audit firm. The scholars constructed an un-weighted disclosure index based on 94 mandatory items collected from Bangladeshi regulations at that time. They applied this index by using the dichotomous procedure on 63 companies listed on Dhaka stock exchange for the years 1987-88. The descriptive analysis showed that the level of compliance with mandatory requirements was on average 58.7%. The multiple regression analysis, Stepwise, explained 50% of this disclosure variation among the sampled companies, and the t-test results reported that multinational companies and large audit firms had a significant, positive relationship with the level of compliance. Less effect on the level of compliance by professional qualifications accountants was observed, and company size appeared insignificant regarding the level of compliance.

Solas (1994) assessed the level of compliance with IASs in the annual reports of Jordanian listed companies. An un-weighted disclosure index was constructed based on 31 items collected from IAS1 and IAS5, and this index was applied on the annual reports of 45 Jordanian service and manufacturing companies for 1988. The descriptive analysis of this study showed that the level of compliance with IASs in Jordanian companies' annual reports was 46.35%, and a higher level of compliance was observed regarding balance sheet items as opposed to income statement items and accounting policy items. Furthermore, the low level of compliance was explained within the context of companies' characteristics, namely company size (total assets), rate of return, number

of shareholders, and earnings margin. The results of the univariate analysis showed that none of these characteristics were associated significantly with level of IASs mandatory compliance.

Wallace & Naser (1995) followed Tai et al. (1990) in measuring the level of compliance with mandatory disclosure requirements in HK companies' annual reports, and the relationship with some selected company characteristics: (i) structure- related variables such as company size (total assets, total sales or capitalized market value), gearing (ratio of debt\equity), proportion of shares held by outsiders; (ii) performance-related variables such as liquidity, profit margin and earnings return; (iii) market-related variables such as market capitalization; scope of business operations; and auditor size influence. Also this study included foreign registration of companies listed on HKSE as a further factor in order to explain the comprehensiveness of information in annual reports. An un-weighted disclosure index based on 30 mandatory items was applied on 80 companies listed on HKSE. The results reported that there was on average a 72% level compliance with mandatory disclosure requirements by HK companies. Also the result of ranked OLS regression models explained that 58% of mandatory disclosure variations among the sampled companies by the independent variables were included in the model. The results of the t-test showed that there was a positive relationship between companies' compliance and asset size and scope of business, while there was a negative relationship with the profit variable.

Owusu-Ansah (1998) constructed and applied dichotomously an un-weighted index based on 32 main mandatory items, divided into 214 sub-items, on the sampled annual reports of 49 companies listed on Zimbabwe Stock Exchange in 1991. Owusu-Ansah (1998) also measured empirically the relationship between the level of compliance and eight characteristics, namely company size (total assets, and market values of equity shares), quality of external audit, ownership structure, industry type, company age, multinational companies (MNC) affiliation, profitability (return on turnover, and return on capital employed) and liquidity. A level of 74% of compliance was identified, and an alternative approach of data transformation, logarithm, rank and robust regression was utilised. The results of robust regression explained 40% of the variation in the companies' compliance, and the t test indicated that company age, profitability, multinational corporation affiliation, company size and ownership structure

had a significant and positive association with the level of compliance, whereas external audit, industry type and liquidity appeared insignificant.

Abd-Elsalam & Weetman (2003) carried out an empirical investigation to assess the effect of relative familiarity and language accessibility on the compliance with IASs in Egypt. They constructed a disclosure index based on IASs requirements and applied this index on a sample of listed company annual reports to evaluate the level of compliance with IASs in association with some company characteristics, namely: size, profitability, type of business, audit firm, gearing, legal form, share trading, the presence of an IAS compliance note, the presence of a note of compliance with International Standards on Auditing. The descriptive result provided evidence that on average the level of compliance with IASs was 83% for Egyptian companies, which did not represent full compliance, and the ranked regression explained 21-46% of the variation in the level of compliance. Non-compliance with less familiar IASs disclosure was due to non-availability of the standards in official Arabic translations during the period they researched, and the extent of compliance was related to the type of audit firm used and to the presence of a specific statement of compliance with IASs.

Appendix 2: The JSC's Disclosure Requirements and some Quantitative Information about ASE before and after the New Change in 1998.

A2.1. Accounting and Auditing Standards and Conditions No. (1) for the Year (1998):Article No (6) of Disclosure of Periodical Financial Statements. Article (6) The Board of Directors of the issuing company shall prepare and provide the Commission with the company's annual report within a period not exceeding three months as of the end of its financial year. Such report shall include the following:

a) The chairman's speech.

b) The report of the board of directors including the following:

1. The company's future plans for at least one coming year for any company's, or its products, protection or privileges from the government
2. An explanation for any company's patents or concessions.
3. An explanation for any governmental decisions or international organizations having material effect on its operations, products or competitive ability of the Company, and the board of directors must disclose the extent of the company's compliance with the international quality standards.
4. An explanation for any accomplishments of the company supported by figures, and an explanation of important events that the company faced during the financial year.
5. The company's status of competitive with other companies in the same activities' sector; the company's main markets; and the company's portion in the local and international markets if possible.
6. The extent of the company's dependence on limited suppliers and/or main customers.
7. The financial impact of transactions of non-repetitive nature during the financial year, which are not from the company's main activity.
8. A report including the profits or losses for five years, and the distributed profits, the shareholder's net equity and the prices of securities issued by the company, for the same period.
9. The company's financial status' analysis and operation results during the financial year.

10. The company's future plan for the coming year including the future developments.
11. The auditor's fees
12. An explanation for all company's operations and activities, and their geographical locations. As well as and the number of employees in each one.
13. An explanation of the volume of capital investment.
14. List of the board of director's names, and names and titles of senior executive managers.
15. List of the number of company's securities, and all the securities-holders, especially include the members of the board of directors.
16. An explanation of the privileges and bonuses that the chairman and members of the board of directors and senior executive managers have had during the financial year, or any other amounts of money.
17. A list by the company's donations and grants during the financial year, and details about to whom it was granted.
18. A list of the Names of the company's senior shareholders and the number of shares held by every one of them.
19. An explanation about the company's organizational structure, its appointing policy, number of employees, their qualification categories and other information related to its employees development.
20. An explanation for any contracts between the company and its employees or their relatives.
21. The company's contribution in serving the environment and the local society.

c) The annual financial statements of the company audited by the company's auditors compared with the last year statements, which shall include the following:

1. The Balance Sheet.
2. Profits and losses account.
3. Changes in the shareholders equity
4. Cash-flow list.
5. Explanations of the financial statements

d) The auditor's report including a statement about auditing procedures that have been conducted according to accounting standards stipulated pursuant to these Instructions.

e) Other two statements including:

1. An announcement from the board of directors, within their knowledge and beliefs, there had been no problems would impact on the company's continuity during the next financial year.
2. An announcement from the board of directors of its responsibility for preparing the financial statements and for providing effective control system in the Company.

A2.2 Quantitative information about ASE

A2.2.1 Key Statistics of the ASE from 1997 to 2002

	1997	1998	1999	2000	2001	2002
Number of company listed	139	150	152	163	161	158
Market Capitalisation (JD)million	3,862	4,157	4,138	3,510	4,767	4,627
Value Traded (JD) million	355	464	389	335	669	782.4
Non-Jordanian Ownership of market Capitalisation (%)	39.1	43.9	43.2	41.7	38.5	39.4
Jordanian Ownership of market Capitalisation (%)	60.9	56.1	56.8	58.3	61.5	60.6

(Source ASE's Home Page, Market Information –Fact and Figures-History)

A2.2.2 Figures on the completed privatisation schemes in Jordan from 1998 to 2002

Year of Transaction	Company	Type of Transaction
1998	Public Transporation Corporation (PTC)	A ten years contract was signed with three local companies to operate the bus lines in Amman area against an annual fee.
1998	Jordan Cement Factories (JCFC)	The government sold 33% of JCFC' shares to Lafarge
1999	Water Authority of Jordan	The government signed a performance based management contract with the joint venture of France's Suez Lyonnaise des Eaux & Montegomery Watson-Arabtec Jardaneh.
1999	Ma'in Spa	A 30 years contract was signed with the French company ACCOR and the Jordanian company Aram
2000	Jordanian Telecommunication Company (JTC)	Sold 40% to French Telecom/Arab Bank consortium, 8% to the Social Security Corporation, and 1% to the provident fund of JTC
2000	Airport Duty Free Shops	Sold to Spanish Aldeasa, a multinational company specialised In free shops.
2001	Jordan Flight Catering company	80% sold to the British company Alpha
2002	Jordan Cement Factories Co.	Sold 14.28% to Palestinian National Authority
2002	Arab Potash Co.	52.86% slated for privatisation
2002	General Mining Co.	51% slated for privatisation
2002	Alia Hotal	100% slated for privatisation
2002	General Maintenance	25% slated for privatisation
2002	Machinery, Equipment & Maintenance	26% slated for privatisation
2002	Jordan Express Tourism & Transport	8.43% slated for privatisation
2002	Joradan National Shipping Lines	18.75% slated for privatisation

(Quoted from Goussous, 2002, pp. 2-4)

A2.2.3The entire portfolio of Jordan Investment Corporation (JIC)[47] (on offer for sale):

Company	Shares	Company	Shares
The Arab Investment Company	0.32%	Jordan Tobacco	39.58%
Jordan Phosphate Mines	60.37%	Safi Salt	43.46%
Jordan Petroleum Refinery	5.49%	Safi Complex	11.04%
Arab Engineering Industries	15%	Seven Arches Hotel	98.84%
Arab Company For Whit Cement Industry	15%	Royal Tours	30%
Machinery Equipment Renting & Maintenance	26.25%	Jordan Technology Group	23.08%
Jordan Spinning & Weaving	18%	National Shipping Lines	18.78%
Jordan Express Tourist Transport	8.43%	General Maintenance	25%
Public Mining Company	51%	Arab Potash Company	52.86%
National Textile& Plastic Industries	10%	Jordan Real Estate Company	87.05%
Jordan Industrial Estates Corporation	67.5%	Shabsough Complex	90%
Arab Co. For Drug Ind. Medical Appliances	0.28%	United Glass Industries	5%
Syrian& Jordanian Company For Industry	50%	Jordanian Duty Free Shops	0.44%
Jordanian Express Tourist Transport	8.43%	National Petroleum	99.89%
Agricultural Marketing & Processing	93.69%	Petra Drilling Company	100%
Jordan Livestock Development	37.5%	Modern Food Industries	26.32%
Jordanian Bio Industries Center	24.81%	Main Spa Complex	96.48%
Arab Gypsum Manufacturing Company	21.82%	Industrial Development Bank	2.89%
Modern Agricultural Investment	10.55%	Alia Hotel	100%
Jordanian Hospital & Tourism Education	33.33%	Arab Mining	1.01%

(Quoted from Goussous, 2002, pg. 4)

[47] JIC is a governmental institution which came into life in 1989 representing the government's investment arm (Goussous, 2002).

Appendix 3: The Current Sampled Companies Classified According to their major Industries Sectors as Follow:

Company's name	Sector	Company's name	Sector
1. Dar Al-Dawa Development & Investment	3	26. Jordan Industries & Match / JIMCO	5
2. Arab Electrical Industries	4	27. The Jordan Pipes Manufacturing	4
3. Middle East Pharm & Chem. Med. Appliances	3	28. General Engineering Industries	4
4. Jordan Sulpho Chemicals	5	29. The Public Mining	1
5. Jordan Cement Factories	1	30. Jordan Wood Industries / (JWICO)	4
6. International Ceramic Industries	4	31. Jordan Ceramic Industries	4
7. Ready Mix Concrete And Construction Supplies	4	32. National Steel Industry	4
8. Jordan Steel	1	33. Attanqeeb Construction Material Manufacturing	4
9. Jordan Petroleum Refinery	1	34. Jordan Tanning	2
10. Nutri Dar	2	35. The Industrial,Commercial & Agricultural	2
11. National Cable & Wire Manufacturing	4	36. Jordan Chemical Industries	5
12. Al - Ekbal Printing And Packaging	5	37. Arab Paper Converting & Trading	5
13. International Textile Manufacturing Co.	2	38. The Arab Chemical Detergents Industries	5
14. The Jordan Worsted Mills	4	39. The Arab International Food Factories	2
15. Woolen Industries	2	40. International For Optical & Hearing Aid Industries	3
16. Nayzak Dies & Moulds Manufacturing	4	41. El- Zay Ready Wear Manufacturing	2
17. Jordan Paper And Cardboard Factories	5	42. Jordan Dairy	2
18. Arab Center For Pharmaceuticals And Chemicals	3	43. Middle East Complex For Eng. Elec & Heavy Ind.	4
19. Arab Aluminium Industry/Aral	4	44. Arabian Steel Pipes	4
20. Livestock And Poultry	2	45. National Chlorine Industries	5
21. Advanced Pharmaceutical Industries	3	46. Universal Chemical Industries	5
22. Arab Investment & International Trade	5	47. Rum Aladdin Industries	4
23. Jordan Rockwool Industries	2	48. Jordan Magnesia	1
24. Arab Potash	1	49. International Tobacco And Cigarettes	2
25. Jordan Phosphate Mines	1	50. Jordan New Cable Company	4
		51. National Textile And Plastic Industries	2

Appendix (4): Sample of the Online Jordanian Companies in 2004

Banking	Service
1. Arab Bank	30. Jordanian Electric Power
2. Jordan Islamic Bank	31. Jordan Press Foundation (Al-Rai)
3. Jordan Kuwait Bank	32. Jordan Project for Tourism Development
4. Housing Bank for Trade and Finance	33. Jordan Press and Publishing (Al-Dustour)
5. Arab Jordan Investment Bank	34. Jordan Telecom
6. Industrial Developments Bank	35. Batelco Jordan
7. Union Bank	36. Jordan Loan Gurantee
8. Jordan Investment and Finance Bank	**Manufacturing**
9. Export and Finance Banks	37. Dar Al-Dawa Development
10. Cairo Amman Bank	38. Jordan Steel
11. Jordan National Bank.	39. Jordan Petroleum Refinery
12. Phildelphia Investment Bank	40. Al-Ekbal Printing
13. Arab Bank Corporation	41. Arab Centre for Pharmaceuticals
14. Bank of Jordan	42. Arab Aluminium Industry
15. General Bank of Jordan	43. Jordan Rock Wool
Insurance	44. Arab Potash
16. Al-Nisr Al-Arabi Insurance	45. Jordan Phosphate Mines
17. Amman Insurance	46. Jordan Wood Industries (JWICO)
18. Jerusalem Insurance	47. Jordan Ceramic Industries
19. Jordan French Insurance	48. Elzay Ready Wear Manufacturing
20. Arab Life & Accident Insurance	49. Arabian Steel Pipes Manufacturing
21. Jordan International Insurance	50. Jordan New Cable
22. Middle East Insurance	51. Union Tobacco and Cigarette Industry
23. General Arabia Insurance	52. National Aluminium Industry
24. United Insurance	53. Woollen Industry
25. Arab Orient Insurance	54. Cableco Jordan
26. The National Ahlia Insurance	55. Ad-Dulayl Industrial Park
27. Arab Jordanian Insurance	
28. Arab Insurance	
29. Jordan Insurance	

Appendix 5: The Printed Mandatory Disclosure Checklist for 1997

Mandatory disclosure index in 1997
General Information
1.The company's name
2.The country of the incorporation
3.The date and the period covered by the financial statements
4.Brief description of the nature company's activities
5.The legal form of the company
6.The report currency
7.Corresponding figures for the preceding period
Balance Sheet
8.Current assets classified
9.Long-term assets, classified
10.Accumulated depreciation
11.Intangible assets
12.Other assets classified
13.Current liabilities classified
14. Long-term liabilities, classified
15.Other liabilities classified
16.Shareholders capital classified
Income Statement Items
17.Sales and other operating revenues
18.Amount of depreciation
19.Interest income
20.Income from investments
21.Interest expense
22.Tax expense
23.Extraordinary charges
24.Extraordinary credits
25.Significant inter-company transactions
26.Net profit or loss
Cash Flow Statement
27.The cash flow from the main company operations activities;
28.Cash flow from investments activities
29.Cash flow from financing activities classified
30.Balances at the beginning and end of the year
31.Accounting Policies
32.Director's reports
33.Auditor's Reports

Appendix 6: The Printed Mandatory Disclosure Checklist for 2002

Mandatory disclosure index in 2002
A) IASs Mandatory Items
General Information
1. The name of company
2. Whether the annual report cover individual or a group companies
3. The date of the financial information
4. The period covered by the financial information
5. The reporting currency
6. The level of precision used in the presentation of figures
7. The fact of that the comply with IASs
8. Comparative figures of the annually financial information
Accounting Policy
9. The basis of preparation of the financial statements
10. Any accounting policies selected and applied for significant transactions and events.
Balance Sheet Items
11. Current assets classified
12. Non current (Fixed) assets classified
13. Other assets classified
14. The accumulated depreciation of the fixed assets and changes occurred
15. Intangible assets
16. Current liabilities classified
17. Non current liabilities classified
18. Total amount of other liabilities
19. Total amount of provision of taxes payable and other provisions
20. Capital, Shareholders', and owner's equity Interests classified
Income Statement
21. Sales
22. Costs of sales
23. Gross profit
24. Costs of the operating activities and any expenses (administrative, selling, general, and minority interest
25. Profit or loss from ordinary activities
26. Other revenue
27. Other expense
28. Net profit (or loss) of the period before tax
29. Tax expense/ Income taxes
30. Net profit after tax
31. The amount of dividends per share
32. An analysis of expenses using a classification based on either the nature or their function within the enterprise
33. Depreciation for expense and staff costs classified by function
34. Amortization for expense classified by function
Statement of Change in Equity
35. The net profit or loss for the period
36. Each item of income and expense, gain or loss which is recognized directly in equity, and the total of those items
37. The cumulative effect of change in accounting policy and the correction of fundamental errors dealt
38. Capital transactions with owners

39. Distributions to owners
40. The balance of accumulated profit or loss at the beginning of the period and at the balance sheet date, and movements for the period; and
41. Reconciliation between the carrying amount of each class of equity capital,
42. Each reserve at the beginning and end of the period, separately disclosing each movement.
Cash Flow Statement
43. The cash flow from the main company operations activities classified
44. The cash flow from the investments activities classified
45. The cash flow from the financing activities classified
46. The balances at the beginning and at end of the period
B) JSC mandatory Items
47. The Chairman's speech
48. The Board of Director's report, included
49. Description of any governmental protection or privileges with the period such is applied thereto.
50. A description of any patents or concessions that were granted to the company
51. Description of any decisions adopted by the Government, international organizations or otherwise which has material effect on the company's operations, products or competitive ability.
52. To which extend the company abides with the international quality standards
53. The Company's accomplishments with figures
54. A description of significant events that encountered the company during the fiscal year.
55. The competitive status of the company within the sector of its activities
56. The Company main markets its share in the domestic market and in foreign markets if possible
57. Degree of dependence on specific providers and/or main customers where such constitutes (10%) or more of aggregate purchases and/or sales or revenues respectively
58. The financial effect of extraordinary transactions
59. Time chain of incurred profits or losses, distributed profits, the shareholder's net equity and , the prices of securities issued by the company, for a period of no less than five years
60. Analysis of the company's financial status and actions results during the fiscal year.
61. Significant future developments including any expansions or new projects,
62. The company's future plan for at least one coming year
63. The expectations of the board of directors of the company's actions results
64. Amount of auditing fees for the company and the affiliates thereof
65. Description of the main company's activities, and geographical locations for each activity
66. Volume of capital investment in each activity
67. Number of employees in each activity
68. Description of affiliated companies
69. Nature of affiliated companies' work and fields of their activities
70. Names of the members of the board of directors
71. Names and titles of senior executive managers and a resume of each
72. Number of securities issued by the Company
73. Securities owned by any member of the board of directors and senior executive manager and their relatives, and companies controlled by any of them, compared with the preceding year.
74. Privileges and bonuses that the Chairman and members of the board of directors and senior executive managers enjoy during the fiscal year
75. All amounts received by them as wages, fees, salaries, bonuses and others
76. Amounts paid to them as travel and transportation expenses inside and outside the Kingdom.
77. Donations and grants made by the Company during the fiscal year
78. Names of senior shareholders of shares issued by the Company
79. The number of shares owned by each of senior shareholders where such ownership amounts to 5% or more, compared with the preceding year.

80. Organizational structure of the issuing company
81. Company appointing policy
82. Number of employees
83. The employees' qualification categories
84. The employees' turn-over ratio
85. The employees' rehabilitation and training programs
86. Contracts, projects and commitments concluded by the issuing company with the chairman or members of the board of directors, the director general, any employee of the company or their relatives.
87. The company's contribution in serving the environment and the local society
88. The company's annual financial statements audited by its auditors, compared with the preceding year, which shall include the following: balance sheet, profits and losses account, cash-flow list, changes in the shareholders equity.
89. The company's auditor's report on the company's annual financial statements including a statement that auditing procedures have been conducted according to IAS.
90. A declaration from the company's board of directors that, according to the board's knowledge and beliefs, there had been no significant matters affecting the continuity of the company during the following fiscal year.
91. A declaration from the company's board of directors of its responsibility for preparing the financial statements and for providing effective control system in the company

Appendix 7: The Printed Voluntary Disclosure Checklist for 1997

Checklist of Voluntary Disclosure in 1997
General Information
1. Brief history of company
2. General outlook of the economy
3. Discussion of major industry trends
4. Graphs and photos
5. Personal characteristics of directors(age, education)
Notes To Balance Sheet
6. Breakdown the cash into cash on hand and at the bank
7. Details on debaters and any accounts receivable
8. Breakdown of inventories into raw material, work in process and finished goods
9. Any change or movements accrued on the fixed assets during the year
10. Any investments of the company
11. Details on any creditors and any account payable
12. Details on loans of the company
13. Information on interests rates
14. Total amount of provision of taxes payable and other provisions
15. Information about shareholders and dividends reserves
16. Information about authorized capital
Notes To Income Statement
17. Breakdown of sales by major product lines, customer classes or geographical locations
18. Breakdown of cost of sales
19. Breakdown of net income by major product lines, customer classes or geographical locations
20. Breakdown of other sources of revenues.
21. An analysis of expenses using a classification based on either the nature or their function
Other Information
22. Financial instruments
The JSC Items
23. The chairman's speech
24. The board of director's report
25. Description of any governmental protection or privileges with the period such is applied thereto.
26. A description of any patents or concessions that were granted to the company
27. Description of any decisions adopted by the government, international organizations or otherwise which has material effect on the company's operations, products or competitive ability,
28. To which extend the company abides with the international quality standards
29. The company's accomplishments with figures
30. A description of significant events that encountered the company during the fiscal year.
31. The competitive status of the company within the sector of its activities
32. The company main markets its share in the domestic market and in foreign markets if possible
33. Degree of dependence on specific providers and/or main customers where such constitutes (10%) or more of aggregate purchases and/or sales or revenues respectively
34. The financial effect of extraordinary transactions
35. Time chain of incurred profits or losses, distributed profits, the shareholder's net equity and , the prices of securities issued by the company, for a period of no less than five years
36. Analysis of the company's financial status and actions results during the fiscal year.

37. Significant future developments including any expansions or new projects,
38. The future plan for at least one coming year
39. The expectations of the board of directors of the company's actions results
40. Amount of auditing fees for the company and the affiliates thereof
41.Description of the main company's activities, and geographical locations for each activity
42. Volume of capital investment in each activity
43. Number of employees in each activity
44. Description of affiliated companies
45. Nature of affiliated companies' work and fields of their activities
46. Names of the members of the board of directors
47. Names and titles of senior executive managers and a resume of each
48. Number of securities issued by the company
49. Securities owned by any member of the board of directors and senior executive manager and their relatives, and companies controlled by any of them, compared with the preceding year.
50. Privileges and bonuses that the chairman and members of the board of directors and senior executive managers enjoy during the fiscal year
51. All amounts received by them as wages, fees, salaries, bonuses and others
52. Amounts paid to them as travel and transportation expenses inside and outside the kingdom.
53. Donations and grants made by the company during the fiscal year
54. Names of senior shareholders of shares issued by the company
55. The number of shares owned by each of senior shareholders where such ownership amounts to 5% or more, compared with the preceding year.
56. Organizational structure of the issuing company
57. Company appointing policy
58. Number of employees
59. The employees' qualification categories
60. The employees' turn-over ratio
61. The employees' rehabilitation & training programs
62. Contracts, projects and commitments concluded by the issuing company with the chairman or members of the board of directors, the director general, any employee of the company or their relatives.
63. The company's contribution in serving the environment and the local society
64. The company's annual financial statements audited by its auditors, compared with the preceding year, which shall include the following: the balance sheet. profits and losses account. cash-flow list. changes in the shareholders equity.
65. The auditor's report on the company's annual financial statements including a statement that auditing procedures have been conducted according to IASs.
66. A declaration from the company's board of directors that, according to the board's knowledge and beliefs, there had been no significant matters affecting the continuity of the company during the following fiscal year.
67. A declaration from the company's board of directors of its responsibility for preparing the financial statements and for providing effective control system in the company

Appendix 8: The Printed Voluntary Disclosure Checklist for 2002

Checklist of Voluntary Disclosure in 2002
General Information
1. Brief history of company
2. General outlook of the economy
3. Discussion of major industry trends
4. Graphs and photos
5. Personal characteristics of directors(age, education)
Notes to Balance Sheet
6. Breakdown the cash into cash on hand and at the bank
7. Details on debtors and any accounts receivable
8. Breakdown of inventories into raw material, work in process and finished goods
9. Any change or movements accrued on the fixed assets during the year
10. Any investments of the company
11. Details on any creditors and any account payable
12. Details on loans of the company
13. Information on interests rates
14. Total amount of provision of taxes payable and other provisions
15. Information about shareholders and dividends
16. Information about authorized capital
Notes to Income Statement
17. Breakdown of sales by major product lines, customer classes or geographical locations
18. Breakdown of cost of sales
19. Breakdown of net income by major product lines, customer classes or geographical locations
20. Breakdown of other sources of revenues
Other Information
21. Financial instruments

Appendix 9: Internet Voluntary Disclosure 2004

The Internet Voluntary Checklist
General Information
1. Company's name
2. Company's news and events
3. List of the site parts and link to any part
4. Search engine box
5. E-mail contact
6. Mailing contact
7. Presentation formats by HTML
8. Presentation formats PDF
9. Two versions of the site Arabic and English
10. Information enquires service
Financial Reporting Information
11. Complete annual report as one document
12. Names of the board of directors' members
13. The chairman's speech
14. The board of director's report
15. Company's profile
16. Brief summary of company's history
17. Brief summary about top managers
18. Brief summary about company's human rescores
19. The company's product or services
20. Company accomplishments of last year with figures
21. The company's future plan for at least one coming year
22. Organizational structure chart of the company
23. Auditors' report
24. Balance sheet
25. Income statement
26. Cash flow statement
27. Statement of changes in equity
28. Notes and accounting policies

Appendix 10: The dependent variables in both years 1997 & 2002

Co. No.	ORI		MIR		VIR	
	1997	2002	1997	2002	1997	2002
1	0.64	0.83	0.84	0.86	0.54	0.71
2	0.60	0.72	0.94	0.77	0.41	0.52
3	0.60	0.81	0.79	0.85	0.49	0.67
4	0.56	0.61	0.90	0.66	0.41	0.43
5	0.82	0.86	0.94	0.85	0.77	0.90
6	0.49	0.72	0.73	0.78	0.38	0.48
7	0.48	0.79	0.76	0.85	0.34	0.52
8	0.62	0.86	0.90	0.86	0.49	0.86
9	0.87	0.94	0.90	0.93	0.86	1.00
10	0.55	0.81	0.80	0.89	0.43	0.52
11	0.56	0.72	0.80	0.77	0.45	0.52
12	0.62	0.89	0.93	0.95	0.48	0.62
13	0.54	0.60	0.90	0.66	0.38	0.38
14	0.62	0.82	0.79	0.84	0.54	0.76
15	0.56	0.62	0.83	0.66	0.43	0.43
16	0.54	0.56	0.87	0.59	0.39	0.43
17	0.54	0.8	0.90	0.86	0.38	0.57
18	0.60	0.77	0.84	0.81	0.48	0.62
19	0.60	0.82	0.87	0.87	0.48	0.62
20	0.68	0.88	0.90	0.87	0.57	0.90
21	0.51	0.75	0.75	0.81	0.39	0.52
22	0.56	0.73	0.90	0.80	0.39	0.43
23	0.62	0.72	0.93	0.79	0.48	0.48
24	0.84	0.95	0.90	0.93	0.81	1.00
25	0.81	0.91	1.00	0.93	0.73	0.81
26	0.43	0.74	0.59	0.83	0.36	0.38
27	0.61	0.74	1.00	0.81	0.43	0.48
28	0.48	0.63	0.72	0.67	0.36	0.48
29	0.47	0.78	0.97	0.88	0.23	0.38
30	0.57	0.85	0.55	0.91	0.57	0.62
31	0.64	0.82	0.93	0.86	0.51	0.67
32	0.56	0.76	0.79	0.83	0.44	0.48
33	0.59	0.64	0.93	0.69	0.43	0.48
34	0.54	0.81	0.77	0.87	0.43	0.52
35	0.65	0.88	0.81	0.90	0.56	0.81
36	0.49	0.81	0.62	0.90	0.43	0.48
37	0.62	0.75	0.87	0.81	0.49	0.52
38	0.50	0.83	0.62	0.89	0.44	0.62
39	0.66	0.71	0.79	0.77	0.59	0.48
40	0.53	0.71	0.86	0.79	0.38	0.38
41	0.66	0.93	0.86	0.98	0.56	0.76
42	0.58	0.78	0.83	0.83	0.46	0.57
43	0.66	0.91	0.83	0.93	0.58	0.81
44	0.63	0.81	0.79	0.81	0.55	0.81
45	0.67	0.88	0.93	0.91	0.54	0.76
46	0.51	0.74	0.66	0.79	0.44	0.52
47	0.59	0.84	0.76	0.87	0.52	0.71
48	0.72	0.85	0.97	0.90	0.61	0.67
49	0.68	0.88	0.90	0.87	0.58	0.90
50	0.57	0.75	0.79	0.78	0.46	0.62
51	0.62	0.81	0.93	0.84	0.48	0.67

REFERENCES

Abayo, A. G., Adams, C. A. and Roberts, C. B. (1993), 'Measuring the Quality of Corporate Disclosure in Less Developing Countries: the Case of Tanzania', *Journal of International Accounting, Auditing & Taxation*, Vol. 2, No. 2, pp. 145-158.

Abd-Elsalam, O. H. and Weetman, P. (2003), 'Introducing International Accounting Standards to an Emerging Capital Market: Relative Familiarity and Language Effect in Egypt', *Journal of International Accounting, Auditing & Taxation*, Vol. 12, No. 1, pp. 63-84.

Adullatif, M.A. (2003), *The Role of Auditing in Jordan: An Empirical Study of Responsibilities and Expectations*, Unpublished Doctoral Thesis, University of Manchester, UK.

Abu-Baker, N. (1995), *Use of an Accounting Framework As an Alternative Approach for Corporate Social Responsibility and Disclosure Practices in Jordan*, Unpublished Doctoral Thesis, Dundee University, UK.

Abu-Nassar, M. (1993), *The Development of Financial Reporting in Jordan, A Survey of Preparers' and Users' Attitudes and Reporting Practices*, Unpublished Doctoral Thesis, University of Kent, UK.

Abu-Nassar, M. and Rutherford, B. A. (1996), 'External Users of Financial Reports in Less Developed Countries: the Case of Jordan', *British Accounting Review*, Vol. 28, No. 1, pp. 73-87.

Abu-Nassar, M. and Rutherford, B. A. (2000), 'External Reporting in Less Developed Countries with Moderately Sophisticated Capital Markets: A Study of User Needs and Information Provision in Jordan', *Research in Accounting in Emerging Economics*, Vol. 4, pp. 227-246.

Adelegan, O. J. (2003), 'Capital Market Efficiency and the Effects of Dividend Announcements on Share Prices in Nigeria', *African Development Review*, Vol. 15, No 3, pp. 218-236.

Ahmed, K. and Courtis, J. K. (1999), 'Associations between Corporate Characteristics and Disclosure Levels in Annual Reports: A Meta-Analysis', *British Accounting Review*, Vol. 31, No. 1, pp. 35-61.

Ahmed, K. and Nicholls, D. (1994), 'The Impact of Non-Financial Company Characteristics on Mandatory Disclosure Compliance in Developing Countries: The Case of Bangladesh', *The International Journal of Accounting*, Vol. 29, No. 1, pp. 62-77.

Akerlof, G.A. (1970), 'The Market for 'Lemons': Quality Uncertainty and the Market Mechanism', *Quarterly Journal of Economics*, Vol. 84, No. 3, pp. 488-500.

AL- Barmawe, Y. (2003), *Economy, Ad-Dustour news- paper* (Arabic News), at the 1st of January.

AL-Dagany, M. (1994), 'Jordanian Companies Law: A critical comparative study', *Derasat*, Vol. 21(A), No. 5, pp. 139-189.

Al-Hussaini, A. N. (2001), *The Quality of Financial Reporting Practices in Kuwait*, Unpublished Doctoral Thesis, University of Wales, Cardiff, UK.

Allam, A. and Lymer, A. (2002), Developments in Internet Financial Reporting: Review & Analysis Across 5 Developed Countries, *Working paper at University of Birmingham, UK.*

Al-Modahki, J. S. (1995), *An Empirical Study of Accounting Disclosure in the Kingdom of Saudi Arabia*, Unpublished Doctoral Thesis, University of Exeter.

Al-Mulhem, A. A. (1997), *An Empirical Investigation of the Level of Financial Disclosure by Saudi Arabian Corporations*, Unpublished Doctoral Thesis, University of Hull, UK.

Alrazeen, A. (1999), *The Quality of Annual Financial Reporting of Saudi Corporations: Users' Perceptions and Companies' Practices*, Unpublished Doctoral Thesis, Cardiff University, UK.

Alrazeen, A. and Karbhari, Y. (2004), 'Interaction Between Compulsory and Voluntary Disclosure in Saudi Arabian Corporate Annual Reports, *Managerial Auditing Journal*, Vol. 19, No. 3, pp. 351-360.

ASB (1999), *Statement of Principles for Financial Reporting*, London: ASB Publications

Ashbaugh, H., Johnstone, K.M. and Warfield, T.D. (1999), 'Corporate Reporting on the Internet', *Accounting Horizons*, Vol. 13, No. 3, pp. 241–258.

Barrett, M. E. (1975), 'Annual Report Disclosure: Are American Reports Superior?', *Journal of International Business Studies*, Vol. 6, No. 2, pp. 15-24.

Barrett, M. E. (1976), 'Financial Reporting Practices: Disclosure and Comprehensiveness in an International Setting', *Journal of Accounting Research*, Vol. 14, No. 1, pp.10-25.

Bartov, E. and Bodnar, G.M. (1996), 'Alternative Accounting Methods, Information Asymmetry and Liquidity: Theory and Evidence', *The Accounting Review*, Vol. 71, No 3, pp, 397-418.

Beattie, V., McInnes, B. and Fearnley, S. (2004), 'A methodology for analysing and evaluating narratives in annual reports: a comprehensive descriptive profile and metrics for disclosure quality attributes', *Accounting Forum*, Vol. 28, pp. 205–236.

Beattie, V. and Pratt, K. (2003), 'Issues concerning web-based business reporting: an analysis of the views of interested parties', *The British Accounting Review*, Vol. 35, pp. 155–187.

Botosan, C.A. (1997), 'Disclosure level and the cost of equity capital', *The Accounting Review*, Vol. 72, No. 3, pp. 323–350.

Bonson, E. and Escobar, T. (2002), 'A Survey on Voluntary Disclosure on the Internet. Empirical Evidence from 300 European Union Companies', *The International Journal of Digital Accounting Research*, Vol. 2, No. 1, pp. 27-51.

Bromwich, M. (1992), *Financial Reporting Information and Capital Markets*, London: Pitman Publishing.

Buckland, R., Suwaidan, M. and Thomson, L. (2000), 'Companies' Voluntary Disclosure Behaviour when Raising Equity Capital: A Case Study of Jordan', *Research in Accounting in Emerging Economies*, Vol. 4, pp. 247-266.

Burrell, G. and Morgan, G. (1979), *Sociological Paradigms and Organisational Analysis*, London: Heinemann.

Buzby, S.L. (1975), 'Company Size, Listed Versus Unlisted Stock, and the Extent of Financial Disclosure', *Journal of Accounting Research*, Vol. 13, No. 1, pp. 16-37.

Cairns, D. (2000), 'IAS Lite is Alive and Well", *Accountancy*, Vol. 127, No. 1293 (May), pp. 98-99.

Cairns, D. (2001), *International Accounting Standards Survey 2000 - An Assessment of the use of IASs in the Financial Statements of Listed Companies*, London: Colour TCR.

Carmines, E.G. and Zeller, R.A. (1979), *Reliability and Validity Assessment*, Series: Quantitative Applications in the Social Sciences, London: Sage.

Cerf, R.A. (1961), *Corporate Reporting and Investment Decisions*, The University of California Press, Berkeley.

Chamisa, E. E. (2000) 'The Relevance and Observance of the IASC Standards in Developing Countries and the Particular Case of Zimbabwe', *International Journal of Accounting*, Vol. 35, No. 2, pp. 267-286.

Chau, G. K. and Gray, S. J. (2002), 'Ownership Structure and Corporate Voluntary Disclosure in Hong Kong and Singapore', *International Journal of Accounting*, Vol. 37, No. 2, pp. 247-265.

Cheng, C.S.A., Hopwood, W.S. and McKewon, J.C. (1992), 'Non-Linearity and Specification Problems in Unexpected Earnings Response Regression Model', *The Accounting Review*, Vol. 67, No. 3, pp. 579-598.

Chow, C. W. and Wong-Boren, A. (1987), 'Voluntary Financial Disclosure by Mexican Corporations', *Accounting Review*, Vol. 62, No. 3, pp. 533-541.

Choi, F. D. S. (1973), 'Financial Disclosure and Entry to the European Capital Market', *Journal of Accounting Research*, Vol. 11, No.2, 159-175.

Company Act No. (22), for the year 1997, Amman: Ministry of Trade & Industry.

Company Act No. (22), for the year 1997 and its amendments of 2002, Amman: Ministry of Trade & Industry.

Cook, J. (1999), *Chapter 4. Information and communications technology: The Internet and company law*, Available at: www.dti.gov.uk/cld/chapter4may.pdf.

Cooke, T. E. (1989), 'Voluntary Corporate Disclosure by Swedish Companies', *Accounting and Business Research*, Vol. 19, No. 74, pp. 113-124.

Cooke, T. E. (1991), 'An Assessment of Voluntary Disclosure in the Annual Reports of Japanese Corporations', *International Journal of Accounting*, Vol. 26, No. 1, pp. 174-189.

Cooke, T. E. (1992), 'The Impact of Size, Stock Market Listing and Industry Type on Disclosure in the Annual Reports of Japanese Listed Corporations', *Accounting and Business Research*, Vol. 22, No. 87, pp. 229-237.

Cooke, T. E. (1993), 'Disclosure in Japanese Corporate Annual Reports', *Journal of Business Finance & Accounting*, Vol. 20, No. 4, pp. 521-535.

Cooke, T. E. (1998), 'Regression Analysis in Accounting Disclosure Studies', *Accounting and Business Research*, Vol. 28, No. 3, pp. 209-224.

Cooke, T.E. and Wallace, O. (1989), 'Global Survey of Corporate Disclosure Practices and Audit Firms: A Review Essay', *Journal of Accounting and Business Research*, Vol. 20, No. 77, pp. 47-57.

Cooke, T.E. and Wallace, O. (1990), 'Financial Disclosure Regulation and its Environment: A Review and Further Analysis', *Journal of Accounting and Public Policy*, Vol. 9, pp. 79-110.

Cooper, K. and Keim, G. D. (1983), 'The Economic Rationale for the Nature and Extent of Corporate Financial Disclosure Regulation: A Critical Assessment', *Journal of Accounting and Public Policy*, Vol.2, pp. 189-205.

Core, J. E., (2001) 'A Review of the Empirical Disclosure Literature: Discussion', *Journal of Accounting and Economics*, Vol. 31, pp. 441-456.

Coy, D. and Dixon, K. (2004), 'The Public Accountability Index: Crafting a Parametric Disclosure Index for Annual Reports', *The British Accounting Review*, Vol. 36, No. 1, pp. 79-106

Craven, B.M. and Marston, C.L (1999), 'Financial reporting on the Internet by leading UK companies', *European Accounting Review*, Vol. 8, No. 2, pp. 321–333.

Curuk, T. (1999), *An Analysis of Factors Influencing Accounting Disclosure in Turkey*, Unpublished Doctoral Thesis, University of Exeter, UK.

Debreceny, R. and Gray, G. (1999) 'Financial reporting on the Internet and the external audit', *European Accounting Review*, Vol. 8, No. 2, pp. 335–50.

Debreceny, R. and Gray, G. (2001), 'The production and use of semantically rich accounting reports on the Internet: XML and XBRL', *International Journal of Accounting Information Systems*, Vol. 1, No. 2, pp. 47–74.

Debreceny, R., Gray, G. and Rahman, A. (2002), 'The determinants of Internet Financial Reporting, *Journal of Accounting and Public Policy*, Vol. 21, pp. 371-394.

Deller, D., Stubenrath, M. and Weber, C. (1999) 'A survey on the use of the Internet for investor relations in the USA, UK and Germany', *European Accounting Review*, Vol. 8, No. 2, pp. 351–64.

Depoers, F. (2000), 'A Cost-Benefit Study of Voluntary Disclosure: Some Empirical Evidence from French Listed Companies', *European Accounting Review*, Vol. 9, No. 2, pp. 245-263.

Dunn, J. (1996), *Auditing Theory and Practice*, Second Edition, London: Prentice Hall.

Dunn, P. E. (2001), 'Standards for Accounting (UK), Professional Scheme, Accounting Technician Scheme', *Relevant to Paper 1.1, Paper C1. Available at:* http://www.accaglobal.com/publications/studentaccountant/28423

Dye, R. (1986), 'Proprietary and non-proprietary disclosures', *Journal of Business*, Vol. 59, No. 2, pp. 331–366.

Edwards, P. and Smith, R.A. (1996), 'Competitive Disclosure and Voluntary Disclosure: The Case of Segmental Reporting', *British Accounting Review*, Vol. 28, pp. 155-172.

Einhorn, E. (2005), 'The Nature of the Interaction between Mandatory and Voluntary Disclosures', *Journal of Accounting Research*, Vol. 43, No. 4, pp. 593-621.

El-Gazzer, S.M., Finn, P.M. and Jacob, R. (1999), 'An Empirical Investigation of Multinational Firms' Compliance with International Accounting Standards', *The International Journal of Accounting*, Vol. 34, No. 2, pp.239-248.

Elliott, B. and Elliott, J. (2003), *Financial Accounting and Reporting*, Seventh Edition, Harlow: Prentice Hall.

Ettredge, M., Richardson, V. J. and Scholz, S. (2001), 'The Presentation of Financial Information at Corporate Web Sites', *International Journal of Accounting Information Systems*, Vol. 2, pp. 149-168.

Ettredge, M., Richardson, V. J. and Scholz, S. (2002), 'Dissemination of Information for Investors at Corporate Web Sites', *Journal of Accounting and Public Policy*, Vol. 21, pp. 357-369.

Fama, E. F. (1970), 'Efficient Capital Markets: A Review of Theory and Empirical Work', *Journal of Finance*, Vol. 25, pp. 383-417.

FASB (1978), '*Objectives of Financial Reporting by Business Enterprises*', Statement of Financial Accounting Concepts No.1, Financial Accounting Standards Board.

FASB (2000), '*Business Reporting Research Project: Electronic Distribution of Business Information*', Financial Accounting Standards Board. Steering Committee Report Series

FASB (2004), *Codification and Retrieval Project Report: The FASB Embark on Historic Change to the Structure of U.S. Accounting Standards*, September, available at: www.fasb.org/articles&reports/

Field, A., (2000), *Discovering Statistics Using SPSS for Windows*, London: Sage.

Fields, T. D., Lys, T. Z., and Vincent, L. (2001), 'Empirical research on accounting choice', *Journal of Accounting and Economics*, Vol. 31, pp. 255-307.

Firth, M. (1979a), 'The Impact of Size, Stock Market Listing, and Auditors on Voluntary Disclosure in Corporate Annual Reports', *Accounting and Business Research*, Vol. 9, No. 36, pp. 273-280.

Firth, M. (1979b), 'The Disclosure of Information by Companies', *OMEGA*, Vol. 7, No. 2, pp. 129-135.

Firth, M. (1980), 'Raising Finance and Firms Corporate Reporting Policies', *ABACUS*, Vol. 16, No. 2, pp. 100-115.

Foster, G. (1986), *Financial Statement Analysis*, New Jersey: Prentice-Hall.

Gibbins, M., Richardson, A. and Waterhouse, A. J. (1990), 'The Management of Corporate Financial Disclosure: Opportunism, Ritualism, Policies and Processes', *Journal of Accounting Research*, Vol. 28, No. 1, pp. 121-143.

Glaum, M. and Street, D.C. (2003), 'Compliance with the Disclosure Requirements of Germany's New Market: IAS versus US GAAP', *Journal of International Financial Management and Accounting*, Vol. 14, No. 1, pp. 64-100.

Goussous, R. (2002a), 'Economic Report: Economic Highlights', *Research & Studies Investment Banking & Capital Markets*, Vol. II, Issue 1 (January)

Goussous, R. (2002b), 'Economic Report: Privatisation update', *Research & Studies Investment Banking & Capital Markets*, Vol. III, Issue 1 (February)

Gowthorpe, C. and Amat, O. (1999), 'External Reporting of Accounting and Financial Information via the Internet in Spain', *European Accounting Review*, Vol. 8, No. 2, pp. 365-371.

Gray, S. J. (1988), 'Towards a theory of cultural influence on the development of accounting systems internationally', *ABACUS*, Vol. 24, No. 1, pp. 1-15.

Haasbroek, F. (2002), *Dissemination of Annual Report Information on the Internet by South African companies*, MA Dissertation, at Rand Afrikaans University, available at http://etd.rau.ac.za/theses/available/etd-03022004-123439/

Haider, S. A. (2004), '*Auditors and the Public Trust*', Dawn, available at, http://www.dawn.com/2004/04/19/ebr8.htm].

Haniffa, R. and Cooke, T. E. (2002) 'Culture, Corporate Governance and Disclosure in Malaysian Corporations', *ABACUS*, Vol. 38, No. 3, pp. 317-349.

Healy, P. M. and Palepu, K. G. (2001), 'Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature', *Journal of Accounting and Economics*, Vol. 31, pp. 405–440.

Hedlin, P. (1999), 'The Internet as a Vehicle for Investor Relations: The Swedish Case', *European Accounting Review*, Vol. 8, No. 2, pp. 373-379.

Helles, S. A. S. (1992), *The Evolution of Accounting in Developing Countries: the Study of Jordan*, Unpublished Doctoral Thesis, University of Hull.

Holland, J. (2005), 'A Grounded Theory of Corporate Disclosure', *Accounting and Business Research*, Vol. 35, No. 3, pp. 249-267.

Holmes, G., Sugden, A. and Gee, P. (2002), *Interpreting Company Reports and Accounts*, Eighth Edition, London: Prentice Hall.

Hopper, T. and Powell, A. (1985), 'Making Sense of Research into the Organisational and Social Aspects of Management Accounting: A Review of its Underlying Assumptions', *Journal of Management Studies*, Vol. 22, No. 5, pp. 429-465.

Hossain, M., Tan, L. M. and Adams, M. (1994), 'Voluntary Disclosure in an Emerging Capital Market: Some Empirical Evidence from Companies Listed on the Kuala Lumpur Stock Exchange', *International Journal of Accounting*, Vol. 29, No. 4, pp. 334-351.

Hussey, J. and Hussey, R. (1997), *Business Research*, London: Macmillan Press.

Hutcheson, G. and Sofroniou, N. (1999), *The Multivariate Social Scientist*, London: Sage.

IASC (1999), *Business Reporting on the Internet*: by Lymer, A., Debreceny, R., Gray, G. L. and Rahman, A., London: IASC.

IMF (International Monetary Fund, 2004), Jordan: *Selected Issues and Statistical Country Report*, No. 04/121

Inchausti, B. G. (1997), 'The Influence of Company Characteristics and Accounting Regulation on Information Disclosed by Spanish Firms', *European Accounting Review*, Vol. 6, No. 1, pp. 45-68.

Income Tax Law No, 57 of 1985, Amman: Ministry of Finance, Income Tax Department.

Iman, R. L. and Conover, W. H. (1979), 'The Use of Rank Transformation in Regression', *TECHNOMERTRICS*, Vol. 21, No. 4, pp. 499-509.

Jensen, M. C. and Meckling, W.H. (1976), 'Theory of Firm: Managerial Behavior, Agency Costs and Ownership Structure', *Journal of Financial Economics*, Vol. 3, No. 4, pp. 146-153.

Jones, M.J. and Shoemaker, P.A. (1994), 'Accounting Narratives: A Review of Empirical Studies of Content and Readability', *Journal of Accounting Literature*, Vol. 13, pp.142-184.

Jones, M.J. and Xiao, J.Z. (2003), 'Internet Reporting: Current Trends and Trends by 2010', *Accounting Forum*, Vol. 27, No. 2, pp. 132-165.

Jordan Securities Commission (1997), *Securities Law No (23)*, Amman: Jordanian Securities Commission Publication.

Jordan Securities Commission (1997), *Jordanian Shareholding Companies Guide*, Amman: Jordanian Securities Commission Publication.

Jordan Securities Commission (1998), *Disclosure Requirements and Accounting, Auditing Standards and the Requirements for Auditors of Entities Subject to the Commission's monitoring*, Publications No. 1, Amman: Jordanian Securities Commission Publication.

Jordan Securities Commission (2002), *Jordanian Shareholding Companies Guide*, Amman: Jordanian Securities Commission Publication.

Jordan Securities Commission (2004), *Jordanian Shareholding Companies Guide*, Amman: Jordanian Securities Commission Publication.

Joshi, P. L. and Sayel, R. (2002), 'The Adoption of International Accounting Standards by Small and Closely Held Companies: Evidence from Bahrain', *International Journal of Accounting*, Vol. 37, No. 4, pp. 429-440.

Kanaan, T. H. (2001), 'Impact of the Jordan-USA Free Trade Area Agreement on the Banking and Financial Services Sector', *The Arab Bank Review*, Vol. 3, No 2, pp. 45-51.

Kanaan, T., H. and Kardoosh, M. A. (2002), The Story of Economic Growth in Jordan: 1950-2000, *Amman, October, available at: http://www.erf.org.eg/html/erp/GRP_Sep03/Jordan-develop.pdf*

Kapaya, G. (2000) 'International Accounting Standards and Accounting in Developing/Emerging Nations - How about A Fresh Start?' *Paper presented at the International Association for Accounting Education and Research (IAAER) Conference, 6–7 October, Kobe, Japan.*

Knapp M. (1996), *Financial Accounting - A Focus On Decision Making*, USA: West Publishing Company.

Lang, M. and Lundholm, R. (1993), 'Cross-sectional Determinates of Analysts' Ratings of Corporate Disclosures, *Journal of Accounting Research*, Vol. 31, No.2, pp. 246-271

Lee, T. (1981), 'Developments in Company Financial Reporting: a History and Introduction', In Lee, T., (ed.) *Developments in Financial Reporting*, Southampton, UK: Philip Allan, pp. 1-26.

Leventis, S.N. and Weetman. P. (2000), 'Exploring and Explaining Variations in Voluntary Disclosure in a European Emerging Capital Market: Evidence from the Athens Stock Exchange', *Paper Submitted to the BAA[S] 2000 Regional Conference University of Aberdeen.*

Lodhia, S. K., Allam, A. and Lymer, A. (2004), 'Corporate Reporting on the Internet in Australia: An Exploratory Study', *Australian Accounting Review*, Vol. 14, No.3, pp. 64-71.

Lybaert, N. (2002), 'On-Line Financial Reporting. An Analysis of the Dutch Listed Firms', *The International Journal of Digital Accounting Research*, Vol. 2, No. 4, pp. 195-234.

Lymer, A. (1997) 'The use of the Internet in company reporting: a survey and commentary on the use of the WWW in corporate reporting in the UK', *Paper presented at the 1997 BAA National Conference, 21–25 March 1997*, Birmingham.

Lymer, A. (1999) 'The Internet and corporate reporting in Europe', *European Accounting Review*, Vol. 8, No. 2, pp. 289–301.

Lymer, A. and Debreceny, R. (2003), 'The Auditor and Corporate Reporting on the Internet: Challenges And Institutional Responses', *International Journal of Auditing*, Vol. 7, pp. 103-120.

Lymer, A. and Tallberg, A. (1997), 'Corporate Reporting and the Internet - A Survey and Commentary on the Use of the WWW in Corporate Reporting in the UK and Finland', *Paper presented at the 20th Annual Congress of the European Accounting Association*, Antwerp, Belgium.

Maali, B., Casson, P. and Napier, C. (2003), 'Social Reporting by Islamic Banks', *Discussion Paper in Accounting & Finance, at the School of Management, University of Southampton.*

Malone, D., Fries, C. and Jones, T. (1993), 'An Empirical Investigation of the Extent of Corporate Financial Disclosure in the Oil and Gas Industry', *Journal of Accounting, Auditing and Finance*, Vol. 8, No. 3, pp. 249-273.

Marston, C. and Polei, A. (2004), 'Corporate Reporting on the Internet by German Companies', *International Journal of Accounting Information Systems*, Vol. 5, pp. 285-311.

Marston, C. and Shrives, P. J. (1991), 'The Use of Disclosure Indices in Accounting Research: A Review Article', *British Accounting Review*, Vol. 23, pp. 195-210.

Marston, C. and Wu, W. (2000), Financial Reporting on the Internet by Leading Japanese Companies. *Paper Presented at the Scottish Regional Conference of the British Accounting Association*, Aberdeen.

Masocha, W. and Weetman, P. (2005), Rhetoric in Standard Setting - The Case of the Going-Concern Audit. *Paper Presented at the Financial Reporting and Business Communications Conference*, 7-8th July, Cardiff.

McNally, G. M., Eng, L. H. and Hasseldine, C. R. (1982) 'Corporate Financial Reporting in New Zealand: An Analysis of User Preferences, Corporate Characteristics and Disclosure Practices fro Discretionary Information', *Accounting and Business Research*, Vol. 13, No. 49, pp. 11-19.

Meek, G. K., Roberts, C. B. and Gray, S. J. (1995), 'Factors Influencing Voluntary Annual Report Disclosures by U.S., U.K. and Continental European Multinational Corporations', *Journal of International Business Studies*, Vol. 26, No. 3, pp. 555-572.

Milne, M. J. (2002), 'Positive Accounting Theory, Political Costs and Social Disclosure Analyses: A Critical Look', *Critical Perspectives on Accounting*, Vol. 13, pp. 369-395.

Milne, M. J. and Adler, R. W. (2002), 'Exploring the Reliability of Social and Environmental Disclosures Content Analysis', *Accounting, Auditing & Accountability Journal*, Vol.12, No. 2, pp. 237-256

Mintzberg, H. (1979), *The Structuring of Organizations: A Synthesis of the Research*, New Jersey: Prentice-Hall.

Mutter, C. M. (1993) (in Arabic), ' Evaluation of Actual Disclosure Level in the Financial Statements of Jordanian Companies, *DIRASAT*, Jordan University, Vol. 20A, No. 2, pp. 116-169.

Naser, K. (1998), 'Comprehensiveness of Disclosure of Non-Financial Companies Listed on the Amman Financial Market', *International Journal of Commerce and Management*, Vol. 8, No. 1, pp. 88-119.

Naser, K. and Al-Khatib, K. (2000), 'The Extent of Voluntary Disclosure in the Board of Directors' Statement', *Advances in International Accounting*, Vol. 13, pp. 99-118.

Naser, K. and Nuseibeh, R. (2003), 'Quality of Financial Disclosure Reporting: Evidence from the Listed Saudi Non-Financial Companies', *International Journal of Accounting*, Vol. 38, No. 1, pp. 41-69.

Nobes, C. (1998) 'Towards a General Model of the Reasons for International Differences in Financial Reporting', *ABACUS*, Vol. 34, No 2, pp, 162-187.

Ogus, A. (2002), 'Regulatory Institution and Structures', *Annuals of Public Cooperative Economics*, Vol. 73, No. 4, pp. 627-648.

Owusu-Ansah, S. (1998), 'The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe', *International Journal of Accounting*, Vol. 33, No. 5, pp. 605-631.

Oyelere, P., Laswad, F. and Fisher, R. (2000), 'Determinants of Internet Financial Reporting by New Zealand Listed Companies, *Journal of International Financial Management and Accounting*, Vol. 14, No. 1, pp. 26-63.

Patton, J. and Zelenka, I. (1997), 'An Empirical Analysis of the Determinants of the Extent of Disclosure in Annual Reports of Joint Stock Companies in the Czech Republic', *European Accounting Review*, Vol. 6, No. 4, pp. 605-626.

Pirchegger, B. and Wagenhofer, A. (1999), 'Financial information on the Internet: a survey of the homepages of Austrian companies', *European Accounting Review*, Vol. 8, No. 2, pp. 383-95.

Ponte, E.B., Rodriguez, T. E. and Barrios, M. S. (2000), 'Corporate Digital Reporting in Europe, A Survey on Eurostoxx50 Companies', *Paper presented at the 3rd European Conference on Accounting Information Systems*, 27-28 March, Munich, Germany.

Posner, R.A. (1974), 'Theories of Economic Regulation', *Bell Journal of Economics and Management Science*, Vol. 5, No. 2, pp. 335-358.

Radebaugh, L.H. and Gray, S.J. (2002), *International Accounting and Multinational Enterprises*, Fifth Edition, New York: John Wiley & Sons. Inc.

Raffournier, B. (1995), 'The Determinants of Voluntary Financial Disclosure by Swiss Listed Companies', *European Accounting Review*, Vol. 4, No. 2, pp. 261-280.

REACH 1.0 (2000), *Jordan's REACH Initiative, Lunching Jordan's Software and IT Industry, A Strategy and action Plan For H.M. King Abdullah II*, Available at: http://www.reach.jo/Downloads/R1/R1_report.pdf

REACH 2.0 (2001), *Jordan's REACH Initiative, Lunching Jordan's Software and IT Industry, An Updated Strategy and action Plan For H.M. King Abdullah II*, Available at: http://www.reach.jo/Downloads/R2/R2_report.pdf.

REACH 3.0 (2002), *Jordan's REACH Initiative, Lunching Jordan's Software and ICT Services Industry, An Updated Strategy and action Plan For H.M. King Abdullah II*, Available at: http://www.reach.jo/Downloads/R3/R3_report.pdf

REACH 4.0 (2003), *Jordan's REACH Initiative, Lunching Jordan's Software and ICT Services, An Updated Strategy and action Plan For H.M. King Abdullah II*, Available at: http://www.reach.jo/Downloads/R4/REACH%204.0.pdf

Riahi-Belkaoui, A. (2000), *Accounting Theory*, Fourth Edition, London: Thomson Learning.

Riahi-Belkaoui, A. (2004), *Accounting Theory*, Fifth Edition, London: Thomson Learning.

Roberts, C., Weetman, P. and Gordon, P. (1998), *International Financial Accounting Comparative Approach*, London: Pitman Publishing.

Roger, B., Suwaidan, M. and Thomson, L. (2000), 'Companies Voluntary Disclosure Behavior When Raising Equity Capital: A Case Study of Jordan', *Research In Accounting In Emerging Economies*, Vol. 4, pp. 247-266.

Scott, W.R. (2003), *Financial Accounting Theory*, Third Edition, Toronto: Pearson Education Canada Inc.

Sengupta, P. (1998), 'Corporate Disclosure Quality and the Cost of Debt', *The Accounting Review*, Vol. 73, No. 4, pp. 459-474.

Singhvi, S. S. (1968), 'Characteristics and Implications of Inadequate Disclosure: A Case Study of India', *International Journal of Accounting*, Vol. 3, No. 2, pp. 29-43.

Singhvi, S. S. and Desai, H. B. (1971), 'An Empirical Analysis of the Quality of Corporate Financial Disclosure', *Accounting Review*, Vol. 46, No. 1, pp. 129-138.

Solas, C. (1994), 'Financial Reporting Practice in Jordan: An Empirical Test', *Advances in International Accounting*, Vol. 7, pp. 43-60.

Stigler, G.J. (1971), 'The Theory of Economic Regulation', *The Bell Journal of Economics and Management Science,* Vol. 2, No. 1, pp.3-21.

Street, D.L. and Bryant, S.M. (2000), 'Disclosure Level and Compliance with IASs: A Comparison of Companies with and without U.S. Listings and Filings', *The International Journal of Accounting,* Vol. 35, No. 3, pp. 305-329.

Street, D.L. and Gray, S.J. (2002), 'Factors Influencing the Extent of Corporate Compliance with International Accounting Standards: Summary of Research Monograph', *Journal of International Accounting Auditing and Taxation,* Vol. 35, No.3, pp. 305-329.

Strong, N. and Walker, M. (1987), Information and Capital Market, New York: Basil Blackwell.

Suwaidan, M. S. (1997), *Voluntary Disclosure of Accounting Information: The Case of Jordan*. Unpublished Doctoral Thesis, University of Aberdeen, UK.

Tai, B. Y. K., Au-Yeung, P. K., Kwok, M. C. M. and Lau, L. W. C. (1990), 'Non-Compliance with Disclosure Requirements in Financial Statements: The Case of Hong Kong Companies', *International Journal of Accounting*, Vol. 25, No. 1, pp. 99-112.

Taplin, R., Tower, G. and Hancock, P. (2002), 'Disclosure (Discernibility) and Compliance of Accounting Policies: Asia-Pacific Evidence', *Accounting Forum*, Vol. 26, No. 2, pp. 172-190.

Taylor, P. and Turley, S. (1986), *The Regulation of Accounting*, Oxford: Basil Blackwell.

Tower, G.D., Hancock, P. and Taplin, R. (1999), 'A Regional Study of Listed Companies' Compliance with International Accounting Standards, *Accounting Forum*, Vol. 23, No. 3, pp. 293-305.

Verrecchia, R.E. (2001), 'Essays on disclosure', *Journal of Accounting and Economics*, Vol. 32, pp. 97–180.

Wallace, R.S.O. (1987), *Disclosure of Accounting Information in Developing Countries: A Case Study of Nigeria*. Unpublished Doctoral Thesis, Exeter University, Exeter, UK.

Wallace, R. S. O. (1988), 'Corporate Financial Reporting in Nigeria', *Accounting and Business Research*, Vol. 18, No. 72, pp. 352-362.

Wallace, R. S. O. and Naser, K. (1995), 'Firm-Specific Determinants of the Comprehensiveness of Mandatory Disclosures in the Corporate Annual Reports of Firms Listed on the Stock Exchange of Hong Kong', *Journal of Accounting and Public Policy*, Vol. 14, pp. 311-368.

Wallace, R. S. O., Naser, K. and Mora, A. (1994), 'The Relationship between the Comprehensiveness of Corporate Annual Reports and Firm Characteristics in Spain', *Accounting and Business Research*, Vol. 25, No. 97, pp. 41-53.

Watts, R.L. and Zimmerman, J.L. (1978), 'Towards a Positive Theory of the Determination of Accounting Standards', *The Accounting Review*, Vol. LIII, No. 1, pp.112-143.

Watts, R.L. and Zimmerman, J.L. (1986), *Positive Accounting Theory*, New Jersey: Prentice Hall.

Watts, R.L. and Zimmerman, J.L. (1990), 'Positive Accounting Theory - A Ten Year Perspective', *The Accounting Review*, Vol. 65, No.1, pp.131-156.

Watson, A., Shrives, P. and Marston, C. (2002), 'Voluntary Disclosure of Accounting Ratios in the UK', *British Accounting Review*, Vol. 34, No. 4, pp. 289-313.

Weber, R.P. (1985), *Basic Content Analysis, Quantitative Application in the Social Science*, Second Edition, London: Sage Productions.

Wehmeier, S. (ed) (2000), *Oxford Advanced Learner's Dictionary*. Sixth Edition, Oxford: Oxford University Press.

Wilson, J. (1996), *Current Issues in Accounting and Auditing*, Surrey-UK: Tudor Business Published Limited.

Xiao, J.Z., Jones, M.J. and Lymer, A. (2002), 'Immediate Trends in Internet Reporting', *European Accounting Review*, Vol. 11, No.2, pp. 245–275.

Xiao, J.Z., Dyson, J. and Powell, P. (1996) 'The Impact of Information Technology on Corporate Financial Reporting: A Contingency Perspective', *British Accounting Review*, Vol. 28, No. 3, pp. 203–27.

Xiao, J.Z., Yang, H. and Chow, C.W. (2004), 'The Determinants and Characteristics of Voluntary Internet-Based Disclosures by Listed Chinese Companies', *Journal of Accounting and Public Policy*, Vol. 23, pp. 191-225.

Young, J.J. (2003), 'Constructing, Persuading and Silencing: The Rhetoric of Accounting Standards', *Accounting, Organizations and Society*, Vol. 28, pp. 621-638.