



THE IMPACT OF CORPORATE GOVERNANCE MECHANISM -
AUDIT COMMITTEE FINANCIAL EXPERTS ON FIRM VALUE
FROM THE PERSPECTIVE OF THE FINANCIAL REPORTING
PROCESS

EVIDENCE FROM US, UK and GERMANY

Mohamed Musa

CIMA, MBA, PG. Dip research.

Membership: British Accounting and Finance Association

European Accounting Association

A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of
Philosophy of University of Hull

Hull Business School, Hull University

SEPTEMBER 2016

DECLARATIONS

This work has not previously been in substance for any degree and is not concurrently submitted in candidature for any degree.

STATEMENT 1

This thesis is being submitted in partial fulfilment of the requirements for the degree of PhD.

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references.

STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organizations.

ACKNOWLEDGEMENTS

Firstly, I would like to thank my supervisor, Professor Waymond Rodgers for his constructive and candid comments that helped me during my research and who inspired me to finish my thesis and provided a number of useful suggestions. I would also like to thank all my individual module tutors especially Professor Magadi who took me through statistical lessons. My discussions with them led to several developments in this thesis. They have been there all the while and their continuous guidance and encouragement has motivated me to finish this thesis and make a new contribution to our understanding of these issues.

Also, I would like to thank my beloved wife Beth Njeri Wainaina for her moral and financial support as well as my children, sisters and brothers for their spiritual support. Above all, I would like to thank God for his protection, provision and favour on my life.

Finally, my sincere thank you to my colleagues and friends for their support as well.

Dedication

This thesis is dedicated to my wife, Beth –Njeri wainaina and my children:
Madlene, Magdalene, Marilyn and Mylin.

Also to my late mother Masa Musa, may your soul rest in perfect peace.

Abstract

This PhD thesis contains four main essays on financial health and firm value, with a focus on the term board structure – unitary and dual. With the exception of Chapter 1 and Chapter 6, which set out the general introduction and conclusion, each of the chapters can be considered as a standalone piece of work.

In Chapter 2, we model and predict, using FTSE100 and Nasdaq100 sample data, the impact of audit committee financial experts on firm value. Model dimensions and parameters were conducted over a period of five years and allowed to change to four years, so as to ascertain lag effects. The proposed financial expert decision - making model (Throughput Model) allows us to estimate these influences. Hence, we find mixed results.

Chapter 3 investigates ethical consideration influences on the role of United States, United Kingdom and German audit committees. Simultaneously, we empirically test whether financial experts may influence firm value in German Dax100 firms using the preference –based pathway. Our empirical results suggest that accounting experts exerts significant influence on firm value.

Chapter 4 examines the impact of regulations on the performance of Nasdaq100 firms in the US. Our result suggest that the Sarbanes – Oxley Act has indeed changed the dynamics of business structure and improved monitoring. We find evidence of a positive significant influence of supervisory financial expert on financial health but accounting experts, negative.

Chapter 5 examines the influences of financial experts on firm value of firms, operating within the unitary and dual board structures. Our empirical results suggest that financial experts with accounting expertise exerts significance influence on firm value in the UK and Germany but not in the US. We observed mixed results for the influence on financial health across countries.

Keywords: Audit committee, financial experts, firm value, board structures and Throughput Model

Table of contents

DECLARATIONS	i
ACKNOWLEDGEMENTS.....	ii
Dedication	iii
Abstract.....	iv
Table of contents	vi
CHAPTER 1 : INTRODUCTION.....	1
1.1 Background to the study.....	1
1.2 Concept and development of Audit Committee	2
1.3 Organization of the thesis.....	21
CHAPTER 2	26
PRINCIPLES VERSUS RULES – BASED REGIME FROM THE UNITARY BOARD PERSPECTIVE: THE IMPACT OF FINANCIAL EXPERTS ON FIRM VALUE.....	26
2.1 Introduction	26
2.2 Unitary board structure and Role of Audit committees.....	30
2.2.1 Accounting Practices (Rules versus Principles – based)	36
2.2.2 Agency theory, Board and Firm value	41
2.3 Contribution of financial experts to Firm value	46
2.4 Contribution of financial experts to financial health.....	52
2.5 Theory and Hypothesis.....	58
2.5.1 Financial expert decision making model (Throughput).....	58
2.5.1.1 Perception Phase/ Preference – based pathway (P → D) - -.....	63
2.5.1.2 Judgemental Phase/ Rules –based pathway (P → J →D).....	69
2.5.1.3 Informational Phase/Utilitarian position (I → J →D)	73
2.6 Hypothesis development	76
2.6.1 Financial experts (P) and Firm value (D).....	78

2.6.2	Financial experts (P) and financial health (J).....	81
2.6.3	Information and Financial health	84
2.6.4	Audit quality (I) and financial health (J).....	85
2.6.5	AC Characteristics (I) and financial health (J).....	86
2.6.6	Profitability (I) and financial health (J).....	87
2.6.7	Leverage (I) and financial health (J)	90
2.6.8	Liquidity (I) and financial health (J)	91
2.6.9	Financial health (J) and Firm value (D)	92
2.7	Data sample definition and Method	94
2.7.1	Data Source	97
2.7.2	Variable definition	97
2.8	Statistical Method.....	99
2.8.1	Validation of Measurement Model	110
2.8.1.1	2.8.1.1 Individual Construct Reliability.....	110
2.8.1.2	AVE and Composite Reliability	111
2.8.1.3	Discriminant Validity	113
2.8.1.4	Model Summary	114
2.9	Empirical Result (Descriptive).....	115
2.9.1	PLS Result UK.....	117
2.9.2	PLS Result US	119
2.9.3	Summary of Hypothesis.....	133
2.9.4	Conclusion	138
CHAPTER 3		141
DO AUDIT COMMITTEES IN A TWO – TIER BOARD STRUCTURE MAKE ANY DIFFERENCE?		141
EVIDENCE FROM GERMANY		141
3.1	Introduction	141
3.2	Board Structures	147

3.2.1	One – Tier Board Structure	152
3.2.2	Two – Tier Board Structure	156
3.2.3	Financial Reporting and Accounting Practices	161
3.2.4	Firm value and Systems of Corporate Governance.....	164
3.3	Theory and hypothesis development	167
3.3.1	Principles – based Pathway and influences on UK board structure.....	170
3.3.2	Rules – based Pathway and influences on US board structure	175
3.3.3	Stakeholder Theory and influences on German board structure.....	178
3.4	Hypothesis	181
3.4.1	Financial experts (P) and Firm value (D).....	181
3.5	Methodology	185
3.5.1	Systematic literature review	185
3.5.2	Throughput Model (Data and Method)	191
3.6	Data Sources	192
3.7	Variable definition.....	193
3.8	Statistical Method.....	196
3.8.1	Validation of Measurement Model	196
3.8.1.1	Individual item Reliability	196
3.8.1.2	Convergent and Composite reliability	197
3.8.1.3	Discriminant Validity	198
3.8.1.4	Model Summary	198
3.9	Empirical Results	199
3.9.1	Descriptive Statistics.....	199
3.9.2	Correlation Matrix.....	204
3.9.3	PLS Result.....	208
3.9.4	Conclusion	216
CHAPTER 4		217

THE IMPACT OF REGULATION ON THE PERFORMANCE OF FIRMS: EVIDENCE FROM USA	217
4.1 Introduction	217
4.1.1 Ambiguity in the definition of financial experts.....	219
4.2 Accounting regulatory framework	223
4.2.1 Enforcement Mechanism of Regulation.....	227
4.3 Theory and hypothesis.....	233
4.3.1 Throughput Model	233
4.3.1.1 Rules – based Pathway	235
4.4 Hypothesis development	239
4.4.1 Financial experts (P) and financial health (J).....	239
4.4.2 Financial health (J) and firm value (D)	239
4.5 Data and Method	241
4.5.1 Data Source	242
4.5.2 Variable definition	243
4.6 Statistical Method.....	245
4.6.1 Validation of Measurement Model	247
4.6.1.1 Individual Construct Reliability	247
4.6.1.2 Convergent and Composite Reliability.....	248
4.6.1.3 Discriminant Validity	249
4.6.1.4 Model Summary	249
4.7 Empirical Result	250
4.7.1 Descriptive Statistics	250
4.7.2 Correlation matrix	255
4.7.3 PLS Result.....	257
4.8 Summary of hypothesis	261
4.9 Conclusion.....	264
CHAPTER 5	265

THE IMPACT OF FINANCIAL EXPERTS ON FIRM VALUE: EVIDENCE FROM US, UK AND GERMANY	265
5.1 Introduction	265
5.2 Theory and Hypothesis.....	270
5.2.1 Financial experts decision making Model (Process Thinking Model)....	271
5.2.1.1 Judgemental Stage/Rules –based pathway (P → J →D)	276
5.2.1.2 Perception Stage/Preference – based pathway (P → D).....	279
5.3 Hypothesis development	281
5.3.1 Financial experts (P) and financial health of Firms (J).....	281
5.3.2 Financial experts (P) and Firm value (D).....	284
5.4 Data and Method	285
5.4.1 Data sources	285
5.4.2 Variable Definition.....	286
5.5 Method explanation	287
5.6 Empirical Results	288
5.6.1 PLS Results	288
5.6.2 OLS Results	289
5.6.3 Cross Country analysis of Variables	308
5.7 Summary of Hypothesis	311
5.8 Conclusion.....	317
CHAPTER 6	319
6.1 Conclusions and Originality of Research.....	319
6.2 Limitations.....	326
6.3 Further research opportunities.....	326
Appendices 2.9.5.....	329
2.9.5.1 Companies excluded from studies – UK and US	329
2.9.5.2 Sample structure	330
2.9.5.3 Descriptive statistics (Mean, Skewness) UK.....	331

2.9.5.4	Correlation Matrix	335
2.9.5.5	Data Preparation (US).....	341
2.9.5.6	Impact of ACC Experts on Firm Value (model 1) UK.....	347
Appendix 3.9.5.....	351
3.9.5.1	Companies excluded Table 1	351
3.9.5.2	Figure 1. Outlier detection analysis in DAX100 Company's data set 352	
CHAPTER 4	365
Appendix 4.9.1.....	365
Table 1. Companies excluded.....	365
4.9.2 Data Preparation (US)	366
CHAPTER 5	370
5.9Appendix	370
5.9.1 Table 1 Companies excluded from study at the results of missing value analysis (UK)	370
5.9.2 Table 5.2. Definition of variables	372
5.9.3 Table.3 Descriptive statistics UK from 2009 - 2013	373
5.9.4 Data Preparation (UK)	390
5.9.5 Data Preparation (Germany)	393
5.9.6 Data Preparation (US)	397
5.9.7 Additional PLS Results - diagrams of individual models	400

LIST OF TABLES

Chapter 1

Table 1.1: Acts and Recommendations	4
Table 1.2: Structural divergences	6
Table 1.3: Definition of financial experts	8

Chapter 2

Table 2.1: US Board composition	42
Table 2.2: Contribution if financial experts to firm value	49
Table 2.3: Contribution of financial experts to financial health	54
Table 2.4: UK Sample structure	95
Table 2.5: US Sample structure	96
Table 2.6: Motivation for the use of PLS	102
Table 2.7: Factor loadings	111
Table 2.8: AVE and Composite reliability	113
Table 2.9: Discriminant validity UK	114
Table 2.10: Discriminant validity US	114
Table 2.11: Model summary UK	115
Table 2.12 Residual regression UK	115
Table 2.13 Model Summary US	115
Table 2.14 Residual regression US	115
Table 2.15: UK Path analysis results (Model 1 – 4)	118
Table 2.16: UK bootstrapping results	119
Table 2.17: US Path analysis result (Model 1 – 4)	120
Table 2.18: US bootstrapping results	121
Table 2.19: UK hypothesis summary	124
Table 2.20: US hypothesis summary	130
Table 2.21: UK Lagged effects (Model 5)	131
Table 2.22: US Lagged effects (Model 5)	132
Table 2.23: H1 Financial experts and firm value	134
Table 2.24: H2 Financial experts and financial health	134
Table 2.25: H3 Audit Quality and financial health	135

Table 2.26: H4 AC Characteristics and financial health	136
Table 2.27: H5 Profitability and financial health	136
Table 2.28: H6 Leverage and financial health	137
Table 2.29: H7 Liquidity and financial health	137
Table 2.30: H8 Financial health and firm value	138
Chapter 3	
Table 3.1: Differences in Corporate Governance	146
Table 3.2: Composition of Board structure	148
Table 3.3: Four ethical Pathways	169
Table 3.4: Articles published from 1970 – 2013	188
Table 3.5: Citation Analysis	190
Table 3.6: Sample structure	192
Table 3.7: Definition of variables	195
Table 3.8: Factor loading	197
Table 3.9: Average Variance Explained (AVE)	197
Table 3.10: Discriminant Validity	198
Table 3.11: Model Summary	198
Table 3.12: Residual regression	199
Table 3.13: Descriptive statistics 2009 – 2013	200
Table 3.14: Descriptive statistics yearly	201
Table 3.15: Correlation Matrix	205
Table 3.16: Principal Component Analysis	206
Table 3.17: PLS results	208
Table 3.18: Bootstrapping	209
Table 3.29: Lagged effects	215
Chapter 4	
Table 4.1: Acts and Recommendation	218
Table 4.2: Definition of Financial experts	220
Table 4.3: Accounting Regulation, Financial expert and Financial health	226
Table 4.4: Sample Structure	242
Table 4.5: Definition of variables	244
Table 4.6: PLS Motivation	246
Table 4.7: Factor loading	247

Table 4.8: Average Variance and Composite reliability	248
Table 4.9: Discriminant validity	249
Table 4.10: Model Summary	249
Table 4.11: Residual regression	250
Table 4.12: Descriptive statistics of variables	250
Table 4.13: Correlation Matrix	256
Table 4.14: PLS result	257
Table 4.15: Bootstrapping result	258
Table 4.16: H1 Financial experts and financial health	261
Table 4.17: AC Characteristics and Financial health	262
Table 4.18: Audit quality and financial health	262
Table 4.19: Leverage and financial health	262
Table 4.20: Liquidity and financial health	263
Table 4.21: Profitability and financial health	263
Table 4.22: Financial health and firm value	263
Chapter 5	
Table 5.1: Corporate Governance Model	267
Table 5.2: PLS Motivations	288
Table 5.3: UK OLS and panel data results	292
Table 5.4: UK PLS result	293
Table 5.5: UK Bootstrapping	294
Table 5.6: Germany OLS and Panel data results	298
Table 5.7: German PLS result	299
Table 5.8: Germany Bootstrapping	300
Table 5.9: US OLS and Panel data results	303
Table 5.10: US PLS result	304
Table 5.11: US Bootstrapping	305
Table 5.12: ACC expert across country	309
Table 5.13: FE expert across country	310
Table 5.14: SFE expert across country	310
Table 5.15: HI: Financial expert and financial health	312
Table 5.16: H2: Financial expert and firm value	313
Table 5.17: AC characteristics and financial health	314

Table 5.18: Audit quality and financial health	314
Table 5.19: Leverage and financial health	315
Table 5.20: Liquidity and financial health	315
Table 5.21: Profitability and financial health	316
Table 5.22: Financial health and firm value	317

LIST OF FIGURES

Chapter 1

Figure 1.1: Throughput Model	12
------------------------------	----

Chapter 2

Figure 2.1: UK board structure	31
Figure 2.2: US board structure	35
Figure 2.3: Financial expert decision making Model (Throughput)	62
Figure 2.4: Perception/Preference – based Pathway	65
Figure 2.5: Judgement/Rules – based Pathway	70
Figure 2.6: Information/Principles – based Pathway	74
Figure 2.7 Linearity assumption	106
Figure 2.8 Linearity assumption new	107
Figure 2.9: UK PLS summarised result (Model 1 – 3)	122
Figure 2.10: UK PLS result (Model 4)	125
Figure 2.11: US PLS summarised result (Model 1 – 3)	127
Figure 2.12: US PLS result (Model 4)	128

Chapter 3

Figure 3.1: Published articles from 1970 – 2013	143
Figure 3.2: One Tier board structure	152
Figure 3.3: Two Tier board structure	156
Figure 3.4: Information mechanism	159
Figure 3.5: Throughput Model	167
Figure 3.6: Utilitarian position/Principles – based	171
Figure 3.7: UK board and ethical influences	173
Figure 3.8: Deontological position/Rules – based	176

Figure 3.9: US board and ethical influences	177
Figure 3.10: Ethics of care/Stakeholder position	179
Figure 3.11: German board and ethical influences	180
Figure 3.12: Published articles	189
Figure 3.13: Category of ABS journal	191
Figure 3.14: Variable definitions	194
Figure 3.15: Median values of Audit quality (Audit fees_Non – audit fees)	202
Figure 3.16: Median values of AC characteristics (Audit Size/Audit Meetings)	203
Figure 3.17: Median values of Profitability (ROA and Sales_Assets)	203
Figure 3.18: Median values of Leverage (Debt_Assets and Debt_ Equity)	203
Figure 3.19: Median values of Liquidity (Cash ratio and Quick ratio)	204
Figure 3.20: Median values of financial health and firm value	204
Figure 3.21: ACC Exp. impact on firm value	211
Figure 3.22: FE Exp impact on Firm value	212
Figure 3.23: SFE Exp impact on firm value	213
Figure 3.24: Lagged effects	214
Chapter 4	
Figure 4.1: US Board Structure	224
Figure 4.2: Throughput Model	233
Figure 4.3: Rules – based Pathway	236
Figure 4.4: Median values of Audit quality (Audit fee and Non-audit fee)	252
Figure 4.5: Median values of AC Characteristics (AC Meeting and AC Size)	253
Figure 4.6: Median values of Profitability (ROA and Sales/Asset)	253
Figure 4.7: Median values of Leverage (Debt/Asset and Debt/Equity)	254
Figure 4.8: Median values of Liquidity (Cash ratio and Quick ratio)	254
Figure 4.9: Median values of financial health and firm value	254
Figure 4.10: PLS Summary result (Models 1, 2 and 3)	259
Figure 4.11: PLS result Model 4	260
Chapter 5	
Figure 5.1: Process Thinking Model (Throughput Model)	275
Figure 5.2: Judgemental/Rules – based Pathway	277
Figure 5.3: Perception/Preference – based Pathway	279
Figure 5.2: UK PLS summarised results (Model 1 to 4)	296

Figure 5.3: Germany PLS summarised results (Model 1 to 4)	302
Figure 5.4: US PLS summarised results (Model 1 to 4)	307

Abbreviations

AAA	The American Accounting Association
ABS	Association of Business Schools
ACCA	Association of Chartered Certified Accountants
AGM	Annual General Meeting
AICPA	American Institute of Certified Public Accountants
ASB	Accounting Standards Board
ASCPA	Australian Society of Certified Practicing Accountants
ASEAN	Association of Southeast Asian Nations
BADC	Business Accounting Deliberation Council
BAFA	British Accounting and Finance Association
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht
CA	Chartered Accounting
CEO	Chief Executive Officer
CESR	Committee of European Securities Regulators
CG	Corporate Governance
CIA	The Central Intelligence Agency
CIPFA	Chartered Institute of Public Finance and Accountancy
CPA	Certified Public Accountant
CPD	Continuing Professional Development
EAA	European Accounting Association
EC	European Commission
ECON	Committee on Economic and Monetary Affairs
EMTAP	Economic Management Technical Assistance Program
EU	The European Union

FASB	Financial Accounting Standards Board
FDI	Foreign Direct Investment
FRA	Financial Reporting Act
FRC	Financial Reporting Council
FSA	Financial Services Authority
FSRP	Financial Sector Reforms Program
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GER	Germany
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IBA	Institute of Business Administration
ICAEW	Institute of Chartered Accountants in England and Wales
IFAC	International Federation of Accountants
IFR	International Financing Review
IFRIC	International Financial Reporting Interpretations Committee
IFRSs	International Financial Reporting Standards
IMF	The International Monetary Fund
IO	Individual Organization Level
IOSCO	International Organization of Securities Commissions
IPO	Initial Public Offering
IPSAS	International Public Sector Accounting Standards
IRD	Internal Resources Division
MNC	Multinational Companies
OECD	The Organization for Economic Co-operation and Development
ROSC	Reports on the Observance of Standards and Codes

RQ	Research Question
SEC	Securities and Exchange Commission
SIC	Standing Interpretations Committee
SME	Small and Medium Enterprises
SOE	State Owned Enterprises
US	The United States
UK	The United Kingdom
UN	The United Nations
USA	United States of America
VAT	Value Added Tax
WTO	The World Trade Organization

CHAPTER 1 : INTRODUCTION

“Corporate perspective changes substantially, from the real economy to artificial engineering so that in recent years, diverse opinions point to an irrational exuberance of creating value within companies. In modern society, governance is seen as an interrelated mechanism of government institutions, civil society and economic forces”.

(Avadanei, 2011 p .1)

1.1 Background to the study

The debates surrounding diverse opinions of the role and authority of audit committees as a corporate governance mechanism in the financial reporting process, in light of great recessions and financial crises currently affecting places like Venezuela, Brazil and globally has once again brought to fore the perils associated with lax financial regulations, excessive borrowing, and dubious financial reporting and brought to question the effectiveness of financial experts in accessing risk and creating value that will promote economic growth.

Furthermore, the financial scandals at Enron, Tyco and WorldCom have also brought under greater scrutiny, the powers exercised by corporate boards. In fact, these corporate malfeasances have provided the impetus for large legislative changes for example, the Oxley Act of 2002, European Union directives of 2006 and the release of new corporate guidelines for the New York Stock Exchange, Nasdaq etc.

Based on the Blue Ribbon Committee recommendation (1999), it is quite clear that “audit committee performance relies on the practices and attitudes of the entire board”. In other words, cognizance should be taken of the fact that, the ability of financial experts to ensure firm value creation for example, May however, be “contingent upon the presence of a strong board and audit committee governance environment”. Section 1.2 starts by describing the concept and development of audit committee governance environment and role. 1.3 describes the outline of the thesis.

1.2 Concept and development of Audit Committee

An Audit committee is a sub-committee of the main board of directors of a company. The history of audit committees can be reflected as far back in 1972 by the SEC, 1992 in the UK and 2001 in Germany as shown in Table 1-1. Its primary function is the oversight of financial reporting, although new regulations have increased its responsibility to be more effective in its role, composition and purpose. ((BRC, 1999; Carcello et al, 2002; SOX, 2002).

The development of audit committees is now well established in many countries around the world. Over the last twenty five years, the evolution of the audit committee has largely been driven by developments in the US, as a result of cyclical financial crises; enhancing the formation and repositioning the role and authority of audit committees, the responsibilities of its members, restructuring and redefining their qualifications and competences. The history, evolution and integration of audit is rooted deeply in American corporate evolution especially the New York Stock Exchange crash in 1929. This crash became a wakeup call as the effects of it led to instability in internal control settings and

an asymmetric negative effect leading to an enormous depreciation of shares. The need for a corporate governance mechanism such as audit committee that will strengthen and stabilize internal control became a debating issue in companies. The endorsement thereafter for the creation of an audit committee by the New York stock exchange gained credible acceptance by 1939. It should be noted that the credible acceptance was driven by the consequences of the McKesson and Robbin's Inc. fraud.

By 1972, (see Table 1.1), the formation of audit committees was mandated requiring US public companies to be in compliance. By 1977, inclusion of external directors was mandated by the U.S. Securities and Exchange Commission. The New York Stock Exchange went on to adopt that as a listing requirement. By 1999, the New York Stock Exchange, NASDAQ, AMEX and SEC all finalized the current functions and rules of audit committees based on the Blue Ribbon Committee recommendations. The intention of these recommendations was and is to impact stronger governance control and environment, in the hope this changes will avert companies to fail, future financial collapses, restore consumer confidence and above all, mitigate the agency problem.

Table 1-1 Act/Recommendation

Year	Act/Recommendations	Audit Committee Requirement
1972	SEC Recommendation	US Public companies to form Audit Committees
1978	SEC Recommendation adopted	A requirement for the New York Stock Exchange
1987	Treadway Commission	6 Specific Recommendation to prevent fraud
1989	SEC Recommendation adopted	A requirement for NASDAQ
1992	SEC Recommendation adopted	A requirement for AMEX
1999	Blue Ribbon Committee Recommendation	10 recommendations for improving audit committees'
1999	Blue Ribbon Committee Recommendation	Resulted in changes by NASDAQ, the NYSE, AMEX, and the SEC.
2002	Sarbanes-Oxley Act(Section 301)	SOX forces all U.S. stock exchanges to prevent listings from companies with no audit committee
2002	Sarbanes-Oxley Act (Sec. 407)	Increased audit committees' responsibilities and authority
1992	Cadbury Committee Recommendation	UK Public companies to form Audit Committees
1999/ 2003	Cadbury Recommendation/Smith	A requirement for the London Stock Exchange
2001	Baum Commission Recommendation	"Baum's commission" Establishment of the Codex Commission(Germany)
2002	Codex Commission	Establishing Audit committees in publicly listed companies(Germany)
2006	European Union 8 th company law	Enforced and requires listed company within the Euro-Zone to have an audit committee.

However, the Sarbanes – Oxley Act of 2002, changed the dynamics of internal control settings and became the major driving force not only for the formation of audit committees but its composition. This act became a blue print for US listing companies. Subsequently, the EU 8th company law of 2006 was enacted. In Germany, the Baum and Codex commissions in 2001 and 2002 also recommended the formation of audit committees.

In light of the above recommendations, it is worth pointing out that, there are many similarities on matters relating to the role of audit committees in the UK, US and Germany. However, how they function in their roles in the face of structural divergences among these three countries in their regulatory, accounting and corporate governance frameworks is subjected to empirical analysis in this study. These significant differences and the implication they may have on financial experts in creating value from the perspective of the financial reporting process has been barely overlooked by prior studies. Concerns raised by Beasley (2009) and Cohen (2010) about the impact these divergences may have on the role and authority of audit committees and financial health of companies, respectively is a clear justification for further research and this study. See table 1.2 below

Table 1-2 Structural divergences in Corporate Governance system.

Countries	U.S.	U.K.	Germany	Nigeria	China	Japan
Corporate Governance System	Corporate governance system is Rules - based with a one tier board system	Corporate governance is Principles – based with a one tier board system	Corporate governance is Rules – based with a two tier board system	Corporate Governance in Nigeria, principles – based and guidelines.	Corporate Governance of China	Corporate Governance of Japan
Code	SOX (2002)	CGC (FRC, 2010)	GCGC (Recommendation of Baum commission, 2002)	Companies of Allied Matters Act (2003).	China Securities Regulatory Commission (2007)	Corporate Governance code of Japan
Audit Committee Requirement	AC requirements are enforced or mandated by law and listing rule	AC requirements are voluntary subjected to “comply or explain” approach	AC requirement is Quasi mandatory. Implying that is partly mandated.	AC requirements are mandatory	Voluntary	AC requirement are Voluntary
Role and Authority of AC	AC has an extended authority and Role well defined.(Sox, 2002)	AC’s Role well defined but perform a specialist function as well	AC’s Role is semi – regulated. The Supervisory board decides delegated monitoring role and as such AC has limited authority	AC have extensive authority and play an active role	AC playing a strategic role	AC playing a strategic role
Influences on Accounting Policies	AC has direct influence on accounting policies. AC act as proxy for Shareholders	The interference of NED’s may result to further checks on AC’s influence on accounting policies. Shareholders can influence board	AC has passive influence on accounting policies due to the dominance of the Supervisory board. A Stakeholder approach is predominant	AC has major influence on accounting policies	AC playing an important role in shaping accounting policies	At the centre of accounting policies and active
Financial expert	In compliance with SEC (2003) final rule but for Nasdaq listed companies, Financial Management experiences is emphasized.	More emphasis is laid on Financial experts with the requisite professional certification such as ACCA, CA etc.	In compliance with German Code but more emphasis is laid on vast experience. At least two financial experts	In compliance with CAMA (2003). At least one financial experts	Financial expert must have accounting expertise and also must be an independent director	AC members should be independent and have expertise in accounting
Composition	Independence of all directors are required	Independence of three directors are recommended	Recommends two independent	Maximum of Six directors	AC should comprise majorly with independent directors	Directors must be independent

These structural divergences continues to evolve based on pending proposals such as the replacement of local accounting standards, the GAAP in to the use of the International Financial Reporting Standards (IFRS), which may raise serious concerns about the perceptions of audit committee financial expertise in terms of their qualification, skills and experience. New rules have been proposed over the years in the US by the NYSE and NASDAQ exchanges that mandate board independence and tighten the definition of an independent director who may be qualified as a supervisory financial expert. “In the U.K., for the fourth time in the last 10 years, the British government commissioned a new study of board independence” (FRC, 2010)). Likewise, “In Germany, the federal government established two commissions to examine and suggest improvements to governance practices including the functioning of the two-tiered corporate boards which are pervasive in Germany” (PricewaterhouseCoopers, 2002).

Further, as indicated above, one area of regulatory requirement that has captured global attention is the appointment of financial experts to audit committees and the ambiguity that lies with how financial experts have been defined. (Dhaliwal, 2010; Erkens and Bonner, 2013). Over the years, the broad or narrow definition and interpretation of who a financial expert is in different jurisdictions has led to further widespread academic debates, with mixed results and unexplored conceptual or theoretical framework. (Cohen, Krishnamurthy and Wright, 2008; Hoitash et al, 2009; Dhaliwal et al; 2010).

Table 1-3 Definition of financial experts

Accounting expertise	Finance expertise	Supervisor expertise
Qualified	Qualified	Experience
Strong grasp of Revenue recognition, strong leadership contribution.	Knowledge in financial-related issues	Financial oversight duties
In-depth Knowledge of GAAP	In-depth knowledge of GAAP???	Knowledge of GAAP???
Can detect Irregularities	Foster FR process but can he detect Fraud??	What about IFRS???

As indicated by Dhaliwal et al (2010, p. 2), “The findings from these studies indicate that the presence of audit committee members with only accounting expertise is positively related to financial reporting process and quality”. According to Cohen, Krishnamurthy, and Wright (2008), the predominant theoretical focus of such prior studies rests upon the foundation of Jensen and Meckling’s 1976 agency theory. Under this theoretical framework, improper financial accounting practices are assumed to obscure real performance and diminish investors’ ability to make informed decisions, leading to higher agency costs (Xie, Davidson, and DaDalt 2003). The AC plays a key role in reducing agency costs by overseeing the effectiveness of management’s financial reporting policies (Klein 2002; Beard, Chtourou, and Courteau, 2004; Archambeault, DeZoort, and Hermanson 2008). Moreover, Cohen et al. (2004) point out that various characteristics of ACs influence their effectiveness as corporate governance mechanisms. The findings of studies such as Zhang et al. (2007) and Krishnan and Visvanathan (2008), suggest that the domain-specific knowledge of AC accounting experts provides them with

an effective means of monitoring management's financial reporting practices and reducing associated agency costs.

However, Beasley (2009) and Cohen et al (2010) noted that the substantial variation or divergences in the structure, role and authority of audit committee and the requirements in different jurisdictions may impact the creation of value from the perspective of the financial reporting process. Financial experts are faced with decisions that will impact firm value in a positive or negative way such as:

- (a) Decisions relating to financial reporting and disclosure process
- (b) Decisions relating to monitoring choice of accounting policies and principles
- (c) Decision relating to oversight of regulatory compliance and ethics

More specifically, audit committee financial experts will have to make:

- Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.
- Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.
- Decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory authorities.

- Decisions as to the best business practice or investment that a firm is advised to undertake
- Decision relating to risk management policies and practices with management

Accordingly, we address the following research questions:

- (a) Which of these financial experts categorised into accounting, finance and supervisory expertise within the unitary board of the US and UK may positively influence financial health and firm value comparatively?
- (b) Which other corporate governance factors such as audit quality, profitability, leverage and liquidity influences the financial health of firms individually and as well as comparatively in the US, UK and Germany?
- (c) Which of the financial experts categorised into accounting finance and supervisory expertise within a dual board structure in Germany influence firm value?
- (d) Comparatively, which financial experts in the above categories influence the financial health of firms and firm value in the US, UK and Germany?

In light of these audit committee evolvments, Be´dard and Gendron (2010) suggest that, while it is of immense significance that audit committees appoint the right experts,

however, their efficiencies and effectiveness in their monitoring and advisory role requires further research and determination. The objectives of the study therefore are:

- (a) To extend previous research by empirically exploring the influences of audit committee financial experts may have on the financial health of firms and firm value from the perspective of a unitary board in the US and UK comparatively.
- (b) With barely no research done by prior studies using Dax100 companies and the uniqueness of the German board structure, the study intend to explore how financial experts within the dual board in Germany may influence firm value.
- (c) Given the fact that, prior studies have over looked the structural divergences that exist in the US, UK and Germany, the study will take a deeper view of how audit committee financial experts may influence financial health of firms and Firm value comparatively.
- (d) The exploration of how other factors such as audit quality, profitability, leverage and liquidity may influence the financial health of firms.
- (e) Finally, by using a new theoretical framework, “Throughput Model”, the study intend to update the current status of audit committee and financial experts in the US, UK and Germany, thereby adding new insight, new contributions and new knowledge to the accounting literature.

In answering to the research questions and fulfilling the objectives of this study, the new proposed theoretical framework, “Throughput Model” mentioned above will form the main theoretical underpinnings of this study. (Rodgers & Guiral, 2013).

The next section will give a brief overview of the Throughput Model.

The (Throughput Model) was selected since its six dominant decision-making pathways relate to six significant ethical positions (Rodgers, 1997). This Throughput Model is built on six ethical pathways. Each pathway represents fundamental principles that will be adopted by individuals, such as independent financial experts, or organizations in arriving at a decision (Rodgers, 1997). It must be noted that the individual viewpoint or organizational goals do play a predominant role in depicting the pathway employed that is considered highly or conversely less influential.

The Throughput Model (Financial expert decision Model)

Figure 1-1

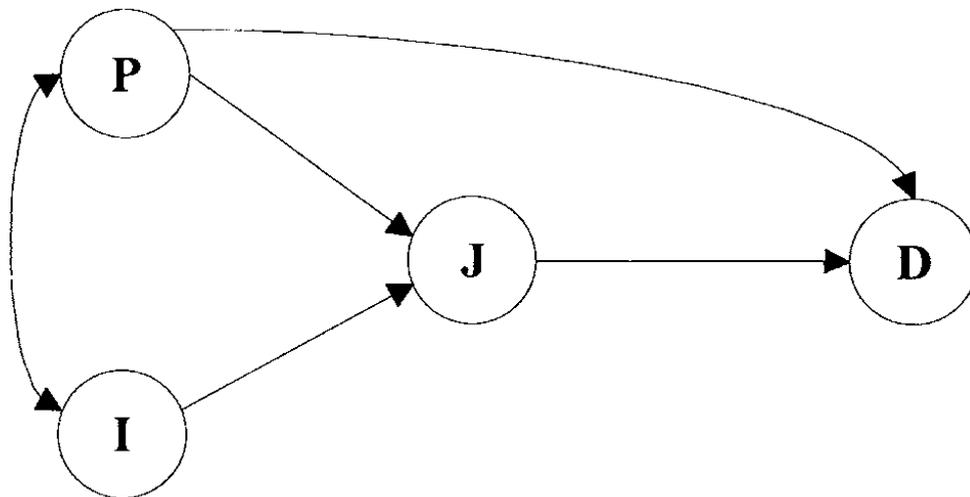


Fig.1 Where P is Perception, I is Information, J is Judgement and D is Decision

These viewpoints can form the basis of our perceptions, which will ultimately influence judgement or the analysis of evidence and subsequently, the final decision.

The formation of audit committees with the viewpoint that the independent financial experts should choose collective interest over self-interest, for example can be depicted by the Throughput Model as a principle that shows concern for all or the majority of stakeholders. According to Rodgers *et al.* (2009, p.350), “Decision making in the *Throughput Model* is defined here as a multi-stage, information-processing function in which cognitive, economic, political, and social processes are used to generate a set of outcomes.”

Based on Figure 1, we can establish six general pathways:

- P → D (1)**
- P → J → D (2)**
- I → J → D (3)**
- I → P → D (4)**
- P → I → J → D (5)**
- I → P → J → D (6)**

The financial expert decision – making model (Throughput Model) (TM), draws attention to: (1) only 2 – 4 major concepts that are instrumental in arriving at a decision; (2) the order of a particular pathway (and its strength) will greatly influence the outcome of a decision; and (3) each decision-making pathway relates to a particular ethical position”. There are many philosophies that are complex in nature. We discuss six prominent approaches depicted in the model’s six general pathways. The six ethical positions discussed below are ethical egoism, deontology, relativist, utilitarianism, virtue ethics, and ethics of care (Rodgers *et al.*, 2009).

$P \rightarrow D$ represents the *ethical egoism position*, which lays emphasis on self-interest or greed. $P \rightarrow J \rightarrow D$ depicts the deontology position that emphasizes the compliance with rules, regulations or accounting standards, for example, and stresses the concept of equality in obeying those rules irrespective of size or location and gender. According to Rodgers and Gago (2004, p.351), “ $I \rightarrow J \rightarrow D$ reflects the utilitarian position that is concerned with consequences, as well as the greatest good for the greatest number of people. Utilitarianism is based on collective economic egoism”. Also Rodgers and Gago (2004, p .355), “ $I \rightarrow P \rightarrow D$ highlights the *relativist position*, which assumes that decision-makers use themselves or the people around them as their basis for defining ethical standards. In another study, Rodgers and Gonzalo (2009 p.351), noted that, “ $P \rightarrow I \rightarrow J \rightarrow D$ underscores the *virtue ethics position*, which is, whereby the cultivation of virtuous traits of character is viewed as morality’s primary function and $I \rightarrow P \rightarrow J \rightarrow D$ represents the *ethics of care position* (stakeholders perspective), which focuses on a willingness to listen to distinct and previously unacknowledged perspectives”

For the purpose of this study, three of the six ethical pathways will be discussed. $P \rightarrow D$, $P \rightarrow J \rightarrow D$. and $I \rightarrow J \rightarrow D$. Also, the study will revisit other theories such as the agency, resource – based and Stakeholder theory to help explain the influences of audit committee financial experts.

The relation between audit committee characteristics and financial health of firms and firm value is particularly important to the accounting profession because auditors have a responsibility to identify the actual position and value of a company in terms of income shown, assets and equity value as depicted by the financial statements.

Audit committee is considered vital to maintaining transparency in a firm. The members of audit committee are also part of the board of directors which is responsible for formulating strategies for improving the financial health of the firm. So, if the audit committee presents a true picture of financial statements in front of the members of board of directors and the CEO, they would be in a better position to draw effective strategies towards increasing the value of the firm as well as the financial health.

More so, the audit committee is an important governance mechanism designed to ensure that a company produces relevant, adequate and credible information that investors as well as independent observers can use to assess company performance.

There are several links between the decisions made by an audit committee and the subsequent value of the firm. In this vein, the Throughput model will help us bring new insight and theoretical contribution to the accounting literature. Also, it will shed light on how the agency problem can be solved and also a healthy relationship between the agent (Audit committee financial expert) and the principal (Shareholder). In the next section, these decisions are explained.

DECISIONS BY FINANCIAL EXPERTS APPOINTED TO AUDIT COMMITTEES and APPLICATION OF THROUGHPUT MODEL

In this study, we use the Tobin's Q as a proxy for firm value which is represented in the Throughput Model as "Decision". The fundamental reason for this is based on the fact that, Tobin's Q (TQ) has been defined as the ratio of the market value of equity plus the book value of debt to the book value of total assets (Chung and Pruitt, 1994, Beiner *et al.*, 2006). TQ has been used as a measure of financial performance and firm value from the

investors' perspective, and markets' valuation of a company and its corporate governance mechanisms. This study adopts the definition of Chung and Pruitt (1994) approximation of TQ as it demonstrates 96.6% of the original TQ .

Cognizance must be taken of the fact that the proxy Tobin's Q constitutes (a) Outstanding shares, (b) Price of shares, (c) Book value of debt and (d) Book value of assets. The accuracy of these figures are not only relevant but critical in a financial experts' decision – making model proposed by this study as a result of the fact that:

(1) An undervalued company, one with a ratio of less than one, would be attractive to corporate raiders or potential purchasers, as they may want to purchase the firm instead of creating a similar company. This would likely result in increased interest in the company, which would increase its stock price, which would in turn increase its Tobin's Q ratio.

(2) As for overvalued companies, those with a ratio higher than one, they may see increased competition. A ratio higher than one indicates that a firm is earning a rate higher than its replacement cost, which would cause individuals or other companies to create similar types of businesses to capture some of the profits. This would lower the existing firm's market shares, reduce its market price and cause its Tobin's Q ratio to fall.

Based on the above, financial experts (**P**) categorised into accounting, finance and supervisory expertise may have to participate in the following decisions in order to be able to influence firm value positively. The question as to which of these experts will positively or negatively influence the financial health and firm value of the firm may depend on the level of their perceptions i: e qualifications, experience etc.

These decisions that audit committee financial experts may be faced for example are:

(a) Decisions relating to financial reporting and disclosure process

According to Section 404 of the Sarbanes-Oxley Act, the firm is obliged to publish information in their annual reports related to the depth and reliability of the internal control structure, the procedures used for financial reporting and evaluation of the effectiveness of the internal controls and procedures. The main purpose of Section 404 was to enhance accuracy and transparency of financial records provided by the firm to the public. Additionally, Section 404 requires an assessment and description of the effectiveness of the internal control system and procedures for financial reporting prepared by a public audit company.

Based on the above, audit committee financial experts will be faced with the decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.

The action of the audit committee acting as an agent (**P**), will not only help the principal (Shareholder) to maximize his wealth but will influence firm value (**D**) positively. The Throughput model therefore, will help us from a theoretical perspective to understand the fundamental reasons why financial experts should have an – depth knowledge of the intricacies and complexities of the financial statement, as they will solely depend on their perceptions to influence firm value.

(b) Decisions relating to monitoring choice of accounting policies and principles

All major industrial countries converted their systems or are planning to harmonize to

the International Financial Reporting Standards put together by a supranational body that aimed to make financial reporting process more transparent and consistent. It is management of the firm that has to decide on which accounting principles to follow. This decision has a direct effect on the revenue recognition. After the decision is made, the firm needs to employ control policies and procedures to ensure that the chosen accounting principles are applied correctly (Ramos 2008).

Therefore, this may imply that audit committee financial experts may also be facing decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory authorities. In view of this, the agent and principal relationship will benefit the firm and increase its value as the audit committee is seen aligning its objective with that of the shareholder. The monitoring is purely based on the experience (**P**) of the financial expert, thereby influencing firm value (**D**).

In this case, the Throughput model helps us to affirm Kant (1996) assertions that, we have the moral obligation to respond to duty, adhering to rules and principles.

(c) Decision relating to oversight of regulatory compliance and ethics

Ethics plays a significant role in corporate governance and is becoming a major issue when reforming audit system. Since the introduction of Sarbanes-Oxley (SOX) legislation in 2002, expectations of audit committee members grew immensely, requiring more meetings, more expertise and more supervision. While auditors are expected to be strong-willed and diligent gate-keepers protecting shareholders' interests, it is not surprising that often this ideal is difficult to attain. The common aversion to reporting any suspicious financial actions reflected in annual reports or related documentation stems

from the attention to the subject and little if any support within the environment auditors find themselves in ethical dilemmas. The legislature around the world was successful in addressing number of topics relating to ethical corporate governance with some success. However, the problem of ensuring right corporate environment and legal protection to auditors is a major setback in attaining goal of transparent and just accounting practices. In case of fraud, employees are put before excruciating decision: shall they report the crime of their colleagues and face not only hostility but possibly lose their source of income or shall they decide not to report the fraud, breaking the oath and possibly, leading to psychological hardship and feel of inadequacy stemming from going against one's morals. Moreover, failure to report misconduct can lead to liability.

In this vein, audit committee financial experts are faced with decisions based on their perceptions to ensure the accounts more accurately reflect management decisions, regulations and constrain managers to more closely adhere to the interests of shareholders in their decision making. All of these factors are detrimental to firm value and the composition of audit committee since the most adequate candidates may search for a position with more perks and less responsibility. For instance, a recent study conducted in U.S. on the topic shows a drop of new hires to audit committees of experienced directors from 53% in 2000 to under 20% in 2009 (Sharma et al., 2009).

(d) Decision relating to risk management policies and practices with management

Audit committee plays important role in risk detection and assessment. Through discussion with management the biggest threats can be identified, prioritized and diminished after implementing policies appropriate for the specific risk management. The

committee of sponsoring organization of the Treadway commission (COSO), recognizes strong link between the ability to achieve business goals and risks management. Only after deciding on company's objectives and understanding associated risks, it is possible to choose the most appropriate policies to avoid or diminished the threats. In this decision both internal and external factors have to be taken into account. Internal factors include complexity of the organization, employee turnover, and employee quality, among others. External factors include for instance, changes in the industry, technology, or economic environment. Not all risks can be controlled. In this instance, it is up to the management whether the aim is worth the risk or whether to abandon the risky objective.

SOX sets out responsibilities regarding risk management. However, indirect contrast to other corporate governance systems, remember that these responsibilities are statutory rather than guidance. The comments below relate specifically to the s404 requirements of SOX, i.e. the audit and reporting of internal control systems within a company.

There are two main areas of responsibility. Management is likely to delegate the authority to obtain information on internal controls to the audit committee and/or internal audit department. Obviously, the responsibility for managements' report cannot be delegated. In SOX terms, management refers to the board, with specific emphasis on the CEO which is deemed to be a supervisory financial experts and CFO as finance expert - these individuals have to attest that, control system has been reviewed.

Based on the above, audit committee financial expert may be faced with the decisions as to the best business practice or investment that a firm is advised to undertake. **(D)**

In a nutshell, the Throughput (Financial expert decision model) will help us to understand theoretically, how the perception of financial experts (**P**) which is based on their experience, qualification may influence firm value (**D**) as reflected in the above decisions, without the use of any information.

Additionally, based on their review of financial statements, financial experts are required to have an in – depth knowledge of rules, accounting standards (**P**) which will enable them to ensure that these rules or accounting standards are properly understood and applied (**J**). Subsequently, (**J**) which pays closer attention to adherence and the right application of rules and principles relating to the treatments of profits, revenue, liquidity and leverage, as well as audit quality may influence firm value.

It is also worth noting that the monitoring and review of financial statements by the audit committee financial experts may lead to significant judgements that may influence the decision –making process. Based on the above, the Throughput Model is seen making distinctive theoretical contributions to the accounting literature.

The next section will describe the organization of the thesis.

1.3 Organization of the thesis

The thesis consists of four main chapters, which are independent but related. These chapters focus on the terms: Financial experts and influences of firm value within different board structures.

Chapter 2 will address the topic: Principles versus Rules – based regime from the perspective of the unitary board: Impact of financial experts on firm value. While some research suggests that financial accounting experts are considered more relevant in the creation of firm value from the perspective of the financial reporting process, our result shows that this notion continue to hold in the UK but not in the US

We analyse using a financial expert decision model (*Throughput Model*) according to Rodgers & Guiral, (2013), how audit committee financial experts, with different levels of expertise appointed to audit committees within a unitary board structure, such as UK and US may influence firm value. Using Partial Least Squares (PLS) path analysis, we find that financial experts with accounting, finance and supervisory expertise exert significant positive influence on firm value in the UK. However, we find no significant evidence of financial experts' influences on financial health. In the US, accounting experts exert a negative influence on firm value. However, we find evidence of financial experts with supervisory expertise exerting a significant influence on firm value. Additionally, we also find evidence of lagged effects. The results suggest that mandating financial expertise on audit committees may not benefit shareholders and other stakeholders, if conflicting interests are neglected and rules not adhered to. Chapter 2 proposes four hypothesis to be tested:

$$P \rightarrow D \quad (1)$$

$$P \rightarrow J \quad (2)$$

$$I \rightarrow J \quad (3)$$

$$J \rightarrow D \quad (4)$$

Where **P** = the Perceptions of financial experts (Qualifications, skills and experience)

I = Information (audit quality, AC characteristics, profitability, liquidity leverage)

J = Judgement (Financial health)

D = Decision (Firm value)

Chapter 3 will address the topic –Does German Audit Committees in a Two – Tier system make any difference? Ethical Consideration of Influences on the Role of United States, United Kingdom and German Audit Committees: The Impact on Firm value. This research paper examines three board structures (US, UK and Germany) and the role of audit committees viewed from different ethical positions in relation to audit and financial reporting. As reported by the Public Company Accounting Oversight Board (PCAOB, 2010), deficiencies in auditing are not only based on issues of “lack of objectivity” and “enhanced scepticism,” but also on areas of questionable judgement. This paper employs a theory, described as the “*Throughput Model*”, in order to explain the decision–making processes of experts from an accounting principles point of view and the predicted consequences. Hence, the paper argues that these predictions can be based on three ethical positions: Deontological view (rules – based), the Utilitarian view (principles – based) and Ethics of care (stakeholder based).

In chapter 3, we propose one hypothesis **P** → **D** with lagged effects. We also use **I** as control variables. Our result suggest that financial experts with accounting expertise within German audit committee exert significant influence on firm value. We employ a systematic literature review and PLS analysis.

Chapter 4 deals with the impact of regulations on the financial performance of firms in the US. The Sarbanes – Oxley Act of 2002 changed the way firms conduct financial transactions. Our result suggest that this regulation impacted the financial health of firms through the re – definition of financial experts.

In this chapter, we propose only one Pathway ($P \rightarrow J \rightarrow D$) with two hypothesis ($P \rightarrow J$) and ($J \rightarrow D$) and used (**I**) as control variables. We employ PLS statistical method.

Chapter 5 addresses the topic: The Impact of Corporate Governance Mechanism - Audit Committee Financial Experts on Corporate Decisions (Firm Value) - The Financial Reporting Process: Evidence from US, UK and GERMANY. A positive increase in firm value have been evidently linked to companies with strong corporate governance and mechanisms such as audit committee financial experts. Particularly, those with accounting financial expertise exerts significance influence on firm value. However, the evolvement of organisational settings and dealings in different jurisdictions, structural divergences in the formation of audit committees and legislative differences in the UK, US and Germany have raised serious questions. This study analyses the relationship between corporate governance mechanisms and firm value using a new theoretical framework – Process Thinking Model (Throughput Model). Chapter 5 proposes two hypothesis and use **I** as control variables.

$$P \rightarrow J \quad (1)$$

$$P \rightarrow D \quad (2)$$

In this chapter, we employ OLS and Panel data as well as PLS to make our findings robust. Our result suggest that financial experts with accounting expertise have significant

influence on firm value in the UK and Germany but not in the US. The impact on financial shows mixed results.

Chapter Six deals with the conclusions and prospect for further research

CHAPTER 2

PRINCIPLES VERSUS RULES – BASED REGIME FROM THE UNITARY BOARD PERSPECTIVE: THE IMPACT OF FINANCIAL EXPERTS ON FIRM VALUE

2.1 Introduction

The debates surrounding the role and authority of audit committees as a corporate governance mechanism in the financial reporting process and its effect on firm value have received a tremendous amount of concerns from accounting and finance practitioners, professional bodies as well as academia. DeFond and Francis (2005) claimed that the consequences of the corporate collapses have renewed the significance of the corporate governance monitoring role. Furthermore, the regulators believe that good corporate governance is able to improve the ability of boards and their committees to manage effectively and in the best interest of shareholders, whose trust and confidence is gained (SOX, 2002).

Also, the financial scandals at Enron, Tyco and WorldCom have also brought under greater scrutiny, the powers exercised by corporate boards. In fact, these corporate malfeasances have provided the impetus for large legislative changes for example, the Oxley Act of 2002 and the release of new corporate guidelines for the New York Stock Exchange: under the new guidelines there is greater focus on the exact monitoring and control duty exercised by the board of directors. This monitoring is not thought to be limited to evaluating

the general performance of the firm or performance of CEO but these boards are considered to have greater additional valence. For instance, it is widely recognized, that in addition to aforementioned duties, the board plays a crucial role in outlining and framing future company strategy, general advice on firm financial health and in setting goals for the firms they work for (Lorsch and MacLver, 1989).

Traditional answers have been to increase transparency, audit committee independence, and improve financial reporting standards and further independent assessments by financial experts to stave off future financial upheavals. The intended consequences were that, audit committee performance would improve as a result of a greater focus on accurate disclosure and transparency in respect of firm policies upon the appointment of financial experts. Evidence from prior studies produced mixed results as to the impact of financial experts on firm value and the financial reporting process. (Defond et al, 2009; Koehler, 2005; Felo. J et al, 2003; Davidson 111 et al, 2004; Abbot et al, 2004, 2010; Be'dard et al, 2004; Defond et al,2005; Carcello et al, 2006, 2011; Zhang et al, 2007; Turley and Zaman, 2007; Chan and Li, 2008; Krishnan and Visvanathan, 2008; Pomeroy, B and Thornton, 2008; Beasley et al, 2009; Cohen et al, 2009). Moreover, most of the prior studies are based on US data and as such, their findings cannot be generalised because the regulations in each country, economic environment and governance practices are different between the UK and the US further highlight the need for more research in this area (Morck *et al.*, 1988, McConnell and Servaes, 1990, Hermalin and Weisbach, 1991, Agrawal and Knoeber, 1996, Beasley, 1996, Bhagat and Black, 1999, DeZoort *et al.*, 2003a, Vafeas, 2005). Furthermore, the agency and resource – based theories have been predominantly used to describe the link between financial experts and firm value.

The purpose of this paper therefore, is to extend previous research by empirically exploring the influences of audit committee financial experts may have on the financial health and firm value from the perspective of a unitary board structure. Using FTSE100 and Nasdaq100 companies, the evidence from our study shows that financial experts from three different category of expertise: accounting, finance and supervisory exerts significant influence on firm value. Particularly, our results also show that financial experts in the UK with accounting expertise continue to exert significant influence on firm value. However, we did not find any significant influence of any of the financial experts categorized into accounting, finance and supervisory expertise on financial health. On the contrary, accounting experts' influences on firm value in the US is found to be negative. Additionally, lagged effects on financial experts shows a positive effect.

We contribute to this literature in six ways. First, we extend previous studies by examining how a three - stage financial expert decision model (Throughput Model) may link financial experts to financial health and firm value. The insignificant relationship between financial experts and the financial health of firms may have been attributed to role and authority of financial experts within the UK board structure where the non – executive directors are also playing a pivotal role in monitoring.

Secondly, we adopted Philips (1992) definition of originality. We used the same variables that were previously used in prior studies but with a new theoretical framework, different interpretation, thereby bearing new evidence on an existing topic.

Thirdly, by using profitability, liquidity and leverage to capture financial health, we have added new knowledge to the definition of the variable. Traditionally, prior studies have used only one of these and other individual measures to capture the performance of a company.

Fourthly, we respond to the calls of Bedard and Gendron (2010), Cohen et al (2010) as well as Rodgers (2013) on more post SOX research to be done on the impact of financial experts on the financial reporting process and firm value. Notably, we examine the impact of financial experts on firm value from the perspective of the unitary board.

Fifthly, we also respond to the Security Exchange Commission (SEC) broad definition of financial experts by categorizing financial experts into accounting, finance and supervisory expertise. We disagree with the narrow definition of only taking accounting and auditing expertise as financial experts.

Finally, our findings of mixed expertise may be useful for organizations, regulators and policy applications.

The next sections will take the following format: 2.2 - 2.4 will discuss board structures and accounting practices, 2.5 – 2.6 will deal with the theory and hypothesis development, 2.7 – 2.8 will describe data and statistical method and finally 2.9 will present empirical results and conclusions.

2.2 Unitary board structure and Role of Audit committees

The main aim of this section is to discuss the research questions. More specifically, the section seeks to achieve two goals. Firstly, to help to identify unexplored areas in the existing literature, since there is no single approach explaining firm value. Secondly, as most of the studies on financial expertise have been based on US companies, the present study therefore considers some interesting questions around charting the similarities and differences of the influences of financial experts on financial health and firm value in two different jurisdictions, the US and UK

The similarities between the UK and US board structure have been over simplified by prior studies. While both structures operate under the unitary board, there are internal variations. These internal variations ranges from (a) composition of the board (b) requirements of financial experts in terms of qualifications, (c) Philosophy in terms of operating on a rules – based versus principles –based, (d) role and authority of audit committee, (e) influences of shareholders and (f) Strong legal protection. All these may impact the end product of the financial reporting process and the creation of firm value.

This point is echoed by Blanchard et al. (2010) where the authors studying host of country cases conclude that the initial conditions; for example the role of corporate governance framework, financial sector and the specific policy responses played a large role in the evolution of the economy following the great recession.

Johnson et al. (2000), using macro-level national statistics find that countries with better legal protection and corporate governance fare better in the stock market than countries with lower

legal protection during time of financial upheavals. Mitton (2000) finds more direct evidence albeit at a micro level. He finds that firms with greater disclosure of information performed better and were able to withstand and absorb macroeconomic shocks more ‘efficiently’. Nevertheless, he finds no clear evidence that firms having clear distinction of control rights and cash flow management to have much effect on companies’ performance during crises years. In this vein, the UK and US board structures will be examined.

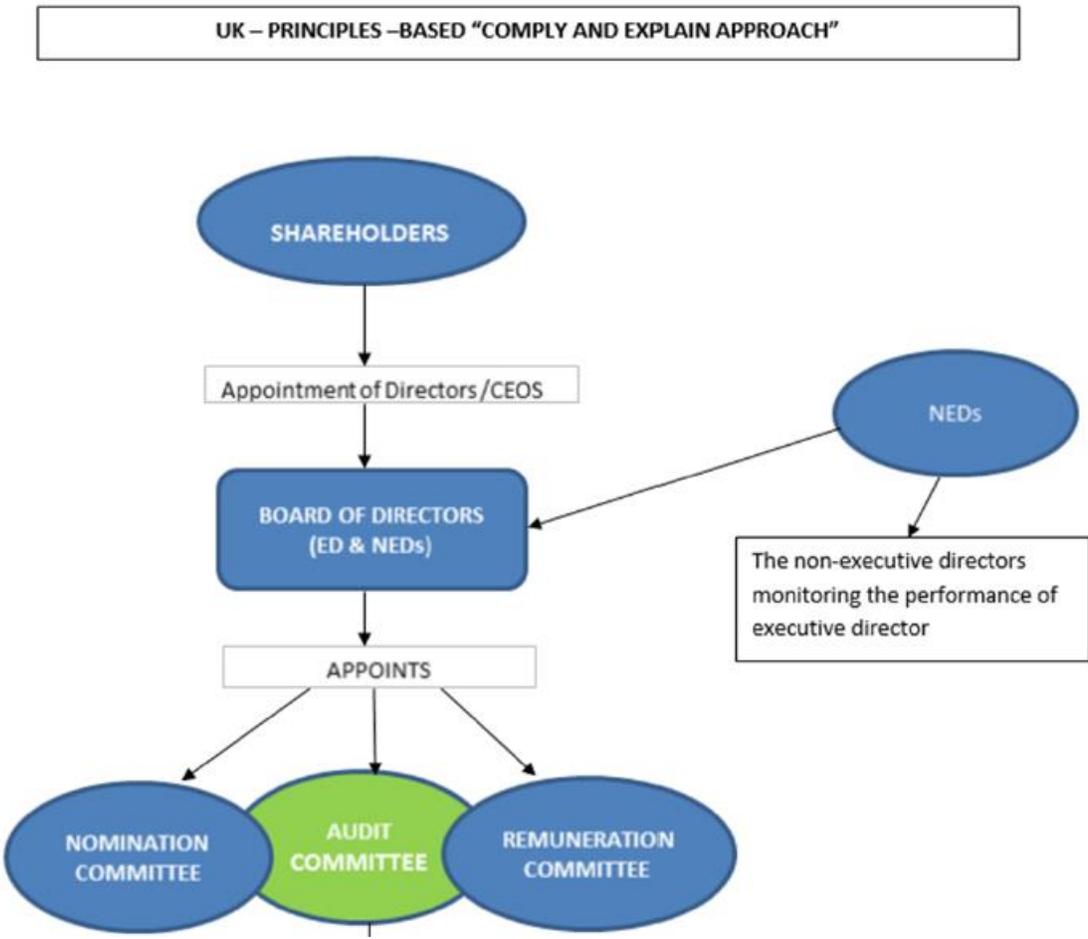


Figure 2-1

The UK board in figure 2.1 is principles – based. One of the milestones achieved in the evolvement of the UK unitary board was the implementation of the Cadbury report of 1992.

Many have argued that, the role of audit committee and board structure was strengthened in that, the involvement of non – executive directors in the monitoring activity improved the financial health of companies. (Peasnell, Pope and Young, 1998).

However, Weir, Weir and Laing (2000) and Laing and McKnight (2002) showed that, there was insignificant effect on corporate performance after the recommendations of the Cadbury Report. Buckland (2001) argues that there is a tendency of destabilization of control and result in poor governance and performance in the compliant firms as a result of strengthening the power of nonexecutives on boards irrespective of those other control mechanisms. He also adds that compliance or non – compliance with the Cadbury report has no association with the survival of firms. There is little consensus regarding the causal relationship between governance mechanisms and corporate performance. This signifies the need for further research in this area.

The structural setup of the UK board with the role of non – executive directors has raised questions about the authority and the extent to which audit committee financial experts may influence firm value and financial health. The audit committee financial expert's role is to ensure effective monitoring, overlook fraudulent activities and act as a whistle-blower on dubious behaviour. This is achieved by assisting the board and to ensure high quality accounting practices are being pursued through supervision of complete financial reports where integrity and transparency are key elements. The audit committee, through their examination of annual reports delivered by the management to the shareholders, were supposed to protect shareholders from misrepresentation of information and abuse of trust. .

This role is largely summed up by an ex-chairman of SEC, Arthur Levitt when he argues forcefully that:

“Effective oversight of the financial reporting process depends, to a very large extent, on strong audit committees; qualified, committed, independent, and tough-minded audit committees represent the most reliable guardians of the public interest – this time for bold action” (Levitt, 1999, p. 1).

According to SOX Glassman (2005, p.1), the main objective for audit committee is to restore confidence in the profession of external auditing, a feature he dubs as “restoring the gatekeeper function”, improving management behaviour and quality of financial reporting. This is crucial for insuring good corporate governance, which is pivotal for the economy. As Roche (2005, p.9) put it, “ethical, sound and transparent corporate governance arrangements, both for the private and public sectors, are essential pillar of healthy market economies.”

The United States, like the United Kingdom operates within one-tier Anglo-American system of corporate governance that has a strong focus on protection of shareholders. To here, the financial reporting system relies on professional self-regulation, where professionalism is preferred over statutory control. Over the years, the system slowly adopted a new approach where profession is regulated. In fact, the definition of corporate governance relies on an agency theory which states that the goal of corporate governance is to increase profits, to create firm value and ensure a stable income stream, in the name of its shareholders. This was to be achieved without much of government’s involvement based on Liberalism and Capitalism reining over US economy. In line with this, the US operates in one-tier system

with a single board and an ‘imperial CEO’ who has supremacy in setting firm’s direction. Although, prescriptive regulations were alien to the US, the corruption scandals revealed with the bankruptcy of Enron Corporation, WorldCom Inc. and many others ultimately led to severe stock market crashes.

This provided the impetus for top management and policy makers to search for supervision system that would ensure accuracy and transparency of financial records held at firms so that such adverse financial upheavals due to corruption, negligence and even outright fraud are not repeated. As a result of these efforts, the Securities and Exchange Commission (SEC), a governmental agency concerned with the securities industry, introduced the (now famous) Sarbanes-Oxley Act into existence in 2002. This act gave audit committees in the US an extensive authority. As seen in figure 2.2 below, the US board structure is rules – based, implying that the formation of audit committees are mandated. Unlike the UK, the US lay emphasis on rules rather than principles.

In mitigating agency problems as well as the occurrence of another financial crisis in both board structures, audit committees over the years have gained recognition. However, it has been argued that the role and authority vested in audit committee’s especially financial experts in these two jurisdictions of principles versus rules - based, may impact both financial health and firm value.

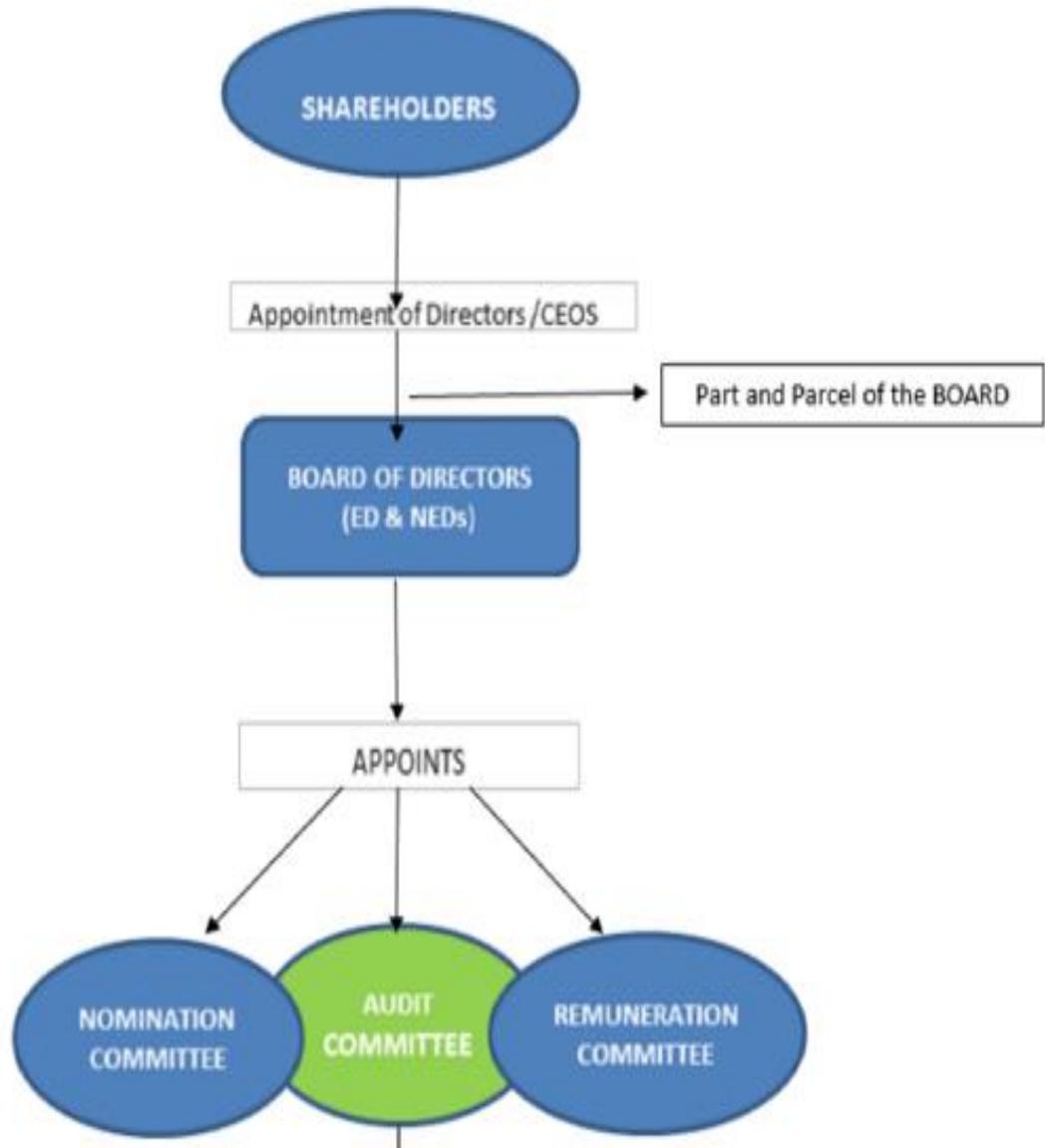


Figure 2-2 US board structure

Standards of corporate governance and auditing in the UK are to be found in the UK Corporate Governance Code (formerly known as the Combined Code on Corporate Governance, FRC 2003). Independent (non-executive) directors are necessary for protection of shareholders' rights by offering impartial opinion on the actions of the executive board.

Under the UK system, non-executive directors do not review work of the audit committee, but they are incorporated in the audit committee. This is the reason why it is required for an audit committee to consist in majority out of independent auditors (Kohler, 2012). The authority of audit committees in the UK is significant. Over the years, the responsibilities of audit committee grew immensely; it had to make recommendations for the auditor's appointment, discharging and audit fee negotiation. It also had to ensure appointed auditors' independence, especially in case of using non-audit services of the same individual (FRC 2003: C.3.2 and C.3.7).

In the next section 2.1, 2.2 and 2.3, rules –based versus principles – based, the contribution of financial experts categorized into accounting, finance and supervisory expertise to firm value and financial health will be discussed.

2.2.1 Accounting Practices (Rules versus Principles – based)

The accounting practices implemented by various countries can be broadly categorized into two camps: principle and rule based accounting frameworks. As the names implies, the principle based accounting practices are more flexible and cater to a more global outlook towards accounting needs and requirements. On the other hand, a rule based approach is more specific and precise. The focus here is meticulousness and exactness in following the designated standards. In fact, large scale accounting standards particularly in the United States have resulted in regulatory initiatives that try to dilute the rule based system in the United States. The worry was that US GAAP had become too rigid and in following

the strictures in place, there was room to exploit loopholes and find round about ways to get around the accounting principles to maximize self-interest.

The congressional plan to make US accounting system more flexible was encapsulated in Oxley Act 2002 where two major reforms were proposed and implemented. The idea was to nullify aggressive financial reporting and place in a new institutional platform for financial reporting and corporate governance systems to operate in. Thus, it was proposed that the US accounting system should be made ready for potential adoption of a principle-based accounting framework. In this vein, Securities and Exchange Commission (SEC) was instructed to submit a report on how the US can move to a principle based accounting system. This inevitably led for SEC to provide a roadmap that included a harmonization with International Financial Reporting Standards (IFRS) that would allow the US to move a more principle based accounting standards. Furthermore, under the Act, the audit committees were to be strengthened, particularly for public enterprises which were expected to provide greater oversight and transparency (SEC, 2008).

In fact, greater interest by many countries in the International Financial Reporting Standards (IFRS) was not only based on an effort to reduce global transaction costs while ‘translating’ accounting and financial documents in an increasingly interconnected world but also the great interest in implementation and harmonization of IFRS was also predicated on the fact that these rules catered more to the spirit rather than the letter of the ‘law’ i.e. are principle based (FASB, 2002). The hypothesized gain from this shift is that it will allow greater comparability of financial documents of firms across countries. Additionally, there was a fear that rule based standards can lead to perverse financial reporting, transaction structuring and

interpreting the standards to achieve preferred accounting outcomes i.e. in general it can foster a culture where firms may be challenging the rules based on different interpretation. which can lead to opportunistic and dubious accounting behaviour (Nelson, 2003).

According to a widely held view, US accounting standards are “rule-based”. Rule based approach came under fire after Enron scandal where it was discovered that Arthur Andersen, an auditor at the firm was accepting client-originated financial instruments. Additionally, he was also observed to design these instruments to meet the technical requirements of GAAP by running a Ponzi scheme which led the company to its inevitable fate. Eventually, Mr. Anderson was charged by the US Department of Justice and convicted in 2002 (Benston, 2006).

Soon after this ‘upheaval’, the Securities and Exchange Commission (SEC) report in 2002 was unanimously approved with all the major players on board. This led the transplantation of rule based accounting system to a more principle-based or objectives-oriented accounting framework.

Nevertheless, it should be noted that not all FASB’s standards are principle based. In fact, FASB’s Statement of Financial Accounting Standards (SFAS) has tedious classifications for “Accounting for lease Number 13”, giving clear guidelines to reduce individual judgment and focus on explicit rules to get consistent application of standards across various companies (Maines, 2007). But, SFAS Number 13, instead of eliminating subjectivity and bringing in consistency and objective implementation of accounting standards gave way for firms to

interpret lease contracts to preclude capitalization and show a more acceptable picture of firms overall financial health (Shortridge and Myring, 2004).

Conversely, more principle-based accounting requirements that by their very nature have less guidance are thought to increase application of professional insight and judgment that are consistent with the original intention of the standard. This, FASB believes would eventually result in more informative, accurate and ironically even 'consistent' financial statements (FASB, 2002).

The 'novel' accounting system as being propounded by FASB and favoured by SEC, has its own set of shortcomings as documented in Benston (2006). Firstly, the combination of asset/liability approach with the principle based standard requires a lot of guidance from management i.e. it is an information intensive and therefore expensive system. This becomes a problem not only during crisis years but also because the assets/liability approach uses fair value which is known to be relatively easily manipulated by the auditors and can result in dubious numbers. Secondly, it is necessary that the format be more than just 'principles' to deal with the inconsistencies between principles and guidance. The principle-based approach can override provisions if necessary. This makes the auditor follow rules by the letter and not by the intended bigger picture which gave rise to that 'rule' in the first place. This also discloses the methodology used by the auditor and gives transparency to the system. This enables other users to understand and perhaps, challenge the application if need arises (Benston, 2006). Again, accounting practices can be carried out on the basis of the good practices of the board and major players such as the lead directors, chairman, employed managers and above all audit committee members. The structural set up of the unitary board

where there is separation between ownership and control may negatively affect financial health and firm value if monitoring is not effective and efficient. Although, differences in financial reporting results based on application of different standards can be problematic for potential investors, they do not lead to compromised ethical corporate governance failures that typically result from the agency problem. The issue that is the focus of most regulating bodies is the abiding by the accounting policies and principles applied in particular jurisdiction.

Accounting policies are detailed rules and standards aiming at transparency of information through financial reporting to the shareholders. Manipulation of rules and deceitful reporting can benefit the company by increasing perceived value and profitability of the firm. There are various causes for accounting manipulations committed by the management and they can be affected by the accounting policy choices. The International Accounting Standard (IAS) 8 – Accounting Policies, Changes in Accounting Estimates and Errors, lists accounting policy changes which ultimately lead to disparity between companies.

Manipulation is commonly defined as "any intentional act or omission designed to deceive others, that results in losses to third persons i.e. the victims of manipulation“.

One common form of manipulation in the corporate environment is adjustment of information, usually performed by the company's management. This type of manipulation is highly problematic for the monitoring system practices since the audit is offered information that has been compiled (and possibly manipulated) by the management. Therefore, detection of financial reporting manipulation of this sort is a daunting task.

In the next section, the practices of the key players will be discussed and demonstration of the relevance of the audit committee.

2.2.2 Agency theory, Board and Firm value

In literature and in business discourse, company “Boards” are often explained in terms of their important institutional features that includes but is not limited to the boards’ total number of members, its autonomy, committees such as audit committee and diversity. It is of course a different question whether these structural characteristics have direct effect on board’s ability to monitor and advice the enterprise.

The typical board structure of a large United States firm. Table 2.1 outlines the key features of a typical board in such a corporation. As can it be seen, typically there are on average eleven board of directors. Most are usually independent directors that are defined by the New York Stock Exchange as directors that have “no material relationship” with the firm. Especially important among such directors is the “lead independent director” who serves over the executive sessions of the board. Usually, the lead director plays a pivotal role in assessing performance of both the boards’ and corporations’, planning a successor and recruiting directors. Furthermore, another salient aspect of role of lead director is that fact that it acts as an anchor and a point of contact; managing relationship with nonexecutive directors, management board, large investors and information management. Another important position within the board is one of the “Chairman”. The chairman of the board is an interlocutor of discussion and relevant information not only between the board and management but also between the board and shareholders. Regarding duties and responsibilities, the chairman typically leads the board to set agenda, distribute materials for

points of discussion and schedule important meetings that includes and but are not limited strategic planning, risk management, merger analysis, compensation determination and performance review. Therefore, it is clear that the chairman is vital for the governance system of the enterprise (Stuart, 2009).

Table 2-1 Composition of a US board structure

Number of directors	11
Number of meetings per year	8-9
Independent directors	82%
Independent chairman	16%
Dual chairman/CEO	63%
Lead director	95%
Independent audit committee	100%
Independent comp committee	100%
Independent nom/gov committee	100%
Average age	62
Mandatory retirement	75%
Mandatory retirement age	~70
Female directors	16%
Boards with at least one female director	89%

The Board of a typical Large U.S. Corporation

Source: Adapted from Stuart (2009)

As seen from the Table 2.1, all boards have “committees”, be it audit committee or compensation or governance committee. Their role is to deliberate and discuss particular issues that are important to monitor the enterprise. The selection among the directors for the committees is usually made based on domain of interests and expertise of the respective

director and the particular task at hand. Nevertheless, Sarbanes Oxley Act (SOX) requires that all audit, competition and nominating committees must be autonomous. Nevertheless, other more specific committees that are designated with specific tasks such as strategic planning, financial management or technological evaluation need not be independent (Larcker, 2011).

Richardson et al. (2007) look at if lead directors add value to the firm. They hypothesize the relationship to go either way. The strong lead director might bring clarity at time of crisis and provide much needed leadership skills. However, they conclude that it depends on the particular definition of corporate governance if indeed lead directors add value. For example, only 2 out of 14 measures of governance did strong lead directors improve 'value'.

Considering, ordinary, non-crisis times, rigorous academic work on corporate governance, managerial ownership and firm value dates back to Jensen and Meckling (1976). For instance, they show that increase in managerial ownership and weaker corporate governance structure can reduce firm value. The channel that is explored acts through increased agency costs and is referred in literature as the "incentive alignment effect". The idea is that lower proportion of stakes in the company can increase agency costs since managers can still benefit through non-pecuniary 'imbursements', albeit, not bearing the complete costs. This results in a reduction of effort because the managers will now appropriate a smaller fraction of additional profits of the firm.

Conversely, according to this line of reasoning, if managers own a larger proportion of company, the consequent stakes in the firm and share of the profit 'pie' tend to increase,

resulting in larger proportion of benefits associated with increased effort. This in turn is supposed to 'solve' the classic principal agent problem and result in alignment of incentives. However, subsequent literature suggested the relationship is not as simple as once thought. For example, Morck et al. (1988) found that the association between corporate value and managerial ownership is non-linear. In particular, there is a 'inverted U' shaped relationship which implies that as the managerial ownership in the company increases the corporate value increases but up to a point; if the firm ownership becomes too high, it begins to hurt firm value i.e. after a threshold of 25% of total firm ownership by the managers, the company value as measured by the "Tobin's Q" begins to decrease.

This has given rise to wide range of theories to why higher degree of firm ownership by the management might in fact be detrimental to firm value after the move away from the threshold of management ownership. This is referenced to as the "management entrenchment hypothesis" (Faccio and Lasfer, 1999, p. 6). Three explanations are given to explain this phenomenon, with is closely related to the corporate governance structure in place. The first theory emphasize on CEO behavior: high managerial ownership enables the CEO of the company to create a board that is forgiving i.e. a weak monitor. This of course can be a major issue in the United Kingdom and United States. Another reason cited for this hypothesis is that a greater ownership by the management makes hostile takeovers less effective and unlikely. This can take the bite out of the monitoring role of the board especially taking into account that external discipline by hostile takeovers is lower (Hirshleifer and Thakor, 1994).

The non-monotonic relationship between managerial ownership, board structure and firm value is not only found for the UK as in Faccio and Lasfer (1999) who study managerial

stakes in firms and board structure of all (non-financial) listed firms in the United Kingdom covering 1650 companies during 1996 to 1997. They find that managers hold around 17 percent of company shares on average where the optimal level of managerial holding, i.e. the point where the firm value begins to fall is 12 percent. The companies above this threshold of managerial ownership not only have lower firm value but seem to have different corporate governance structures in place. For example, these ‘suboptimal’ firms have smaller boards, lower likelihood of having a non-executive chairman and disproportionately lower non-executive directors on the board. The non-monotonic relationship is not limited to the UK case only. For instance, Holderness et al. (1999) find that managers hold around 21 percent of firms in the United States. These results are consistent with managerial entrenchment hypothesis and challenge the extent of effectiveness of internal corporate governance structures.

Boyd (1995) studied how autonomy of chairman impacts firm value. He studies 192 firms in 16 industries and hypothesized that independent chairman may be beneficial since it offers a dynamic environment that may promote firm value creation and innovation. However, in his sample he finds no such evidence particularly in low turbulence or normal economic conditions. Larcker (2011) explains this finding by arguing that independence and separation is artificial and complicates decision making which is detrimental to the firm value.

Nevertheless, there is empirical evidence that independent audit committees in fact do improve earnings and that having ‘financial experts’ (specialized members who have ‘inside’ knowledge) improves firm ‘value’. Klein (2002) look at S&P 500 firms in year 1992

and 1993 looking at both accounting and market measures of firm value (asset and stock market returns, respectively), in addition to Jensen productivity variable, a proxy for investment strategies and long run productivity of the firm. She finds that having experts in finance and investment do enhance firm value for all his measures of performance.

2.3 Contribution of financial experts to Firm value

In a seminal contribution, Jensen and Meckling (1976) define firm as a “nexus of contracts” that have possibility to create value. Firm value in this context is defined in the broadest possible terms, an idea that dates back to Penrose (1959). It inculcates not only financial value but also social and cultural “value creation” that the firm might bring to fore (Adams, 2004). An example might illustrate this point; consider the introduction of “Mac-book air” by Apple Inc. The introduction of the product and hence resultant increase in Apple’s profits is well documented. However, Apple Inc. firm value through introductions of novel products such as the brand ‘Mac’ is widely acknowledged to create value beyond the financial value; fueling culture of portability, sleekness, miniaturization and interconnectivity (Bloom et al, 2012).

Nevertheless, the current dominant paradigm of firm value, particularly in the field of corporate strategy and governance, is based on Resource Based Theory (RBT) of the firm as propounded by Wernerfelt (1984). Instead of focusing on output or product side of the market to access firm value, Wernerfelt’s suggested it is more appropriate to evaluate firm value from input or “resource side” (Wernerfelt, 1984, p. 171).

He goes on to define resources in a broad sense, echoing Penrose (1959), covering both tangible and intangible resources. Specifically, he views resources as any source of strength and weakness or any resource that may offer firm a semi-permanent advantage. He elaborates his point by citing real world examples covering machine capacity, customer loyalty, production experience and technological leads. The study builds on Porter (1980) influential analysis of competitive strategy. He discusses and analyses each of Porter's five forces as a struggle between firms to acquire resources.

Following in Wernerfelt's footsteps, Peteraf (1993) extends this line of research. She uses Wernerfelt's resource based view of the firm to build a model to explain how firms can sustain competitive advantage. There are the four "cornerstones" of the model: Heterogeneity of resources, ex post limits to competition, imperfect mobility and ex ante limits to competition. The driving force behind the model is heterogeneity of resources that allow firms to access and manipulate its 'idiosyncratic capital' to either earn Ricardian or monopoly rents, where the former is based on scarcity in the supply of inputs (resources) and the latter is based on restriction in output. Therefore, Peteraf (1993) contribution is considered influential since it models both input and output side of the market while explaining firm value.

Bowman and Ambrosini (2000) further refine and clarify the Resource Based Theory's notion of value. They distinguish three concepts of value: perceived use value, monetary value and exchange value. The perceived use value is subjective, since it is defined by customers who define the magnitude of this value based on their perceptions of the usefulness of the product. Furthermore, the monetary value is the amount the customer is willing to pay

for the product. Whereas, exchange value is the 'objective' value of the project i.e. it is realized "when the product is sold" Bowman and Ambrosini (2000, p. 4).

This encompassing and broad definition of firm value, inevitably, bring with them problems of measurement. Technically, the creation of noise in the latent firm value variable introduces the econometric problem of "endogeneity" that results in biased or meaningless estimates. Nevertheless, these difficulties have given rise to novel innovations in measurement of firm value across various forms of dimensions. As a result proxies, approximating the latent variable of firm value that minimize endogeneizing measurement noise are often put forth as reliable measure of latent firm value variable.

Bowman and Ambrosini (2000) extension of resource based paradigm is useful in this regard. Instead of looking at utility theory proposed by neoclassical economists which postulates that consumers buy products to maximize their satisfaction or utility and that any increase in value is thus equal to "marginal utility" i.e. increase in utility by buying additional unit of product. Bowman and Ambrosini (2000) definition or categorization of 'value' allows for more ready measurement. Even from standard utility theory it follows that a sale is achieved when product confers greater "consumer" surplus than 'next best' feasible set of alternatives. Therefore, under our current definition, firm create the perceive use value and when the sale is made, exchange value is realized which can be measured.

The fundamental question as to which of the categorised financial experts with (accounting, finance and supervisory expertise) to positively influence firm value has been discussed by many with mixed results as shown in Table 2.2

Table 2-2 financial experts and Firm value

Author	Date	Country	Key findings
McMullen and Raghunandan	1996	USA	Absence of Financial experts will lead to financial reporting problems and as such value creation
McDaniel, Martins and Maines	2002	USA	Financial experts differ in their functioning role of value creation and the financial reporting process
Davidson III et al	2004	USA	Financial experts on audit committees increase firm value”
Defund et al.	2005	USA	“A positive market reaction has been linked to financial experts with accounting expertise appointed to audit committee”.
Karamanou and Vafeas	2005	USA	“AC expertise and board independence are positively associated with market reaction”
Bedard et al. Krishnan, Dhaliwal et al.	2004, 2005, 2006	USA AND CANADA	financial expertise, measured using a strict definition based on accounting/auditing experience, is associated with less earnings management and better internal control
Weiss	2005	OTHER COUNTRIES	They document that no clear relationship between firm value and institutional ownership (“block holders”) or insider ownership
Carcello et al.	2006	OTHER COUNTRIES	They also found that most financial experts did not have a background in accounting or finance and the stock exchange affiliation moderated this factor.
Coates et al	2007	USA	“Over a 4 year period of 2000 – 2003, the result show that stock return increases enormously as their audit committee financial literacy improves”.
Zhang et al.	2007	USA	Internal control weaknesses are related to a company’s audit committee having less financial expertise
Chan and Li	2008	USA	Supervisory experts who are independent directors influence firm value significantly.
Chen et al.	2008	USA AND OTHERS	The establishment of audit committees resulted to an increase in earning returns.
Henry	2008	AUSTRALIA	Noted based on his findings that firm value was not significantly influenced as a result of the formation of audit committee
Brick and Chidambaram	2010	USA	Found mixed results of firm value being impacted negatively as a whole, however, a significant influence on firm value by AC was experienced for sub – periods.
Aldamen et al.	2011	AUSTRALIA	Noted that in the recent crisis, financial expertise significantly influence firm performance.

Research on accounting numbers presented in an accounting framework and its relationship to firm value dates back to the 1990s. This literature has been famously dubbed “value relevance literature” by Holthausen and Watts (2001). These studies are typically divided into three broad groups. First are the relative association studies that measure the relationship between stock market valuations with bottom line accounting measures. The studies usually statistically test for any significant differences in R squares by varying bottom line accounting ‘figures’. An example of this is Dhaliwal et al. (1999) where the authors find statistically insignificant results for the relationship between stock market value (of non-financial firms) and future cash flows and net incomes. They conclude that “comprehensive income” is not a better measure of firm value relative to simple net income and puts into question the items included in SAFS 130 where a requirement of comprehensive income reporting was put in place.

The second group, “incremental association studies”, evaluate if firm value can be explained by some particular accounting code or standard. The standard or guideline is concluded to be “value relevant” if the coefficient of regression estimation is not a result of sampling error i.e. is significantly different than zero. Some studies, however, go even further than testing for no effect and instead estimate a valuation model and make explicit predictions on the coefficients. For instance, Venkatachalam (1996) in an incremental association study assesses the relationship between fair values of risk management derivatives on equity value of the 99 banks for the year 1993 to 1994. He goes on to further test whether the coefficient on fair value is equal to his theoretical prediction of 1. It is hence concluded that investors’ perception of derivatives’ fair value reflects underlying economic fundamentals with greater accuracy relative to their notional figures.

Last, strand of literature is referred to as “marginal information content studies” that evaluates if particular accounting practices adds ‘value’ in the sense that it reduces informational asymmetries of the principal (investor). These studies are relatively straight forward in their empirical strategies since they just evaluate if any additional accounting information results in changes in firm value. The most typical study looks for reactions of price in face of new information. Amir et al. (1993) is an illustrative example. They test for marginal information content when there was reconciliation with US GAAP by several foreign enterprises under requirement to fill in a form mandated by the Securities and Exchange Commission (SEC). They find that there is a clear difference and in fact abnormal returns in earning for foreign firms that made the ‘transfer’ to US GAAP requirements as opposed to foreign firms that did not. This gives an exogenous source of variation and allows the authors to interpret the effects causally. It is found that in fact, harmonization of earnings (i.e. cash flows adjusted for accruals) and shareholders’ equity to US GAAP is value relevant and that information content is important channel connecting this relation (Amir et al., 1993).

The studies mentioned above make their inferences of the empirical results above based on two theoretical paradigms. First one is the “direct valuation theory” (see Sloan, 2002) where accounting profits and value is considered highly correlated with equity market value. Furthermore, book value of the asset in this scenario is considered a reliable proxy for market and firm value. Under this theoretical paradigm the regulators and policy makers would be looking to see if there are particularly high stock price co-movements in relation to changes in accounting codes.

The second dominant theoretical paradigm is the “input-to-equity valuation theory” (Holthausen and Watts, 2001, p 1). In this case accounting plays a relatively more central role where the role of accounting standards and guidelines is to provide investors information that would allow the prospective investors to price assets and assess firm value i.e. under this paradigm financial reporting and accounting numbers disclosure serves as an input in the valuation models of creditors and investors. Policy makers and regulators under this theory, value studies that which accounting rules and standards allow for more easy to use inputs for valuation models of investors. Further, inference in this case requires an assumption that links accounting code and a variable that enters the valuation model. The standard approach in literature basing their inference on this theory is to present measures of firm value and outline accounting information that is pertinent for valuation (Barth and Clinch, 1998).

Thus the findings of the impact of audit committee financial experts on firm value are conclusively mixed. (McMullen and Raghunandan ,1996; McDaniel, Martins and Maines, 2002; Krishnan, 2005; Dhaliwal et al,2006; Weiss, 2005; Zhang et al, 2007; Henry, 2008; Brick and Chidambaran, 2010; Aldamen et al, 2011). Instead of using a single theoretical framework such as the agency, resource – based and the above mentioned theoretical paradigm, we propose a financial expert decision model (Throughput Model), an integration of several models that will help us better to understand the relationship between financial experts and firm value.

2.4 Contribution of financial experts to financial health

There are several studies that have investigated financial experts and their influences on the financial reporting process with a link to the financial health of firms. The financial

health of firms in this paper is centred on the profitability, liquidity and leverage of firms. In prior studies, it is the handling of accruals quality, discretionary accruals, restatements, litigations and the detection and minimization of fraud.

The question of which of the financial experts such as those with accounting, finance and supervisory expertise that can influence a firm financial health has been debated with mixed results. The table below shows that most of the research done in this area used data of US firms with very minimal studies using UK data. These findings from the US therefore cannot be generalised. This paper viewed influences of financial experts from the perspective of the unitary board.

For instance, Teoh and Wong (1993) document how companies where accounting regulatory frameworks value high quality auditors and experts gave better earning coefficients. However, this kind of study suffers from problem of endogeneity primarily driven by reverse causality. It is not at all clear if high quality auditors and high financial quality is driving the better earning response or it is the fact that higher earning firms can afford to hire better and more expensive financial experts/ auditors.

Table 2-3 Financial Experts and financial health

Author	Date	Country	Key findings
Xie et al.	2003	USA	Found that the reduction of discretionary accruals and a negative association with restatement occurrences have been linked to audit committee financial experts. Firms with the right experts and sound financial background are an asset to the financial health of firms.
Abbott et al.	(2004)	USA	Noted that the detection of financial malpractices that has to do with restatement occurrences are negatively linked to financial experts. Their expertise are essential to the growth of the firm.
Anderson et al	2004	USA	“Cost of debts are linked with larger ACs. It is suggested that as such effective monitoring can be done based on their size”.
Bedard et al.	(2004)	USA	Reported that constraining earning management are within the skills, experiences or expertise of financial experts. ACs with financial experts are in a better position to tackle this task.
Davidson et al.	2005	AUSTRALIA	A significant negative association to earning management has been linked to audit committees with a higher proportion of non – executive directors
Farber	(2005)	USA	Firms where fraud is consistent prove to have less of the necessary expertise needed such as independent directors and CEOs.
Peasnell et al.	2005	UK	Noted that while AC may be necessary in a firm, their impact as far as manipulations especially when threshold are exceeded by pre – managed earnings are ineffective. Also their presence is irrelevant to manipulations whether downward or instances of income increasing manipulations.
Lary and Taylor	2012	AUSTRALIA	Lower incidence of fraud or severity of financial restatements are positively linked to the presence of financial expertise. AC members with financial background are assets and intellectual capital to the firm.

Ghafran, C (2013 p.32)

Financial Experts and financial health continued.

Author	Date	Country	Key findings
Vafeas	2005	USA	Noted that experiences of audit committee members are associated with an increase in earnings. Implying that their expertise play a fundamental role.
Piot and Janin	2007	FRANCE	Reported that, the presence of AC is linked to a decrease in abnormal accruals.
Cullinan et al.	2008	USA	Misstatement decreases probably as a result of AC that maintain the concept of objectivity and independence.
Krishnan and Visvanathan	2008	USA	Reported that the knowledge and expertise of financial experts especially with accounting expertise gives them an added advantage in dealing with complex financial and accounting matters that directly relates to the financial health of firms.. Hence they are better positioned to influence the performance of firms.
Baxter and Cotter	2009	AUSTRALIA	An increase in earning quality has been positively linked to the presence of AC.
Krishnan and Lee.	2009	USA	Found that, there is a higher probability for firms where financial malpractices and the issue of litigations are common, to hire financial experts with accounting expertise. .
Dhaliwal et al.	2010	USA	Due to the complexity and the difficulties of understanding accounting transactions, rules and standards, the accounting experts is much more capable to confront issues as compared to other experts.
Lo et al. (2010)	2010	CHINA	The issue of financial manipulations are less in firms where accounting experts are present.
Sun et al.	2012	USA	“Accounting, finance and insurance experts are associated with more accurate loss reserve estimates”.

Ghafran, C (2013 p.32)

Furthermore, it is also possible that better auditors or financial experts are more poised to detect manipulations and infractions which may eventually be beneficial for firms earning

potential; especially in the long run i.e. auditors endogenously improve precision and credibility which is driving better earnings prospects for the enterprise. Another concern relates to the proxy for high quality auditors i.e. large auditing firms is a good one since such a proxy may not reflect better accounting regulation and financial reporting quality.

United States because of its similarities with the United Kingdom and accessible data is an informative case study to evaluate accounting regulations and their consequences. In this line, the Section 302 and 404 of Sarbanes-Oxley Act (2002) is an important accounting regulatory statute and has wide ranging implications; it allows firms to file for “material weakness in internal control”. This essentially means that the company admits that there are significant deficiencies in accounting system that would inevitably lead to accounting misstatements since it might not be prevented or detected (PCAOB, 2004). Specifically, under section 302, executives must certify that they have sufficiently evaluated the internal control and financial reporting system of the enterprise and in case they are not satisfied and believe a “material weakness” is present, they must identify and point out the material weakness to the Securities and Exchange Commission (SEC) under this statute. On the contrary, section 404 focuses on managerial branch. It requires that within each annual report presented by the management, an additional document that contains a managerial assessment of the efficacy of accounting control system and a procedure for accurate, timely and transparent financial reporting is attested by public accountants is also to be included.

Doyle et al. (2007), put exactly this hypothesis to test. In their sample covering 779 companies who disclosed material weaknesses in the year 2002-2005, they study the characteristics of firms who file and the drivers leading them up to this. They document the enterprises who file under section 302 and 404 are typically younger, smaller,

financially weaker; surprisingly they also document the firms to be more innovative in the sense they are typically growing rapidly, have more complex tasks or/and going through restructuring. On the other hand, corporations who make these filing the least were more diversified and were in better financial health. This has clear policy implications for regulators. Specifically, regulators who require these filings should be cognizant of the fact that filing for section 302 and 404 need not necessarily be a bad thing. Since, typically regulators want to encourage innovation and young firms it would help give special accounting breaks to young enterprises going restructuring to they can catch up with their peers. This can be achieved by adding sunset clauses through a contractual agreement that ensures the relaxing of rule is temporary so that moral hazard problem does not become a concern in the future.

Beneish et al. (2008) extends this line of research by empirically investigating the effect of this statutory internal control weakness requirement on information uncertainty and financial health consequences. The empirical methodology applied in this study improves upon Doyle et al. (2007) since this study constructs matched pair based on a size and performance for also non-disclosing companies to serve as a counterfactual. This provides a more empirically rigorous way to interpret the causal mechanism as propounded in previous study. Beneish et al. (2008) find statistically significant negative stock price effect following the disclosure. This is consistent with the idea that information revelation that harbors uncertainty is detrimental for firm financial health. Further, analysis of these companies shows that the adverse consequences are worsened in some circumstances, particularly with high auditor turnover and membership in a high risk industry. This research also has important policy lessons both regulators and firms. For instance, it is found that adverse consequences due to disclosure can be dampened in case of companies' engagement with a high quality financial experts/ auditor. This hints towards

strategy advice for the firm where it is in their own long-term best interest that they hire more qualified expert/auditors. Similarly, regulators can frame accounting rules or provide special subsidies to firms who hire more qualified auditors.

2.5 Theory and Hypothesis

2.5.1 Financial expert decision making model (Throughput)

The research model for this research is based on the Throughput Model. As suggested by many philosophers and ethicists, ethical standards in general are governed by preferences, rules and principles. (Trevino, 1986; Rodgers, 2009; 2013)

Several authors have agreed that ethical decision making or the decision making process for both individuals or organizations constitute stages of perception, implying the recognition of a moral issue and with a viewpoint as to how to fix it based on the information at hand, analysing those information to make a judgement that will ultimately lead to a constructive decision. (Bartlett, 2003 & Rodgers, 2013). The influence of individual characteristics such as those in audit committees and environmental factors such as the framework of perceptions or rules under which they operate has been a major focus for most researchers over the years. Trevino (1986, 1992) as cited in. (Pasternak, 2013,p.3) proposed that “ethical decision making is the result of the interaction between individual and situational components, with the individual's way of thinking about ethical dilemmas being moderated by individually and situationally based moderators”. This may imply that on one hand, the financial experts may find themselves in different environments, facing the same task. On the other hand, the way they perceive the task at hand may be based on the nature of the environment and more importantly, their qualification and experience, which will enable them to constructively engage in the

analysis of the evidence derived from the task as well as delivering an expected decision that will boost the firm. The *Throughput Model* recognised two general cognitive stages: a stage of perception, in which the decision maker perceives situations such as manipulations or financial discrepancies based on his qualifications and experience, the available alternatives, and the expected consequences of decisions; and a stage of rules and principle evaluations and judgment. According to the proposed financial expert decision model (Throughput Model) used in this study, the first sense-making stage is affected by personal experience, qualifications, skills, organizational culture, and the wider cultural environment.

This paper does not try to differentiate which of these theories (Agency or Resource – based) drives the relationship between financial experts and firm value or saying that the "Throughput Model" is better than other models. Rather we adopt a new theoretical framework that distinguishes this paper from prior studies and will better explain the influences of financial experts on financial health and firm value. Consequently, we are responding to calls made by authors such as Beard and Dendron (2010) that researchers need to undertake extensive research after the financial crisis. Thus by using a new theoretical frameworks will bring in new knowledge and add to the accounting literature. The Throughput Model, is an integration of individual models into one model that can better explain decision - making processes in work settings.

The need to understand and explain bad decision making caused by lack of auditor's independence or negligence of financial experts is encouraged by numerous cases that had indicated that frequently, auditors as well as financial experts do not display complete independence in mind and this leads to a decrease in audit quality and affects firm value.

Consequently, without efficient and independent financial monitoring, the good corporate governance cannot be attained. Understanding what causes auditor's lack of independence may serve the legislature in adopting new rules and regulations that would improve the depth of auditors' independence, the role of financial experts and in turn, increase audit quality, creating more value for the shareholders. The aforementioned theories are concerned about the relationship between two variables. On the contrary, the financial expert's decision making model is not only concerned about influences but probable reasons for a positive or negative influence.

In this vein, the financial expert decision - making model (Throughput) is seen shedding more light on findings that cannot be explained by other theories. For example, the agency theory simply concluded that the reason why financial experts may arrive at a decision, without considering other alternatives is as a result of self – interest or greed. While this may be true, the financial expert decision – making model went further to explain probable reasons and not to be confined only to self – interest. Probable reasons may be (1) Time pressure, (2) Insufficient information to act on, (3) Mixed signals, (4) No information, (5) Regulatory differences and (6) Ethical and cultural differences.

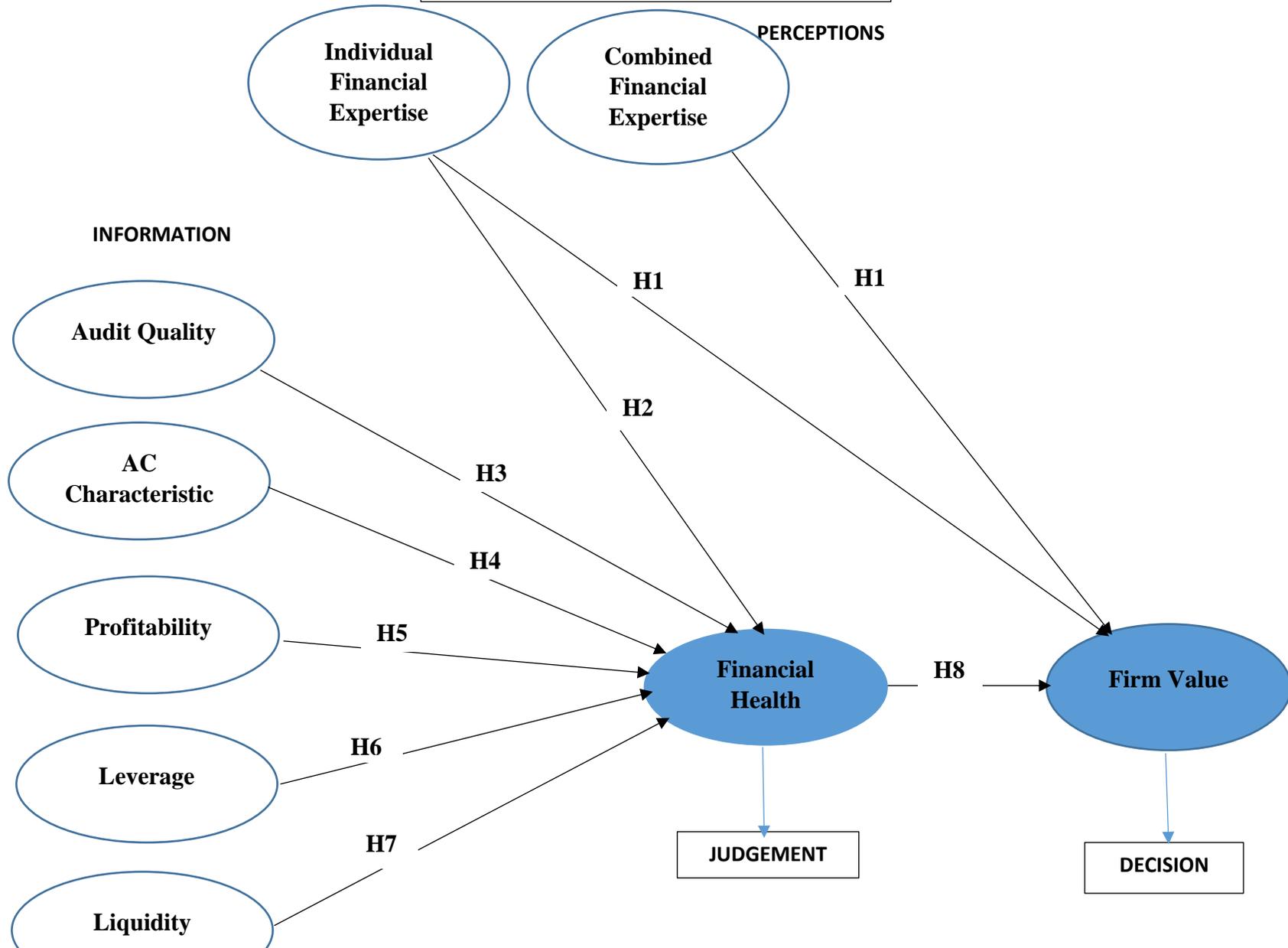
There are number of factors that can affect decision making in corporate environment with most of the processes being interconnected. The four processes described by the financial expert decision making model (Throughput Model) are perception, information, judgement, and decision (Rodgers, 2007). There is no unified view in the literature on what constitutes each phase exactly and whether all phases are always present in decision making process. The three phases in the Throughput Model proposed by Rodgers are the most frequently used in a decision making process: (a) perception and information

gathering, (b) analysis of information and processing (i.e., judgment), and (c) choice (Rodgers, 2007).

While Throughput Model has a wide range of applications in analyzing ethical decision making in corporate setting, it can also allocate different players to particular stages of decision making. For instance, the outside auditor plays a significant role in creating the perception of the problem. Moreover, audit services aid the analysis of information and perceptual framing in the judgment stage.

To the best of the author's knowledge, no study in the accounting literature has used the financial expert decision – making model (Throughput Model). This paper will then add to the accounting literature, looking at decision – making process from a different perspective, thereby contributing new knowledge. Figure 2 – 3 below represents a diagram of the financial expert decision – making model.

Figure 2-3 Financial Expert decision Model



2.5.1.1 Perception Phase/ Preference – based pathway (P → D) - -

The perception phase of audit committee financial experts or preference-based pathway relies greatly on the knowledge, qualifications and experiences of the individuals such as financial experts with different expertise in order to arrive at various decision choices. Perceptions are formed by individuals to use in the decision choices through the process of framing the problem solving set or their world view.

In this study, we use the Tobin's Q as a proxy for firm value which is represented in the Throughput Model as "Decision". The fundamental reason for this is based on the fact that, Tobin's Q (TQ) has been defined as the ratio of the market value of equity plus the book value of debt to the book value of total assets (Chung and Pruitt, 1994, Beiner *et al.*, 2006). TQ has been used as a measure of financial performance and firm value from the investors' perspective, and markets' valuation of a company and its corporate governance mechanisms. This study adopts the definition of Chung and Pruitt (1994) approximation of TQ as it demonstrates 96.6% of the original TQ .

Cognizance must be taken of the fact that the proxy Tobin's Q constitutes (a) Outstanding shares, (b) Price of shares, (c) Book value of debt and (d) Book value of assets. The accuracy of these figures from the financial statement perspective are critical to the decisions of financial experts. These decision may be for example:

- Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.

- Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.
- Decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory authorities.
- Decisions as to the best business practice or investment that a firm is advised to undertake.

Depending on the task to be attended to, as indicated above, the framing of perception involves the expertise of the audit committee financial experts using pre-formatted knowledge that will help them in conforming or rejecting the information required for decision making.

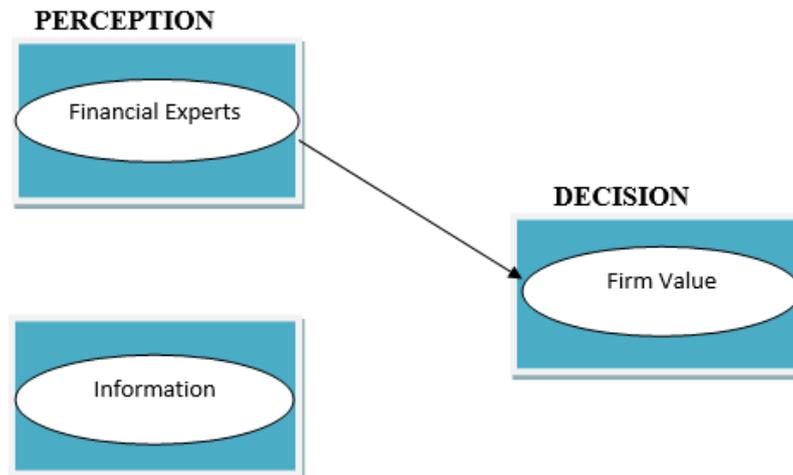


Figure 2:4 Research Model – Preference-based Pathway

Source: Based on Rodgers (2009)

Ensuring that assets are properly and accurately recorded, accounts reporting meet a reliability target can only be done by financial experts that have accounting know – how. The consequences of financial experts lacking the ability to make correct or accurate decisions may lead shareholders not only to make misleading judgements about the value of the firm, but will as well affect the reputation of the firm and send a misleading information to investors.

Therefore using this pathway, the experiences, qualifications or skills of the financial expert in dealing with complex transactions in the financial statements is critical. Among

the measures established to reduce the self-serving nature of the agent is an independent AC. Therefore in order to reduce information asymmetry, there is the need for governance mechanisms such as audit committee financial experts with the right expertise and experience to prevent or reduce the selfish interest of the agent (Wiseman *et al.*, 2012). However, one of the criticisms of the Agency Theory includes the view that it provides with a short term perspective and explanation of the purpose of a firm (Freeman, 1984).

Therefore, Throughput Model will enable us to understand the decision - making process better. Decisions using this pathway are not taken using any additional information that could be connected with the problem. If the information available is not in agreement with the perception (P) of the financial expert, such information is ignored (Rodgers *et al.*, 2009). This pathway can be expressed by the above Figure 2.

Legitimate questions have been raised as to whether financial experts with finance and supervisory expertise are up to this task. The variation of experiences of financial experts in the UK and US may influence firm value differently, given the fact that both countries operate under different regulatory rules and principles. Within the board structure of the UK, principles supersedes rules and vice versa for the US. Decisions are then guided by either rules or principles. Despite audit committee financial experts in both the US and UK may have the same goal of influencing firm value, outcomes based upon their decisions may differ. Also, with the use of no information, the question arises as to whether the perception (experience, qualification) of the financial expert is up to the task. This is critical to the empirical analysis in this study.

DeZoort (1998) explores various kinds of advantages that experienced members have over their inexperienced colleagues, therefore, affecting the audit committee functioning. First, experience enhances the *judgment* power of the audit committee members. Experienced audit committee members possess relevant technical knowledge due to prior training, performance, review and feedback (GAO, 1991; Harrison, 1992). Second, audit committee members with auditing experience show the *consistency* levels that are comparable to those of auditors. The studies of Ashton and Brown (1980), Ettenson *et al.* (1987) and Messier (1983) highlight that the amount of variation explained among a group of auditors increased with work experience.

Similarly, experienced members can make effective usage of the *cues* that they get while checking the financial statements, whereas, their lesser experienced colleagues may not identify/utilize relevant cues. Third, the experienced members of audit committees have high degrees of *self-insight*, which means committee members, owing to their oversight experience, are better equipped to identify the specialized cues systematically; and understand, interpret and communicate such specific cues in their judgment processes or policies. Fourth, there is likelihood of *consistency* or *consensus* among the audit committee members, which implies that they would make the same judgment given the same information and similar business environment factors

However, given the fact these business environmental factors such as the board structures differ, their perceptions may influence firm value differently.

Within the context of the Throughput Model, it implies therefore that in order to pursue one's self interest, (I), which is referred to as relevant information that may alter one's

perspective or dismiss a more thoughtful analysis, will influence the final decision. At the core of this argument lies the concept of Enron and World.com for example, where the seeking of own self-interest became an everyday practice. However in order to do so, some compromises are necessary. As shown in our Throughput Model, (I), which is considered to be relevant ethical guidelines or accounting information, was deliberately ignored, (P), which is Enron's board of directors' framework of perceptions, (i.e., skills, experience and qualifications) was solely relied on to arrive at (D), their decision. According to Gini (2004, p.2), reflecting on comments made by business ethicist and accountant, John Dobson: "Ethical guidelines are viewed in the same way as legal or accounting rules: they are constrained to be, wherever possible, circumvented or just plain ignored in the pursuit of self-interest, or in the pursuit of the misconceived interests of the organization." Therefore, this type of rationalized self-interest left Enron with no alternative but to adopt (P→D). By using the Throughput Model, we argue that the danger of audit committee members or the board of directors in a self-regulated company with a unitary board where all parties are complicit in the propositioning of this inimitable form of ethical egoism will not only affect the reputation of the company but severely affect the financial reporting process. Users of accounting information, such as investors, will be misled in their decision-making process.

However, from a different perspective, we argue that the downplaying of (I) might not necessarily result from self-interest, implying that this goes beyond the agency theory. Information may be disregarded due to its unreliability. Another reason for ignoring information may be noise interfering with the main signal or message. In this particular instance, the decision maker may be confused regarding the intended message of the information. Finally, conflicting informational signals may affect a decision maker in

determining the proper weights to place on the information sources (Rodgers, 2009). “It is the composition of audit committees with independent and qualified individuals that is considered the crucial factor of monitoring effectiveness” (Schaffer [2003, 245]), as cited in Kohler (2005).

This is evident in the study of Defond et al (2009), where the appointment of financial experts with accounting expertise led to a positive market reaction. This notion is subjected to empirical analysis in this study as reflected in Table 2.15 and hypothesis (H1 and H1b).

2.5.1.2 Judgemental Phase/ Rules –based pathway (P → J →D)

The judgemental phase or rule-based pathway works on the premise that individuals such as financial experts on audit committees are motivated to make their analysis and recommendations based on the existence of laws, procedures, guidelines and rights of individuals. The decisions in the Throughput model by financial experts using this pathway are non-consequential, judgment-oriented and are conditioned by their perceptions of rules and laws. Examples of such judgements by financial experts based on their review of financial statements may be:

- Judgements relating to the right application of rules and accounting principles
- Judgement relating to the treatment of revenues, pre –paid expenses, sales that may impact the profitability of the firm and hence financial health
- Judgement relating to the treatment of accruals quality, discretionary accruals that may impact the debt of the firm and hence financial health
- Judgement relating to the treatment of audit and non – audit fees that may impact audit quality.

It is worth noting that these judgements will be guided by the accounting regulations implemented in companies operating within the two distinct board structures i:e rules versus principles.

This pathway does not require information because the financial experts are presumed to have full knowledge of the regulations (Rodgers, 2009). The rule-based pathway can be illustrated by the following figure (Figure 2.5).

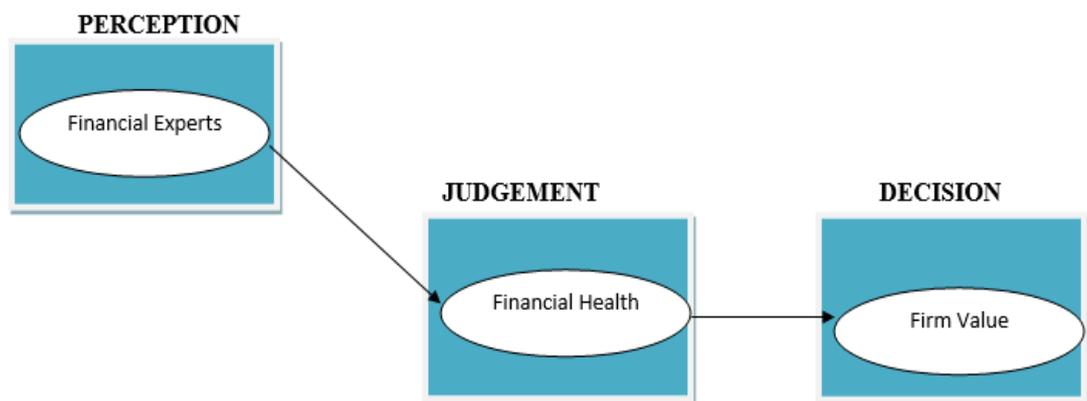


Figure 2:5 Research Model – Preference-based Pathway

Source: Based on Rodgers (2009)

The most significant feature in understanding the rule-based pathway is that the decisions are fully exclusive of any consequences and in this context, rules can be viewed as customs and practices that are formally recognised and are binding among a group of people. The purpose of establishing the rules and laws is to control the ways in which

groups act. In the rule-based pathway, the decision-making process is judgment-oriented and the process is conditioned by the rules and laws as perceived by the individuals. In this pathway, it is to be noted that rule-based pathway positions should not be influenced or such positions should not depend on the decision choices. It is then critical to note that a failure in judgement may have serious consequences on the subsequent outcome, financial health.

The Rules – based or the deontological view as it is otherwise called, is based on the principles of justice. Deontologists advocate that there are certain things that we should not engage in, even to maximize utility. Rodgers and Gago, (2001, p .360) noted that, “Deontologists also regard the nature of moral principles as permanent and stable and that compliance with these principles defines ethicalness. Furthermore, they believe that individuals have certain absolute rights, which include (1) freedom of conscience, (2) freedom of consent, (3) freedom of privacy, (4) freedom of speech, and (5) due process”

In Figure 2.5, the financial expert forms a perception without the use of any information, weighs the possible outcomes before making any judgment and then concludes with a decision. It implies, for example, that audit committee financial experts appointed to the board should use their experience and qualifications to apply and adhere to (P) which can be referred to as acts, such as the Sarbanes–Oxley Act of 2002, properly analyzed (J) to form a judgement about the financial health of the firm to be able to affect firm value (D). Van Stavaren (2007) argued that, Deontological ethics has been applied in a way that goes beyond ensuring fair competition and compliance by all companies irrespective of the size. The Sarbanes-Oxley Act and EU regulated corporate governance laws that were

enacted after the financial scandals are typical examples. These acts seem to limit the manipulation of financial statements, fraud arising from non-compliance and provide a framework by which companies should and must conduct themselves. The above argument by Van Stavaren (2007) is strongly supported by Beattie *et al.* (2013) who conducted research using UK listed companies constituting 446 audit committee chairs found that, the implementation of the Sarbanes – Oxley Act of 2002 after the Enron crises is considered a mile stone in the auditing process. This is also consistent with findings based on many US studies especially reflecting on the perspective of the preparers and auditors. Rodgers and Gago (2001) stated that the understanding of our ethical duties and application of the correct rules is pivotal in the judgmental phase of a decision making process. This will enable financial experts appointed to audit committees to be effective and efficient in their regulated responsibilities. Throughput Modelling may assist us in understanding the important factors that can guide and increase our awareness of improving the financial reporting quality in the workplace. This theoretical framework, therefore, justifies the necessity for the appointment of an independent financial expert, given the fact that the understanding of regulatory laws, which can be complex in some cases, requires the right interpretation and application. Specifically, financial experts are required to monitor the integrity of the financial statements of the company and any formal announcement relating to the company's financial performance, reviewing significant financial reporting judgements. Ensuring the accuracy of financial figures from the financial statements, best practices in applying rules and principles etc. This is critical to the findings of this study that seek to establish how their judgement decisions may influence financial health. In the OECD findings of 2009, the execution of governing principles was a major issue found to be an ultimate cause for the economic collapse. SOX (2002) and the EU 8th company law clearly defined the role of audit committees in these countries.

2.5.1.3 Informational Phase/Utilitarian position (I → J → D)

The informational stage or principle-based pathway stresses values, attitudes and beliefs that motivate and influence the judgments of an individual for example, audit committee financial experts before they make a decision choice. The values, attitudes and beliefs enable structuring the important information required to make the judgment before the individual can make ethical decision choices. Individuals using this pathway demand information before they take the decision in order to facilitate the greater good for the greatest number of people. In this pathway, individuals follow things which according to them are right by maximising the utility for all (Rodgers and Gago, 2001). This pathway is expressed by Figure 2.6.

The information phase or utilitarian position is concerned with consequences, as well as the greatest good for the greatest number of people. According to Rodgers (2009), therefore, the available information (I) judgment is typical, customary or has been agreed upon before analysis (J) en route to a decision (D). Furthermore, this theory advocates that society should always produce the greatest possible balance of positive value or the minimum balance of negative value for all individuals affected. Following this argument, a decision is ethically ‘correct’ when its derived utility is higher than other alternative choices (e.g., cost–benefit analysis, Rodgers, 2009).

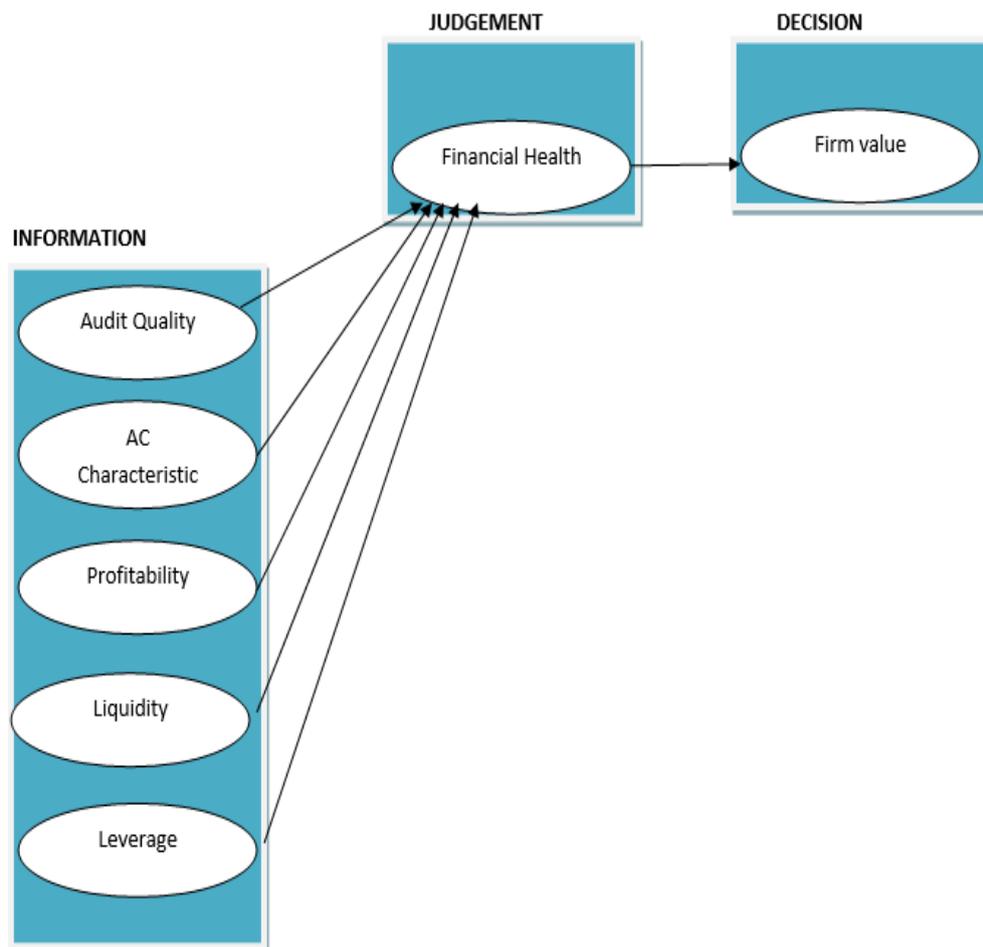


Figure 2:6 Research Model – Principle-based Pathway

Source: Based on Rodgers (2009)

In the appointment of independent financial experts to the audit committee, the UK boards put greater emphasis on experts with specifically accounting expertise from a recognized institution such as the ACCA, CIMA or CPA. The fundamental reason for this is based on the benefits these experts will bring to the quality of the financial reporting process

and firm value as well as the minimization of errors that might result in huge losses due to incompetence of non-accounting financial experts in detecting fraud

In this phase, information will dominate and to a greater extent determine any analysis or financial estimates, planning and strategy that should be carried out in dealing with audit quality, size of the audit committee, profitability, leverage and liquidity.

It is well known that value creation is often deemed as the ultimate objective of an enterprise (Rappaport, 1986; Jensen, 2001). This of course is closely related to firm enhancing its own value and its long run profitability and income stream. Nevertheless, in order to create value for all its stakeholders, the company cannot neglect the impact of useful financial information in reducing informational asymmetries. However, as discussed in the onset of this study, measuring value accurately is a daunting task and there is a need for healthy dose of qualitative interpretation along with the myriad of quantitative studies documenting relationships between financial reporting quality, corporate governance environment and value generation. This is important since the notion of value is too broad to be captured by any single quantitative metric. Useful financial information for the stakeholders encapsulates much more than greater disclosure via more rigorous implementation of various statutes, since these legislations themselves are incomplete and imperfect. It requires transparency and a culture of openness, discussions and problem solving where stakeholders' concerns are readily and efficiently communicated to achieve desired results (Freeman, 1984).

The two primary qualitative dimensions that are considered in literature is the relevance and reliability of accounting and financial information. These two dimensions are

considered particularly important since it is widely believed not fulfilling this minimal criterion makes the information next to useless for decision making. The relevance is defined as relevant to creditors and investors in investment and borrowing decisions insofar as that information presented can make the agent change decisions and increase value. Therefore, relevant financial information needs to have predictive power, feedback worth and timeliness. Similarly, reliability relates more to the quality of information, particularly it can allow stakeholders to rely on this information and use it in to improve their respective positions in the marketplace; typical characteristics include verifiability, faithful representation and lack of bias (Kieso et al., 2005).

It is worth noting also that the individual and collective role of the financial experts in terms of monitoring and advising the board may have huge impact on the profitability, liquidity and leverage of the firm, which may influence the financial health of the firm in a positive or negative way. This will subsequently influence firm value that is measured by the Tobin's Q.

2.6 Hypothesis development

Four major hypothesis were tested based on the Financial Decision Making Model (Throughput Model) as reflected in figure 2.3

P → J Financial experts influencing financial health

P → D Financial experts influencing firm value

I → J Information (Audit quality, AC characteristics, Profitability, Liquidity and Leverage) influencing financial health.

J → D Financial health influencing firm value

Where P is the perception of the financial experts in terms of his skills, qualification, experience and J represents financial health. Likewise D represent firm value. We use I as a control variable. We also test for lagged effects

In the Throughput Model, perception and information are interdependent. In other words, information may have an effect on audit committee financial expert's perception of the problem. This in turn affects the framing of the issue. However, the influence can appear in a reversed order, such as the manner in which audit committee financial experts frames a problem (reflecting financial expert's' perception) can affect the selection of information to be used in their prescribed tasks. It is possible that a financial expert can fall in a "vicious circle" where selective information enhances financial expert's belief in the accuracy of his/hers perception of a problem. This, in turn will steer financial experts into search of information that could further increase their confidence in the formed perception.

The selected information with formed perception of a problem results in a judgement by the financial experts or in other words, an evaluation of financial viability. Ultimately, perception and judgment may lead to altered decision choice. These decision choices may range from:

- (a) Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.

- (b) Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.

- (c) Decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory authorities.

- (d) Decisions as to the best business practice or investment that a firm is advised to undertake.

These decisions forms the central aspect of the empirical findings of this study. In the next section, findings of how financial experts with different expertise influences firm value will be explained and tested statistically.

2.6.1 Financial experts (P) and Firm value (D)

Defond et al, (2005), noted that an increase in firm value due to a positive market reaction. They reported that financial experts with accounting expertise are favoured as compared to other expertise. This finding is also supported by Karamanou and Vafeas (2005).

However, Carcello et al, (2006) found that most financial experts did not have a background in accounting or finance and the stock exchange affiliation moderated this factor. Chan and Li (2008) reported that supervisory financial experts such as independent directors significantly influence firm value.

Hsueh –En Hsu (2007) found as cited in Coates et al (2007) that, Over a 4 year period of 2000 – 2003, the result show that stock return increases enormously as their audit committee financial expertise improved. During the financial crisis, it was evident as

reported by Aldamen et al. (2011), that, financial experts significantly influence firm performance

Nevertheless, Henry (2008) noted based on his findings that firm value was not significantly influenced as a result of the formation of audit committee. Brick and Chidambaram (2010) reported mixed results. In light of these mixed results, Cohen et al (2013) concluded that the audit committee will be better served if financial experts with mixed expertise can work together.

As noted earlier, DeZoort (1998) as well as Dhaliwal et al (2010), explores various kinds of advantages that experienced members have over their inexperienced colleagues, therefore, affecting the audit committee functioning in different board settings.

First, experience enhances the *judgment* power of the audit committee members. Experienced audit committee members possess relevant technical knowledge due to prior training, performance, review and feedback (GAO, 1991; Harrison, 1992). Second, audit committee members with auditing experience show the *consistency* levels that are comparable to those of auditors. The studies of Ashton and Brown (1980), Ettensonet *al.* (1987) and Messier (1983) highlight that the amount of variation explained among a group of auditors increased with work experience. Similarly, experienced members can make effective usage of the *cues* that they get while checking the financial statements, whereas, their lesser experienced colleagues may not identify/utilize relevant cues. Third, the experienced members of audit committees have high degrees of *self-insight*, which means committee members, owing to their oversight experience, are better equipped to identify the specialized cues systematically; and understand, interpret and communicate

such specific cues in their judgment processes or policies. Fourth, there is likelihood of *consistency* or *consensus* among the audit committee members, which implies that they would make the same judgment given the same information and similar business environment factors.

However, the UK and US operates on different business environmental factors where accounting principles differ. The UK operates on a principles – based regulatory principles which may guide their choice of financial experts and even their judgement decisions as mentioned above. The US operates on a rules – based regulatory principles which may also have impact on their review of financial statements and judgement decisions.

. DeZoort (1998) shows that above mentioned advantages are available to companies where audit committee members are relatively experienced. These experiences, qualifications for example may vary across borders, countries and specific companies such as the FTSE100 and Nasdaq100.

We argue, therefore, that:

H 1: The level of qualifications, skills and experiences (P) of Audit committee financial experts will influence firm value (D) differently of firms in the unitary board (US and UK).

H 1b: The mixture of the level of qualifications, skills and experiences (P) of Audit committee financial experts, will influence firm value (D) differently under the unitary board leading to an increase in firm value.

2.6.2 Financial experts (P) and financial health (J)

Bedard et al. (2004) reported that constraining earning management are within the skills, experiences or expertise of financial experts. ACs with financial experts are in a better position to tackle this task. The study of Abbot et al (2004) also noted that the detection of financial malpractices that has to do with restatement occurrences are negatively linked to financial experts. Their expertise are essential to the growth of the firm.

However, Farber (2005) recognised the worth of financial experts with supervisory expertise. He noted that Firms where fraud is consistent prove to have less of the necessary expertise needed such as independent directors and CEOs. In maintaining the goodwill of the company, which is part and parcel of the financial health, studies such as Krishnan and Visvanathan (2008) and Dhaliwal (2010) found that financial experts with accounting expertise have the knowledge and training necessary to do so. They argued that, issues relating to complex accounting treatments such as revenue, pension schemes and dealing with accounting standards such as International Financial Reporting Standard (IFRS) can only be handled by financial experts with accounting expertise. Krishnan and Lee, (2009) also found that, there is a higher probability for firms where financial malpractices and the issue of litigations are common, to hire financial experts with accounting expertise. .

Most of these studies neglected the evolvments of board structures that may affect the role and authority of the audit committee financial expert. Klein (2002) recognised the bias role of the board in appointing financial experts to the audit committee and also their dominance in exercising their authority. Deficiencies in auditing and the financial reporting process as reported by the Public Company Accounting Oversight Board (PCAOB, 2010) were not merely based on the issues of lack of objectivity and enhanced scepticism but fundamentally “in areas of significant judgement”

While the appointment of an audit committee financial expert is expected to foster the financial health of firms, cognizance should be taken that, the ability of financial experts to ensure sound financial health for example, may however, be “contingent upon the presence of a strong board and audit committee governance environment”. The report of the Blue Ribbon Committee (1999) states that “audit committee performance relies on the practices and attitudes of the entire board.” (Dhaliwal et al (2007, p .8)

The UK board has evolved over the years. Davidson et al. (2005) noted that, there is a significant negative association between earning management and audit committee with higher proportion non –executive directors.

The accounting practices in the UK and US can be broadly categorized into two camps: principle and rule based accounting frameworks. As the names implies, the principle based accounting practices in the UK are more flexible and cater to a more global outlook

towards accounting needs and requirements. On the other hand, a rule based approach in the US is more specific and precise. The focus here is meticulousness and exactness in following the designated standards. In fact, large scale accounting standards particularly in the United States have resulted in regulatory initiatives that try to dilute the rule based system in the United States. The worry was that US GAAP had become too rigid and in following the strictures in place, there was room to exploit loopholes and find round about ways to get around the accounting principles to maximize self-interest.

With the introduction of the IFRS that allows the dilution of the US rules – based accounting system, raised many questions as to the understanding, interpretation and the right application. If financial experts may monitor the integrity of the financial statements, apply the two different accounting approaches in their analysis, assessments of any formal announcements relating to the company’s financial health, it is inevitable that their aggregate review of significant financial reporting judgement may differ. This will invariably influence financial health either positively or negatively and possibly no influence on financial health of the companies.

In a nutshell, these two approaches may impact the following judgements:

- (a) Judgement relating to the exactness and structure of how financial statements should be presented
- (b) Judgements relating to rules, the application of accounting standards and its interpretation
- (c) Judgements relating to the review of financial reporting statements

- (d) Judgements relating to the treatments of revenue, prepaid income and expenditures which may influence the profitability of the company.

Although both the FASB and the IASB stress the importance of high-quality financial reports, often major methodological drawbacks arise when it comes to assessing and evaluating the decision usefulness of financial reports. Indeed, the quality of financial reports and the decision usefulness of the information they offer are complex and multi-dimensional constructs, which cannot be observed directly (Barth, Landsman, & Lang, 2008).

We argue, therefore, that:

H2: The level of qualifications, skills and experience of Audit committee financial expert as defined by a framework of rules (P) may likely influence the financial health (J) of the firm differently under the unitary board structure (US and UK).

2.6.3 Information and Financial health

The qualitative dimension of financial information and its impact on various market participants was a subject of recent report by Ernest and Young. They highlighted, how accounting and financial information needs to contain an element of forecast power and the new trend among policy makers and regulators where the need for accounting and financial information to be “relevant” or “reliable” is being supplanted by a requirement for the information to be “faithfully represented” i.e. it satisfies three main elements: it is complete to a reasonable degree, it is neutral and objective and that it is free from error

i.e. there is certain degree of meticulousness involved when presenting the information (E&Y, 2010).

2.6.4 Audit quality (I) and financial health (J)

One of the causes ascribed to the financial crisis was that of poor audit quality. In this study, two indicators are used to measure audit quality (Audit fee and non – audit fee).

Results from studies such as Hoitash et al (2007) have shown that auditor's effort increased based on higher audit fees and as such improved audit quality.

On the other hand, the issue of non – audit fees as described by Frankel et al,2002; Beattie and Fearnley, 2002 and Lacker and Richardson, 2004), as controversial. This is because it may affect the independence of auditors. This argument is supported by the findings of DeAngelo (1981).

Concerns raised by Arthur Levitt, former chair of the SEC, pertaining to non – audit services provisions (Levitt, 2000) also adds to the controversy. According to Levitt (2000, p.1), “consulting and other services shorten the distance between the auditor and management’ and therefore have a direct negative impact on auditor independence”.

Thus we argue that:

H3: Audit quality (Audit fee and non-audit fees) may influence the financial health differently in the US and UK under a one – tier board structure

2.6.5 AC Characteristics (I) and financial health (J)

In the financial expert decision model (Throughput), we consider the size of audit committees as a non – financial information that may play a role as far as the effectiveness of the audit committee financial expert is concerned.

The UK Corporate Governance Code states that “the board should establish an AC of at least three, or in the case of smaller companies, two, independent non-executive directors”. (FRC, 2012, p. 18P). Likewise members of audit committee should be at least three in Nasdaq100 companies (SOX, 2002). However, despite there may be no difference in the sizes of audit committees in FTSE100 and Nasdaq100 companies, their role and responsibilities may lead to a difference in their influences on financial health.

The audit committees in the US unlike the UK, has an extended role and authority. Based on this argument, we can conclude that within the Throughput Model, sizes of audit committee with an extended authority may make a big difference.

In other studies, the size of an audit committee has been considered to play an immense role in the effectiveness of their monitoring function as well as in the capacity of value creation. Vafeas (2005) argued that the larger the size of the audit committee as their

responsibilities are now extended, the better the expected outcome. This findings is strongly supported by Xie et al, (2003) and abbot et al, (2004).

According to Yang and Krishnan (2005), firms that have larger audit committees experienced a lower quarterly earning management. They argued that the financial reporting process will be well equipped and expectations gap can be met with sufficient audit committee members.

In another study conducted by Chen and Zhou (2007), they noted that the size of audit committees may impact financial health of firms positively as well as negatively depending on the task at hand. It is also worth noting that while audit committee size may be the same, the regulatory structure may be a major factor. Also, notably, the task at hand will be a major factor.

Thus the following hypothesis is proposed:

H4: Audit committee characteristics (AC Size) may influence financial health differently in the US and UK under a one – tier board structure.

2.6.6 Profitability (I) and financial health (J)

Investors and other stakeholders alike often judge profitability and financial health of a business by Return on Assets (ROA) and Net Profit Margin (NPM). Return on Assets is the ratio of Net Profit Average to Total Assets i.e. $ROA = NPA/TA$. It is a useful

measure to not only assess firm value and financial health from an intrinsic point of view but also gives us a useful comparison metric to compare your financial health relative to the industry you are operating in. This is possible since ROA measures the ability to transform company assets into profits. Thus, a lower ROA relative to industry ROA is indicative that possible competitors in the industry are more efficient in utilizing their resources to create firm value. (Mallin, 2013).

In order to support the continuance of their positions and remuneration and to signal institutional confidence, Managers are motivated to disclose more detailed information. Samir, M. et al. (2003) as cited in Rouf (2011, p.3) argue that “higher profitability motivates management to provide greater information because it increases investors’ confidence, which in turn, increases management compensation”. Conclusively, its impact the financial health positively. The decision to disclose information and the accuracy of such information is of immense significance and a burden placed on financial experts to ensure that manipulation, creative accounting and financial discrepancies have no place in the disclosure of information. The fundamental question of how financial experts operating within a one – tier board structure in the UK and US, where the former operates under a principles – based and the latter, a rules – based regimes is critical.

The accounting practices in the UK and US can be broadly categorized into two camps: principle and rule based accounting frameworks. As the names implies, the principle based accounting practices in the UK are more flexible and cater to a more global outlook towards accounting needs and requirements. On the other hand, a rule based approach in the US is more specific and precise. The focus here is meticulousness and exactness in

following the designated standards. In fact, large scale accounting standards particularly in the United States have resulted in regulatory initiatives that try to dilute the rule based system in the United States. The worry was that US GAAP had become too rigid and in following the strictures in place, there was room to exploit loopholes and find round about ways to get around the accounting principles to maximize self-interest.

With the introduction of the IFRS that allows the dilution of the US rules – based accounting system, raised many questions as to the understanding, interpretation and the right application. If financial experts may monitor the integrity of the financial statements, apply the two different accounting approaches in their analysis, assessments any formal announcements relating to the company’s financial health, it is inevitable that their aggregate review of significant financial reporting judgement may differ. This will invariably influence financial health either positively or negatively and possibly no influence on financial health of the companies.

Haniffa and Cooke (2002) as cited in Rouf (2011,p.3), “find a positive and significant association between the firm’s profitability and the extent of voluntary disclosure, which is consistent with the earlier (Ahmed and John, 1999; Kusumawati, D. N., 2006) find that profitability affects Good Corporate Governance voluntary disclosure level negatively. It implies that when companies are facing decline in profitability, they will tend to give more disclosure about corporate governance practices. These disclosures are relevant to investors”.

There is no doubt that profitability may influence the financial health of firms. (Cohen, Chang and Ledford, 1997; Almajali et al, 2012; Russo and Fouts, 1997; McGuire et al,

1988; Clarkson et al, 2008, Ningish, 2011 ; Setiawan, 2012 ; Alviani, 2013 and Rodgers et al, 2013).

Therefore, we argue that:

H5: Profitability will influence financial health differently in the US and UK under a one – tier board structure.

2.6.7 Leverage (I) and financial health (J)

Leverage i.e. degree of debt relative to firm value and its impact on firm's financial health and performance has been subject of academic debate for many years.

Studies show a direct relation between firms' performance and leverage/optimal structure. For instance, Ward and Price (2006) document a strong correlation between leverage and profitability as well as Sharma (2006) documents a strong association between leverage and performance using different samples in both temporal and special dimensions. Similar finding is documented in Lasher (2003). Grossman and Hart (1982) document that debt financing makes managers aware of consuming fewer perks and become more efficient to avoid bankruptcy; the loss of control as well as loss of reputation (Grossman & Hart, 1982).

On the contrary, Stiglitz and Weiss (1981) predict that as a firm is financed with large debts, it is more likely that its equity holders with limited liability may prefer to undertake highly risky projects and this might inverse with the firm performance (Stiglitz & Weiss, 1981). Previous studies on firm performance have resulted in contradictory results. For

example, Downen (1995), McConnell and Servaes (1995), Short and Keasey (1999), Weir et al. (2002), Haniffa and Hudaib (2006) and Aljifri and Moustafa (2007) report a significant negative relationship between leverage and firm performance

Therefore, we argue that:

H6: *leverage will influence financial health differently in the US and, UK under o one – tier board structure.*

2.6.8 Liquidity (I) and financial health (J)

The two standard measures of liquidity are the quick ratio and the cash ratio. The quick ratio which is $(\text{current asset} - \text{Inventory}) / \text{Current liabilities}$, focuses on the cash solvency dimension of liquidity by focusing on the fact whether the company has enough short term assets to pay for its immediate (short-term) liabilities without selling its inventory assets. Therefore, a 1/1 ratio would imply that the company can pay all its short term liabilities without having to resort to a ‘fire sale’ of inventory. This is why this ratio is often dubbed as the “acid” test of financial health when considering the liquidity dimension. On the other hand, cash ratio is the ratio of total cash and its equivalents owned by the firms to its current liabilities. Both ‘indicators’ are known to be highly correlated and better capture cash solvency position of the company where a larger ratio indicates that larger cash and its associated equivalents are available to cover the current liabilities thereby a company is better poised to avoid bankruptcy and have lower risk of running out of cash while paying its day to day transactions. (Li et al., 2012).

Krishnamurthy and Vissing-Jorgensen (2012) document a significant liquidity premium particularly for safe liquid assets, thereby improving companies’ financial

health and increasing firm value. The way this is done is by studying long run trends in the United States (1926-2008) and noting that changes in liquidity supply had large effects on yield spreads.

Almajali et al (2012) also reported that the firm financial health is influenced significantly by liquidity. The findings imply that in order to maintain a positive relationship between liquidity and financial health, firm's current liabilities should be kept lower than current assets.

On the contrary, Jovanovic (1982) noted that an abundance of liquidity will be detrimental to the firm but a moderate amount of liquidity will motivate and boost performance of the company.

Thus we argue that;

***H7:** liquidity will influence financial health differently in the US and UK under a one – tier board structure.*

2.6.9 Financial health (J) and Firm value (D)

The judgements of financial experts as related to the financial statements may influence firm value significantly either positively or negatively. These judgements for examples are:

- Judgements relating to the right application of rules and accounting principles

- Judgement relating to the treatment of revenues, pre –paid expenses, sales that may impact the profitability of the firm and hence financial health
- Judgement relating to the treatment of accruals quality, discretionary accruals that may impact the debt of the firm and hence financial health
- Judgement relating to the treatment of audit and non – audit fees that may impact audit quality.

Profitability measured by the return of asset (ROA), Liquidity measured by (Cash ratio) and Leverage by (Debt/Asset and Equity) provides useful information in determining a firm's financial health (**J**) (Smith and Watts, 1992; Kaplan and Zingales, 1997; Pava and Krausz, 1996; Garcia – Castro et al, 2010). These financial ratios from the financial statement are reviewed by financial experts in the UK and US from a different accounting and regulatory perspective. Subsequently, their outcomes may differ and that will invariably lead to a fundamental difference of their influences on firm value. This may imply that Shareholders in both the UK and US will be dealing with two different outcomes that will enable them in the valuation of stock, hence the value of the firm.

The failure to detect the manipulation of a firm's financial health may have adverse negative influence on financial health estimates. This is so, because shareholders are relying solely on these information perceived and reviewed by financial experts to enable them in the firm value process. It is therefore a necessity that financial experts are competent enough in their monitoring and review of financial disclosures to be able to ensure that rules and accounting principles and policies are rightly applied and that profitability, leverage and liquidity indicators are accurate.

Prior studies have reported that firms with sound corporate governance and with qualified audit committee members with in – depth knowledge of risk assessment and accounting may maintain a sound financial health. (Deloitte, 2011). This will ultimately improve firm value.

Other studies have reported that firms that are plagued with litigations, weaker corporate governance, less and unqualified experts may ultimately experience a negative financial health, which will subsequently affect firm value. (Krishnan and Visvanathan, 2009, Garcia – Castro et al, 2010).

The consequences of financial experts within UK audit committees to lay more emphasis on principles rather than rules as in the US, may lead to the influence of financial health on firm value differently.

Thus, we propose that:

H8: Financial health may influence firm value differently in the US and UK under a one tier board structure.

2.7 Data sample definition and Method

The study is based on the FTSE100 and Nasdaq100 companies as a sample which covers a period of 5 years, from 2009 to 2013. The reason for selecting these companies is based on their market capitalizations. The sizes of these companies will enable the researcher

to draw on reliable results as these companies contribute immensely to the economic growth of both the US and UK.

Secondly, the accessibility of data is also a major reason. It is easier to access data via various sources. In common with most studies in this area this study excludes all financial firms, principally insurance companies and banks, as they have different regulatory environments as well as different reporting conventions to other companies.

Before starting the statistical analysis financial institutions are removed from the data set for both US and UK data. In addition to that, missing value analysis indicates that some values of variables for some companies are absent, so the corresponding observations are also removed. The first step of the data analysis is data preparation. For this reason additional analysis was conducted to investigate whether there are unusual observations (mainly in two main variables of the study: Financial Health and Firm Value) in the data set.

The tables below shows the dimensions of the sample data after taken the removal of financial institutions, missing values and outliers into consideration.

Table 2.4 UK data sample structure

Description	2009	2010	2011	2012	2013	Total
FSTE100	100	100	100	100	100	500
Financial Institution	18	18	18	18	18	90
Missing values	3	2	1	2	9	17
Outliers	5	5	4	4	5	23
Final sample size	74	75	77	76	68	370

US Sample structure

Table 2.5 US data sample structure

Description	2009	2010	2011	2012	2013	Total
NASDAQ100	100	100	100	100	100	500
Financial Institution	15	15	15	15	15	75
Missing values	4	6	5	2	11	28
Outliers	6	5	4	4	3	22
Final sample size	75	74	76	79	71	375

Obviously there are some outlier (unusual) observations in the relationship, so they should be removed from data set to understand the actual form of relationship between these two variables.

There were a few steps taken to check for potential outliers in this current study. They can be detected in a histogram, by looking for data points sitting on their own, on the extremes, or using a boxplot, where SPSS identifies scores which it considers are outliers compared to other scores. (See appendix 2.9.5.5). All the outliers' scores were checked to ensure they were genuine and not just an error from the data entry or miscoding. The next step was to check the descriptive table to indicate how much of a problem these outlying cases were likely to be. After all of these processes were undertaken to identify the outliers and ascertain their type of influence, it was concluded that more than two standard deviation from the mean logically impossible. (Large negative values for leverage).

We decided to remove from data set those observations, for which Financial Health values are below -20, and above 101. Thus 23 and 22 observations are treated as outliers UK and US respectively and removed from the UK data set. (See appendix 2.9.5.5)

2.7.1 Data Source

The independent variable, financial experts (**P**) was obtained from the corporate governance section of the proxy statement. Variable (**I**) which includes audit quality with two indicators (Audit and Non – Audit fee) were obtained from audit analytics, AC characteristics (AC size and AC meeting) were obtained from proxy statements, Profitability (ROA and Sales/Asset), Liquidity (Cash ratio and quick ratio) and Leverage (Debt/Equity and Debt/Asset) were obtained from Data stream.

The dependent variable (**J**) which is financial health was obtained from the Zmijewski, M. E. (1984) Score calculation.

2.7.2 Variable definition

The variable **P** represents the qualification, skills and experiences of financial experts categorised into accounting, finance and supervisory expertise. This was captured by looking at the biographical background of each member of the audit committee. Based on the SEC final rule of 2003, we define financial experts with accounting expertise as those with the requisite professional certification such as CPA, ACCA, CA and CIMA etc.

1 In Figure 2.1.1.1. unusual observations (Financial Health of which are below -20 and above 10) are highlighted. See appendix 2.9.5.2

Using dummy variables, we assign 1 to accounting expertise if an audit committee member is a holder of any of the above qualification or else 0. The procedure is repeated for both finance and supervisory expertise. (See appendix 2.9.5)

I represents (a) Audit quality, defined by two indicators (audit and non – audit fee). (b) AC characteristics, composed of (AC Size and AC Meeting). (c) Profitability, composed of (ROA and Sales/Assets), (d) Liquidity is defined by (Cash ratio and Quick ratio) and Leverage (Debt/Asset and Debt/Equity).

J represents financial health. Financial health was captured using Z scores and firm value (**D**), via Tobin's Q.

We use a firm's financial health status as a proxy for the firm's accounting-based. As noted by Rodgers, Choy and Guiral (2013), This serves as a "benchmark against which we can measure the contribution of the perception of financial experts to the overall market value of a firm relative to the financial viability. We use -1 times the Zmijewski score (Zmijewski 1984) as a proxy (i.e., -1 * Zmijewski score) for financial health. This financial health score measures a firm's financial viability. The higher the score, the higher the probability a firm will stay financially healthy. The Zmijewski score is constructed based on a firm's profitability, liquidity, and leverage ratios as follows:

$$ZFC = -4.336 - 4.513 (\text{PROF}) + 5.679 (\text{FINL}) + 0.004 (\text{LIQ})$$

Where PROF is the profitability measure, FINL is the financial leverage, and LIQ is the liquidity measure. The financial health measure is computed as $-ZFC$. We consider three sets of financial measures that are likely to be significant determinants of a firm's financial health: profitability, liquidity, and leverage". (Para 20). These measures have been widely used in prior research as a measure of a firm's performance. (Smith and Watts, 1992; Kaplan and Zingales, 1997; Pava and Krausz, 1996; Garcia-Castro et al, 2010).

For Firm value, the Tobin's Q was used as a proxy. (See appendix 2.9.5.4)

2.8 Statistical Method

In this study, we have employed the Structural Equation Modelling (SEM). This method is considered as one of the popular method for data analysis, as opposed to first generation regression tools. SEM explains relationships among multiple variables by examining the structure of interrelationships in a series of equations, which are similar to a series of multiple regression equations. SEM enables researchers to examine theory and measures simultaneously. In the SEM, a variable can play a double role, as an independent, as well as a dependent variable and thus, SEM is said to be superior compared to more traditional techniques because it allows for the explicit inclusion of measurement error and an ability to incorporate abstract and unobservable constructs (Fornell, 1982).

Given the fact that the main theoretical underpinning of this study is the Throughput Model where three distinctive theories should be tested, we decided to choose this approach as "SEM is more suitable to theory testing rather than theory development

because the SEM encourages confirmatory modelling. Byrne (2006) and Gefen et al. (2000) as cited in Ramli, (2013, p.98) stated that SEM starts with a hypothesis, and then a specific model, based upon a rigorous review of previous related academic studies. It continues by operationalizing the constructs of interest with a measurement instrument and finally, tests the model”.

“The SEM represents two types of methods, which are (1) covariance-based; and (2) component based (also known as Partial Least Squares - PLS). The first method of the covariance-based SEM (CovSEM) according to Chin (1998b) is traditionally considered as the SEM method. It has a widespread availability of software programs such as LISREL and AMOS, and is a popular method among many research disciplines. However, the CovSEM requirements are sometimes not easily fulfilled by some research. Among the requirements are data normality, minimum number of cases and reflective indicators. This method also fails to be applicable to small data samples, which may result in improper solutions in some instances (Chin and Newsted, 1999)”. (Ramli, 2013, p.99)

“The second method of component based SEM, also referred to as Partial Least Squares (PLS), and was developed partly to avoid some of the limitations found in the CovSEM. PLS according to Tenenhaus (2008) is a distribution-free approach that is presented in a two-step method, the measurement model and structural model. The differences between the CovSEM (represented by the LISREL which is the most widely known causal modelling technique) and PLS” (Ramli, 2013, p.101)

According to Chin (1998a), one fundamental advantage of structural equation model (SEM) statistical techniques such as PLS, a variance – based approach as opposed

to Lisrel and Amos, a co – variance based approach is its flexibilities. These flexibilities include: (a) among multiple predictor and criterion variables, relationships can be modelled. (Chin and Newstead, 1999), (b) Unobservable latent variables (LV) can be constructed. (Fornell, 1982), (c) Errors in measurement for observed variables can be modelled (Gefen et al, 2000), (d) A priori substantive or theoretical and measurement assumptions against empirical data such as confirmatory analysis can be statistically tested. (Byrne, 2006).

In this vein, the PLS method was chosen as the best approach for this study based on the following reasons: (a) The data in this study is not normally distributed. In other words, positively skewed. (b) The study deals with both formative and reflective indicators (c) The intention of this study is to be able to predict positive influences that are considered accurate and reliable. The Throughput Model is to be tested and the PLS is much more considered to be accurate in predictions. Above all, consistent with the studies mentioned in Table 2.4, it is a clear justification that the PLS method will serve the purpose of this study.

The studies in the table below supported the use of PLS technique.

Table 2-6 Prior studies and Motivations for the use of PLS

Author	Date	Motivation for the use of PLS
Acodo and Jones	2007	Where theory is insufficiently grounded and variables are not in conformity with normality distributions, PLS techniques can be of great help. (p.242)
Ainuddin, Beamish, Hulland, and Rouse)	2007	Exploratory studies benefit from PLS
Alpert, Kamins, Sakano, Onzo, and Graham	2001	PLS techniques are very useful for formative indicators. This is a fundamental advantage that PLS have over other techniques like LISREL (p.177–178)
Birkinshaw, Morrison, and Hulland	1995	In cases where sample sizes are smaller, PLS can be useful (pp.646–647)
Calantone, Graham, and Mintu-Wimsatt	1998	PLS parameter estimates in terms of strength and direction is better revealed.
Festge and Schwaiger	2007	“The researcher’s focus is place don’t he explanation of an endogenous construct” (p.192)
Graham, Mintu ,and Rodgers.	1994	PLS flexibility and the disregard to adhering to certain normality measurements are counted as an added advantage. (p.80)
Green and Ryans	1990	Also emphasizes on PLS tolerance for positively skewed data distribution and its general flexibility
Holzmu”ller and Kasper	1991	PLS used for predictive purposes are reliable and flexible.

Source: Henseler, Ringle, and Sinkovics, (2009, p.279)

Joreskorg and Wold (1982, p.270) noted that the “the primary intention of PLS is for causal predictive analysis in situation of high complexity but low theoretical

information”. In a nutshell, PLS is for predictive purposes while other Co-variance structural equation models are more focused on parameter estimation. (See appendix)

In the current study to investigate the main research questions the Path Analysis approach is implemented using SmartPLS software. Path Analysis provides a way to empirically estimate the relationships in assumed theory, in particular to estimate whether the relationships are positive, negative and importantly to test whether the relationship is zero and hence not supported by the data. It also provides a way to estimate the assumed causal effect that one variable has on another and also provides a graphical way to represent assumed theory. Path analysis provides a framework for the researcher to think more carefully about how the X variables are related to the Y as well as how the X variables are related to each other.

MODEL EQUATIONS

Our hypotheses were built on the Throughput Model as seen below and each variable was measured with various indicators as shown in Table 2.5 below.

- (a) Perception – Judgement (P → J) and Information – Judgement (I → J) Pathways
- (b) Perception – Decision choice (P → D) and Judgement – Decision choice (J → D).

Following is the structural model equations of the first stage which represents the parallel processing effects of perception and information on judgment; and the second stage which represents effects of perception and judgment on decision choice. The structural equations are:

$$Y1 = \beta_1 \cdot X1 + \beta_2 \cdot X2 + \beta_3 \cdot X3 + \beta_4 \cdot X4 + \beta_5 \cdot X5 + \varepsilon$$

$$Y2 = \beta_6 \cdot X1 + \beta_7 \cdot X6 + \varepsilon$$

Interpreted in the context of a multiple regression equation, eq. (1) indicates that β_1 value for the effect of perception on y_1 , is the effect of perception after ‘having controlled for $\beta_2 \cdot (\text{Audit Quality})$, $\beta_3 \cdot (\text{Leverage})$, $\beta_4 \cdot (\text{Liquidity})$, $\beta_5 \cdot (\text{Profitability})$ variables in the equation’. Eq. (2) shows the β_6 value for the effect of perception on y_2 after having controlled for β_7 , (judgment).

Procedure:

First, we test Hypothesis 1 by examining the effect of an audit committee’s composition (P) and on a firm’s financial health (J). The most commonly used regression method, ordinary least squares (OLS), is employed to test the hypothesis. Standard errors are adjusted for potential heteroscedasticity and within firm serial correlations. We later employed the partial least squares as the findings are more robust.

Considering that many other variables would also exert significant impact on a firm’s financial health, we include five composite variables in the regression. These composite variables include audit committee (AC) characteristics, audit quality, profitability, leverage and liquidity. As stated by Rodgers (2009,p.249), “many studies of organizational performance (e.g., Altman 1980) and studies of fitting linear models to decisions made by loan officers (e.g., Libby 1979) implied a definite potential of ratios as predictors of successful and unsuccessful companies. This may also be applicable to decisions made by audit committee financial experts.

Each composite variable is generated through a set of financial measures. AC characteristics equals to a weighted average of the size of an audit committee (AC_Size) and the number of meetings held by an audit committee each year (AC_Meetings). The

weights of AC_Size and AC_Meetings are determined by the average number of AC members and AC Meetings of a firm yearly, Audit quality equals to a weighted average of a firm's yearly audit fees (Audit_Fees) and non-audit fees (Non-Audit_Fees). Profitability equals to a weighted average of a firm's return on assets (ROA) and its sales over assets ratio (Sales_Assets). Leverage equals to a weighted average of a firm's debt over assets ratio (Debt_Assets) and debt over equity ratio (Debt_Equity). Liquidity equals to a weighted average of Cash_Ratio, a firm's cash and equivalents divided by its current liability, and Quick Ratio, the sum of a firm's cash and equivalents, marketable securities and accounts receivable, divided by its current liability. The weights of each set of financial measures are calculated similarly as the weights of AC_Size and AC_Meetings.

Rodgers (1991) and Rodgers and Guiral (2009) used the Bankruptcy model to illustrate how a parallel distributed processing (PDP), a two stage model depict decision makers' knowledge representation of information that may influence their analysis, which in turn may have impact on their analysis as well as describe why and when formative factors, in combination with reflective measures can be used in accounting research to better represent complex theoretical constructs.

Secondly, the question of linearity may raise concerns in certain circles. The relationship between Decision Choice ($J \rightarrow D$) was treated in our data set. The revised relationship between Financial Health and Firm Value is presented in below scatter diagram for UK firms. This procedure is done for US as well.

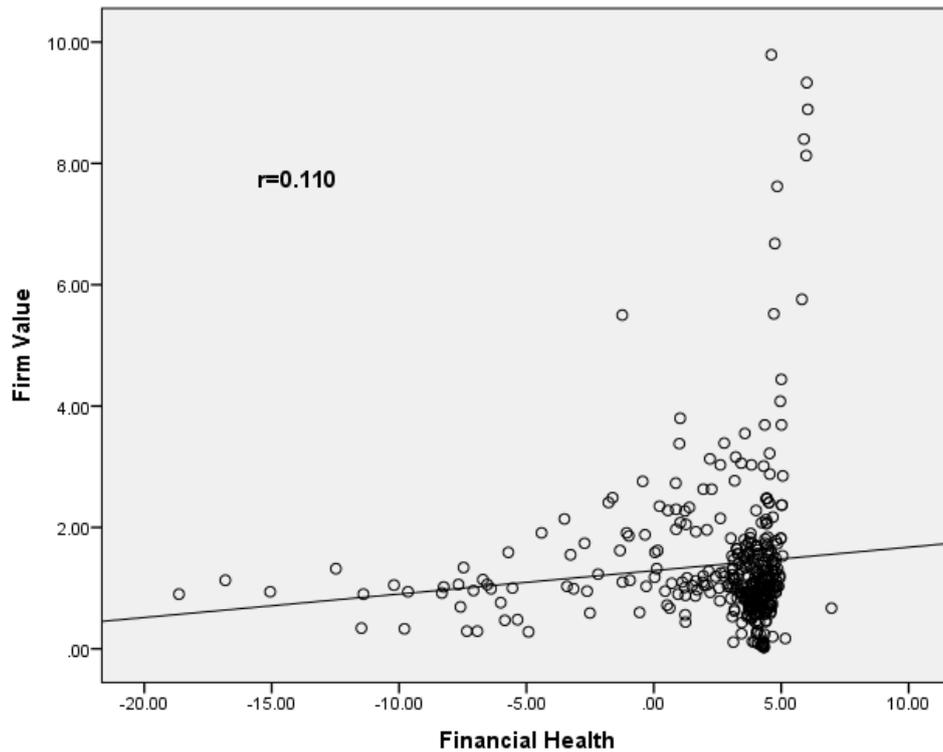


Figure 2.7 Scatter diagram of Financial Health and Firm Value (N=370)

Above scatter diagram shows that the relationship between Financial Health and Firm Value cannot be described accurately by the linear function (the linear correlation coefficient is 0.110).

As we know one of the main assumptions of path and regression analysis is the linear relationship between independent and dependent variables. So we can conclude that in this particular case the linearity assumption is violated.

The distribution of points indicates that exponential curve can describe the relationship more clearly. To check this assumption we transformed Financial Health variable's values using $\exp(\text{Financial Health})$ transformation and call the new variable "Financial Health (transformed)":

$$\begin{aligned} \text{Financial Health (transformed)} &= \exp(\text{Financial Health}) \\ &= e^{\text{Financial Health}} \end{aligned}$$

The scatter diagram for Financial Health (transformed) and Firm Value shows that the correlation improved significantly ($r=0.415$)

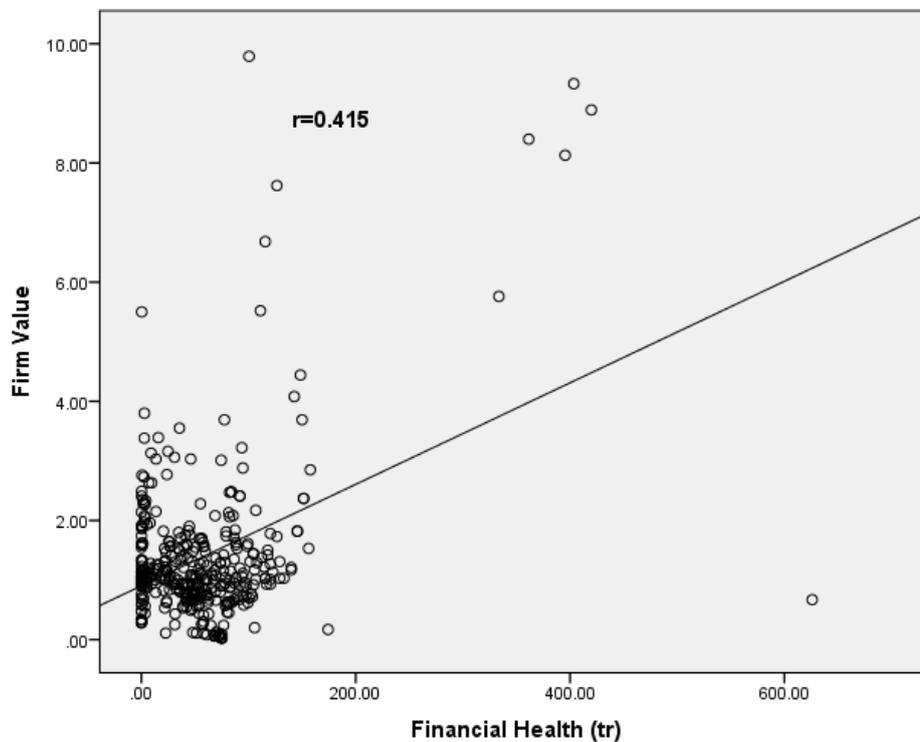


Figure 2.8 Scatter diagram of Financial Health Transformed and Firm Value

So instead of initial Financial Health variable the Financial Health (transformed) variable are used in path analysis.

The Least square estimator assumes linearity in **parameters** and not in variables. In other words, linearity is based on the co-efficient Beta. As indicated above, THE JUDGEMENT CONSTRUCTS in the Bankruptcy model are measured using Zmijewski score. We use -1 times the Zmijewski score (Zmijewski 1984) as a proxy (i.e., $-1 * \text{Zmijewski score}$)

The Zmijewski score is constructed based on a firm's profitability, liquidity, and leverage ratios as follows:

$$ZFC = -4.336 - 4.513 (\text{PROF}) + 5.679 (\text{FINL}) + 0.004 (\text{LIQ})$$

It implies that the INFORMATION INDEPENDENT VARIABLES can be non – linear and that should not affect the outcome. It is also clear that the PLS method does not lay emphasis on linearity and this flexibility is a major advantage.

Applying the above to the financial expert decision model, it will thus take these forms:

Overall 5 path analysis models are analysed in the study using both exponentials of financial health and firm value.

Model 1.

Financial Health

$$= \beta_1 \cdot AC \text{ Characteristics} + \beta_2 \cdot Audit \text{ Quality} + \beta_3 \cdot Leverage \\ + \beta_4 \cdot Liquidity + \beta_5 \cdot Profitability + \beta_7 \cdot ACCDUMMY + \varepsilon_{11}$$

$$Firm \text{ Value} = \beta_6 \cdot Financial \text{ Health} + \beta_8 \cdot ACCDUMMY + \varepsilon_{12}$$

Model 2.

Financial Health

$$= \beta_1 \cdot AC \text{ Characteristics} + \beta_2 \cdot Audit \text{ Quality} + \beta_3 \cdot Leverage \\ + \beta_4 \cdot Liquidity + \beta_5 \cdot Profitability + \beta_9 \cdot FEDUMMY + \varepsilon_{21}$$

$$Firm \text{ Value} = \beta_6 \cdot Financial \text{ Health} + \beta_{10} \cdot FEDUMMY + \varepsilon_{22}$$

Model 3.

Financial Health

$$= \beta_1 \cdot AC \text{ Characteristics} + \beta_2 \cdot Audit \text{ Quality} + \beta_3 \cdot Leverage \\ + \beta_4 \cdot Liquidity + \beta_5 \cdot Profitability + \beta_{11} \cdot SFEDUMMY + \varepsilon_{31}$$

$$Firm \text{ Value} = \beta_6 \cdot Financial \text{ Health} + \beta_{12} \cdot SFEDUMMY + \varepsilon_{32}$$

Model 4.

$$Financial \text{ Health} = \beta_1 \cdot AC \text{ Characteristics} + \beta_2 \cdot Audit \text{ Quality} + \beta_3 \cdot \\ Leverage + \beta_4 \cdot Liquidity + \beta_5 \cdot Profitability + \beta_7 \cdot ACCDUMMY + \beta_9 \cdot \\ FEDUMMY + \beta_{11} \cdot SFEDUMMY + \varepsilon_{41}$$

$$Firm \text{ Value} = \beta_6 \cdot Financial \text{ Health} + \beta_8 \cdot ACCDUMMY + \beta_{10} \cdot FEDUMMY + \beta_{12} \\ \cdot SFEDUMMY + \varepsilon_{42}$$

Model 5. Lagged variables impact on financial experts (ACC, FE, SFE)

Lag_Financial Health

$$= \beta_{1,l} \cdot Lag_AC \text{ Characteristics} + \beta_{2,l} \cdot Lag_Audit \text{ Quality} + \beta_{3,l} \\ \cdot Lag_Leverage + \beta_{4,l} \cdot Lag_Liquidity + \beta_{5,l} \cdot Lag_Profitability \\ + \varepsilon_{51}$$

$$Lag_Firm \text{ Value} = \beta_{6,l} \cdot Lag_Financial \text{ Health} + \varepsilon_{52}$$

$$ACCDUMMY = \beta_{7,l} \cdot Lag_Financial \text{ Health} + \beta_{8,l} \cdot Lag_Firm \text{ Value} + \varepsilon_{53}$$

$$FEDUMMY = \beta_{9,l} \cdot Lag_Financial \text{ Health} + \beta_{10,l} \cdot Lag_Firm \text{ Value} + \varepsilon_{54}$$

$$SFEDUMMY = \beta_{11,l} \cdot Lag_Financial \text{ Health} + \beta_{12,l} \cdot Lag_Firm \text{ Value} + \varepsilon_{55}$$

Where P → Financial experts in dummies (ACCDUMMY, FEDUMMY and SFEDUMMY).

I → AC Characteristics, Audit quality, Leverage, Liquidity and Profitability

J → Financial health

D → Firm value

After running Path Analysis models the robustness of estimates should be tested. To do this Bootstrap analysis is used for a 5,000 sample size. Bootstrapping is an increasingly popular and promising approach to correcting standard errors. Bootstrapping is a re-sampling method and works by creating a sampling distribution to estimate standard errors and create the confidence intervals. One of the benefits of bootstrapping is the ability for researchers to assess the stability of parameter estimates. It can be applied when the assumptions of large sample sizes and multivariate normality may not hold.

2.8.1 Validation of Measurement Model

In fulfilling the requirement of Partial Least Squares (PLS), three types of validity were taken into consideration: (a) Individual item reliability, (b) Internal consistency and (c) Discriminant validity.

2.8.1.1 2.8.1.1 Individual Construct Reliability

In general CFA is used to test the validity of indicators for a particular latent variable and at the result generate numerical variable describing the latent variable. In the current study CFA is used to analyse the validity of five multidimensional latent construct: Audit Committee Characteristics; Audit Quality; Leverage; Liquidity, and Profitability. Thus the goal of using CFA, is to represent two or more correlated variables by new latent variable (which can extract information from initial variables).

In the framework of Model 1 the initial path analysis is implemented and CFA is used to estimate latent variables reliability and validity, which provides very useful information

about possibility of combining individual indicators for latent variable values computation. Two measures (Average Variance Explained (AVE) and Composited Reliability (CR)) are used to evaluate CFA results.

Table 2.7 Factor Loadings

Indicators UK	Loadings	Threshold	Below Threshold
Audit fees	0,758	0,50	
Non - audit fees	0,913	0,50	
AC Size	0,978	0,50	
AC Meetings	0,398	0,50	0,398
ROA	0,988	0,50	
Sales - Assets	0,112	0,50	0,112
Debt - Asset	0,940	0,50	
Debt - Equity	0,879	0,50	
Cash - Ratio	0,986	0,50	
Quick - Ratio	0,989	0,50	
Indicators US			
Audit fees	0,850	0,50	
Non - audit fees	0,916	0,50	
AC Size	0,544	0,50	
AC Meetings	0,497	0,50	0,497
ROA	0,944	0,50	
Sales - Assets	0,503	0,50	
Debt - Asset	0,962	0,50	
Debt - Equity	0,952	0,50	
Cash - Ratio	0,987	0,50	
Quick - Ratio	0,994	0,50	

2.8.1.2 AVE and Composite Reliability

In theory and in practical researches the minimum threshold is defined for these two measures, which show that AVE and CR values higher than these thresholds (AVE>0.5; CR>0.7), are considered acceptable so the for the latent variable construction all initial

indicators can be used. (Hair et al, 2010). As can be seen from the table below, AVE of all latent variables for UK are higher than 0.5, however for AC Characteristics and Profitability CR values are less than 0.7. In this situation we have decided to exclude from those indicators from these latent variables construction, which have lower loading (lower correlation) for the particular latent variable. Thus AC Meetings and Sales/assets indicators are eliminated from the final path analysis for UK

Table 2.8 Total Variance Explained and Composite Reliability – (UK) and (US)

Table 2 -8 Total Variance Explained and Composite Reliability						
UK*	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		2.50%	97.50%		2.50%	97.50%
AC						
Characteristics	0.553	0.407	0.617	0.674	0.047	0.763
Audit Quality	0.704	0.405	0.789	0.825	0.392	0.882
Leverage	0.828	0.797	0.868	0.906	0.887	0.93
Liquidity	0.974	0.954	0.983	0.987	0.976	0.992
Profitability	0.506	0.478	0.536	0.554	0.402	0.641
<i>* Reed Elsevier is removed from data as Sales/assets, Debt/assets, Debts/equity, Cash ratio, Quick ratio are 0 for all 5 years</i>						
US	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		2.50%	97.50%		2.50%	97.50%
AC						
Characteristics	0.497	0.472	0.544	0.364	0.010	0.683
Audit Quality	0.781	0.679	0.842	0.877	0.803	0.914
Leverage	0.916	0.887	0.966	0.956	0.940	0.983
Liquidity	0.981	0.970	0.990	0.991	0.985	0.995
Profitability	0.572	0.535	0.614	0.710	0.656	0.754

In the US data above, AVE and CR for all latent variables satisfy the minimum acceptable thresholds except AC Characteristics. So one of AC Characteristics indicators should be eliminated from further path analysis. In this case this variable is AC Meetings.

2.8.1.3 Discriminant Validity

One of the very important requirement of the PLS path analysis so as to validate results of the PLS estimates, is the discriminant validity. In establishing that, the average variance extracted (AVE) should be used. According prior researchers such as Hair et al (2010), the square root of the AVE for each variable as per indicators, should be higher than the correlated variables.

Table 2.9 Discriminant validity UK

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.839				
AC Characteristics	0.250	0.744			
Profitability	-0.162	-0.071	0.711		
Leverage	0.121	-0.030	-0.152	0.910	
Liquidity	-0.120	-0.175	0.080	-0.137	0.987

Table 2.10 Discriminant validity. US

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.884				
AC Characteristics	0.044	1.000			
Profitability	-0.151	0.030	0.756		
Leverage	0.181	0.073	-0.200	0.957	
Liquidity	-0.152	-0.059	-0.262	-0.172	0.990

As seen above, we can conclude that both UK and US variables fulfilled the discriminant validity.

2.8.1.4 Model Summary

The Model Summary gives us a clear indication of how strong our model is by paying attention to values: R Square and adjusted R Square. With reference to the table below, both are very close to 80%.

Table 2.11 UK Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896 ^a	.803	.798	35.35614

a. Predictors: (Constant), Cash ratio, Non-Audit fees, ROA, Debts/equity, AC Size, Sales/assets, AC Meetings, Audit fees, Debt/assets

Table 2.12 UK residual Regression

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1859083.470	9	206564.830	165.244	.000 ^b
	Residual	456270.596	365	1250.056		
	Total	2315354.066	374			

a. Dependent Variable: Financial Health (tr)

Table 2.13 US Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 ^a	.806	.802	28.87122

a. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

Table 2.14 US Regression Residual

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1266571.465	8	158321.433	189.937	.000 ^b
	Residual	305078.418	366	833.548		
	Total	1571649.882	374			

a. Dependent Variable: Financial Health (tr)

b. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

2.9 Empirical Result (Descriptive)

The descriptive statistics for the variables of this paper is over a period of five years. The Table 4 and 5 for both UK and US displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. (See appendix 2.9.5.3). As can be seen from the Table 4, the average number of financial experts in the UK with accounting expertise is 57%, finance expertise is 86% and those with supervisory expertise is 92%. The financial health ranges between a minimum of -18.64 to a maximum of 6.97, with an average of 2.53 for the whole sample over the period. (See appendix 2.9.5.3)

Furthermore, the standard deviation of financial health is 3.68, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (*TQ*) ranges from a minimum of 0.02 to a maximum of 9.79, with an average of 1.39 for the whole period. The standard deviation is 1.29, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of financial health is negative (-2.80), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 3.63. Nonetheless, the kurtosis statistics of Tobin's Q and financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q. This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006 and Francoeur et al.2008). The same situation applies to the US (See appendix 2.9.5.3, Table 5).

In addition to that, the correlation matrix shows that among several significant independent variables Financial Health and Firm Value have the highest significant positive correlation with ROA (0.161 and 0.551 correspondingly). At the same time financial health has the highest negative correlation with one of the leverage indicators: Debt/equity ratio (-0.948). Additionally very high correlation can be observed between liquidity (cash ratio and quick ratio, 0.949) and leverage indicators (debt/assets and debt/equity, 0.664). The same situation applies to the US. (See appendix 2.9.5.4)

2.9.1 PLS Result UK

Table.2.15 Path analysis outputs (Models 1 - 4) for UK

Path Coefficients	Model 1 ACC Experts	Model 2 FE Experts	Model 3 SFE Experts	Model 4 Financial Experts
AC Characteristics → Financial Health ² (β_1)	-0.070***	0.065***	-0.073***	-0.065***
Audit Quality → Financial Health (β_2)	0.045	0.037	0.043	0.045
Leverage → Financial Health (β_3)	-0.591***	0.589***	-0.594***	-0.586***
Liquidity → Financial Health (β_4)	-0.009	-0.002	-0.005	-0.004
Profitability → Financial Health (β_5)	0.553***	0.551***	0.550***	0.555***
Financial Health → Firm Value (β_6)	0.407***	0.428***	0.419***	0.424***
ACC Experts → Financial Health (β_7)	0.043			0.048**
ACC Experts → Firm Value (β_8)	0.149***			0.131***
FE Experts → Financial Health (β_9)		-0.025		-0.032
FE Experts → Firm Value (β_{10})		0.130***		0.117***
SFE Experts → Financial Health (β_{11})			0.014	0.011
SFE Experts → Firm Value (β_{12})			0.085***	0.100***
Multiple R² (explained variance)				
Financial Health	0.722	0.721	0.721	0.723
Firm Value	0.194	0.189	0.180	0.215

* Significant at p<0.1; ** significant at p<0.05; *** significant at p<0.01

² In table 2.3.3 Financial Health is the already transformed variable.

In order to show robustness, bootstrapping techniques were used as seen in figure 2.16 below

Before making a conclusion about the research questions in terms of the interpretation of the path coefficients significance, bootstrap analysis was performed to check whether table 2.13 coefficients are robust or not. Bootstrapping is the practice of estimating properties of an estimator, such as its variance or standard deviation. In general the estimates of performed models can be biased due to deviations of model variables from normal distributions. One of the issues addressed in relation to bootstrap analysis is the question of the sample size. The number of bootstrap samples recommended in the literature has increased as available computing power has increased. In practical researches several sample sizes are used most often: 1,000; 5,000; 10,000. In our study we used 5,000 as a bootstrapping sample size. One of the main outcomes of bootstrapping is the construction of bias-corrected confidence intervals for models coefficients.

Table 2.16

Bootstrapping Results: Bias-corrected 95 % Confidence Interval for UK

Model	Path Coefficients	Estimate	Lower 95% CI	Upper 95% CI	P Value
Model 1	AC Characteristics → Financial Health (β_1)	-0.070	-0.107	-0.026	0.001
Model 1	Audit Quality → Financial Health (β_2)	0.045	-0.021	0.094	0.134
Model 1	Leverage → Financial Health (β_3)	-0.591	-0.763	-0.482	0.000
Model 1	Liquidity → Financial Health (β_4)	-0.009	-0.042	0.061	0.717
Model 1	Profitability → Financial Health (β_5)	0.553	0.337	0.675	0.000
Model 1	Financial Health → Firm Value (β_6)	0.407	0.154	0.606	0.000
Model 1	ACC Experts → Financial Health (β_7)	0.043	-0.009	0.093	0.104
Model 1	ACC Experts → Firm Value (β_8)	0.149	0.053	0.217	0.000

Model 2	FE Experts → Financial Health (β_9)	-0.025	-0.079	0.049	0.506
Model 2	FE Experts → Firm Value (β_{10})	0.130	0.041	0.182	0.000
Model 3	SFE Experts → Financial Health (β_{11})	0.014	-0.048	0.037	0.492
Model 3	SFE Experts → Firm Value (β_{12})	0.085	0.027	0.140	0.003

Bootstrap sample size=5000

In Table 2.17 below, the PLS estimates for the US is shown.

2.9.2 PLS Result US

US RESULT

Table 2.17. Path analysis outputs (Models 1 - 4) for US

Path Coefficients	Model 1 ACC Experts	Model 2 FE Experts	Model 3 SFE Experts	Model 4 Financial Experts
AC Characteristics → Financial Health ³ (β_1)	-0.067***	0.065** *	- 0.068***	- -0.068***
Audit Quality → Financial Health (β_2)	-0.031	-0.040	-0.026	-0.034
Leverage → Financial Health (β_3)	-0.540***	0.531** *	- 0.541***	- -0.541***
Liquidity → Financial Health (β_4)	0.026	0.020	0.030	0.023
Profitability → Financial Health (β_5)	0.534***	0.535** *	0.532***	0.536***
Financial Health → Firm Value (β_6)	0.406***	0.396** *	0.399***	0.403***

³ Financial Health is the already transformed variable.

ACC Experts → Financial Health (β_7)	-0.062***			-0.061***
ACC Experts → Firm Value (β_8)	-0.120***			-0.122***
FE Experts → Financial Health (β_9)		0.021		0.018
FE Experts → Firm Value (β_{10})		-0.038		-0.043
SFE Experts → Financial Health (β_{11})			0.079***	
SFE Experts → Firm Value (β_{12})			0.102***	
Multiple R² (explained variance)				
Financial Health	0.762	0.758	0.764	0.762
Firm Value	0.174	0.161	0.170	0.176

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

Also, in order to show robustness, bootstrapping techniques were used as seen in Table 2.16

Table. 2.18 Bootstrapping Results: Bias-corrected 95 % Confidence Interval

Model	Path Coefficients	Estimate	Lower 95% CI	Upper 95% CI	P Value
Model 1	AC Characteristics → Financial Health (β_1)	-0.067	-0.109	-0.017	0.004
Model 1	Audit Quality → Financial Health (β_2)	-0.031	-0.076	0.014	0.178
Model 1	Leverage → Financial Health (β_3)	-0.540	-0.648	-0.447	0.000
Model 1	Liquidity → Financial Health (β_4)	0.026	-0.024	0.075	0.307
Model 1	Profitability → Financial Health (β_5)	0.534	0.455	0.631	0.000
Model 1	Financial Health → Firm Value (β_6)	0.406	0.284	0.528	0.000
Model 1	ACC Experts → Financial Health (β_7)	-0.062	-0.097	-0.023	0.001
Model 1	ACC Experts → Firm Value (β_8)	-0.120	-0.181	-0.058	0.000
Model 2	FE Experts → Financial Health (β_9)	0.021	-0.027	0.061	0.351
Model 2	FE Experts → Firm Value (β_{10})	-0.038	-0.136	0.055	0.445
Model 3	SFE Experts → Financial Health (β_{11})	0.079	0.041	0.109	0.000
Model 3	SFE Experts → Firm Value (β_{12})	0.102	0.040	0.164	0.001

Bootstrap sample size=5000

Illustration of Results using Path analysis diagrams

Figure 2.4 UK PLS result, summarised from Model 1, 2, and 3⁴

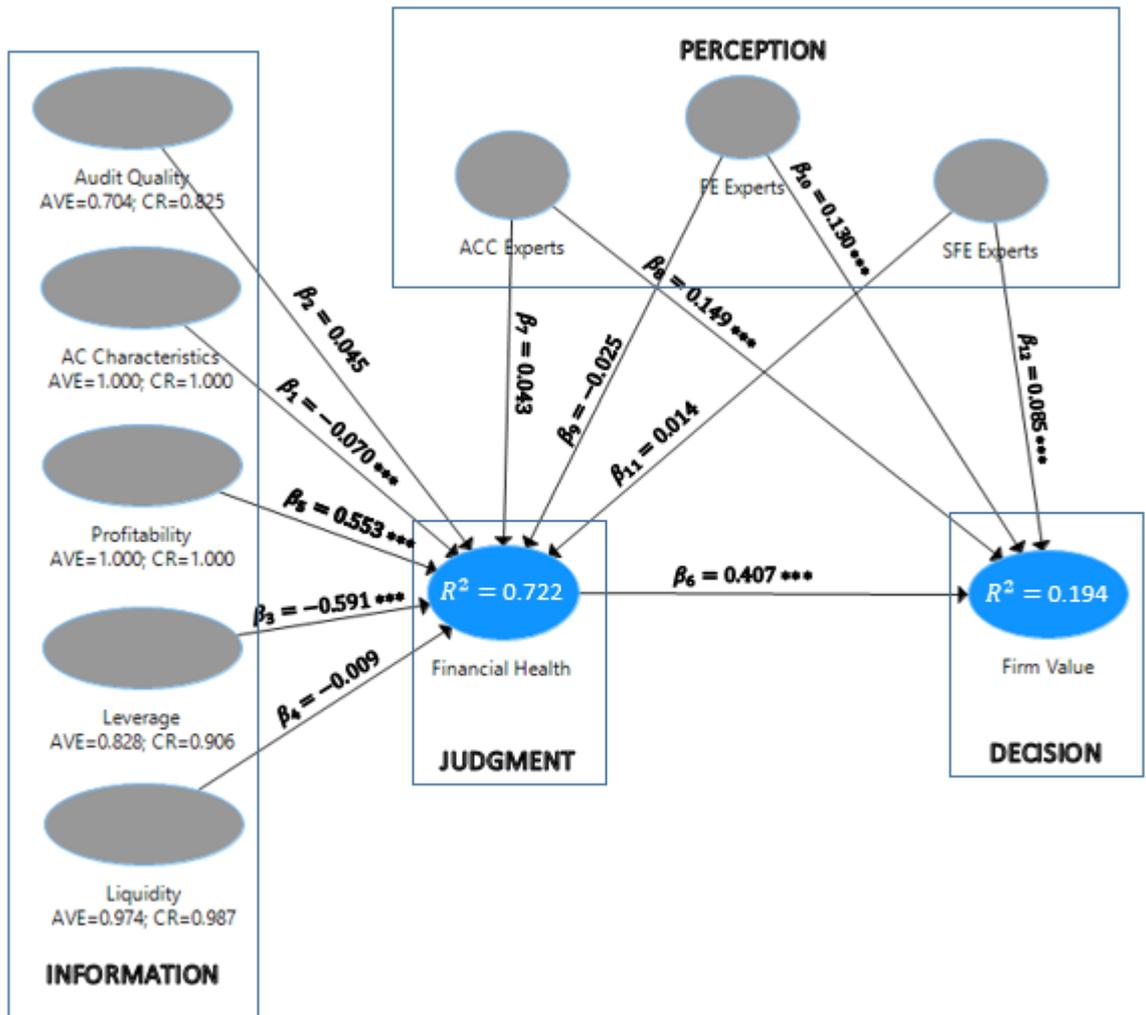


Figure 2.9 PLS Summarised results 1, 2 and 3 for UK

Fig. 2.9 UK PLS result, summarised from Model 1, 2, and 3⁵

⁴ The coefficients from β_1 to β_8 , and also two R^2 values are taken from model 1 estimation results. β_9 and β_{10} are from model 2. β_{11} and β_{12} are from model 3.

⁵ The coefficients from β_1 to β_8 , and also two R^2 values are taken from model 1 estimation results. β_9 and β_{10} are from model 2. β_{11} and β_{12} are from model 3.

We start our interpretation of results by taken figure 2.4 in to consideration, as it represents all the coefficients of variables in Table 2.15. According to the theoretical concept of confidence if the lower and upper values of confidence intervals have the same sign (i.e. both are positive or both are negative), then we can conclude that the particular coefficient is significant at the corresponding significance level. Thus from the bootstrapping results we can conclude that all significant path coefficients in table 2.15 and 2.16 are significant and as a result they can be used to investigate the research questions in this study.

Using table 2.15 coefficients for UK, the Preference-based pathway (**P** → **D**) can be interpreted in the following way: Models 1, 2 and 3 shows that the perception of ACC, FE, and SFE experts qualification (**P**) have significant (at the 0.01 significance level) positive impact on Firm Value (**D**) differently in UK FTSE100 firms ($\beta_8 = 0.149$, $p < 0.01, R^2 = 0.194$, $\beta_{10} = 0.130$, $p < 0.01, R^2 = 0.189$, and $\beta_{12} = 0.085$, $p < 0.01, R^2 = 0.180$ correspondingly). This therefore supports our hypothesis **H1**, as highlighted in figure 2.5 below. Evidently, Model 4, which is a combination of all the experts (**P**) shows that firm value (D) increases when all three expertise are mixed. (H1b)

Based on the above, we can make the following conclusions:

We reject H0 and accept H1 and H1b that financial experts with individual accounting, finance and supervisory expertise as well as when combined together influences firm value

However the impact of financial experts (**P**) on Financial Health (**J**) is not significant ($\beta_7 = 0.043$). Nevertheless, Financial Health (**J**) has significant positive impact on Firm Value (**D**) ($\beta_6 = 0.407^{***}$).

Based on the above, we can conclude therefore that the study failed to reject the null hypothesis.

From observed five factors (**I**) only three have significant impact on Financial Health (**J**), from which the profitability influence positively ($\beta_5 = 0.553^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.070^{***}$ and $\beta_3 = -0.591^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.407^{***}$).

Based on the above findings, a summary of supported and rejected hypothesis are presented as seen below.

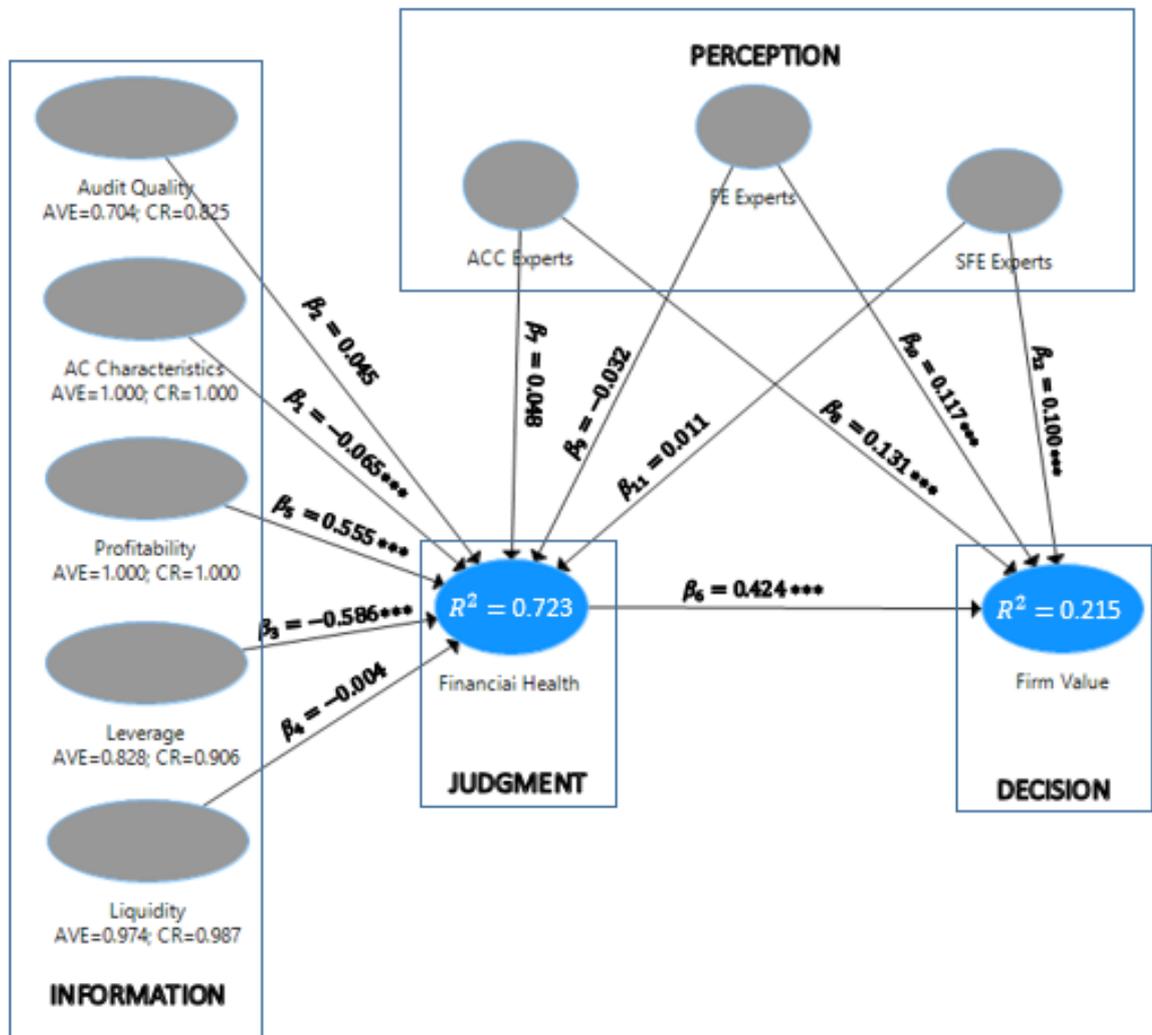
Table 2.19

Variables	Construct	Hypothesis	Outcome
FINEXP influencing Firm value	$P \rightarrow D$	H1	Supported
Combined FINEXP influencing Firm value	$P \rightarrow D$	H1b	Supported
FINEXP influencing Financial health	$P \rightarrow J$	H2	Rejected
Audit Quality influencing Financial health	$I \rightarrow J$	H3	Rejected
AC Characteristics influencing Financial health	$I \rightarrow J$	H4	Supported
Profitability	$I \rightarrow J$	H5	Supported

influencing Financial health			
Liquidity influencing Financial health	$I \rightarrow J$	H6	Rejected
Leverage influencing Financial health	$I \rightarrow J$	H7	Rejected
Financial health influencing Firm value	$J \rightarrow D$	H8	Supported

Graphical presentation of the individual path analysis models (models 1-4) for UK is presented in appendix 2.9.5

Figure 2.10. Impact of all Financial Experts on Firm Value (model 4) for UK

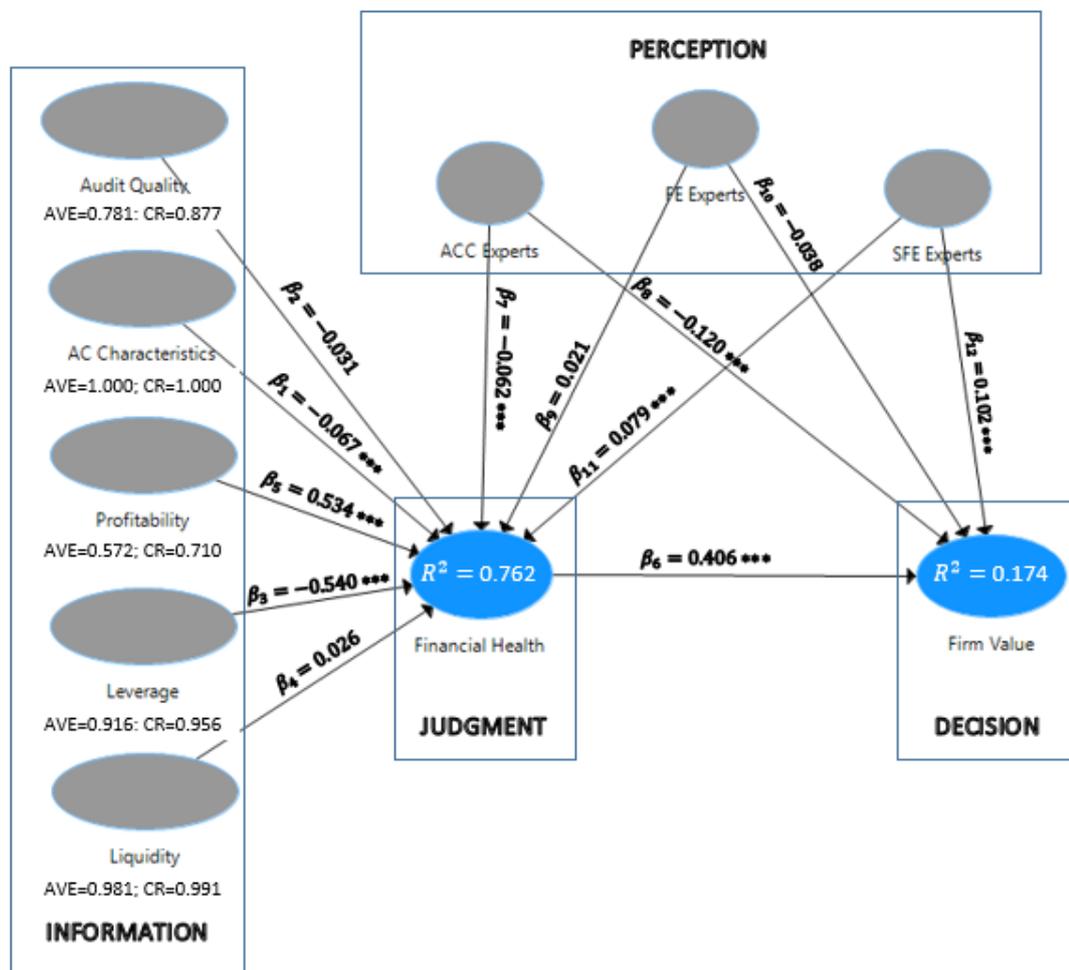


In the combined model 4 all three financial experts perceptions (ACC, FE, and SFE) have significant positive impact on Firm Value ($\beta_8 = 0.131^{***}$, $\beta_{10} = 0.117^{***}$ and $\beta_{12} = 0.100^{***}$ correspondingly).

Financial Health doesn't play mediated role between financial experts perceptions (ACC, FE, and SFE) and Firm Value ($\beta_7 = 0.048$, $\beta_9 = -0.032$, and $\beta_{11} = 0.011$ correspondingly). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.424^{***}$).

The profitability influence positively ($\beta_5 = 0.555^{***}$) the Financial Health; the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.065^{***}$ and $\beta_3 = -0.586^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.424^{***}$).

Figure 2.11 US PLS result, summarised from Model 1, 2, and 3



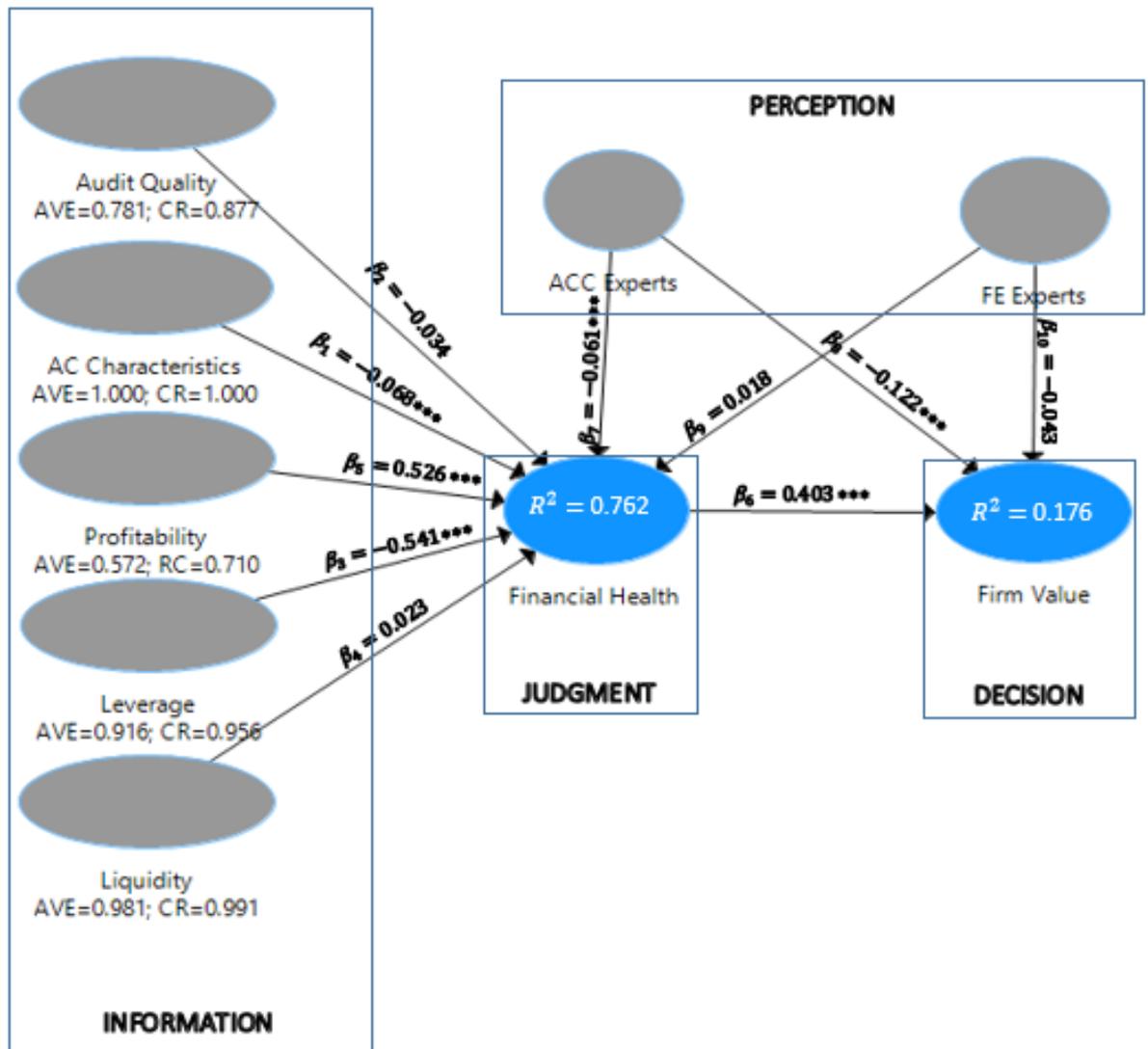
US PLS result, summarised from Model 1, 2, and 3

With reference to Table 2.15 and figure 2.6, ACC Experts perception (**P**) has significant negative impact on Financial Health (**J**) and Firm Value (**D**) ($\beta_7 = -0.062^{***}$ and $\beta_8 = -0.120^{***}$). Unlike UK, we find evidence of SFE experts having impact on firm value. However, Financial Health itself (**J**) has significant positive impact on Firm Value (**D**) ($\beta_6 = 0.406^{***}$).

From observed five factors (**I**) only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.534^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.067^{***}$ and $\beta_3 = -0.540^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.406^{***}$).

The graphical outputs of all individual models are presented in appendix 2.9.5

Figure 2.12. Impact of all Financial Experts on Firm Value (model 4) United States



In the combined model 4 ACC Experts perception have significant negative impact on Financial Health and Firm Value ($\beta_7 = -0.061^{***}$ and $\beta_8 = -0.122^{***}$ correspondingly). The impact of FE Experts perception on Financial Health and Firm Value is not significant ($\beta_9 = 0.018$ and $\beta_{10} = -0.043$ correspondingly)

Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.526^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.068^{***}$ and $\beta_3 =$

−0.541*** correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

Based on the above, we can conclude that in the US we can make the following conclusions:

We reject H0 and accept H1 and H1b that financial experts with individual accounting, finance and supervisory expertise as well as when combined together influences firm value. Further summary are shown below.

Table 2.20

Variables	Construct	Hypothesis	Outcome
FINEXP influencing Firm value	P→D	H1	Supported
Combined FINEXP influencing Firm value	P→D	H1b	Supported
FINEXP influencing Financial health	P→J	H2	Supported
Audit Quality	I → J	H3	Rejected

influencing Financial health			
AC Characteristics influencing Financial health	I → J	H4	Supported
Profitability influencing Financial health	I → J	H5	Supported
Liquidity influencing Financial health	I → J	H6	Rejected
Leverage influencing Financial health	I → J	H7	Rejected
Financial health influencing Firm value	J → D	H8	Supported

In the framework of current research we investigate whether a firm's performance in prior period affects perception of financial experts by reversing the direction of impact in above models⁶. In the new path analysis all independent variables and two dependent variables (Financial Health and Firm Value) are taken by one year lag.

Results of Lagged Effects UK

Table 2.21. Lagged variables impact on financial experts perception

	Path coefficients	Bootstrap analysis (Bias-corrected 95% CI)		P Value
		Lower 95% CI	Upper 95% CI	
Lag_AC Characteristics → Lag_Financial Health ($\beta_{1,l}$)	-0.067***	-0.115	-0.019	0.006

⁶ In this case we analyzed one combined model, with all three Expert types as dependent variables.

Lag_Audit Quality → Lag_Financial Health ($\beta_{2,l}$)	0.061*	-0.026	0.106	0.060
Lag_Leverage → Lag_Financial Health ($\beta_{3,l}$)	-0.479***	-0.786	-0.344	0.000
Lag_Liquidity → Lag_Financial Health ($\beta_{4,l}$)	-0.046	-0.087	0.068	0.267
Lag_Profitability → Lag_Financial Health ($\beta_{5,l}$)	0.601***	0.318	0.736	0.000
Lag_Financial Health → Lag_Firm Value ($\beta_{6,l}$)	0.313***	0.07	0.645	0.045
Lag_Financial Health → ACC Experts ($\beta_{7,l}$)	-0.051	-0.137	0.095	0.389
Lag_Firm Value → ACC Experts ($\beta_{8,l}$)	0.187***	0.059	0.276	0.001
Lag_Financial Health → FE Experts ($\beta_{9,l}$)	-0.209**	-0.338	-0.024	0.014
Lag_Firm Value → FE Experts ($\beta_{10,l}$)	0.159***	0.053	0.218	0.000
Lag_Financial Health → SFE Experts ($\beta_{11,l}$)	-0.062	-0.231	0.002	0.295
Lag_Firm Value → SFE Experts ($\beta_{12,l}$)	0.061	0.003	0.195	0.199

Multiple R² (explained variance)

Lag_Financial Health	0.633
Lag_Firm Value	0.098
ACC Experts	0.032
FE Experts	0.048
SFE Experts	0.005

* Significant at p<0.1; ** significant at p<0.05; *** significant at p<0.01

Results of Lagged Effects US

Table. 2.22 Lagged variables impact on financial experts perception

	Path coefficients	Bootstrap analysis (Bias-corrected 95% CI)		P Value
		Lower 95% CI	Upper 95% CI	

Lag_AC Characteristics → Lag_Financial Health ($\beta_{1,l}$)	-0.060**	-0.119	-0.004	0.044
Lag_Audit Quality → Lag_Financial Health ($\beta_{2,l}$)	-0.048**	-0.098	-0.008	0.038
Lag_Leverage → Lag_Financial Health ($\beta_{3,l}$)	-0.535***	-0.663	-0.394	0.000
Lag_Liquidity → Lag_Financial Health ($\beta_{4,l}$)	0.041	-0.019	0.110	0.216
Lag_Profitability → Lag_Financial Health ($\beta_{5,l}$)	0.556***	0.477	0.653	0.000
Lag_Financial Health → Lag_Firm Value ($\beta_{6,l}$)	0.500***	0.369	0.607	0.000
Lag_Financial Health → ACC Experts ($\beta_{7,l}$)	0.133***	0.053	0.229	0.003
Lag_Firm Value → ACC Experts ($\beta_{8,l}$)	-0.126**	-0.219	-0.027	0.012
Lag_Financial Health → FE Experts ($\beta_{9,l}$)	-0.099*	-0.216	0.018	0.096
Lag_Firm Value → FE Experts ($\beta_{10,l}$)	0.004	-0.119	0.117	0.945
Lag_Financial Health → SFE Experts ($\beta_{11,l}$)	-0.064*	-0.135	-0.001	0.060
Lag_Firm Value → SFE Experts ($\beta_{12,l}$)	0.099**	-0.004	0.190	0.047
Multiple R² (explained variance)				
Lag_Financial Health	0.720			
Lag_Firm Value	0.250			
ACC Experts	0.017			
FE Experts	0.009			
SFE Experts	0.008			

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

As shown in Table 2.19, our results also suggest that lagged financial health (accounting-based performance measure) of a firm has no significant impact on the perceptions of financial expertise ($b_7 = -0.051$, $p > 0.01$; $b_9 = -0.209$, $p > 0.01$; $b_{11} = -0.062$, $p > 0.01$; $R^2 = 0.633$). On the other hand, firms with higher lagged Tobin's Q (market-based performance measure) tend to have higher financial expertise such as (accounting expertise and finance expertise score) in the current period as indicated above. ($\beta_{8,l} = 0.187$, $p < 0.01$, $\beta_{10,l} = 0.159$ $p < 0.01$). Together these results suggest that financially viable companies do have a significant effect on a firm's financial expertise decisions. It is also clear from the lag effects, the relevance of finance expertise.

Therefore, firms with high growth potential or those with high firm valuation (relative to book value) are more likely to consider perceptions leaning into accounting and finance expertise. In this regard, the appointment of financial experts will be based on the evaluation of potential benefits leading to the creation of firm value and making the financial process to be more effective and efficient.

In the case of US as results above suggested, firms with high growth potential or those with high firm valuation (relative to book value) are more likely to consider perceptions leaning into accounting and Supervisory financial expertise.

2.9.3 Summary of Hypothesis

Hypothesis H1

Perceptions of Audit committee financial experts in terms of the level of his skills, experience and qualifications influencing financial health and Firm value in the UK and US companies differently

Table 2.23

	UK				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
ACC Experts → Financial Health	0.043	-0.009	0.093	0.104	-0.062	-0.097	-0.023	0.001
FE Experts → Financial Health	-0.025	-0.079	0.049	0.506	0.021	-0.027	0.061	0.351

SFE Experts → Financial Health 0.014 -0.048 0.037 0.492 | 0.079 0.041 0.109 0.000

In UK all three financial experts' perceptions don't significant influence Financial Health. At the same time ACC (negative) and SFE Experts influence (positive) levels are significant for US companies

Hypothesis H2

Perceptions Audit committee financial experts in terms of the level of his skills, experience and qualifications influencing firm value in the UK, US and German companies differently

Bootstrapping results: Financial experts perception → Firm Value across countries

Table. 2.24

	UK				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
ACC Experts → Firm Value	0.149	0.053	0.217	0.000	-0.120	-0.181	-0.058	0.000
FE Experts → Firm Value	0.130	0.041	0.182	0.000	-0.038	-0.136	0.055	0.445
SFE Experts → Firm Value	0.085	0.027	0.140	0.003	0.102	0.040	0.164	0.001

ACC Experts influence on Firm Value in UK and US, moreover in UK this influence is positive unlike US, where the influence is negative

FE Experts influence on Firm Value is significant only for UK companies.

SFE Experts influence levels on Firm Value are significant only for UK and US companies, however these influence levels don't differ significantly across these two countries.

Hypothesis H3

Audit committee characteristics (AC Characteristics) influencing the financial health and Firm value in the UK, US and German companies differently.

Table. 2.25

	UK				P value	US				
	Estimate	Lower 95% CI	Upper 95% CI	P value		Estimate	Lower 95% CI	Upper 95% CI	P value	
AC Characteristics → Financial Health	-0.070	-0.107	0.026	-	0.001	-0.067	-0.109	0.017	-	0.004

AC Characteristics has significant negative impact on Financial Health of UK and US companies: the influence levels don't change significantly across these countries. This influence is not significant for German companies

Hypothesis 4.

Audit quality (Audit and non-audit fees, Non-audit fee ratio) influencing the financial health In the UK and US companies differently.

Table. 2.26

	UK				P value	US			
	Estimate	Lower 95% CI	Upper 95% CI	P value		Estimate	Lower 95% CI	Upper 95% CI	P value

Audit Quality → Financial Health	0.045	-0.021	0.094	0.134		-0.031	-0.076	0.014	0.178
----------------------------------	-------	--------	-------	-------	--	--------	--------	-------	-------

Audit Quality doesn't have significance influence on Financial Health of companies in all countries

Hypothesis 5

Profitability (ROA and Revenue or Sales/Assets) influencing the financial health and firm value in the UK, US and Germany differently.

Table. 2.27

	UK				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Profitability → Financial Health	0.553	0.337	0.675	0.00	0.534	0.455	0.631	0.00

Profitability has equally significant positive impact on financial health in all countries

Hypothesis 6.

Leverage (Debts/Assets and Debts/Equity) influencing the financial health and Firm value in the UK, US and Germany differently

Table. 2.28

UK	US
----	----

	Estimate	Lower 95% CI	Upper 95% CI	P value		Estimate	Lower 95% CI	Upper 95% CI	P value
	Leverage → Financial Health	-0.591	-0.763	0.482		0		-0.540	-0.648

Leverage, which is a combination of two indicators: Debts/Assets and Debts/Equity, has significant negative (and significantly not different) influence on Financial health of companies in all two countries.

Hypothesis 7.

Liquidity (Quick ratio and cash ratio) influencing the financial health and Firm value in the UK and US differently

Table 2.29

	UK				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Liquidity → Financial Health	-0.009	-0.042	0.061	0.717	0.026	-0.024	0.075	0.307

Liquidity, as a combination of two indicators (Quick ratio and cash ratio), has no significant positive influence on Financial health in both countries.

Hypotheses 8

Considering all independent variables effects on Financial health in all three countries we can say that subsequently Financial Health impacts on Firm Value are significantly positive, and don't significantly differ across all countries.

Table.2.30

	UK				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Financial Health → Firm Value	0.407	0.154	0.606	0.000	0.406	0.284	0.528	0.000

2.9.4 Conclusion

The financial expert decision model employed in this paper clearly gave an understanding of how financial experts with accounting, finance and supervisory expertise may influence financial health and firm value respectively.

From the above analysis, our results are supported by studies from the perspective of the financial reporting process such as Cohen (2010) and Erkens and Bonner (2013). Due to the intricacies and complexities of financial transactions and dealing with the financial statements, the accounting experts possess the ability and skill to deliver as compared to the other experts. We also shed light on the significance and contributions of both financial experts with finance and supervisory expertise which has been under estimated in prior studies.

We establish a clear distinction between the UK and US based on our PLS results. ACC, FE and SFE experts exert significant influence on firm value in the UK but no evidence

of any significant influence on financial health. In the US, AC financial expert have a negative influence on firm value. We suggest that, one of the reason for this is that, the percentages of accounting experts in FTSE100 companies as compared to Nasdaq100 is over 40%. In such a situation, the UK FTSE100 is expected to influence firm value significantly. This suggestion is supported by prior studies. (McMullen and Raghunandan, 1996; McDaniel, Martins and Maines, 2002 and Cohen, 2010). However, we find evidence of SFE financial expert significantly influencing firm value in the US.

Summarizing we can say that the impact of financial experts qualifications don't have significant impact on financial health in the UK. Although they do influence directly the firm value. On the contrary, financial experts negatively influence financial health in the US.

Analysis of H3 – H8 evaluates the relationship between other factors relating to audit quality, such as audit committee characteristics, profitability, liquidity, leverage and financial health and subsequently, firm value from the perspective of the financial reporting process in the UK.

Summarizing the path analysis and models 1-4 results, we can conclude that from the observed five constructs only three have significant influence on financial health. This influence is positive only for profitability ($\beta_5 > 0.550$, $p < 0.01$, $R^2 \approx 0.72$).

Leverage and AC Characteristics have a negative impact on financial health ($\beta_3 \approx -0.591$, $p < 0.01$, $R^2 \approx 0.72$ $\beta_1 \approx -0.070$, $p < 0.01$, $R^2 \approx 0.72$). All of these negative and

positive impacts of latent variables on financial health subsequently influence positively firm value ($\beta_6 > 0.407, p < 0.01$ for all four models). Likewise in the US.

We suggest therefore that, these differences may be due to the allocation of experts in terms of percentages to audit committees, role and authority of these experts as well as the influences of principles and rules that governed the two board structures

CHAPTER 3

DO AUDIT COMMITTEES IN A TWO – TIER BOARD STRUCTURE MAKE ANY DIFFERENCE?

EVIDENCE FROM GERMANY

3.1 Introduction

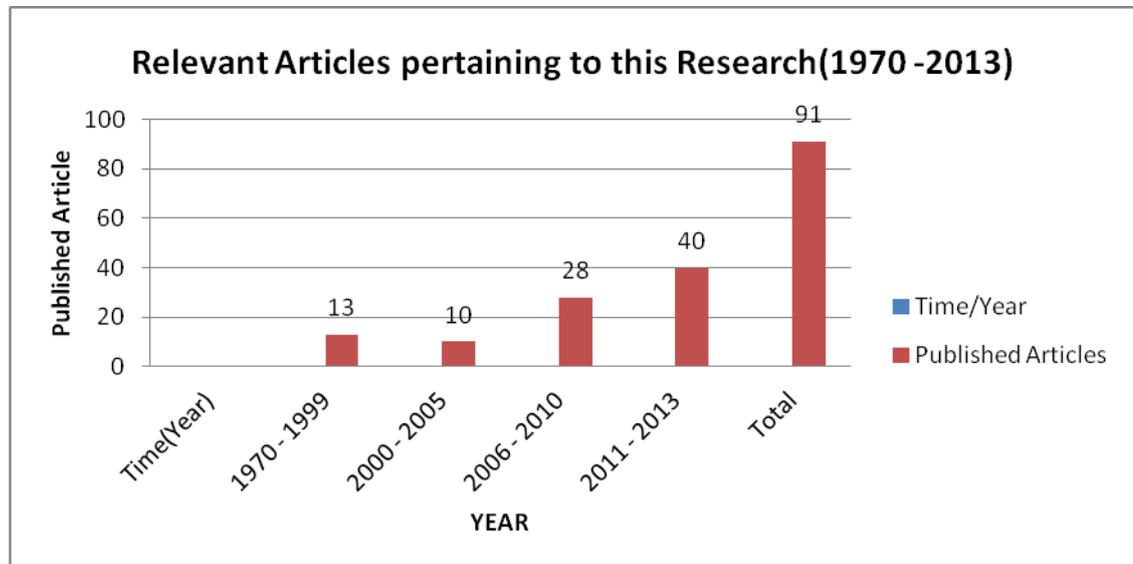
Financial scandals over the last 20 years and the continuous cyclical financial crisis of companies such as World.com and others, captured global attention and affected the integrity of auditors. These scandals intensified questions about how financial experts may exercise judgements in a decision making process in work settings (Cullinan, 2004). These judgements for example may focus on the monitoring and integrity of the financial statements of the company and any formal announcements relating to the company's financial health and firm value, reviewing significant financial reporting judgements. These judgements may reflect ensuring the right application of rules and principles. The need for ethical reasoning in organizations prompted reforms that weighed heavily on board structures and especially on audit committees and highlighted the important mechanism of corporate governance. New rules have been proposed over the years in the US by the New York Stock Exchange (NYSE) and National Association of Securities Dealers (NASD) that mandate board independence and tighten the definition of an independent director who may be qualified to be a potential financial expert. (Ghafran

Noel, 2012). For the fourth time in the U.K and within the last 10 years, the British government commissioned a new study of board independence (Economist, 2003). Also, two commissions were established by the federal government in Germany to examine and suggest improvements to governance practices including the functioning of the two-tiered corporate boards which are pervasive in Germany (PricewaterhouseCoopers, 2002). Prior researchers found that divergences in the structure of the board, the role and functioning of audit committees in the United States (US), United Kingdom (UK) and Germany, for example, may impact financial reporting quality differently (Beasley, 2009; Cohen, 2010).

Unlike prior studies that have looked at ethical issues and firm value directly from a company perspective focusing mainly on US or UK companies, our study is looking at financial experts and their influences on firm value from the perspective of the financial reporting process in Germany. To the best knowledge of the author, there has been no study that has looked simultaneously at the ethical considerations influencing board structures of the US, UK and Germany, as well as the impact of financial experts on firm value in Dax100 companies using a Throughput Model.

Evidently, in applying a systematic literature review, which is a method used in this study, It was established that from 1970 to 2013, the concentration of studies of financial experts were purely based on the financial reporting quality, earning management and very few on firm value. Invariably, there are no studies of German and UK firms looking at financial experts and their influences on firm value from the perspective of the financial reporting process. Thus, the graphical presentation below is based solely on US firms.

Figure 3.1. Published articles on studies based on US firms



UOH (2013), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CKIBHrTK7sfBwQsZ4&preferencesSaved (Accessed 26.03.2014)

The above graphical representation shows that all of the articles found pertaining to this topic or studies are focused on US firms. Evidently, none on Dax100 German firms. See appendix 3.9.5.3 Table 2

The purpose of this paper is to (a) explain how three major ethical theories consisting of rule-based (deontology), principle-based (utilitarianism) and stakeholder based (ethics of care) can explain the different board structures for the United States (US), United Kingdom (UK), and Germany and (b) To examine the influence of financial experts on

firm value, using the preference - based pathway to test the hypothesis, on Dax100 companies in Germany.

A detailed analysis of the Board of Directors indicates differences related to the main features: board size, independence from management, directors' experience, the endogeneity of the structure. In the USA, independent boards are associated with superior corporate performance and the board size varies inversely with the performance. A common element in the U.S. and most European countries is the one-level structure of the Board of Directors, with the exception of Germany and Austria (a two level-architecture) and France and Finland where there is the possibility of a choice between the two structures. The two-tier system faces different problems in relation to its monitoring function: large size, inadequate flows of information, occasional meetings and in some cases the underdevelopment of the committee structure.

To obtain a better understanding regarding these different systems, it is necessary to compare the effectiveness of board structures within which audit committees operate, which, in turn, requires controlling for other ethical, economic, legal and social factors that also affect the financial reporting quality. Empirical research is constrained by the lack of independent variation in the control variables and board systems. For example, companies in countries where two-tiered boards are the norm almost always also feature a high-powered large outside investor or lead bank. This makes it difficult to identify the independent effect of the two-tiered structure as opposed to large owner monitoring. Also, legal systems are highly correlated with board design, with two-tiered boards concentrated in Germany. Recently, researchers have shown great interest in the appointment of independent financial experts to audit committees as required by the

Sarbanes-Oxley Act of 2002 and the EU 8th Company Law Directive of 2006 (BRC, 1999; Carcello *et al.*, 2006 and 2011; SOX, 2002; EU, 2006). In their quest to establish a better understanding of ethical judgement, researchers have used various theoretical frameworks, such as the agency theory, rights theory, resource driven theory and institutional theory, as well as empirical models to explain ethical judgements or considerations (Defond *et al.*, 2009; Koehler, 2005). Nonetheless, much is not known of the ethical implication of the appointment of audit committee financial experts in the US, UK and Germany. Also, there is scant evidence regarding committees' management and internal and external auditors' interaction with the supervisory board (Abbot *et al.*, 2007; Cullinan *et al.*, 2004; Koehler, 2005). Therefore, this study is motivated by comparing board structures in the US, UK and Germany. Firstly, we argue that these different board structures are strongly influenced by different ethical positions. Secondly, we suggest that audit and financial reporting process as well as firm value may be influenced by cultural environment, legal settings or requirements of countries in which organizations operate. Thirdly, the implementation and the extent to which ethical standards are applied in a two-board system in Germany may have huge implications on the decision-making process (see Table 3.1).

Table 3.1 Differences in Corporate Governance Structures

Countries	U.S.	U.K.	Germany
Corporate Governance System	Corporate governance system is Rules - based with a one tier board system	Corporate governance is Principles – based with a one tier board system	Corporate governance is Rules – based with a two tier board system
Code	SOX(2002)	CGC (FRC, 2010)	GCGC (Recommendation from Baum commission 2002)
Audit Committee Requirement	AC requirements are enforced or mandated by law and listing rule	AC requirements are voluntary subjected to “comply or explain” approach	AC requirement is Quasi mandatory. Implying that is partly mandated.
Role and Authority of AC	AC has an extended authority and Role well defined.(Sox, 2002)	AC’s Role well defined but perform a specialist function as well	AC’s Role is semi – regulated. The Supervisory board decides delegated monitoring role and as such AC has limited authority
Influences on Accounting Policies	AC has direct influence on accounting policies. AC act as proxy for Shareholders	The interference of NED’s may result to further checks on AC’s influence on accounting policies. Shareholders can influence board	AC has passive influence on accounting policies due to the dominance of the Supervisory board. A Stakeholder approach is predominant
Financial expert	In compliance with SEC (2003) final rule but for Nasdaq listed companies, Financial Management experiences is emphasized.	More emphasis is laid on Financial experts with the requisite professional certification such as ACCA, CA etc.	In compliance with German Code but more emphasis is laid on vast experience

The considerable practical importance of comparing board structures (see Table 3.2), combined with the lack of guidance from conventional theoretical and empirical studies, and provides a compelling reason why researchers should examine the board structure, decision making and performance relationship from a new approach. This paper embarks on a different approach, using a *Throughput Model* (see Figure 3.5), and a decision-making model that has never been used in this discipline to explain ethical patterns that have ultimately affected both audit and financial reporting process. This paper may be seen addressing current ethical issues and events, as well as “Weber’s paradox of consequences, the extent to which means may come to undermine, rather than serve, ends” (Weber, & Wasieleskey, 2001, p, 21). The remainder of this paper is organised as follows: Section 3.2 will address the different types of board structures, accounting practices and firm value. Section 3.3 will present the Theory, 3.4 the hypothesis, 3.5 – 3.8 the methodology and finally 3.9, the empirical results.

3.2 Board Structures

The Blue Ribbon Committee recommendation of 1999 lay emphasis on the fact that, the performance of financial experts may be tied to the ethical, cultural and good practices that characterises the board structure within which they operate. The question as to whether a one tier or two board structure serves as an added advantage in mitigating agency problems, foster the ability of the audit committees to meet their expectation gap in creating value has been debated over the years. In view of the two board structures that will be discussed in this paper, it is quite clear in Germany, unlike the UK and US, that the management board according to Koehler (2005), noted that 76(1) of the Aktiengesetz play a predominant role in the function of leading the company whilst the supervisory board heads the management. These two functions are statutorily set asunder, at least as

the default rule. In the UK under the Combined Code and US under SOX, the strategic planning and monitoring are done by one body while in Germany these functions are carried out by two separate bodies. See Table 3.2 below: (12.Manage.Com)

Table 3.2 Differences between one and two tier board

Characteristics	ONE – TIER BOARD	TWO –TIER BOARD
Organization	One-layered board structure	Two-layered board structure
Composition	Single board of directors composed of both of executive and non-executive directors. Formerly, executive directors used to form the majority. Currently, increasingly the majority is formed by non-executive directors.	The supervisory board consists fully of non-executives (supervisory) directors. The Board of Directors (Management-Board) consists fully of executive, managing directors.
Committees	There are basically the audit, nomination and compensation committees typically composed of higher proportion of non-executive directors. Chairman of these committees can be the CEO or other executive member, however, recently, the subject of independence as related to committee members has increased.	Historically, supervisory committees were not mandated due to the fact that the Supervisory Board was dominant in a monitoring role. However, as a result of the increasing complexities in companies, accompanied by financial scandals, committees, such as the audit committee, are now major players.
CEO and Chairman Position	In the classic model, the CEO and chairman role can be held by one and the same person (CEO duality). Increasingly, the CEO is no longer chairman of the Board of Directors, but an independent, non-executive director.	No CEO duality, although the CEO can be a regular attendee or even a member of the Supervisory Board in certain modern forms
Executive Directors	Appointed by the general meeting of (shareholders), based on a nomination by the nominating committee or the Board as a whole. Some jurisdictions also permit the board of directors to appoint directors.	Appointed by the general meeting of (shareholders), based on a nomination by the Supervisory Board, the nominating committee, if there is one, or via a general meeting.
Non-executive (Supervisory) Directors	Appointed by the general meeting of (shareholders), based on a nomination by the nominating committee or by the Board of directors to appoint directors.	Appointed by the general meeting of (Shareholders), based on a nomination by the Supervisory Board, the nominating committee, if there is one, or via a general meeting. Sometimes a part of the Supervisory Directors can be appointed by third parties, such as the public government, a bank or the employees.

Source: 12.Manage.Com

These fundamental differences have led to arguments as stated by Davies, (1978), the main argument in favour of having one body doing both strategy setting and monitoring is that the information flow to the monitors is much better where both activities are carried on by the same body. As the Company Law Review put it, ‘members of a supervisory board may have a poorer understanding of the business and more limited access to information’ than members of a board which carries out both functions. From the German side, Hopt (2004), has said that ‘it is common knowledge that the information flow both from the management board to the supervisory board and within the supervisory board from its chairman to the normal members is deficient.’ He also notes also the large size, relative infrequency of meeting and undeveloped committee work of the supervisory board.

Many have argued that the complementarity of monitoring and strategy setting is correct, then as argued by Davies (2001. P.18), “the policy prescription for German company law which would seem to follow is that efficiency in monitoring would be enhanced if the two-tier system were replaced by a single-tier board. Alternatively, the above argument might lead to a prediction that, within the existing system, greater use will be made by supervisory boards of their veto powers under s 111(4) of the AktG (*Zusammenregelung*) in order to enhance their monitoring powers. However, both prescription and prediction rest on an assumption, which now needs to be examined, that the only function of the supervisory board is to monitor the managing board. Although that is what a reading of the *Aktiengesetz* might lead an observer to conclude, since monitoring is the function of the supervisory board which is embedded in the legislation”,

It is clear from the work of Hopt (2004) and others that the neither in practice nor

expectation is the role of the supervisory board confined to monitoring. Having identified the nature of these additional roles, it will be argued that the complementarity between them and monitoring indicate the efficiency arguments for a continuation of the two-tier board structure in Germany.

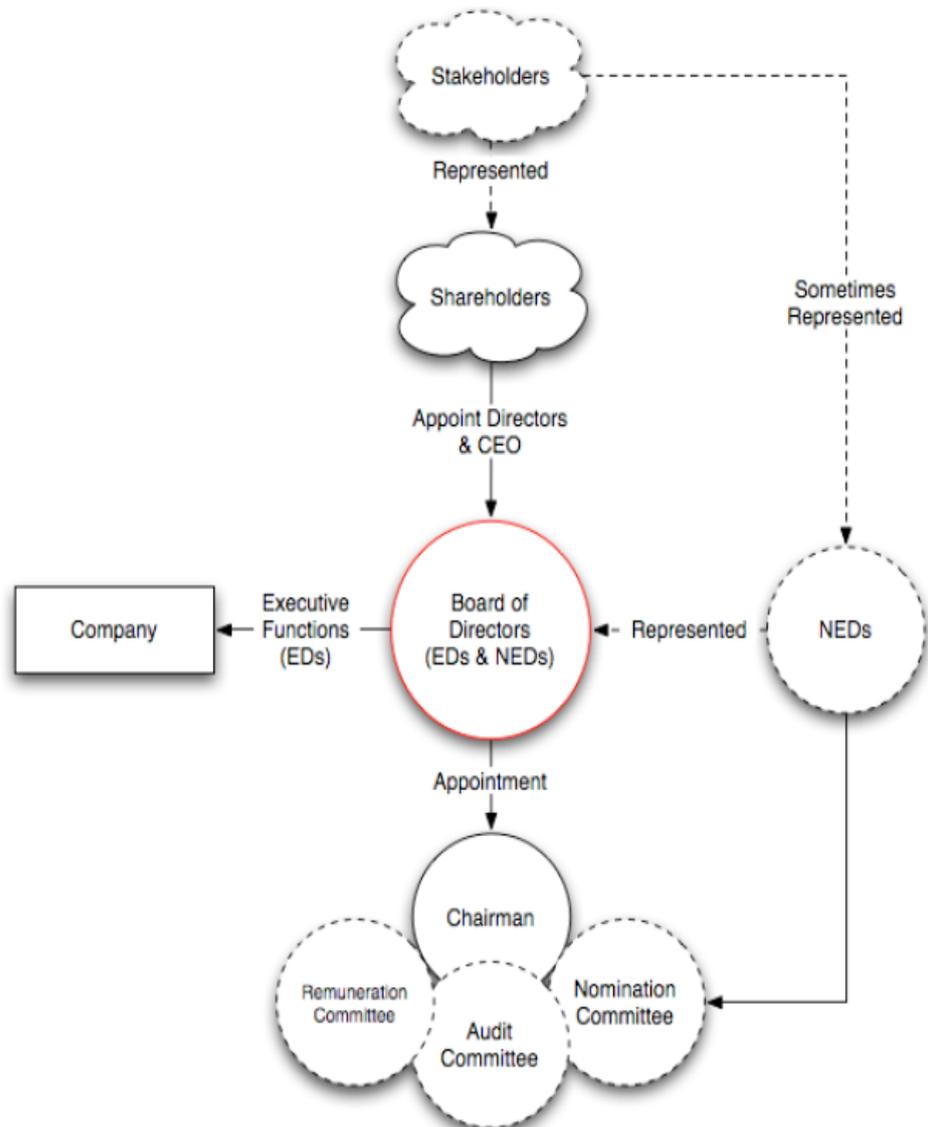
It is also clear that Davies (2001. P.19), noted that “two points in particular emerge from the historical and empirical work which has been done in Germany on board structures. The first is that, from the company’s point of view, the supervisory board from an early stage in the nineteenth century was regarded as having a networking function as well as a monitoring function. Appointments to the supervisory board were a method of establishing and maintaining links between the company and other financial and non-financial institutions whose co-operation was important for the company’s success. This might be viewed as an early form of stake holding, where the stakeholders are defined as those who have a long-term interest in the economic success of the company. At times, at least in the eyes of the company, the fostering of such links may even have appeared to be the primary purpose of the supervisory board. This should not surprise us. Historically, the roles played by boards have been (and probably still are) much more varied than the prescriptions of modern corporate governance codes would suggest. The second point is that, from the perspective of the legislature, the mandatory imposition of a two-tier board upon large companies in 1870 was intended to act as an expression of, even a safeguard for, the public interest in how such companies operated. It was the quid pro quo for the provision of a system of formation of companies by registration and the abandonment of the previous system of company formation only via state charter”. .Evolving regulations over the years that has led to the restructuring of these boards, have affected the role of audit committees diversely. In the US, the Sarbanes-Oxley Act of

2002, have given audit committees extended authority and a well-defined role. Unlike the US, the audit committees in the UK engages also in performing a specialist function and in Germany, their role is passive.

3.2.1 One – Tier Board Structure

The UK and US operates under a One – Tier board structure.

Figure 3.2



Source: Janos Renz-Hotz (2006)

The task of controlling and managing of companies is a task that not only varies under the legal statutes that govern the respective countries but also results in varied outcomes in face of poor performance for the management. Under the “One Tier Environment”, the task of control of managing directors of firms lays in the hands of board itself i.e. instead of an additional supervisory board, distinct from the board itself, the executive and non-executive board members themselves are charged with this additional task. Therefore, all directors are legally duty-bound to manage not only the companies day to day activities but also responsible to monitor the CEO. This system of only one single board is in place in the United Kingdom (Davies, 1997). The Combined Code (CC) in the UK focuses on principles rather than plethora of rules. Given the one tier structure in the UK, the board has universal powers of management and control for companies. However, larger firms’ management is typically delegated to committees (Becht and Mayer, 2003).

However, within the one tier system in the UK, there are legal statutes ‘limiting’ the powers of the board. For instance, the Combined Code distinguishes management and control. Furthermore, it requires that the board must be composed of at least 50% non-executive directors where the position of chairman and CEO must be distinct. Augmenting the requirements are relatively less precise ‘requirements’ where audit and remuneration committee may not only be non-executives but also qualify as independent. Additionally, the audit committee must review the audits and auditors for precision, price efficiency and autonomy (Rowe, 2013).

While it is true that shareholders elect all board members and by the Companies Act 1985 they have the power to remove directors from office. However, as documented by La Porta et al. (1999) and Franks and Mayer (2002) that fragmented shareholders make such

an 'extreme' action unlikely; only in the rarest cases of gross misconduct or supernormal underperformance is such power exercised by the shareholders. Therefore, it is the norm that the board takes the decisions to reorganize management whereas investors and shareholders have limited power. See figure 3.2

Economic rationale outlines five potential management disciplining 'devices' for underperforming companies: groups that acquire new blocks, takeover bidders, large share blocks, non-executive directors and creditors. La Porta et al. (1999) documented that UK has extremely dispersed share ownership. Franks and Mayer (2002) extends this line of research and show that the aforementioned management devices exert little influence in face of poor performance by firms. In fact, inside holders and boards with predominantly non-executive directors preclude disciplinary actions.

Barton and Wiseman (2015) document various studies by McKinsey (2011), that the current system of boards of directors has its fair share of problems and various checks and balances need to be put in place to correct this institutional failure. He states by nothing, that despite of guidelines from independent sources such as the Corporate Governance Network, most boards are not performing up to the mark. He observes that the Board's prime mission is to not only oversee but also support company's effort to create long term value.

For example, he quotes a recent study by McKinsey (2011), where it is documented that 34% of the total 772 directors surveyed agreed that the boards they had served under were not privy and cognizant to company's strategies. Furthermore, only 22% understood well

how their firms created values while only 16% understood the dynamics of their firm's industries.

Similarly, in another study, the board members were asked about their organization's emphasis on short term vis-à-vis long term goals and outcomes where a clear emphasis on short rather than long term was demonstrated. Ironically, vast majority of the board members (74%) directed their censure at themselves. Barton and Wiseman (2015) notes suggest various steps to remedy the precarious situation. They suggest that a first good step of course is to have a director that has large stakes in the long term success of the firm, which might help that he or she puts the company's interest before his/her owns'.

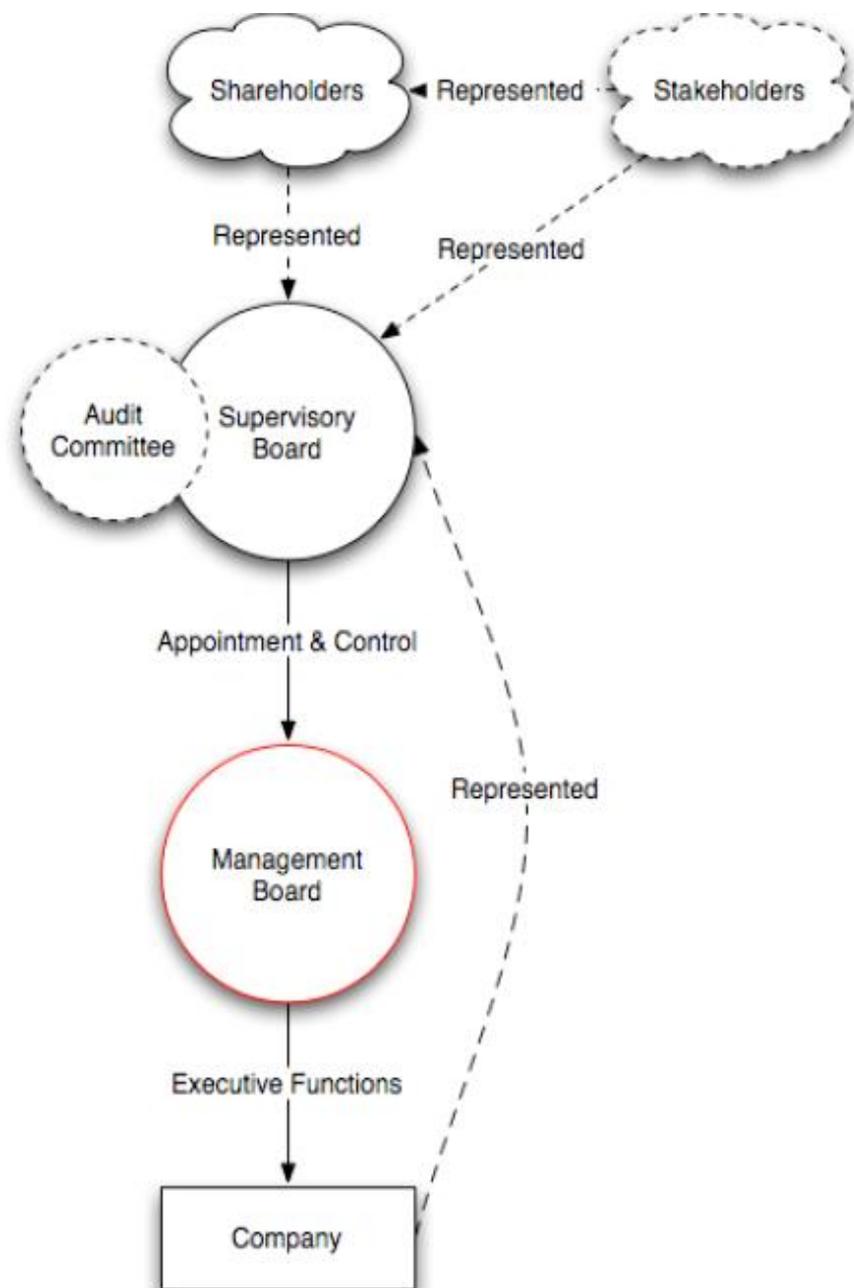
Additionally, it is suggested that the selected member must be apt at pressurizing, formulating concrete plans and persuading the management to work on long term goals. And, suggest that the individual must not only ignore short term vagaries of the market thereby absorbing pressure from the market but also must be equipped with a credible strategy that bears fruit in the future. Building on the needs and objectives of businesses and firms, Barton and Wiseman (2015) suggest the following: selecting people with long term perspective, spending time reflecting on company's long-term strategy, interacting more with long term investors and incentivizing directors with greater rewards especially rewards tied to long term financial performance and health of the firm.

In this vein, the financial experts appointed to audit committees must not only be able to demonstrate accounting knowledge but management and the assessment of risks.

3.2.2 Two – Tier Board Structure

Under the “Two Tier Environment” for example in Germany there is requirement that companies allocate governance functions between a supervisory board (Aufsichtsrat) and a management board (Vorstand). Ergo, in this system the monitoring and controlling tasks are divided under statute into board of managers and a supervisory board.

Figure 3.3 Two – Tier board



Source: Janos Renz-Hotz (2006)

This can be observed in Figure 3.3, the duty of management board is to deal with the company's tactical issues, sustainable management and manage day to day transitions, whereas the duty of the supervisory board is to overlook management, particularly evaluate its long term decisions and financial performance. The arrows indicate the flow of information exchange. For example, the supervisory board 'provides' information, approval, control and guidance to management. On the other hand, the management board has to submit reports and discussions to the supervisory board for it to adequately evaluate it.

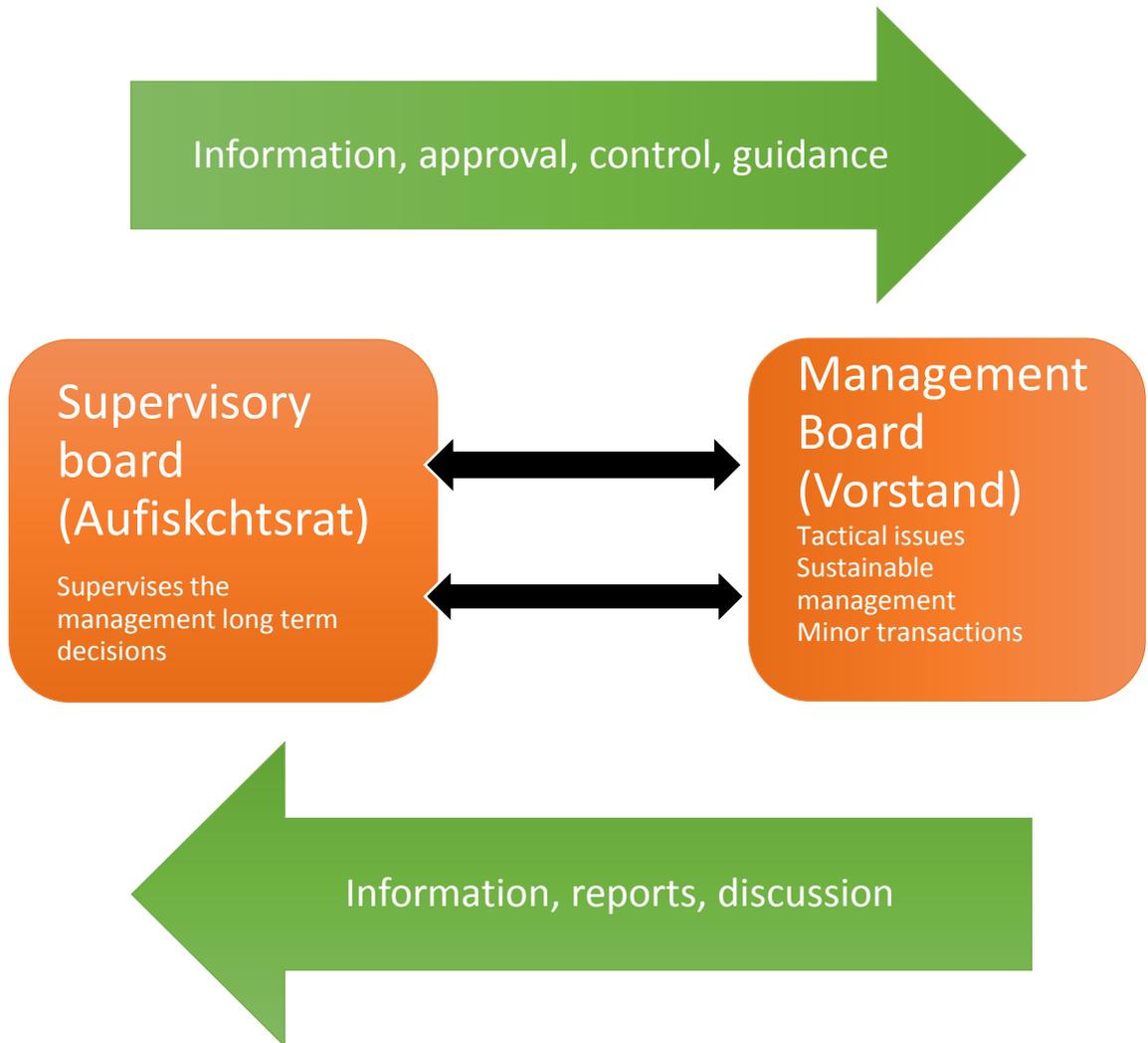
From a logistic and procedural point of view the management board operates as the head of the enterprise making strategic decisions, run day to day transactions and meet approximately every week. In the two-tier system as in Germany, the management board's chairman has greater influence than the CEO, who enjoys greater autonomy to make everyday business decisions (Mallin, 2013).

On the other hand, the supervisory board, composed of senior members and delegates of employees provides the supervisory role by monitoring the management. The chairman of this board acts as its head who is further responsible to frame contracts with the management board. Moreover, the supervisory board is responsible not only for far reaching strategic planning and decision making but also responsible for dismissal and selection of members in the management board (Keasey et al., 2005)

It should be noted that both boards do not strategize individually but there great cooperation expected and required of the two boards. For example, both the supervisory and management board are required to work closely to develop the business strategy that will enable it to gain a competitive advantage. Exchanges are frequent and a steady stream of information flow essential for the long-term viability of the firm. Particularly, the information exchange range from topics on management of risk, business development to large scale transactions (Proctor, 2002).

Figure 3.4 is an illustration of the information flow

Figure 3.4. Information Mechanism



Source: Adapted from Mallin (2013)

The research contributions on the impact of monitoring and control of management board by the supervisory board (as in Germany) or 'Board' (as in the United Kingdom) often interprets the situation as a principal agent problem (Jensen and Meckling, 1976). As in the current context, the German two tier system, the supervisory board is the principal whereas the management is the agent. As in any principal agent problem, the goal is to align the incentives in such a way that it becomes in the best interest of the agent to act in principals' interest. Furthermore, the selection of supervisory board members is made through an election by shareholders in the general meeting. The composition of board varies according to the number of workers in the firm. For example, for enterprises with greater than 500 employees, the representation is extended to them in the supervisory board. The idea is to include as many stakeholders in the supervision, so the long term interests of the company is taken into account. This implies, under the "One-Third Participation Act" (§4 Drittelbeteiligungsgesetz) that for companies with greater than 500 employees, one third of supervisory board members are elected delegates of the employees (Stiglbauer, 2010).

Additionally, under the two tier system as in Germany, the supervisory board has the powers to designate supervisory and auditory functions to committees. In particular, these committees have broad scope that ranges from supervision of accounts, evaluating the risk management schema and auditing processes (§107 GSCA). This in turn implies that the CEO and management would be answerable to two distinct principals. Furthermore, although, monitoring duties of the supervisory board in Germany are required by legislative authority, the board has much more global scope of operation. For example, the supervisory board serves not only monitoring function but also a networking function. This meant that the board also provided an enabling environment to develop

links with financial and non-financial institutions that are considered in line with companies' long term success (Davis, 1997).

This multi-tiered system rests on the tacit assumption that there is a need to separate management and supervision since there is a moral hazard problem i.e. an opportunity of exploitation once the contract is in place. In Germany, this distinction is 'ensured' through the requirement that management board of the firm cannot have any members from the supervisory board and vice versa (§105 GSCA). This means that although the management board has independence in day to day activities of the firm (§76 GSCA), the supervisory board not only appoints but also monitors and suggest improvements to the management board. Therefore, it is considered as an important stakeholder that is pertinent to the firm development and prosperity (§§84, 111 GSCA).

Historically, the statutes were put in place to form the two-tier board for large firms in 1870 as not only a reaction to a crisis at the time but also to protect populace's interests and rights. Although, at that time, it was not precisely clear how this 'new' requirement would protect the rights and interests of the public but it was widely recognized and perceived that this institutional innovation would curb monitoring board micromanaging the enterprise but allow "arm's length networking" (Davies, 1997, p. 19).

3.2.3 Financial Reporting and Accounting Practices

The continuous attempts at harmonization of accounting and financial reporting processes, for example through the supranational International Financial Reporting

Standards (IFRS), have still resulted in vast differences in the financial reporting process, even within the EU countries (Mian, 2006).

Each country with its own national body sets the rules of the financial reporting process. These different regulatory bodies determine how accounts and financial information must be compiled, prepared and presented. The requirement of each body has various similarities and idiosyncrasies. For instance, in the UK, the supra-national body that overlooks this is the Financial Reporting Council (FRC) that sets the Generally Accepted Accounting Practice (UK GAAP). The FRC derives its legal cover from the Companies Act (2006). This legislature incorporates the requirements of European law and ensures that certain minimum reporting standards are met. For instance, UK GAAP requires all limited firms to file their accounts with the Registrar of Companies who then make them public knowledge (FRC, 2012).

Similarly, in Germany the regulatory body that manages banks, insurance companies and credit institutions is the Federal Financial Supervisory Authority (BaFin). The legislation giving it legal cover is the Financial Services and Integration Act (2002). This act ensured among other things that the three, hitherto, regulatory bodies: Federal Banking Supervisory Office, the Federal Supervisory Office for Securities Trading and Federal Insurance Supervisory Office, coalesced under a single umbrella institution called the Federal Financial Supervisory Authority (Sobolewski, 2015).

Institute of Public Auditors in Germany, Incorporated Association (The Institute der Wirtschaftsprüfer in Deutschland e.V., IDW) is a private organization focused on helping their members in different professional matters evolving around audit regulations. Both Public Auditors (Wirtschaftsprüfer) and Public Audit Firms

(Wirtschaftsprüfungsgesellschaften) can become members of IDW. It is not regulated and it does not operate on commercial basis; it is a not-for-profit organization. Not only does IDW provide assistance to auditors, but also it provides training courses and offers professional development for qualified Wirtschaftsprüfer.

The IDW drafted their own auditing rules based on ISA, and incorporated all the regulations after it has been decided in the article 26 no. 1 of the amended Eighth EU Directive that auditors involved in statutory audits executed in the European Union have to follow the international auditing standards, such as ISA and IAPS (Kohler 2012). Furthermore, the IDW Auditing Standards include the German Generally Accepted Standards on Auditing as propagated by the German government. Auditors have to abide by the IDW Auditing Standards and in case they do not they have to explain their individual cases within the extent of the Wirtschaftsprüfer's professional independent accountability. Justification of breaching the IDW Auditing Standards has to be in a form of a detailed, extensive audit report and mentioned in the scope paragraph of the auditor's report. If the justification will be found insufficient the auditor risks proceedings brought before the professional supervisory body or criminal proceedings.

The IFAC developed problem- and risk-oriented audit approach that can be found under provisions: ISA 200 (appendix), 315, 330, and ISA 500. It was believed that these standards will help link audit procedures with associated risks and this will result in effective risk assessment.

When the IDW drafted auditing standards aimed at achieving high quality audit, while inspired by ISA provisions, they took more business risk audit approach rather than problem-oriented audit, which resulted in two standards to be found under IDW PS 261

and 300. Moreover, one provision treats the issue of the early risk detection (IDW PS 340).

3.2.4 Firm value and Systems of Corporate Governance

The relationship between different corporate governance mechanisms and firm value dates back to at least Cable (1985) where he studied the role of West German Banks following changes in corporate governance system. In his sample, that covered around 50% of all largest German companies in 1970, he empirically evaluates the part played by the West Germany's banks on firm value and industrial performance. It is documented that not only the extent of bank involvement in industries is positively associated with firm value but also stricter monitoring and corporate governance environment in a particular industry raise overall profitability. Cho (1998) extends this line of research by improving the econometric methods but come to a converse conclusion. Instead of relying on ordinary least squares methods as in Cable (1985), Cho uses the instrumental variable estimator in a simultaneous equation framework, thereby defining precise causal channels. It is found that there is no statistically significant relationship between firm ownership concentration ratio, degree of corporate governance and firm value.

Nevertheless, we should note that the sample size of 500 manufacturing firms for one year (1991) might be too small to get precise estimates in an instrumental variable framework. The German case is particularly interesting because of its unique corporate governance characteristics. For example, it is a system more oriented towards stakeholders as opposed to the US and UK system 'oriented' towards shareholders alone. Furthermore, again as opposed to the United States case, the German system operates

under an insider control framework as opposed to outsider monitoring system. Therefore, the governance system operation rests greatly on internal and private information relative to public information (Schmidt, 2003).

Gorton and Schmidt (2000) examine the impact of ownership concentration in Germany. The findings are consistent with the incentive alignment or incentive effect where they document a positive relationship between firm value and insider ownership of the enterprise. The effect is more pronounced if control rights are bank rather than equity oriented. However, they find no relationship between firm value and proxy voting structure. In a similar vein, Edwards and Nebler (2000), too look at role of banks and ownership concentration in the German system of corporate governance. They document large conflicts of interests particularly between controlling owners and minority shareholders. This opens up the risk for exploitation of minority investors by the majority. Specifically, they show how bank ownership among the public companies helps minority shareholders in a sample of 158 of the largest nonfinancial firms in Germany (in year 1992). They document that top three banks were controlling around 30 percent of all votes, whereas banks alone accounted for above 60 percent of votes. The results of this study call into question that conventional view that banks in Germany are crucial part of the corporate governance system. In fact, the authors show only ownership concentration has a positive relationship with firm value as opposed to banks role in the company.

The corporate governance system is of course not limited to managerial ownership of the enterprise. In fact, countries with relatively lax corporate governance structures are known to have high managerial compensations. The United States is an informative example. Murphy (1985) studies 72 firms, 461 managements with proxy statements

encapsulating 1964 to 1981 in the United States to empirically determine relationship between firm values with managerial compensation. He finds that managerial remuneration is positively associated with company value. This leads him to interpret the evidence for the fact that ownership structure is endogenous since managerial ownership and compensation packages are simultaneously determined and obey certain statistical regularities. This research echoes influential contribution by Agrawal and Knoeber (1996) who showed the interdependence of various corporate governance features in determining firm value and resolution of agency problems. They too warn against taking cross-sectional OLS regression of company value measure on a particular corporate governance feature. Instead, they document how managerial ownership, institutional framework, autonomous directors, debt policy and market for managers and corporate control interact and endogenously determine firm value. This of course underscores the importance of system of corporate governance in determination of company value.

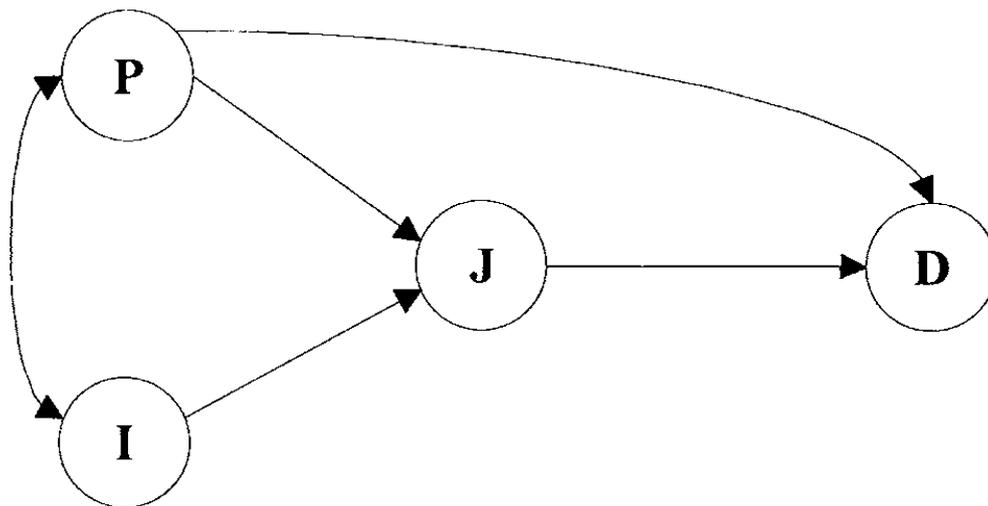
In this stream of literature, the study by Seifert et al. (2005) stands out since it not only studies corporate governance issues and firm value in a hitherto isolated manner but also compares it varying corporate governance structures across countries using micro data from different countries. For example, their analysis covers 319 German companies, 674 firms from the UK, 1015 Japanese firms and 2198 companies from the United States. They document that no clear relationship between firm value and institutional ownership (“block holders”) or insider ownership exists that can be generalized to all the four countries under study. In fact, it depends on the particular corporate governance characteristic in place. For example, systems with lower leverage and higher capital spending fare better since greater leverage is negatively correlated while capital spending has a positive influence on firm value.

3.3 Theory and hypothesis development

Overview

The Throughput Model is a decision model that has six ethical pathways (1) $P \rightarrow D$, which represent Ethical egoism (2) $P \rightarrow J \rightarrow D$, the Deontological view (3) $I \rightarrow J \rightarrow D$, the Utilitarian position (4) $I \rightarrow P \rightarrow D$, represents the relativist view (5) $P \rightarrow I \rightarrow J \rightarrow D$ the virtue of ethics and (6) $I \rightarrow P \rightarrow J \rightarrow D$, ethics of care. These six ethical pathways are built on four fundamental pillars of Perception (**P**), Information (**I**), Judgement (**J**) and decision (**D**).

Figure 3.5 Throughput Model



Where P = Perception of audit committee financial experts which includes skills, qualifications and experience.

I represent accounting and non – accounting information such as audit quality, AC characteristics, Profitability, Leverage and Liquidity.

J represents the analysis of evidence. How financial experts will apply rules and accounting standards to affect the financial health of firms

D is the decision arrived at after all analysis have been carried out. In this context, the Firm value. The value of the firm in this study is measured by the Tobin's Q. In general, the Tobin's Q assesses to what extent a company's management is successful in using its assets to maximise the wealth of shareholders. Similar to *ROA*, a high value of *TQ* indicates that financial experts work effectively and provides a better indicator for the market about the firm's performance or value. In this vein, the role of financial experts is critical here. This imply that the financial experts will have to make decisions based on financial statements recordings such as:

- Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.
- Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.
- Decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory authorities.
- Decisions as to the best business practice or investment that a firm is advised to undertake

The outcome of these decisions are of relevance to the shareholder who will be better positioned to value the firm, By ensuring the accuracy and reliability of financial statement entries, financial experts may be seen contributing to firm value.

The Throughput Model is an inclusive model that enables a researcher to combine two or more theories in explaining a situation. This is what distinguishes this model from others. In this section, four ethical pathways from the Throughput Model will be discussed and one will be a testable hypothesis ($P \rightarrow D$), the Agency or Preference pathway in Dax100 companies. The Utilitarian position/Principles – based pathway will be used to explain ethical influences of the UK board structure, Deontological or rules – based view to help explain the ethical influences on the US board structure and Stakeholder-based will be used to help explain the German board structure.

Table 3.3 Four ethical Pathways of the Throughput Model

Agency Theory/Ethical egoism	Deontological view/Rule based	Utilitarian Position	Stakeholder Theory
↓	↓	↓	↓
Principal's Aim/Shareholder	Sox(2002), EU 8th law, IFRS/GAAP	Collective economic egoism	Critical Thinking
↓	↓	↓	↓
Agent's Personal Objective	Equality, respect for moral law	Financial Expertise	Teamwork/Constitutive
↓	↓	↓	↓
Conflict of interest	Adherence to laid down principles	Independent	Communication
↓	↓	↓	↓
Agency cost	Prevent and limit fraud	Contributes to GDP	Decision that represent most

Reflecting on the above Table 3.3, it can therefore be argued that this paper is contributing to new knowledge in three ways, using the framework of the Throughput Model:

- (a) First, this paper is using a model that has never been used in this discipline to test whether audit committee financial experts may influence firm value ($P \rightarrow D$).

(b) Secondly, this paper is simultaneously using three ethical pathways in the Throughput Model to explain decision making processes in the UK, US and German board structure. ($I \rightarrow J \rightarrow D$), ($P \rightarrow J \rightarrow D$) and ($I \rightarrow P \rightarrow J \rightarrow D$)

The next section of this paper is as follows: Section 3.3.1 will explain how UK board structure is influenced by the Principles – based Pathway. Section 3.3.2 will present influences on US board structure via the rules – based Pathway. Section 3.3.3 will describe the role of the stakeholder theory in the German board structure and Section 3.4 will use the Preference – based Pathway ($P \rightarrow D$) as a hypothesis to test whether audit committee financial experts in German audit committees may influence firm value.

3.3.1 Principles – based Pathway and influences on UK board structure

According to Rodgers and Gonzalo (2009, p.351), this pathway is “concerned with consequences, as well as the greatest good for the greatest number of people. Therefore, the available information (I) such as leverage may influence a board’s behaviour and (J) judgment en route to a decision (D).”

Utilitarianism is built on the premises of economic growth in that it is committed to the maximization of the good and the minimization of harm and evil to a society. Furthermore, this theory advocates that society should always produce the greatest possible balance of positive value or the minimum balance of negative value for all individuals affected. Following this argument, a decision is ethically ‘correct’ when its derived utility is higher than other alternative choices (e.g., cost–benefit analysis) (Rodgers, 2009).

Figure 3.6. Utilitarian Position

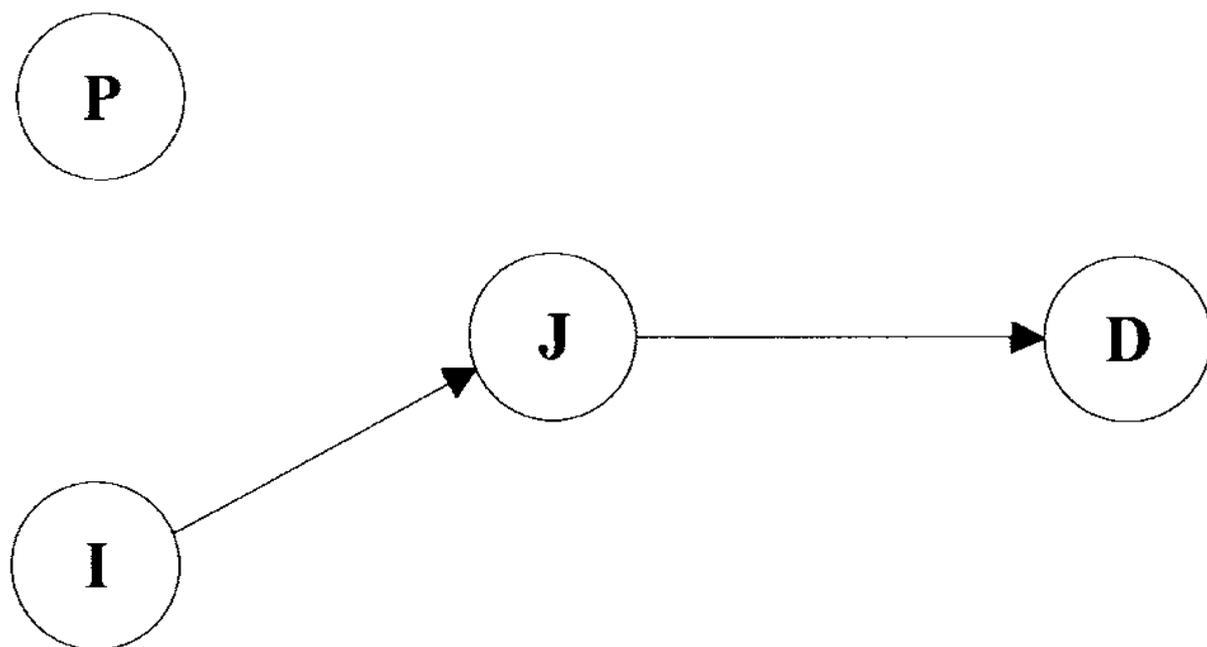


Figure 3.6 Utilitarian/Principles - based

Typical examples of how the Utilitarian position has impacted the UK structure are:

(1) Recent UK Government measures such as the removal of stamp duty on AIM shares and the inclusion of AIM shares in ISA's have been key for the development of the market. The fundamental reason for such initiatives was based on maximising an outcome that will benefit not only the company but will affect stakeholders positively. "In 2013, AIM companies contributed £14.7 billion to UK GDP and directly supported more than 430,000 jobs. To put these numbers in context, the UK aerospace and automotive industries – two of the UK Government's key industrial sectors – make an economic contribution of £9.4 billion and £11.5 billion respectively, while the UK pharmaceutical sector contributes £13.3 billion." (Grant Thornton, 2015, p.8)

"In addition they made a significant tax contribution of £2.3 billion to the Exchequer.

These figures are also higher than in the previous analysis in 2010, which found that in 2009 companies supported by AIM contributed £12 billion to GDP and directly employed 250,000. By providing access to capital and on-going finance, AIM plays a key role in the funding ladder, enabling ambitious companies to raise external finance so that they can make a step change in their development.” (Grant Thornton, 2015, p.8).

Based on the Utilitarian view, the general principles such as beliefs, values based on cost, profitability, liquidity, leverage and benefits should guide board’s behaviour. This underlined principles will affect the role of audit committees in that while, they try to maximize shareholder’s wealth, the interest of stakeholders

Figure 3.7 UK board and Utilitarian influences

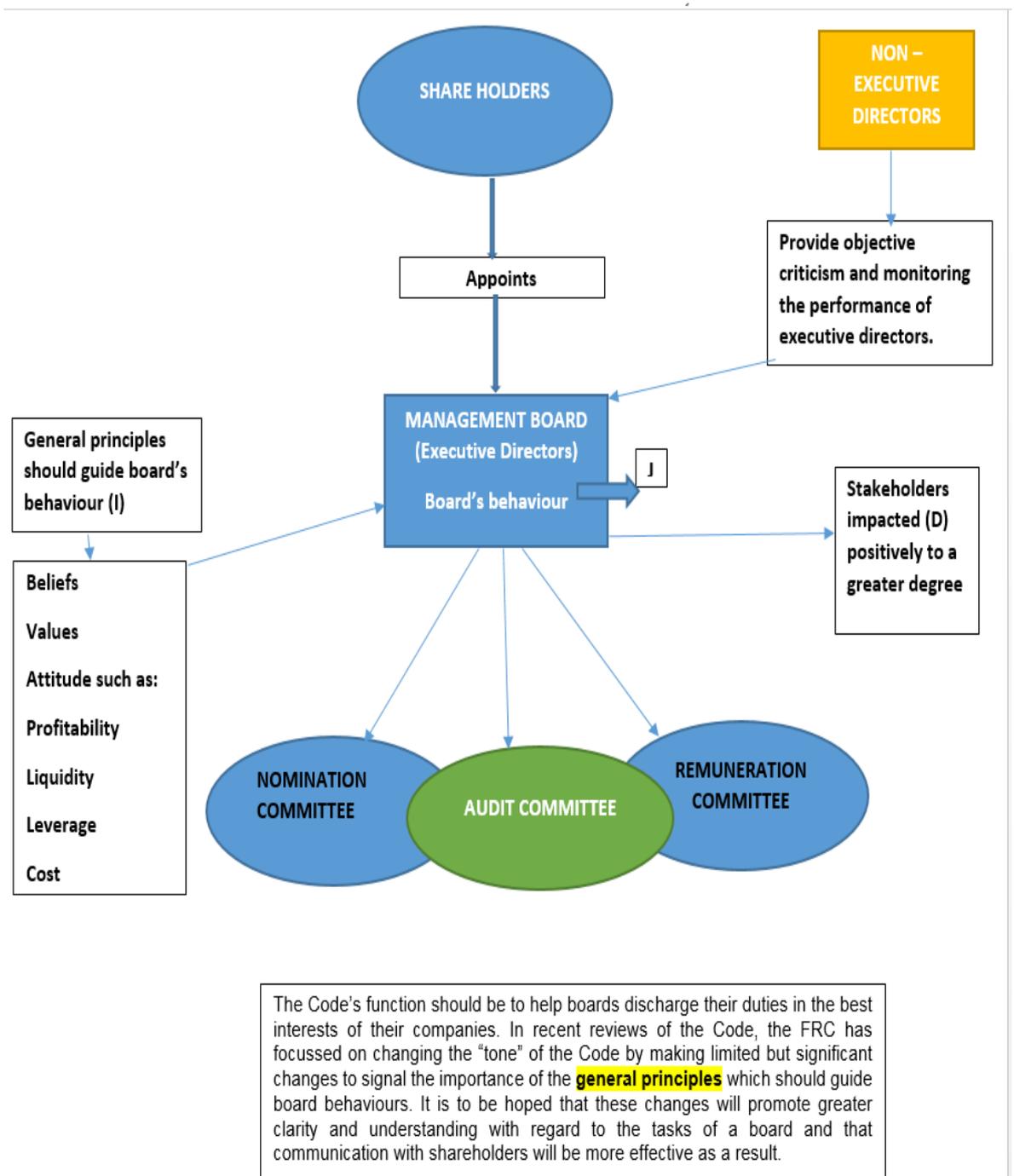


Figure 3.7 UK board and the Utilitarian Influence

UK Board - Consequential

(2) The decision made over the decade to allow immigrants to the UK from European countries to seek employment was purely based on economic reasons in relation to taxes. Despite the concern of crime and ethnic tensions, the government strongly believed that

the benefits to be derived would outweigh the odds. “Therefore, the utilitarian principle infers that quantities of benefits produced by an action can be measured and added and the quantities of harm can be measured and subtracted. This will determine which action produces the greatest total benefits” (Rodgers & Gago, 2009, p .9). It is quite clear that this pathway does influence UK board structure as it is built on the theory of economic growth.

According to the UCL Centre for Research and Analysis of Migration (CreAM, 2014,p.1), “European immigrants who arrived in the UK since 2000 have contributed more than £20bn to UK public finances between 2001 and 2011 than the benefits they received. Moreover, they have endowed the country with productive human capital that would have cost the UK £6.8bn in spending on education.” However, the rate of crime and the uncontrollable influx of immigrants may weigh economically on the UK, and this may lead to cut down on migration.

In the appointment of financial experts to the audit committee, the UK boards do put greater emphasis on experts with specifically accounting expertise from a recognised institution such as the ACCA, CIMA or CPA. The fundamental reason for this is based on the benefits these experts will bring to the quality of financial reporting and the minimization of errors that might result in huge losses due to incompetence of finance and supervisory financial experts in detecting fraud.

Given the fact that financial experts are faced with Judgement decisions such as

- Decisions relating to financial reporting and disclosure process
- Decisions relating to monitoring choice of accounting policies and principles
- Decision relating to oversight of regulatory compliance and ethics

- Decision relating to risk management policies and practices with management

Failure to make the right decisions will negatively impact firm value. This implies that Shareholders will be presented with the wrong information and hence make the wrong judgements that can put the company at risk. It is therefore necessary that audit committee appoint financial experts with the right expertise. This raises question as to which financial expert will be of benefit to the firm as far as value creation is concerned.

3.3.2 Rules – based Pathway and influences on US board structure

The deontological view is based on the principles of justice. Deontologists advocate that there are certain things that we should not engage in, even to maximize utility. Deontologists also regard the nature of moral principles as permanent and stable, and that compliance with these principles defines ethicalness. Furthermore, they believe that individuals have certain absolute rights, which include (1) freedom of conscience, (2) freedom of consent, (3) freedom of privacy, (4) freedom of speech, and (5) due process. (Rodgers, 2009).

Figure 3.8. Deontological Position

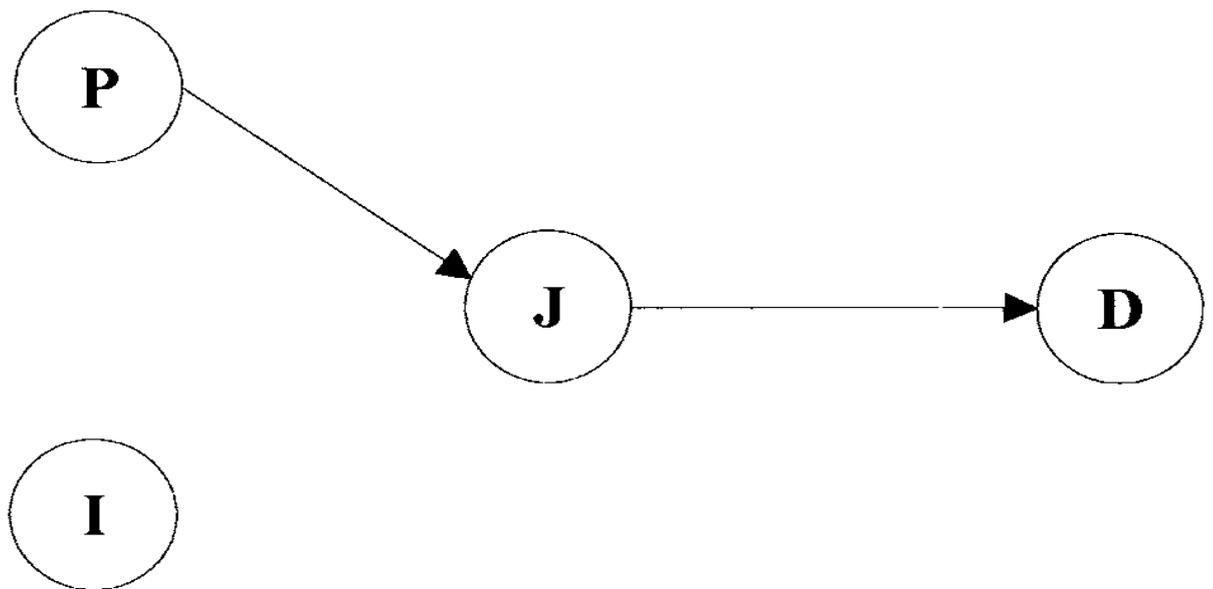


Figure 3.8 Rules - based

In Figure 3.8, the financial expert within a board forms a perception without the use of any information, weighs the possible outcomes before making any judgment and then concludes with a decision. It implies, for example, that audit committees or financial experts appointed to the board should use their experience or qualifications to apply and adhere to (P) which can be referred to as acts, such as the Sarbanes–Oxley Act of 2002, properly analyzed (J) to be able to affect firm value (D).

Figure 3.9 US board and Rules –based influences.

US Board Structure – Principles – based (Non - Consequential)

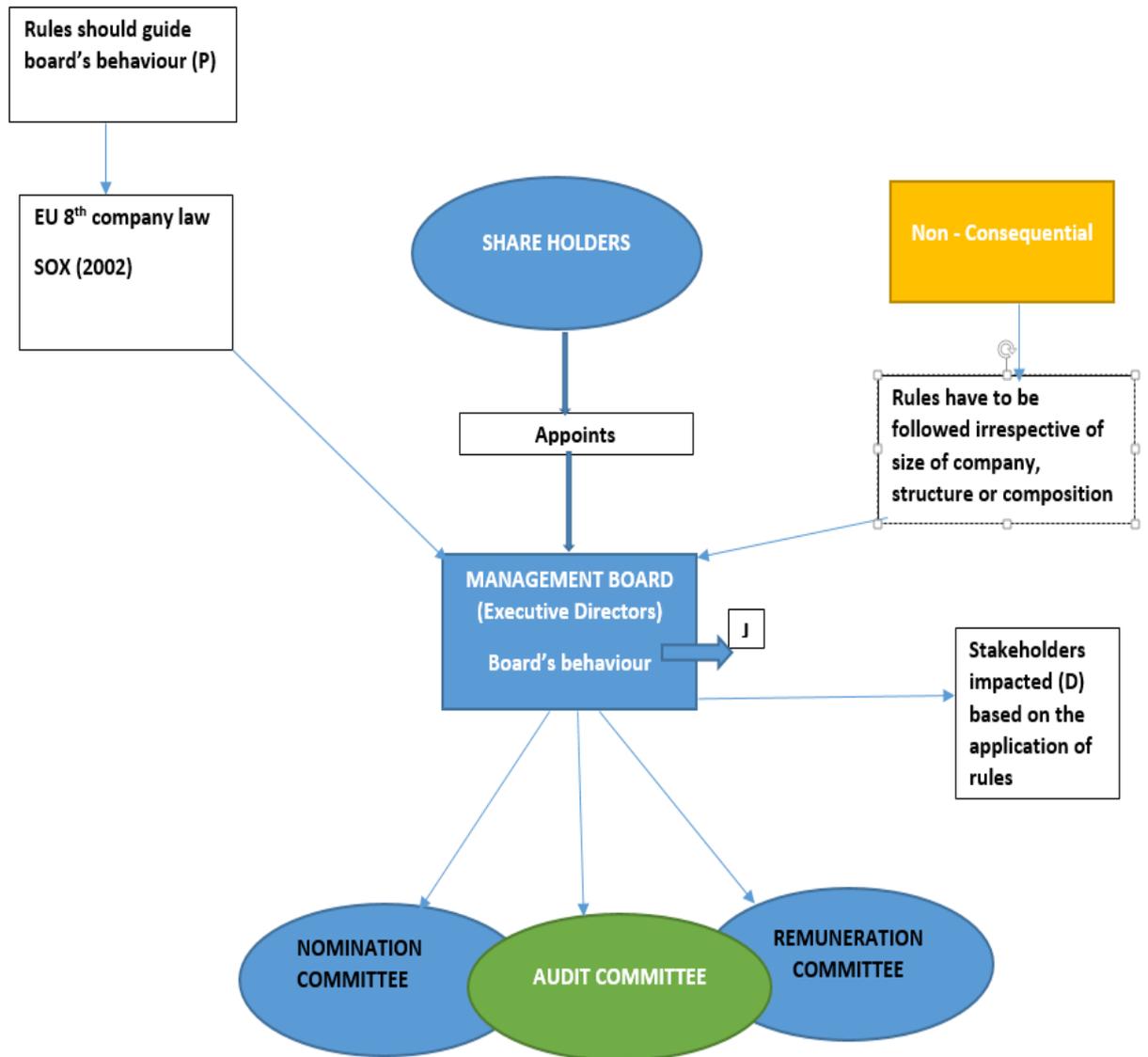


Figure 3.9 US board structure and the Principles - based Influences

With reference to figure the board is strictly guided by rules such as the Sarbanes – Oxley Act of 2002. The role of the audit committees is well defined and with an extended authority. This Act has not only stabilize internal control settings but changed the dynamics of the financial reporting process and the behaviour of financial experts appointed to serve as audit committee member.

Beattie *et al* (2012), noted that, the changes implemented to audit committees as stated in the Sarbanes – Oxley Act has not only changed the dynamics of internal control settings but given audit committees a more central role in the audit process and are among the most highly rated factors, consistent with recent US findings. The formation of audit committee within the US board structure is mandated by law. Others have argued that the ethical pathway, deontological view has positively influenced the role of audit committees in terms of detecting and limiting irregularities in the financial reporting process. (Van Stavaren (2007).

3.3.3 Stakeholder Theory and influences on German board structure

Although Germany is known as a rules – based country in terms of its corporate governance structure, the role played by the board demonstrates a philosophy that can be traced in a stakeholder theory. In a decision making process, the German board place great importance on the interest of stakeholders such as employees, internal auditors etc. According to Freeman (1984), the ethics of care (Stakeholder theory) is built on a constitutive approach where team work is considered a pillar in achieving the organization’s objectives.

Figure 3.10 Ethics of care/Stakeholder

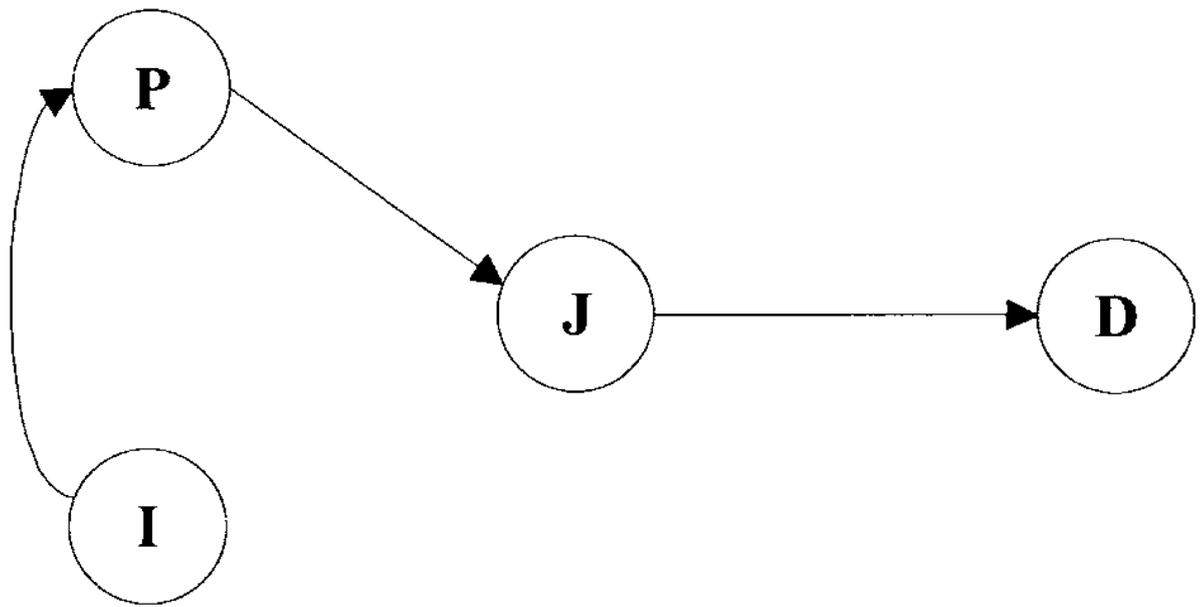


Figure 3.10 Ethics of Care

With reference to figure, information dominates the perception of the financial experts. The financial expert therefore, should demonstrate objectivity, creativity, effectiveness and communication across borders. In other words, information which can be accounting or non-financial reporting within the company, should be carefully assessed before arriving at a decision that will not negatively affect stakeholders of the firm. Rodgers (1997) found that valuable information (**I**) were received from internal auditors by managers. Bank managers often formed personal relations with their customers. The internal auditors' recommendations were instrumental in helping to guide managers' assessments of expenses. This information influenced managers' perceptions (**P**) regarding controlling their expenses. Their perception (**P**), included non-financial information related to customers' satisfaction, which influenced their judgment (**J**) before a decision (**D**) was made. See figure 3.11 below

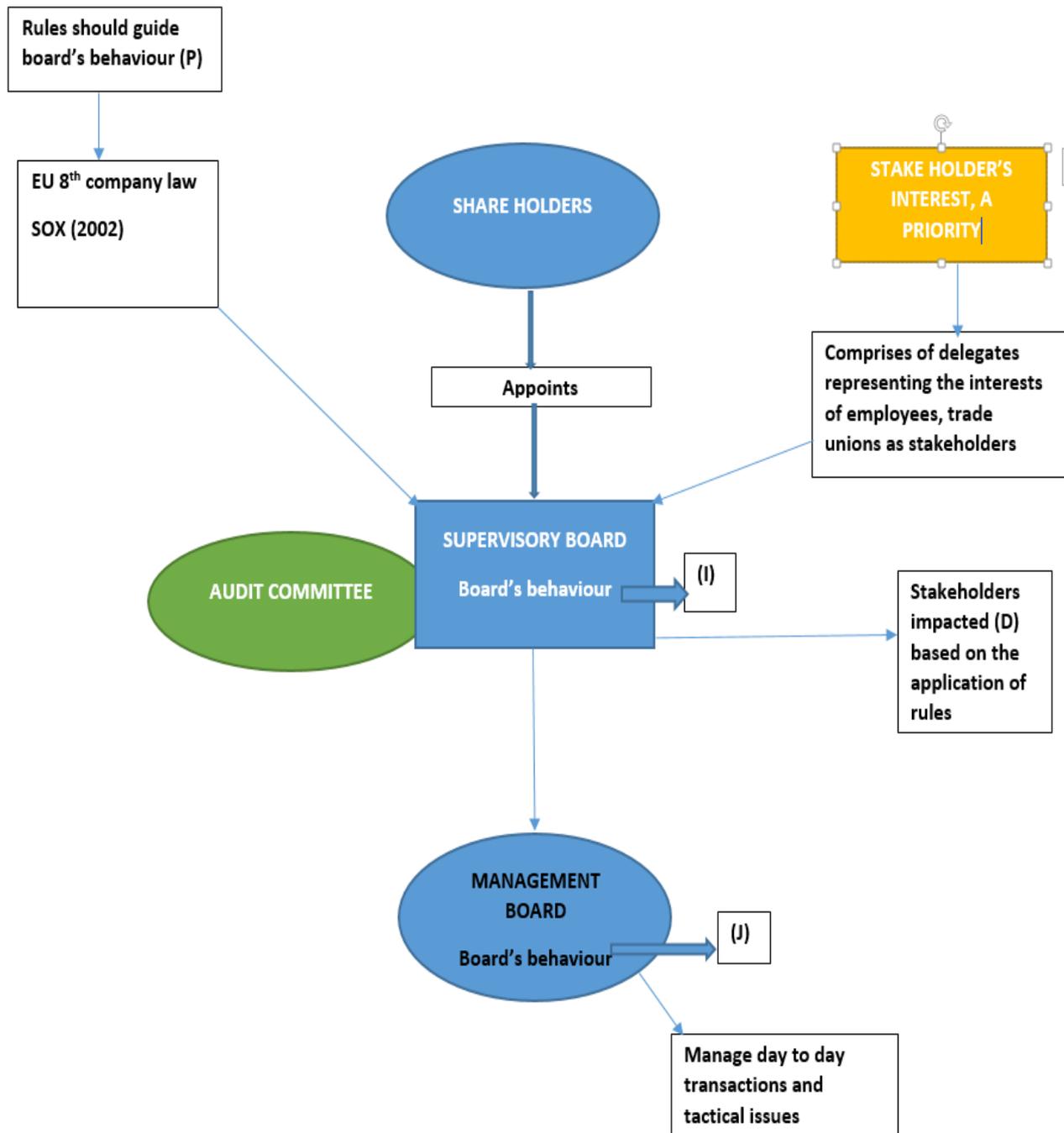


Figure 3.11 Germany and the Ethics of Care Influences

With reference to figure 3.11, the representation of stakeholder's interest in the supervisory board such as the improvement of working conditions, wages or remunerations depicted as (I) may influence the frame work of rules (P), that will

subsequently affect the evaluation of the management board (J) en route to (D), a decision based on inclusiveness.

In summarising the above, the Throughput Model is well equipped to explain different situations based on different ethical pathways. The next section of this paper deals with an empirical approach. In answering to the question as to whether audit committees in a two – tier board may make any difference, the pathway $P \rightarrow D$ will be tested.

3.4 Hypothesis

3.4.1 Financial experts (P) and Firm value (D)

There has been many studies that have dealt with the impact of financial experts on firm value proxied by the Tobin's Q. Tobin's Q (TQ) has been defined as the ratio of the market value of equity plus the book value of debt to the book value of total assets (Chung and Pruitt, 1994, Beiner *et al.*, 2006). TQ has been used as a measure of financial performance and firm value from the investors' perspective, and markets' valuation of a company and its corporate governance mechanisms. This study adopts the definition of Chung and Pruitt (1994) approximation of TQ as it demonstrates 96.6% of the original TQ

However, this study uses book value of assets as a proxy for the replacement cost of a firm's assets; this is because of data limitations. In general, TQ assesses to what extent a company's management is successful in using its assets to maximise the wealth of shareholders. Similar to ROA , a high value of TQ indicates that managers work effectively and provides a better indicator for the market about the firm's performance

An undervalued company, one with a ratio of less than one, would be attractive to corporate raiders or potential purchasers, as they may want to purchase the firm instead of creating a similar company. This would likely result in increased interest in the company, which would increase its stock price, which would in turn increase its Tobin's Q ratio.

As for overvalued companies, those with a ratio higher than one, they may see increased competition. A ratio higher than one indicates that a firm is earning a rate higher than its replacement cost, which would cause individuals or other companies to create similar types of businesses to capture some of the profits. This would lower the existing firm's market shares, reduce its market price and cause its Tobin's Q ratio to fall. The influences of financial experts with accounting, finance and supervisory expertise are then of immense significance.

An increase in firm value as a result of the appointment of financial experts with accounting expertise was reported by Defond (2005). Dhaliwal et al (2010) emphasized on the relevance and the role played by accounting experts. They reported in their findings that accounting experts are not only capable of creating value but can further detect and limit fraudulent activities within the company.

On the contrary, Cohen et al (2008, 2010) argued that financial experts with supervisory financial expertise such as independent directors are better monitors and thus may boost firm value;

In contrast to the simple principal agent problem, the audit committee brings an extended “double principal agent problem” as elucidated by Tirole (1986, p.187). In this case, there

are a two layered principles and agents. For example, the German Stock Corporations (GSCs) acts as a 'supervisory' board upon the supervisory board that is overlooking the management board. The German Stock Corporation Act (GSCA) provides the legal tender to these administrative bodies.

Davies (2001) discusses three important conflicts of interests that arise in corporate governance literature. Firstly, conflicts of interests that arise between the management and shareholders. This becomes a problem arises since shareholdings are widely spread i.e. many people hold small shares. This makes 'coordination failure' more likely. As a result, the managers are in control of the firm and they can prioritize non-shareholder interests at the expense of firms' long term interests. Secondly, the conflict arises between shareholders themselves i.e. among the majority and minority shareholders. Thirdly, a conflict of interests arises between the controllers (people who control the company irrespective of being a majority shareholder or a manager) and the non-shareholder stakeholders.

Gillan (2007) examines the relationship between board structure and character of corporate governance with the main finding being evidence that corporate governance structure is intrinsically related to firm strategy. The study had a sample of 2300 firms over a course of 4 years to find that firms with a powerful board (measured by board's independence) also enjoyed had better strategy and long term outlook (as measured by number of charter provisions). If we accept the author's proxy, the results are consistent with the hypothesis that strong boards are important for corporate control.

In publically traded corporations, conflict arises between the board members (owners) and the managers. These problems are believed to be rooted in the fundamental separation of ownership and control of the firm. It is well established that the results of these interactions determines the firm's governance structure (Jensen, 1993 and Shleifer and Vishny, 1997).

Relationship between corporate governance mechanism such as audit committee and firm value as documented in various studies (Agrawal and Knoeber, 1996; La Porta, Lopez-Silanes, Shliefer and Vishny, 2000; Black, 2001; Gompers, Ishii and Metrick, 2003). These results cumulatively provide evidence: powerful boards serve as a substitute for the market for corporate control.

Cohen et al (2010), DeZoort (1998) as well as Dhaliwal et al (2010), explores various kinds of advantages that experienced members have over their inexperienced colleagues, therefore, affecting the audit committee functioning in different board settings.

First, experience enhances the judgment power of the audit committee members. Experienced audit committee members possess relevant technical knowledge due to prior training, performance, review and feedback (GAO, 1991; Harrison, 1992). Second, audit committee members with auditing experience show the consistency levels that are comparable to those of auditors. The studies of Ashton and Brown (1980), Ettensonet al. (1987) and Messier (1983) highlight that the amount of variation explained among a group of auditors increased with work experience. Similarly, experienced members can make effective usage of the cues that they get while checking the financial statements, whereas, their lesser experienced colleagues may not identify/utilize relevant cues. Third,

the experienced members of audit committees have high degrees of self-insight, which means committee members, owing to their oversight experience, are better equipped to identify the specialized cues systematically; and understand, interpret and communicate such specific cues in their judgment processes or policies. Fourth, there is likelihood of consistency or consensus among the audit committee members, which implies that they would make the same judgment given the same information and similar business environment factors.

We argue therefore that:

H1: Supervisory Board experts appointed to serve as financial experts (P) on the audit committee may positively influence firm value (D) significantly.

3.5 Methodology

The paper adopted a mixed method or the method of triangulation. The systematic literature review and the Throughput Model. The systematic literature review, helps in locating the gaps in the literature. Evidently, barely no study has been done in Germany relating to financial experts and firm value from the perspective of the financial reporting process, moreover with a Throughput modelling.

3.5.1 Systematic literature review

A systematic literature review and a citation analysis will be another methodology that will be considered for this study. The reason for this is that, it is built on the premise of conducting a search dealing with prior research data, characterised by its systematic and rigorous nature in summarising evidence, its explicitness, reproducible, relevance,

assessing the above topic based on criteria well defined, reducing the element of bias and above all will ensure a balanced approach in the findings of this study.

There is no doubt that this method is becoming increasingly preferable to that of the conventional literature review. Being originated from the medical field as with reference to the Cochrane collaboration, a systematic literature review according to Antman (1992), Oxman (1993) as cited in Higgins and Green, (2011, p.1) is defined as “an attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question. It uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made”.

According to Badger et al (2000), the fundamental difference between the systematic literature review and that of the conventional or traditional methods lies in the process. Unlike the conventional methods, the systematic literature review has a systematic strategy in carrying out a search, transparent, replicable and above all can deliver a more reliable result.

This strategy or process in a nutshell include:

A specific scope within which the search can be limited for example, Audit committees between 1970 to 2013 etc. This however will enable the researcher to be more organised and confident that all relevant and irrelevant materials can be reduced into sizeable pieces for digestion.

1. Further criteria can be selected in an inclusion or exclusion process for example, only articles or categories such as finance, Business, psychology etc. to get more adequate result. By so doing, the researcher can identify articles of a qualitative and relevant nature
2. The type of Journal for example “Accounting review or Journal of accounting and economics can be refined. This is very important for the researcher as the aim of the research is not only to simply conduct a systematic research but one that can be considered based upon the sources used with reference to the” ABS” ranking to be of quality and notable
3. Finally, in an instance where search involves inter-related topics such as the “corporate governance and firm value”, using a systematic literature review would help identify both prior researches.

While it is quite clear that the systematic literature review will be more preferable to the conventional or traditional method, cognizance must be taken that, it can only provide tangible evidence of a study and should not be counted on as a factor that should influence the auditing policy process as reflected in this study. In essence, its goal is based on a research that is relevant.

In conducting this review, the following criteria were selected:

1. The parameter between 1970 and 2013
2. Within this parameter, the author had four categories of years in mind in which articles were published as reflected in figure 1 and Table 1: 1970 to 1999 with the

intention of finding out audit committee activities up to 1999 when the Blue Ribbon recommendation was made in order to make audit committee more effective, 2000 to 2005, the financial crisis that became a major driving force for legislations such as the Sarbanes – Oxley 2002 and the EU regulation to be introduced that changed the dynamics of internal control settings and financial reporting, 2006 to 2010, to analyse the impacts of these legislations and 2011 to 2013, to revisit this issue for research opportunities and further research.

It can therefore be argued that a systematic literature review will be one of the methods adopted in this study as it is rigorous and replicable. By so doing, the key search terms such as audit committee, Board structures and firm value were used. It must be noted that 91 articles were found from 1970 to 2013 as seen relevant to this study. (See appendix 3.9.5.3). Table 3.5 below shows how global attention has been drawn to the publication of articles pertaining to audit committees over the years. It must be noted however, that for the choice of articles via an extensive systematic literature review was restricted to the word “relevance” as a criteria to this study.

As seen in Fig. 3.12, these four categories of years were chosen to serve as a yardstick in explaining the extent to which interest over the publication of articles pertaining to Audit committees has grown over the years as well as the lapses in the execution of their objectives in the German jurisdiction.

Table 3.4 Sample structure

Time(Year)	Published Articles
1970 - 1999	13
2000 - 2005	10
2006 - 2010	28
2011 - 2013	40
Total	91

Figures extracted from: UoH (2016), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CKlBhrTK7sfBwQsZ4&preferencesSaved(Accessed 22.07.2016)

Fig.3.12 Published Articles

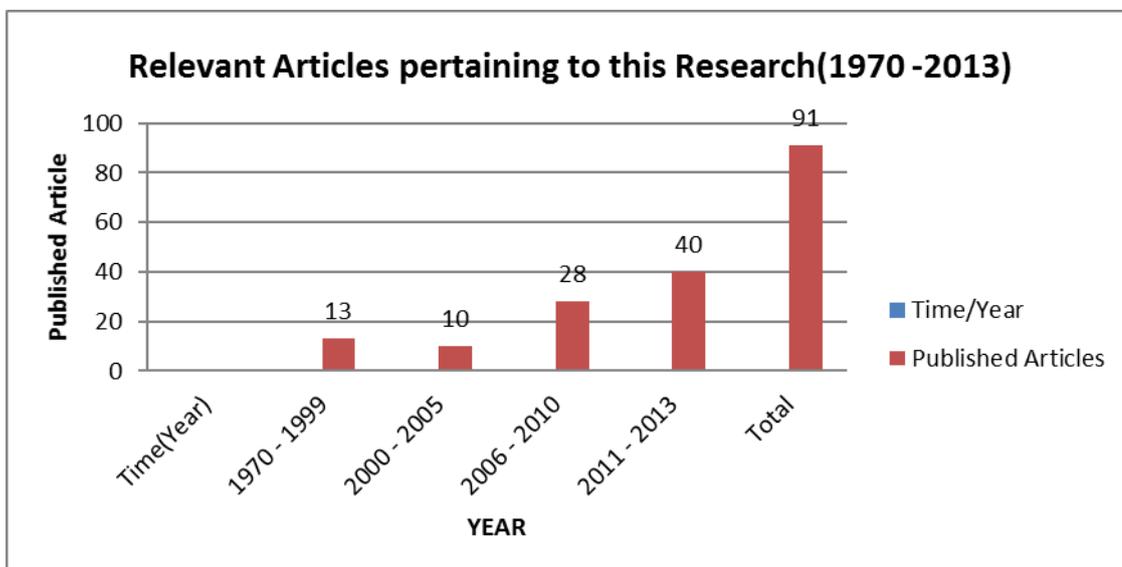


Figure 3.12 UoH (2016), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CKlBhrTK7sfBwQsZ4&preferencesSaved(Accessed 22.07.2016)

These articles are said to be identified in 18 Journals as shown below:

Table 3.5 Citation Analysis

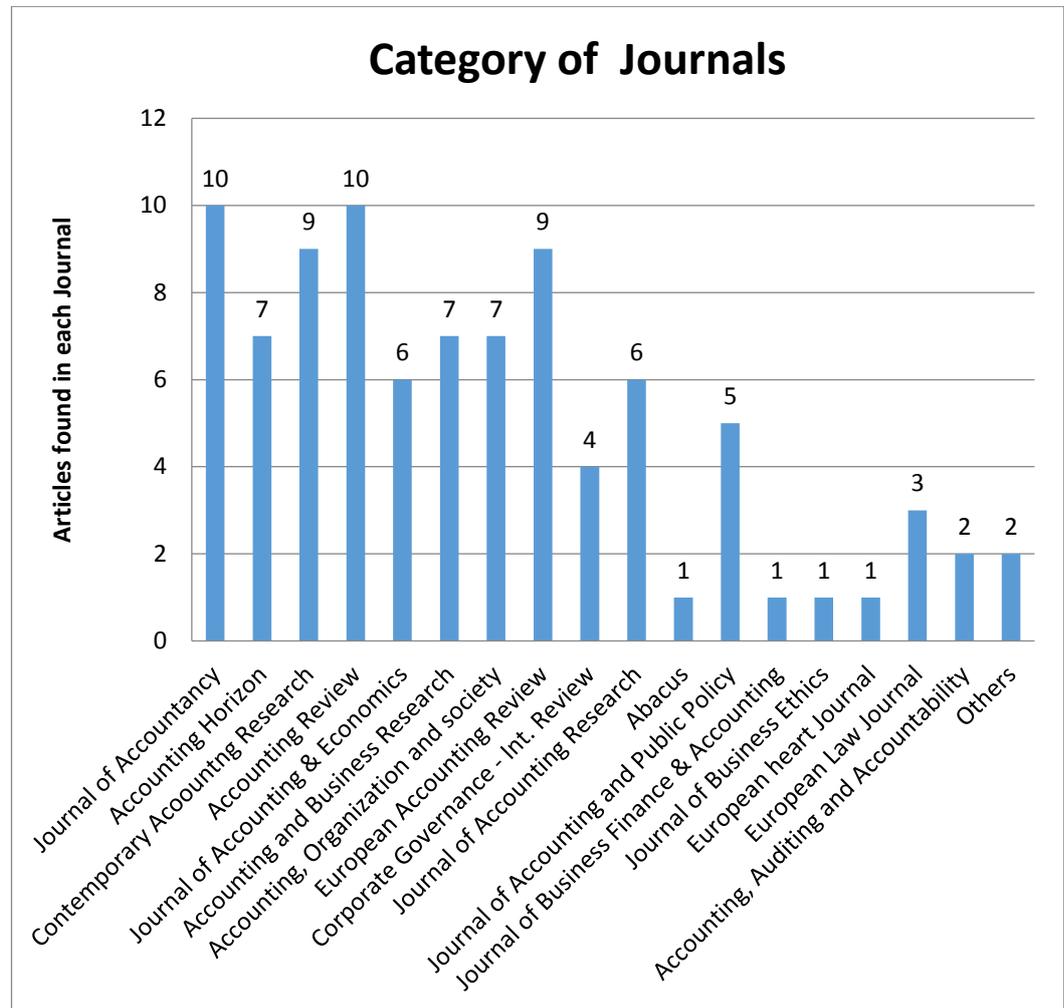
Composition of Articles	Number of Articles	Cited in %
Journal of Accountancy	10	10.99
Accounting Horizon	7	7.69
Contemporary Accounting Research	9	9.89
Accounting Review	10	10.99
Journal of Accounting & Economics	6	6.59
Accounting and Business Research	7	7.69
Accounting, Organization and society	7	7.69
European Accounting Review	9	9.89
Corporate Governance - Int. Review	4	4.40
Journal of Accounting Research	6	6.59
Abacus	1	1.10
Journal of Accounting and Public Policy	5	5.49
Journal of Business Finance & Accounting	1	1.10
Journal of Business Ethics	1	1.10
European heart Journal	1	1.10
European Law Journal	3	3.30
Accounting, Auditing and Accountability	2	2.20
Others	2	2.20
Total	91	100.00

A graphical representation is shown below:

Figures extracted from: UoH (2016), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CKIBHrTK7sfBwQsZ4&preferencesSaved (Accessed 22.07.2016)

Figure 3.13 Category of ABS Journal



: UoH (2016), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CKIBHrTK7sfBwQsZ4&preferencesSaved (Accessed 22.07.2016)

3.5.2 Throughput Model (Data and Method)

The Throughput Model serves both as the main theoretical underpinning of this study as well as a new methodological approach. Using the Throughput, Model, variables can be quantified and used in the PLS estimations. Consistent with prior studies, we include only

companies that have complete data information from 2009 to 2013. Companies with missing data were excluded as well as outliers. (See appendices 3.9.5.1 and 3.9.5.2)

Table 3.6 Dax100 data sample structure

Description	2009	2010	2011	2012	2013	Total
Dax100	100	100	100	100	100	500
Financial Institution	18	18	18	18	18	90
Missing values	4	3	5	9	3	24
Outliers	0	0	1	2	1	4
Final sample size	78	79	76	71	78	382

With reference to Table 3.6, financial institutions were excluded throughout, yearly. The final sample over the period of five years amounted to 382.

3.6 Data Sources

Data for this study were gathered from various sources. In using the corporate governance section of proxy statements of 2009 to 2013, the variable (P), which refers to the expertise of financial experts were gathered as well as the AC size and meetings. The database, Data stream was used to gather the variable (I) such as ratios relating to profitability, leverage and liquidity as well. These ratios were eventually used to calculate variable (J) in conjunction with a ZScore. (Zmijewski, 1984).

In the case of firm value, we use the Tobin's Q. In calculating the Tobin's Q, the following data were used: Outstanding shares, price per share as at the last hour of business, assets and liabilities as well as short and long –term debts. These were obtained from financial statements via data stream database.

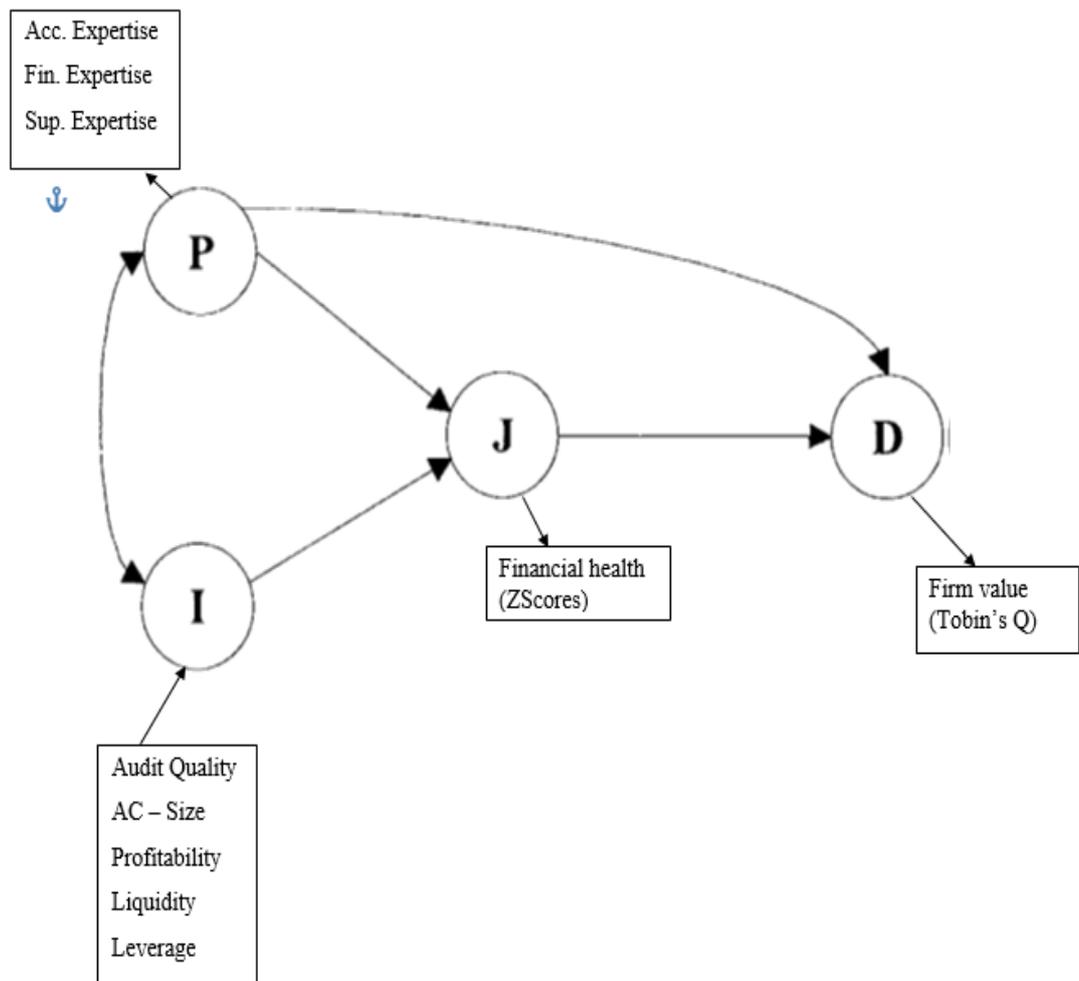
It is worth noting, the database, audit analytics was used for audit and non – audit fees. The Corporate governance data were double checked using a board – ex database to ensure reliability and accuracy.

3.7 Variable definition

The variable **P** represents the qualification, skills and experiences of financial experts categorised into accounting, finance and supervisory expertise. This was captured by looking at the biographical background of each member of the audit committee. Based on the SEC final rule of 2003, we define financial experts with accounting expertise as those with the requisite professional certification such as CPA, ACCA, CA and CIMA etc. Using dummy variables, we assign 1 to accounting expertise if an audit committee member is a holder of any of the above qualification or else 0. The procedure is repeated for both finance and supervisory expertise.

We define variable (I) as Audit quality with two indicators (audit fee and Non – audit fee ratio), AC characteristics (AC size and AC meetings), Profitability (ROA and Sales/Asset), Liquidity (Cash and quick ratio) and Leverage (Debt/Asset and Debt/Equity).

Variable (J) is defined as financial health, calculated using ZScores and Variable (D), the Tobin's Q. See figure 3.14 below



The figure 3.14 above describes how variables were defined by using the Throughput Model. Subsequently, Table 3.8 below shows clearly how each variable has been defined.

Table 3.7 Variable definitions

Variable	Name	Variable definition	Sample Period
ACCEXP	P	1 assigned to ACCEXP if the expert have accounting qualifications such as ACCA, CIMA, CPA or else 0	2009 - 2013
FINEXP	P	1 assigned to FINEXP if the expert of AC have MBA, Investment banker, financial controller or else 0	2009 - 2013
SFEEXP	P	1 assigned to SFEEXP if the expert of AC is CEO, President and vice president of a board with experience or else 0	2009 - 2013
Audit Quality	I	Audit fee and Non-audit fee	2009 - 2013
AC_SIZE	I	The number of AC members on the average.	2009 - 2013
AC_MEET	I	The number of meetings on the average held by AC	2009 - 2013
Profitability	I	Net Income/Assets and Sales/Assets	2009 - 2013
Liquidity	I	Quick ratio and cash ratio	2009 - 2013
Leverage	I	Debt/Assets and Debt/Equity	2009 - 2013
Financial Health	J	Z score	2009 - 2013
Firm Value	D	Tobin's Q	2009 - 2013

3.8 Statistical Method

The data for Dax100 companies happened to be positively skewed after obtaining skewness and kurtosis values. Many studies have applied the PLS pathway method (Acedo and Jones, 2007; Alpert et al, 2001; Festge and Schwaiger, 2007 and Ainuddin et al, 2007). One of the benefits of using the PLS as compared to others such as LISREL, is the flexibility concept and does not lay emphasis on normality of data. It is also rigorous, supported by a bootstrapping method.

3.8.1 Validation of Measurement Model

Consistent to prior studies such Rodgers et al (2013), measurement model was validated by taking the individual item reliability, convergent and composite reliability and discriminant validity as seen below.

3.8.1.1 Individual item Reliability

By examining the loadings or simple correlation of the item to their respective construct, the individual item reliability was assessed. Factor loadings below the threshold of 0.50 are not accepted and as such are not included in the Path analysis

Table 3.8 Factor loadings

Indicators US	Loadings	Threshold	Below Threshold
Audit fees	0.716	0,50	
Non - audit fees	0.993	0,50	
AC Size	0.817	0,50	
AC Meetings	0.717	0,50	
ROA	0.932	0,50	
Sales - Assets	0.580	0,50	
Debt - Asset	0.923	0,50	
Debt - Equity	0.795	0,50	
Cash - Ratio	0.961	0,50	
Quick - Ratio	0.909	0,50	

With reference to the table above, all factors are above the threshold of 0.50. We can then conclude that all constructs are reliable and be used in the path analysis estimation. (Fornell and Larcker, 1981).

3.8.1.2 Convergent and Composite reliability

According to where the Average Variance Extracted (AVE) is above 0.50, convergent validity can be supported.

Total 3.9 Variance Explained and Composite Reliability – Germany (CR)

	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		L 95% CI	U 95% CI		L 95% CI	U 95% CI
AC Characteristics	0.591	0.523	0.630	0.742	0.630	0.769
Audit Quality	0.749	0.245	0.890	0.853	0.226	0.943
Leverage	0.744	0.709	0.790	0.851	0.828	0.882
Liquidity	0.863	0.711	0.937	0.933	0.831	0.968
Profitability	0.604	0.544	0.671	0.742	0.674	0.801

The AVE and CR measures for all five latent constructs are in acceptable range, so in path analysis all individual indicators will be included. From the table, it is also clear that composite reliability values are above 0.7, which fulfils a fundamental requirement of the PLS statistical method. (Hair et al, 2010).

3.8.1.3 Discriminant Validity

The discriminant validity, which is the square root of the average variance extracted (AVE) in Table 3.10 are established as seen below.

Table 3.10 Discriminant validity

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.865				
AC Characteristics	-0.178	0.769			
Profitability	0.088	-0.076	0.777		
Leverage	0.000	0.253	-0.379	0.863	
Liquidity	-0.077	-0.145	-0.152	-0.158	0.929

Table 3.11 shows that each discriminant validity values are higher than the correlated values. As such, using these variables in the path analysis is fulfilled as required by PLS.

3.8.1.4 Model Summary

Table 3.11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.867	.863	17.38132

a. Predictors: (Constant), Quick ratio, AC Meetings, Debt/assets, Audit fees, AC Size, ROA, Sales/assets, Non-Audit fees, Debts/equity, Cash ratio

Table 3.12 Residual regression ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	730627.049	10	73062.705	241.841	.000 ^b
	Residual	112082.857	371	302.110		
	Total	842709.906	381			

a. Dependent Variable: Financial Health (tr)

b. Predictors: (Constant), Quick ratio, AC Meetings, Debt/assets, Audit fees, AC Size, ROA, Sales/assets, Non-Audit fees, Debts/equity, Cash ratio

In the model summary, the R Square is .867 and adjusted R Square is .863. This shows that the model is strong as the difference between the two values is .004.

3.9 Empirical Results

3.9.1 Descriptive Statistics

In next 2 tables descriptive measures (central tendency measures, measures of variation, and measures of distribution) of the main independent and dependent variables are presented.

Table 3.13 Descriptive Statistics 2009 - 2013

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.12	0.00	0.32	0.00	1.00	2.42	3.88
FE Experts	0.65	1.00	0.48	0.00	1.00	-0.65	-1.58
SFE Experts	0.90	1.00	0.30	0.00	1.00	-2.69	5.25
Audit fees	86.56	2.28	276.72	0.17	1592.00	3.80	14.38
Non-Audit fees	54.79	1.00	225.36	0.00	2472.00	6.42	50.93
Non-Audit fee Ratio	0.75	0.45	1.86	0.00	27.54	10.44	130.29
AC Size	4.82	5.00	1.45	3.00	11.00	0.81	0.54
AC Meetings	4.72	5.00	1.66	1.00	12.00	0.66	1.82
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.05	0.05	0.05	0.00	0.44	2.28	9.16
Sales/assets	0.96	0.86	0.64	0.00	4.35	1.48	4.04
Debt/assets	0.23	0.21	0.15	0.00	0.82	0.79	1.07
Debts/equity	1.14	0.65	1.85	0.00	12.47	3.76	15.18
Cash ratio	0.53	0.34	0.70	0.02	6.49	4.90	32.52
Quick ratio	1.19	0.90	0.90	0.10	6.80	3.16	13.43
Financial Health	2.24	3.69	4.69	-23.00	5.60	-3.70	14.39
Firm Value	1.10	0.87	0.86	0.00	5.63	2.40	7.43

This section shows descriptive analysis of dependent, independent variables. Table 3.13 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table, the financial health ranges between a minimum of -23 to a maximum of 5.60, with an average of 2.24 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 4.69, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (*TQ*) ranges from a

minimum of 0.00 to a maximum of 5.63, with an average of 1.10 for the whole period.

The standard deviation is 0,86, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero).

For example, the skewness of Financial health is negative (-3.70), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 2.40. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

Table 3.14 Descriptive Statistics – year wise

Variables	2009		2010		2011		2012		2013	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
ACC Experts	0.12	0.00	0.11	0.00	0.12	0.00	0.11	0.00	0.12	0.00
FE Experts	0.63	1.00	0.66	1.00	0.67	1.00	0.66	1.00	0.65	1.00
SFE Experts	0.90	1.00	0.90	1.00	0.89	1.00	0.92	1.00	0.90	1.00
Audit fees	88.69	2.68	80.20	2.10	93.22	2.12	68.46	2.21	100.88	2.82
Non-Audit fees	64.44	1.01	36.82	0.90	63.78	0.95	50.71	1.10	58.32	1.04
Non-Audit fee Ratio	0.62	0.37	0.57	0.49	0.94	0.49	0.86	0.50	0.77	0.46
AC Size	4.63	4.00	4.65	4.00	4.92	5.00	4.94	5.00	5.00	5.00
AC Meetings	4.87	5.00	4.68	5.00	4.70	5.00	4.65	4.00	4.69	5.00
AC Indp.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ROA	0.05	0.03	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.05
Sales/assets	0.95	0.85	0.94	0.85	0.94	0.86	0.98	0.87	0.98	0.86
Debt/assets	0.25	0.25	0.24	0.23	0.23	0.22	0.21	0.20	0.20	0.19
Debts/equity	1.36	0.76	1.21	0.71	1.13	0.65	1.06	0.56	0.92	0.55
Cash ratio	0.59	0.33	0.48	0.33	0.49	0.34	0.51	0.38	0.58	0.32
Quick ratio	1.26	0.90	1.13	1.00	1.16	0.90	1.14	0.90	1.24	0.90
Z Score	1.58	3.33	2.14	3.62	2.29	3.78	2.24	3.86	2.92	3.92
Tobin's Q	1.07	0.81	1.10	0.88	0.92	0.80	1.10	0.86	1.28	1.02

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur *et al.*, 2008).

Figure 3.15

The development of variables in observed period (2009-2013) is presented in following charts.

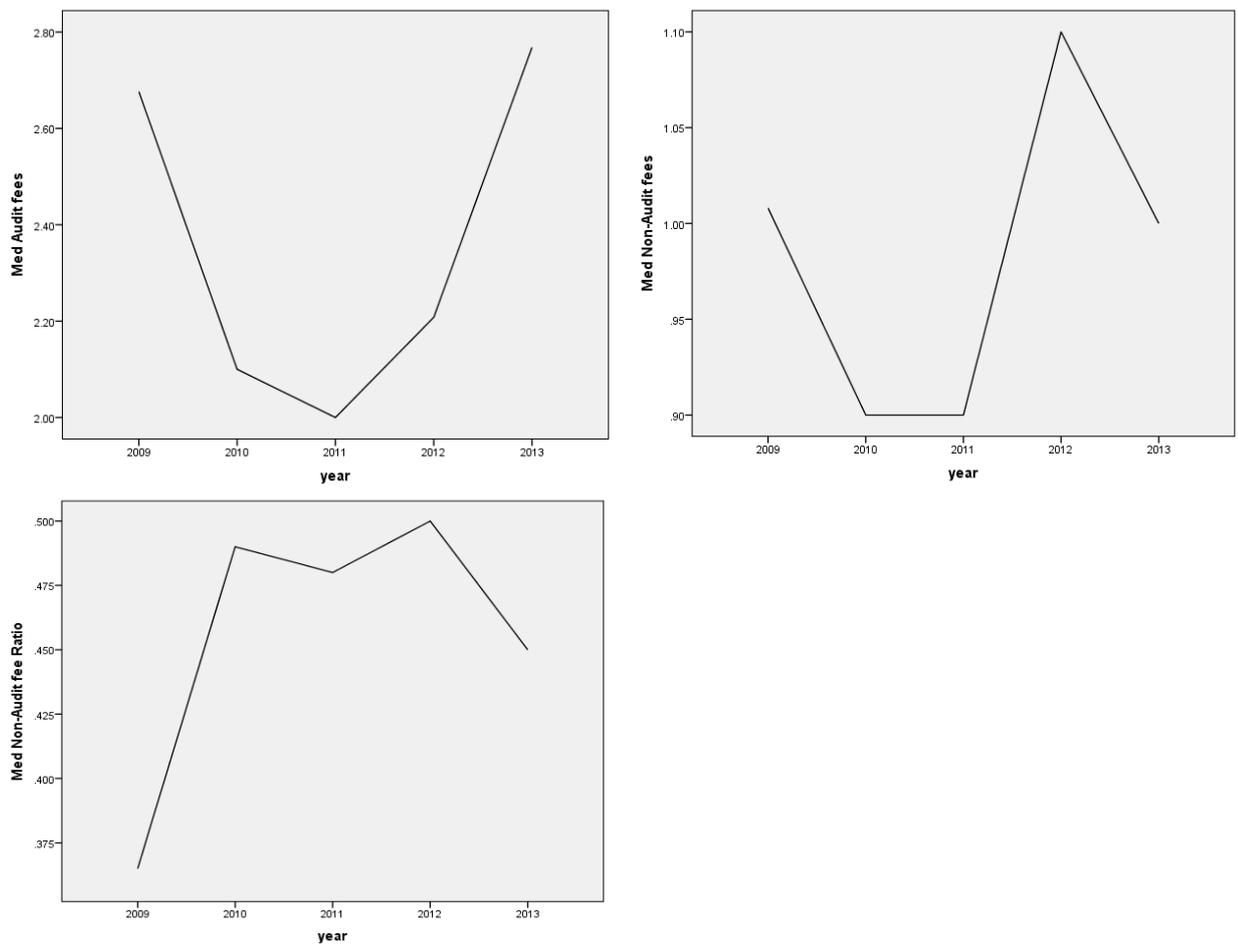


Figure 3.15. The median values of Audit Quality indicators (Audit fees; Non-Audit fees; Non-Audit fee Ratio) from 2009 to 2013

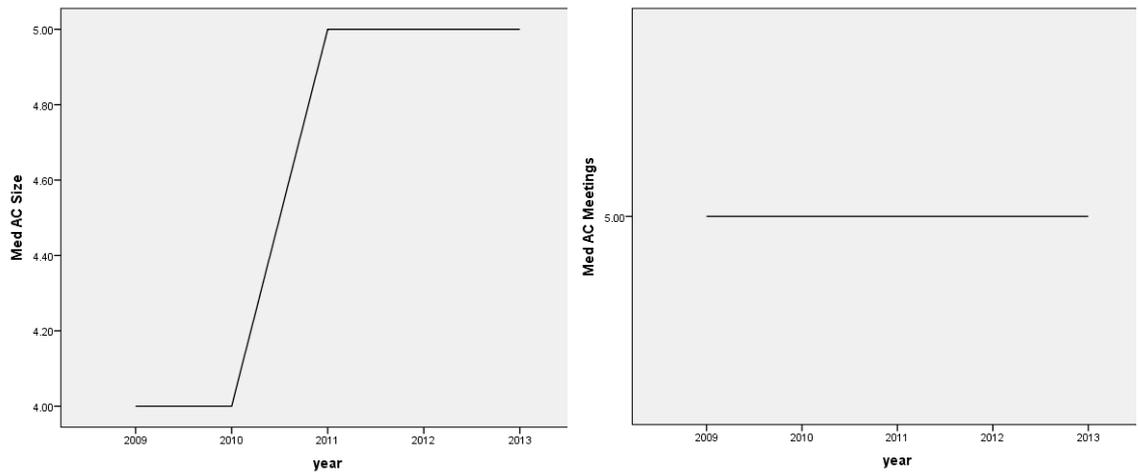


Figure 3.16. The median values of AC characteristic indicators (AC Size; AS meetings) from 2009 to 2013

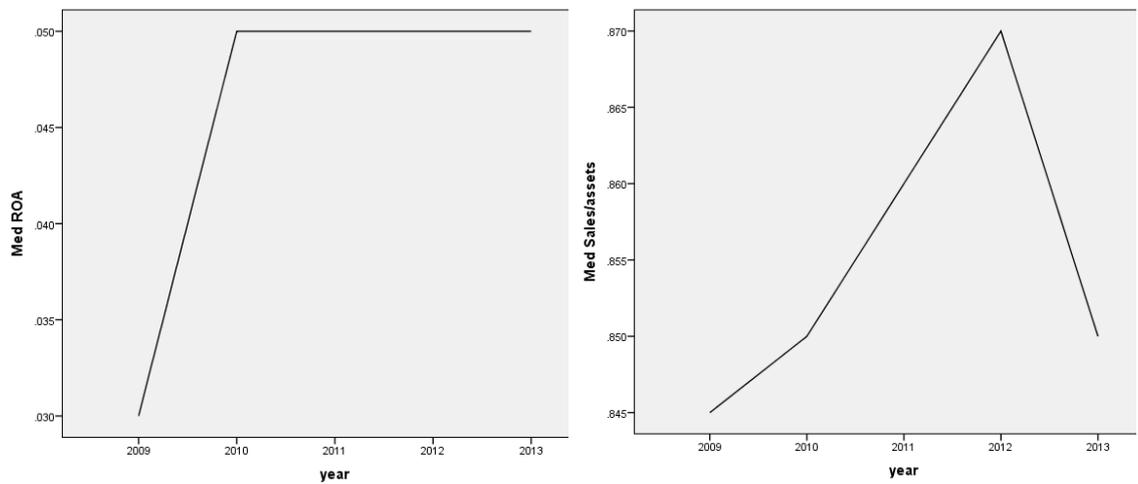


Figure 3.17. The median values of Profitability indicators (ROA; Sales/Assets) from 2009 to 2013

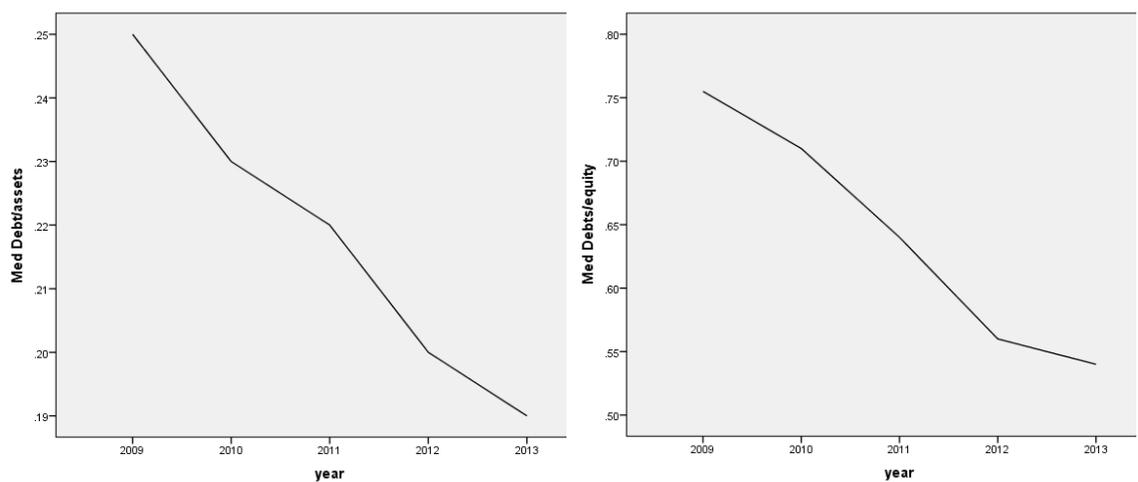


Figure 3.18. The median values of Leverage indicators (Debt/Assets; Debt/Equity) from 2009 to 2013

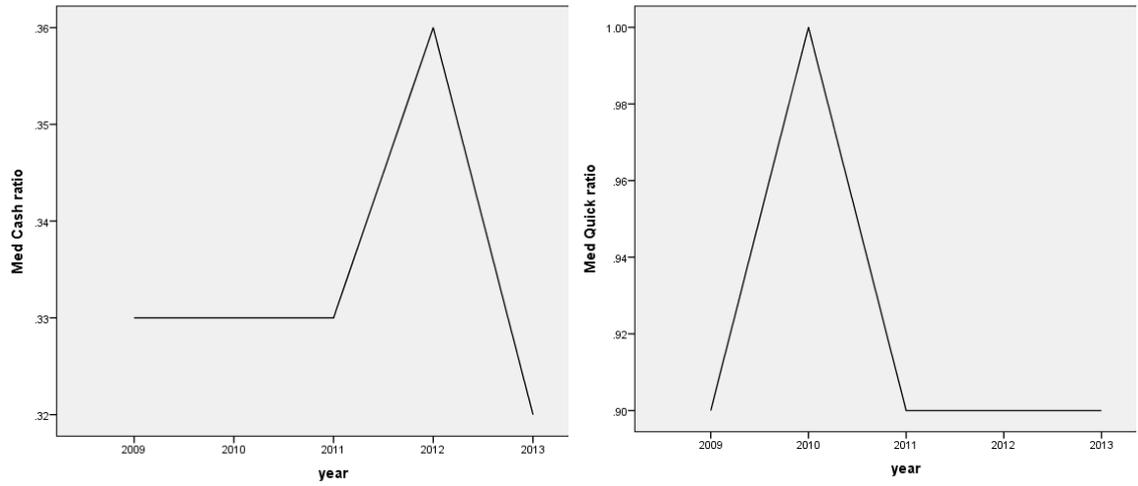


Figure 3.19. The median values of Liquidity indicators (Cash Ratio; Quick Ration) from 2009 to 2013

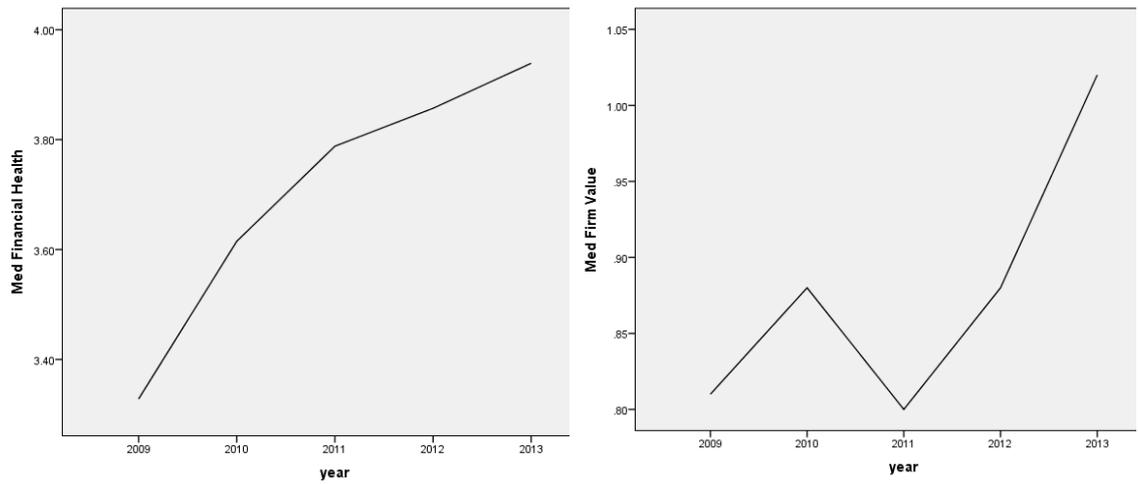


Figure 3.20. The median values of Financial Health (Score) and Firm Value (Tobin's Q) from 2009 to 2013

3.9.2 Correlation Matrix

Table 3.15. Correlation Matrix

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	.176**	1														
SFE Experts	-.921**	-.242**	1													
Audit fees	-.111*	-.013	.102*	1												
Non-Audit fees	-.086	-.100*	.079	.627**	1											
Non-Audit fee Ratio	-.038	.045	.039	-.019	.137**	1										
AC Size	-.002	.220**	-.034	-.055	-.125*	-.018	1									
AC Meetings	-.038	.219**	-.035	-.197**	-.107*	.040	.184**	1								
ROA	.164**	-.036	-.122*	.045	-.023	.032	-.139**	-.246**	1							
Sales/assets	-.085	-.166**	.090	.154**	-.011	-.123*	.032	-.110*	.245**	1						
Debt/assets	-.042	-.022	.012	.042	.196**	-.020	.026	.022	-.225**	-.340**	1					
Debts/equity	.087	.130*	-.118*	-.033	.020	-.019	.110*	.281**	-.283**	-.352**	.501**	1				
Cash ratio	.054	-.048	.003	-.100*	-.031	.313**	-.140**	-.088	.168**	-.169**	-.100	-.156**	1			
Quick ratio	.173**	.030	-.120*	-.117*	-.088	.216**	-.138**	.008	.097	-.234**	-.092	.259**	.759**	1		
Z Score	-.050	-.051	.079	.036	-.056	.001	-.021	-.219**	.300**	.358**	-.632**	-.914**	.123*	-.174**	1	
Tobin's Q	.131*	-.030	-.076	.071	.032	-.024	-.106*	-.197**	.560**	.192**	-.159**	-.234**	.208**	.123*	.182**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in correlation matrix

Correlation matrix shows that among several significant independent variables Financial Health and Firma Value have the highest significant positive correlation with ROA (0.300 and 0.560 correspondingly). Financial health has the highest negative correlation with one of Leverage indicator: Debts/equity ratio (-0.914). Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.759)) and leverage indicators (Debt/assets and Debts/equity (0.501)).

Multicollinearity diagnostic is conducted which proved that there is multicollinearity issue in these two cases. Then Exploratory Factor Analysis (Principal Component Analysis) is used to combine each of these two pairs of indicators. At the result two combined indicators are constructed: Leverage and Liquidity.

Table 3.16: Total Variance Explained for PCA (Leverage, Liquidity)

	PCA Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Leverage	1	1.50	75.04	75.04	1.50	75.04	75.04
	2	0.50	24.96	100.00			
Liquidity	1	1.76	87.95	87.95	1.76	87.95	87.95
	2	0.24	12.05	100.00			

Extraction Method: Principal Component Analysis.

Percent of variance of the first component is very high for both constructs (75.04 and 87.95 % for Leverage and Liquidity correspondingly). These new latent indicators are used further in path analysis instead of corresponding initial variables.

Research Questions Analysis

The goal of the second stage of this paper, is the influence of the financial experts (Accounting Experts (ACC), Finance Experts (FE) and Supervisory Financial Experts (SFE)) perception on Firm Value from the perspective of the financial reporting process in Germany.

Overall 4 models are constructed. First 3 models examine the impact of individual dimensions of financial experts' perception on Firm Value. In models 4 two dimensions (ACC experts, FE experts) are included simultaneously. In Table 4 we show the path coefficients of Models 1, 2, 3 and 4, which examine the impact of the ACC Experts, FE Experts, SFE Experts, and all experts on Firm Value.

3.9.3 PLS Result

Table 3.17: Perception indicator model estimation outputs

Standardized Regression weights	Model 1 ACC Experts	Model 2 FE Experts	Model 3 SFE Experts	Model 4 Financial Experts
Audit fees → Financial Health ⁷ (β_1)	-0.004	0.003	-0.005	0.007
Non-Audit fees → Financial Health (β_2)	-0.024	-0.033	-0.024	-0.034
Non-Audit fee Ratio → Financial Health (β_3)	0.034	0.035	0.033	0.037
AC Size → Financial Health (β_4)	-0.078***	-0.066**	-0.077***	-0.066**
AC Meetings → Financial Health (β_5)	0.105***	0.115***	0.104***	0.117***
ROA → Financial Health (β_6)	0.631***	0.636***	0.632***	0.632***
Sales/assets → Financial Health (β_7)	0.010	-0.003	0.010	-0.001
Liquidity → Financial Health (β_8)	0.073***	0.072***	0.074***	0.070***
Leverage → Financial Health (β_9)	-0.564***	-0.563***	-0.564***	-0.566***
Financial Health → Firm Value (β_{10})	0.407***	0.416***	0.412***	0.407***
ACC Experts → Financial Health (β_{11})	0.018			0.029
ACC Experts → Firm Value (β_{12})	0.088**			0.089**
FE Experts → Financial Health (β_{13})		-0.055*		-0.060*
FE Experts → Firm Value (β_{14})		0.010		-0.006
SFE Experts → Financial Health (β_{15})			-0.009	
SFE Experts → Firm Value (β_{16})			-0.053*	
Multiple R² (explained variance)				
Financial Health	0.741	0.745	0.741	0.745
Firm Value	0.174	0.173	0.171	0.175

Table 3 shows that Financial Health⁸ has the highest explained variance in all three models (Multiple $R^2 = 0.74$), which means that all observed variables explain approximately 74% of Financial Health variance. For Firm Value dependent variable Multiple $R^2 = 0.17$.

Bootstrap analysis (sample size=5000) is performed to check whether table 4 coefficients are robust or not. Bias-corrected confidence intervals are constructed.

⁷ In table 3 Financial Health is the already transformed variable.

⁸ In all path analysis models exponentially transformed Financial Health variable is used.

Table 3.18: Bootstrapping Results: Bias-corrected Confidence Interval (95%)

Model number	Pathway	Estimate	Lower 95% CI	Upper 95% CI	P value
Model 1	Audit fees → Financial Health (β_1)	-0.004	-0.058	0.052	0.760
Model 1	Non-Audit fees → Financial Health (β_2)	-0.024	-0.078	0.025	0.336
Model 1	Non-Audit fee Ratio → Financial Health (β_3)	0.034	-0.041	0.076	0.312
Model 1	AC Size → Financial Health (β_4)	-0.078	-0.127	-0.027	0.004
Model 1	AC Meetings → Financial Health (β_5)	0.105	0.056	0.154	0.000
Model 1	ROA → Financial Health (β_6)	0.631	0.522	0.722	0.000
Model 1	Sales/assets → Financial Health (β_7)	0.010	-0.041	0.070	0.666
Model 1	Liquidity → Financial Health (β_8)	0.073	0.012	0.137	0.014
Model 1	Leverage → Financial Health (β_9)	-0.564	-0.641	-0.484	0.001
Model 1	Financial Health → Firm Value (β_{10})	0.407	0.280	0.514	0.000
Model 1	ACC Experts → Financial Health (β_{11})	0.018	-0.050	0.091	0.554
Model 1	ACC Experts → Firm Value (β_{12})	0.088	-0.025	0.216	0.133
Model 2	FE Experts → Financial Health (β_{13})	-0.055	-0.108	-0.001	0.044
Model 2	FE Experts → Firm Value (β_{14})	0.010	-0.080	0.091	0.830
Model 3	SFE Experts → Financial Health (β_{15})	-0.009	-0.083	0.064	0.789
Model 3	SFE Experts → Firm Value (β_{16})	-0.053	-0.186	0.064	0.379

Bootstrap sample size=5000

According to bootstrapping results we can conclude that path analysis results are robust, so they can be used investigate research questions.

Based on table 4 coefficients we can conclude that:

The perception of ACC experts has significant (at the 0.05 significance level) positive impact on Firm Value in Germany ($\beta_{12} = 0.088$, $p < 0.05$, $R^2 = 0.174$). SFE experts perception have negative correlation with Firm Value (model 3), but at the 0.1 significance level ($\beta_{13} = -0.053$, $p < 0.1$, $R^2 = 0.171$). However bias-corrected confidence interval for SFE expert's coefficient show that its estimate is not robust.

Summarizing we can say that only ACC experts perception influence positively German companies Firm Value.

Using (I) as control variables, we analyse relationship between other factors (Audit quality (Audit fees, non-audit fees and non-audit fees ratio), Audit committee characteristics(AC Size, AC Meetings), Profitability (ROA, Sales/assets), Liquidity (Cash Ratio, Quick Ratio) and Leverage (Debt/assets, Debts/equity) and Financial Health and subsequently, Firm Value from the perspective of the financial reporting process in Germany.

Summarizing path analysis and models 1-4 results we can conclude that from observed independent variables ROA) has the highest positive impact on Financial Health ($\beta_6 \approx 0.63$, $p < 0.01, R^2 \approx 0.74$). Leverage has the highest negative impact on Financial Health ($\beta_9 \approx -0.56$, $p < 0.01, R^2 \approx 0.74$). AC Meetings also have significant influence on Financial Health of company ($\beta_5 \approx 0.11$, $p < 0.01, R^2 \approx 0.74$). Liquidity is another significant factor for Financial Health ($\beta_8 \approx 0.07$, $p < 0.01, R^2 \approx 0.74$). Financial Health is not affected by Audit quality indicators.

All these negative and positive impacts of independent variables on Financial Health subsequently influence positively Firm Value ($\beta_{10} > 0.40, p < 0.01$ for all four models).

In figures 3.21-10 the graphical outputs of used methods are presented.

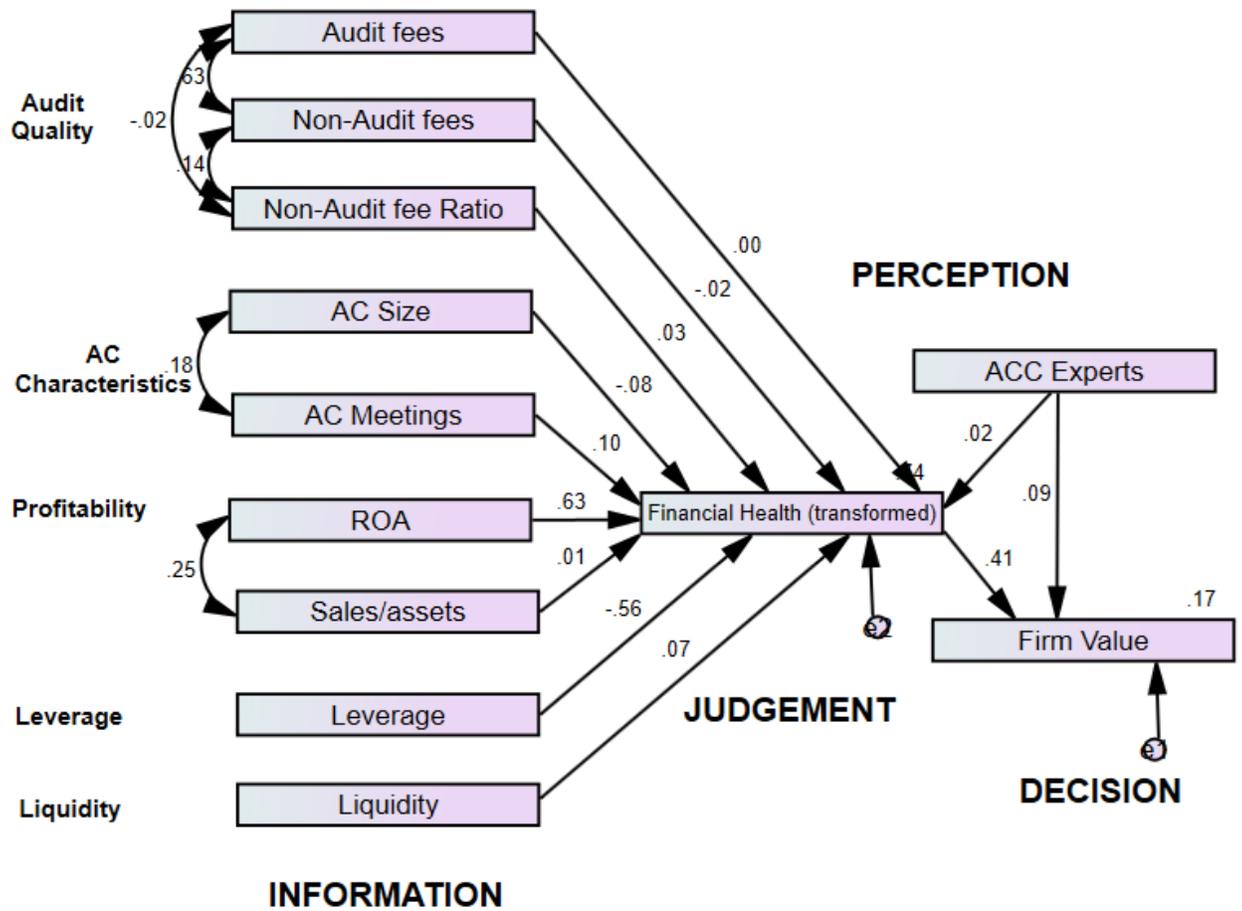


Figure 3.21: Impact of ACC Experts on Firm Value

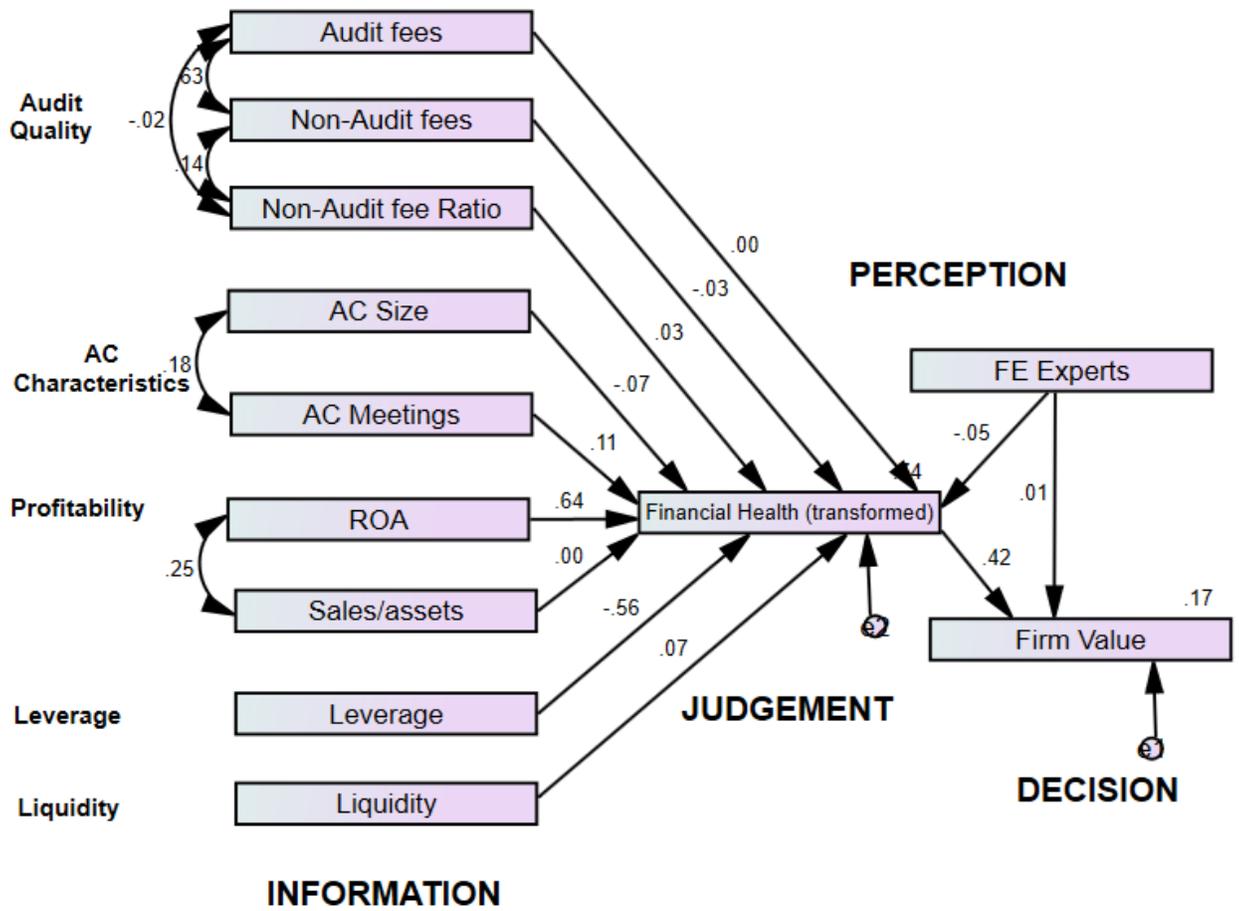


Figure 3.22: Impact of FE Experts on Firm Value

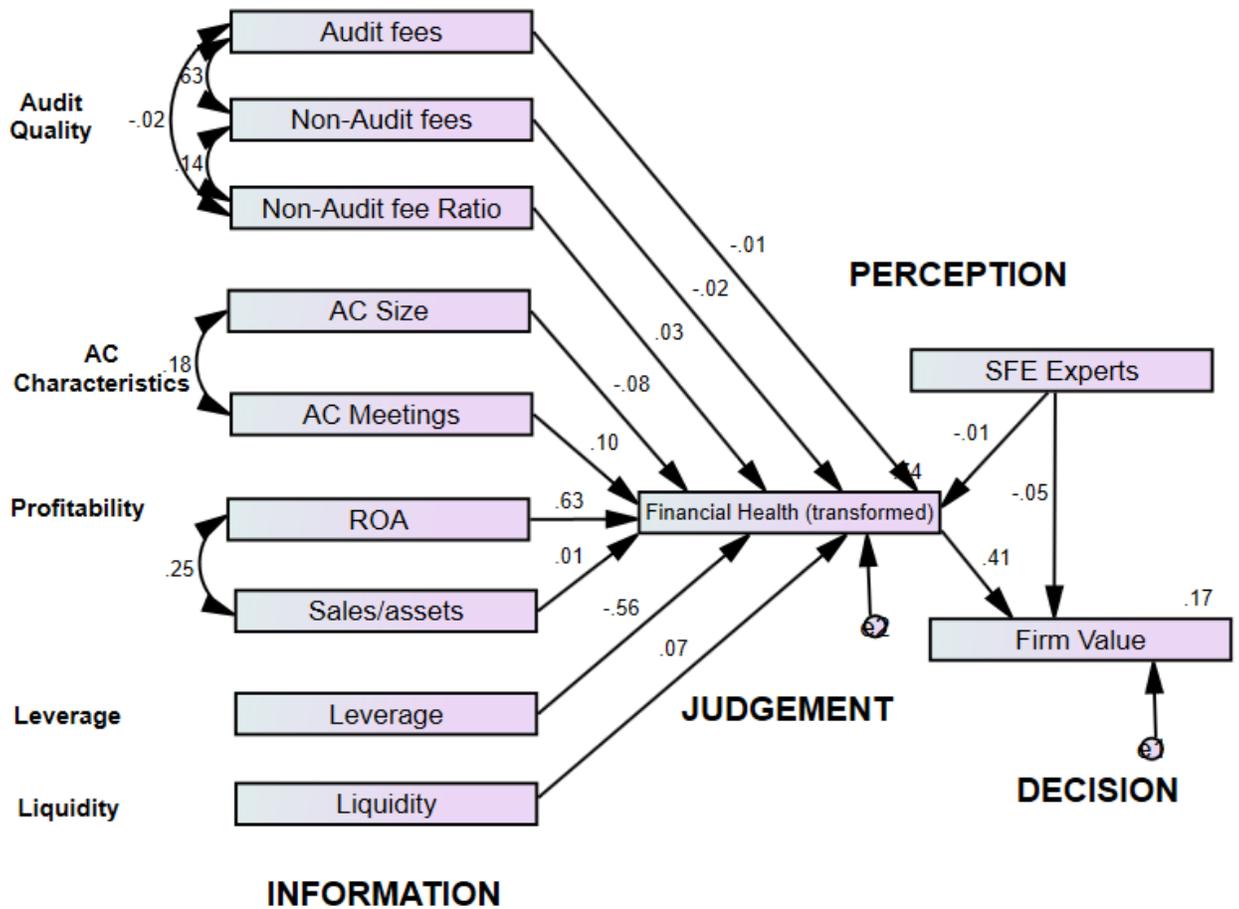


Figure 3.23: Impact of SFE Experts on Firm Value

In current research we investigate whether a firm's performance in prior period affects perception of financial experts by reversing the direction of impact in above models. In the new path analysis all independent variables and two dependent variables (Financial Health and Firm Value) are taken by one year lag.

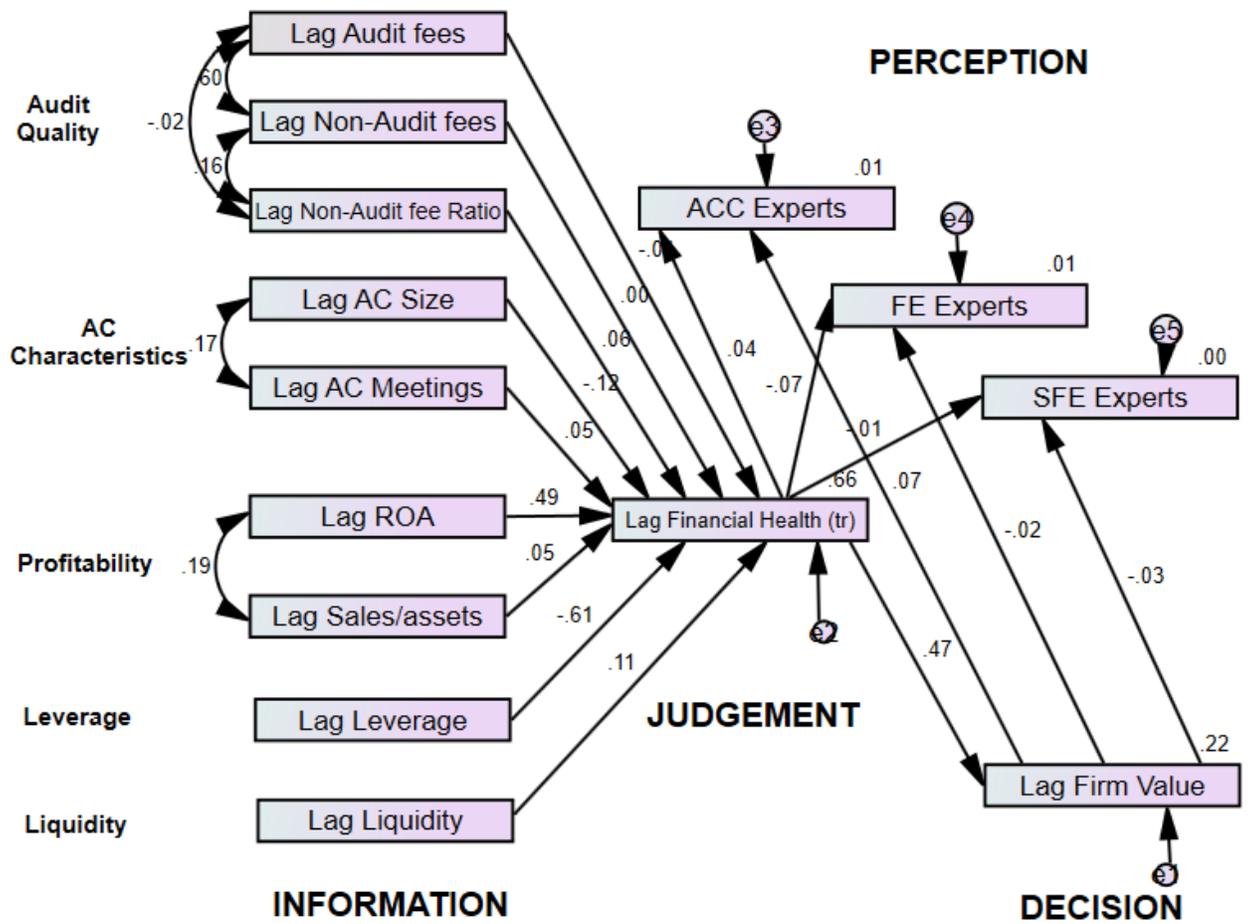


Figure 3.24: Path analysis results.

All coefficients in above diagram are presented in table 5.

Table 3.19

Lagged Standardized Regression weights	Coefficients
Audit fees → Financial Health ($\beta_{1,l}$)	-0.006
Non-Audit fees → Financial Health ($\beta_{2,l}$)	0.004
Non-Audit fee Ratio → Financial Health ($\beta_{3,l}$)	0.062*
AC Size → Financial Health ($\beta_{4,l}$)	-0.117***
AC Meetings → Financial Health ($\beta_{5,l}$)	0.047
ROA → Financial Health ($\beta_{6,l}$)	0.492***
Sales/assets → Financial Health ($\beta_{7,l}$)	0.054
Liquidity → Financial Health ($\beta_{8,l}$)	0.109***
Leverage → Financial Health ($\beta_{9,l}$)	-0.611***
Financial Health → Firm Value ($\beta_{10,l}$)	0.468***
Financial Health → ACC Experts ($\beta_{11,l}$)	0.044
Financial Health → FE Experts ($\beta_{12,l}$)	-0.069
Financial Health → SFE Experts ($\beta_{13,l}$)	-0.015
Firm Value → ACC Experts ($\beta_{14,l}$)	0.074
Firm Value → FE Experts ($\beta_{15,l}$)	-0.017
Firm Value → SFE Experts ($\beta_{16,l}$)	-0.031
Multiple R^2 (explained variance)	
Financial Health	0.658
Firm Value	0.219
ACC Experts	0.002
FE Experts	0.006
SFE Experts	0.011

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

Multiple R^2 is not high for each expert type's dependent variables models (it is from 0.002 to 0.011).

In Germany neither Financial Health, nor Firm Value have leading power for financial experts' perception. This may be due to the uniqueness of the German board structure, whereby the supervisory board is in complete control of monitoring. The delegation of monitoring duties is based on the Supervisory board decision.

3.9.4 Conclusion

In this paper, we have contributed to the accounting and finance literature by examining ethical influences on each board using a new theoretical framework, the Throughput Model. We also establish that despite the role of the financial experts may be passive or semi – regulated within the audit committee structure in Germany, accounting experts exerts significance influence on firm value.

The Throughput Model demonstrated that each board’s decision making process can be depicted by different ethical pathways. Thus, despite Germany is a rules – based regime, the decision making process is linked to an ethics of care position or stake holder based position. Conclusively, audit committees in Germany may be benefiting from the two – tier system under which they operate as checks and balances are well in place

CHAPTER 4

THE IMPACT OF REGULATION ON THE PERFORMANCE OF FIRMS: EVIDENCE FROM USA

4.1 Introduction

The debates surrounding diverse opinions of the role and authority of audit committees as a corporate governance mechanism in the financial reporting process, in light of great recessions and financial crises currently affecting places like Venezuela, Brazil and globally has once again brought to fore the perils associated with lax financial regulations, excessive borrowing, and dubious financial reporting. It has brought to question the effectiveness of financial experts in assessing risk and creating value that will promote economic growth.

Under the backdrop of one of the worst scandals in financial history, ranging from Enron, Bernie Madoff to WorldCom captured global attention. This consequently affected the integrity of auditors and has further intensified questions about ethical judgments in work settings and effective audit committee requirements. The need for ethical reasoning in organizations prompted reforms that weighed heavily on board structures and especially on audit committees as an important mechanism of corporate governance. The evolvments of audit committee requirements especially the appointment of financial experts have raised

legitimate questions as to the continuous ambiguity of how boards choose and define their financial experts. Furthermore, these financial scandals have also brought under greater scrutiny, the powers exercised by corporate boards. In fact, these corporate malfeasances have provided the impetus for large legislative changes for example, the Oxley Act of 2002, European Union directives of 2006 and the release of new corporate guidelines for the New York Stock Exchange, Nasdaq etc.

Accordingly, the motivations of this paper is based on the regulations such as SOX

(2002) that includes accounting and ethical guidelines and how that has affected the performance of Nasdaq100 firms

Table 4.1 Acts/ Recommendations

Year	Act/Recommendations	Audit Committee Requirement
1972	SEC Recommendation	US Public companies to form Audit Committees
1978	SEC Recommendation adopted	A requirement for the New York Stock Exchange
1987	Treadway Commission	6 Specific Recommendation to prevent fraud
1989	SEC Recommendation adopted	A requirement for NASDAQ
1992	SEC Recommendation adopted	A requirement for AMEX
1999	Blue Ribbon Committee Recommendation	10 recommendations for improving audit committees'
1999	Blue Ribbon Committee Recommendation	Resulted in changes by NASDAQ, the NYSE, AMEX, and the SEC. SOX forces all U.S. stock exchanges to prevent listings from companies with no audit committee
2002	Sarbanes-Oxley Act(Section 301)	
2002	Sarbanes-Oxley Act (Sec. 407)	Increased audit committees' responsibilities and authority
1992	Cadbury Committee Recommendation	UK Public companies to form Audit Committees
1999/03	Cadbury Recommendation/Smith	A requirement for the London Stock Exchange
2001	Baum Commission Recommendation	"Baums commission" Establishment of the Kodex Commission(Germany)
2002	Kodex Commission	Establishing Audit committees in publicly listed companies(Germany)
2006	European Union 8 th company law	Enforced and requires listed company within the Euro-Zone to have an audit committee.

Many have argued that this regulation have helped immensely in stabilizing internal control settings. Some have also noted, that despite there are clarifications in the formation and independence of audit committees, there are still ambiguities in the definition of financial experts according to SOX 407 of 2002.

4.1.1 Ambiguity in the definition of financial experts

After numerous accounting scandals, the enforcement of Sarbanes-Oxley Act (2002) as well as the EU 8th company law of 2006, were considered as necessary tools that ensures high quality and transparency of business practices in the United States and European Union. This had direct impact on what constituted a financial expert. Sarbanes-Oxley requires that the Audit Committee will consist of independent directors only, and include at least one “financial expert”. In case among all members of the Audit Committee there is no financial expert, the firm needs to explain valid reasons for that. (Cohen, Krishnamurthy and Wright, 2008; Hoitash et al, 2009; Dhaliwal et al; 2010).

For instance, Hoitash et al. (2009) introduced differentiation between accounting financial expert (AFE) and supervisory financial expert (SFE). The main difference between the two titles is the nature of their experience; AFEs gained accounting proficiency through experience at the position requiring accounting and financial knowledge, such as Chief Financial Officers, whereas SFEs gained financial expertise through supervision of accounting tasks, for instance, at the position of Chief Executive Officers (Adelopo, 2013).

It is also common in academic research on audit and corporate governance to mention financial expert (FE) See Table 3 below:

Table 4.2. Definition of Financial Experts

Accounting expertise	Finance expertise	Supervisor expertise
Qualified	Qualified	Experience
Strong grasp of Revenue recognition, strong leadership contribution.	Knowledge in financial-related issues	Financial oversight duties
In-depth Knowledge of GAAP	In-depth knowledge of GAAP???	Knowledge of GAAP???
Can detect Irregularities	Foster FR process but can he detect Fraud??	What about IFRS???

Since recent changes by SEC pertaining to the definition of a financial expert, the term can be used loosely, allowing for greater freedom of choice. The revised definition of financial expert under Section 407 of the Sarbanes-Oxley Act of 2002 (SEC 2003) allowed the less conservative use of the term and consequently, increased the pool of potential auditor candidates. According to the revised regulation, audit committee financial expert must be familiar with GAAP, financial reporting procedures and internal control. Also, the financial expert must be able to review accounting activities through the scope of GAAP, and has to possess proper education and audit experience or audit supervision experience. This experience is only relevant if it is acquired through (SEC 2003):

- (a) Education and experience as a principal financial officer, principal accounting officer, controller, public accountant or auditor or experience in one or more positions that involve the performance of similar functions.

- (b) Experience actively supervising a principal financial officer, principal accounting officer, controller, public accountant, auditor or person performing similar functions.

- (c) Experience overseeing or assessing the performance of companies or public accountants with respect to the preparation, auditing or evaluation of financial statements; or other relevant experience.

The changes were motivated by the wide criticism of the too narrow definition on what constitutes financial expert. According to requirements set by SEC before modification, not even Warren Buffet would pass the test for an expert (American Association of Bank Directors [2002], Bryan-Low [2002]). The final regulation allowed for broader definition of financial expert by suggesting that auditors may demonstrate their expertise through experience in supervising employees performing financial reporting tasks or monitoring the performance of firms (SEC [2003a]).

However, there is still room for interpretation. In the end, every board or audit committee hiring and approving FEs has the final say. Although, too strict a definition of financial expert may be detrimental due to disqualification of a large pool of adept candidates, the freedom of interpretation allowed in the recent regulations contributes to discrepancies among companies and makes it more difficult for regulators to come up with effective measures aimed at improved corporate governance.

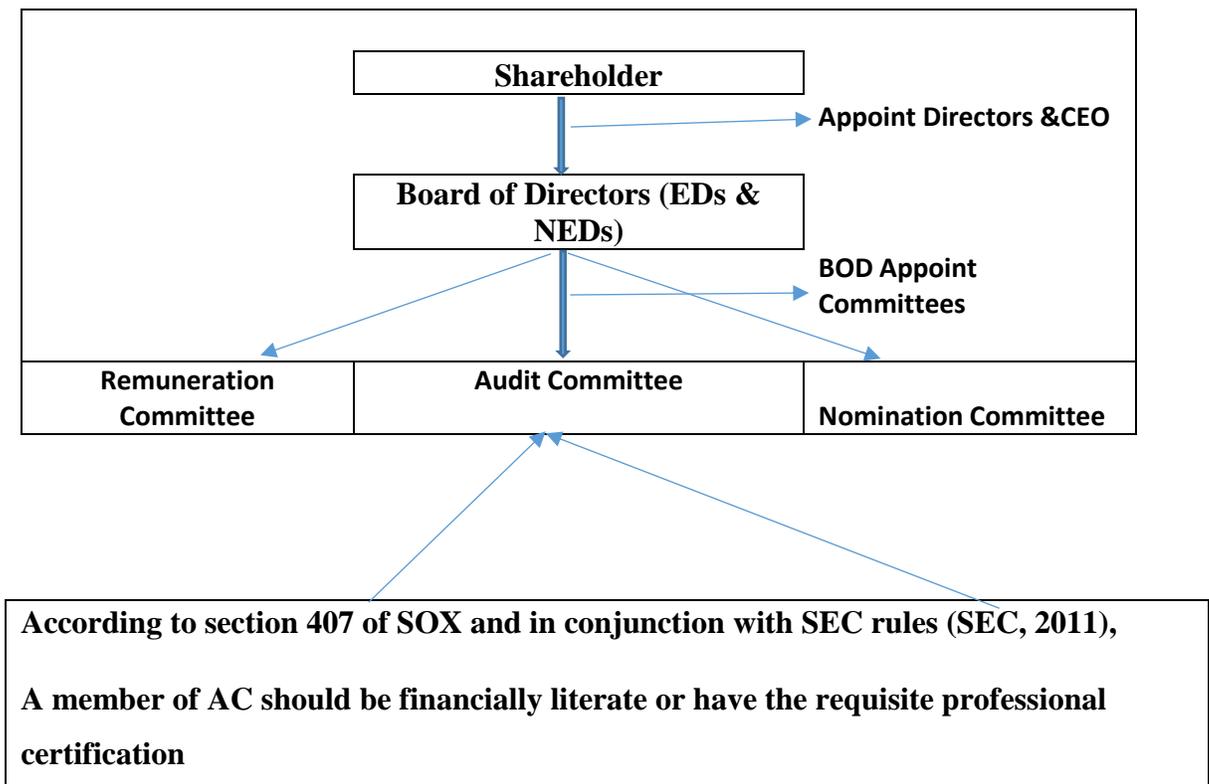
Numerous prior studies have failed to provide strong evidence that financial experts (under the broad definition) positively influences audit committee effectiveness (Carcello and Neal 2003; Anderson, Mansi and Reeb 2004; DeFond et al. 2005). The findings suggest that the current definition of financial expertise may indeed be too encompassing and lacks the effectiveness to ensure high financial reporting quality. A number of studies have indirectly acknowledged the inefficiency of the broad definition of financial expertise by adopting narrower versions of the definition that capture accounting and finance expertise. These studies have produced more consistent results documenting numerous financial reporting advantages from the presence of financial expertise on audit committees (Bédard, Chtourou and Courteau 2004; Archambeault and DeZoort 2001; Raghunandan, Rama and Read 2001; Raghunandan and Read 2001; Krishnan 2005). However, these studies have not examined the influence of accounting and finance expertise separately. This is important given that there is evidence to suggest that any expertise obtained as a result of professional accounting certification or from other work experience that results in a better understanding of technical accounting issues contributes most significantly to audit committee effectiveness (DeFond et al. 2005; Kalbers and Fogarty 1993; McDaniel, Martin and Maines 2002; DeZoort 1997, 1998; Archambeault and DeZoort 2001; McMullen and Raghunandan 1996; DeZoort and Salterio 2001; Agrawal and Chadha 2005).

This study however, decided to adopt the broader definition that will include accounting, finance and supervisory expertise as indicated above in Table 3 with a new theoretical framework.

4.2 Accounting regulatory framework

There are several studies that have investigated financial experts and their influences on the financial reporting process with a link to the financial health of firms. The financial health of firms in this paper is centred on the profitability, liquidity and leverage of firms. In prior studies, it is the handling of accruals quality, discretionary accruals, restatements, litigations and the detection and minimization of fraud. The question of which of the financial experts such as those with accounting, finance and supervisory expertise that can influence a firm financial health has been debated with mixed results. The table below shows that most of the research done in this area used data of US firms with very minimal studies using UK data. These findings from the US therefore cannot be generalised. This paper viewed influences of financial experts from the perspective of the unitary board.

Figure 4.1 US Board Structure



For instance, Teoh and Wong (1993) document how companies where accounting regulatory frameworks value high quality auditors and experts gave better earning coefficients. However, this kind of study suffers from problem of endogeneity primarily driven by reverse causality. It is not at all clear if high quality auditors and high financial quality is driving the better earning response or it is the fact that higher earning firms can afford to hire better and more expensive financial experts/ auditors. Furthermore, it is also possible that better auditors or financial experts are more poised to detect manipulations and infractions which may eventually be beneficial for firms earning potential; especially in the long run i.e. auditors endogenously improve precision and credibility which is driving better earnings prospects for the enterprise. Another concern relates to the proxy for high quality auditors i.e. large auditing firms is a good one since such a proxy may not reflect better accounting regulation and financial reporting quality.

Section 302 and 404 of Sarbanes-Oxley Act (2002) is an important accounting regulatory statute and has wide ranging implications; it allows firms to file for “material weakness in internal control”. This essentially means that the company admits that there are significant deficiencies in accounting system that would inevitably lead to accounting misstatements since it might not be prevented or detected (PCAOB, 2004). Specifically, under section 302, executives must certify that they have sufficiently evaluated the internal control and financial reporting system of the enterprise and in case they are not satisfied and believe a “material weakness” is present, they must identify and point out the material weakness to the Securities

and Exchange Commission (SEC) under this statute. On the contrary, section 404 focuses on managerial branch.

Table 4.3

Accounting Regulation, Financial Experts and financial health

Author	Date	Country	Key findings
Xie et al.	2003	USA	Found that the reduction of discretionary accruals and a negative association with restatement occurrences have been linked to audit committee financial experts. Firms with the right experts and sound financial background are an asset to the financial health of firms.
Abbott et al.	(2004)	USA	Noted that the detection of financial malpractices that has to do with restatement occurrences are negatively linked to financial experts. Their expertise are essential to the growth of the firm.
Anderson et al	2004	USA	“Cost of debts are linked with larger ACs. It is suggested that as such effective monitoring can be done based on their size”.
Bedard et al.	(2004)	USA	Reported that constraining earning management are within the skills, experiences or expertise of financial experts. ACs with financial experts are in a better position to tackle this task.
Davidson et al.	2005	AUSTRALIA	A significant negative association to earning management has been linked to audit committees with a higher proportion of non – executive directors
Farber	(2005)	USA	Firms where fraud is consistent prove to have less of the necessary expertise needed such as independent directors and CEOs.
Peasnell et al.	2005	UK	Noted that while AC may be necessary in a firm, their impact as far as manipulations especially when threshold are exceeded by pre – managed earnings are ineffective. Also their presence is irrelevant to manipulations whether downward or instances of income increasing manipulations.
Lary and Taylor	2012	AUSTRALIA	Lower incidence of fraud or severity of financial restatements are positively linked to the presence of financial expertise. AC members with financial background are assets and intellectual capital to the firm.

Ghafran, C (2013 p.32)

4.2.1 Enforcement Mechanism of Regulation

It is a widely held view among policy makers and regulators alike that precise accounting standards and efficient enforcement mechanism are crucial facilitators of information dissemination that allows more efficient allocation of resources and curbs moral hazard and opportunistic behavior. However, this view is not held by all participants in the economy. Many entrepreneurs are of the view that more strict accounting framework and regulatory mechanisms can stifle innovation and dynamism because it becomes more expensive to fund creative projects and exit investments for example through public ‘fire sale’ of shares. The latter view is important to be aware of since innovation and productivity growth is what drives all modern economies and stifling of innovation will hurt everyone in the long run.

The most influential study (which has been cited over 8000 times) that studies regulatory environment and its impact on financial access to capital markets is one conducted on a sample of 49 countries by La Porta et al. (1997). The analysis was novel and ambitious not only because authors’ construct new indicators of strength of legal regimes operating in the country but also the depth of study that quantitatively tries to trace back the origins and nature of financial systems across countries to the investor protection against expropriation by insiders which is evaluated through the legal paradigm enforced in the country and the enforcement quality. Specifically, their statistical analysis reveal that nations with better regulatory environment i.e. regulations geared towards investor protection have better financial development and capital market access. This study is particularly relevant under our current scope of analysis as they document strong differences between “common law” and “civil law” regimes are the drivers of differing capital market development. We know United States and United Kingdom operate under

common law framework, whereas Germany operates under civil law regime. The conclusions of authors, taken on face value would mean that Germany should by its very nature have worse capital market development, average firm financial health and financial expertise compared to the United Kingdom and United States due to its 'negligence' of shareholders. La Porta et al. (1997) justify their findings by arguing that civil law countries fare worse since they have worse protection for shareholders. This seems to be true from previous accounts as documented above, where Germany as opposed to United States, take a stakeholder as opposed to shareholder approach in its regulation.

However, we should interpret these findings with a grain of salt. Firstly, Germany may have 'weaker' capital market development as measured by La Porta et al. (1997) but this does not necessarily mean that firms' financial health and average firm value is worse in Germany, relative to common law countries. For example, measures other than market capitalization that explicitly take into account 'stakeholder value' will plausibly inflate firm value more compared to the United States and United Kingdom. Secondly, given its two - tier system of governance, strident monitoring and human capital of financial experts, Germany might as well generate additional value for non-shareholder stakeholders which might in fact offset the hypothesized value 'destruction' for shareholders. Lastly, the study neglects cultural differences between Germany, United States and United Kingdom that may impact regulation and enforcement mechanism. A complementary, qualitative analysis would better guide the largely quantitative study to trace the impact of cultural idiosyncrasies and its relation to firm value creation.

The work of La Porta et al. (1997) is extended by Lombardo and Pagano (2000) who determine whether common versus civil law determinism impact market and other institutional outcomes. For example, they determine whether 'weak' and 'strong' legal

regime impact expected stock returns. They find this to be the case: they observe strong correlation especially between market returns and institutional quality (efficiency of judiciary and measure of risk and rule of law). These institutional measures are also positively correlated with earnings, price ratios and dividend yields. This leads Lombardo and Pagano (2000) to conclude that better institutions are acting through curbing 'expropriation' by insiders which in turn increases profitability and firm value. The channel they connect their empirical findings are through enforcement mechanism of regulation. For example, they argue that regulatory framework and legal institutions that curbs managerial benefits from corporate assets to the detriment of shareholders improve firm value and market outcomes. Moreover, more effective judicial system and enforcement of contracts allows both producers and consumers to interact in a more efficient and transparent manner thereby paving the way for improved profit prospects and shareholder returns. One should also note another important (in our current context) finding emanating from Lombardo and Pagano (2000) is that higher accounting standards increases reliability of information which leads to lesser degree of IPO underpricing. Reminiscent of La Porta et al. (1997), they too assert that common law legal framework would lead to higher equity positions relative to civil law legal structures and that regulatory frameworks that stress on shareholders' rights improve financial health outcomes for firms in the market.

One particular regulation that has been under much academic discourse is the insider trading laws and its consequent enforcement. Bhattacharya and Daouk (2002) explicitly study the relationship between these insider trading laws and their effect on firm value by observing market outcomes. In a large macro dataset of 103 nations, they documented that around 85 per cent of all countries had insider trading laws and fewer still (i.e. 37 per cent of the total nations in the sample) ever enforced these laws into effect.

One can view this work as a thematic extension of La Porta et al. (1997), since once again an attempt is made to explore if regulatory inputs have direct influence on market value and firm financial health. Particularly, the authors evaluate if the particular regulatory input of having insider statutory requirements can improve market performance by reducing the cost of equity. They, however, find only a marginal effect. Therefore, on the surface having insider trading law in itself does not improve market outcomes. Nevertheless, they find that countries that also enforced the law for example by prosecuting any wrong doings indeed had lower cost of equity and hence better market outcome. This underpins the importance of enforcement mechanism in a regulatory environment where laws themselves do little if the environment is not amenable to 'strident' enforcement. They go on to test "credibility" of enforcement in a cross country regression. The way this is done is through an examination of differential effect of insider trading statutes in emerging and developed economies. The underlying assumption is that weaker institutions in emerging economies make the implementation of insider trading laws less credible. Under this definition and assumption, they indeed find this to be the case, since enforcement effect is insignificant when they consider a subsample of emerging economies only. Therefore, fall in cost of capital stems from enforcement mechanism emanating from developing countries whereas the high correlation between enforcement and statutory laws in developed nations makes no significant difference on estimated coefficients. Moreover, they also document declining cost effect of enforcement on cost of equity where first prosecution has around 25 percent larger impact of reduction in cost of equity relative to the second prosecution of the insider trading statute.

An important opposition to La Porta et al. (1997) and subsequent literature that, too base regulatory and enforcement mechanism to be determined by legal determinism is made

by Coffee et al. (2007). He argues that legal origins make little practical difference as far as enforcement of regulation is concerned (in a broad cross section of countries). One salient criticism levied by him is La Porta et al. (1997) focus on United States as an archetypical common law country. However, he points that the US is an “extreme outlier” when it comes to enforcement of regulation in terms of fines and even jail terms relative to other countries. He augments his argument by illustrating comparisons with another common law country, United Kingdom, where he documents a weak framework for cross-listing companies and very low enforcement as opposed to United States where strident punishment and frequent enforcement is the norm.

It requires that within each annual report presented by the management, an additional document that contains a managerial assessment of the efficacy of accounting control system and a procedure for accurate, timely and transparent financial reporting is attested by public accountants is also to be included.

Doyle et al. (2007) put exactly this hypothesis to test. In their sample covering 779 companies who disclosed material weaknesses in the year 2002-2005, they study the characteristics of firms who file and the drivers leading them up to this. They document the enterprises who file under section 302 and 404 are typically younger, smaller, financially weaker; surprisingly they also document the firms to be more innovative in the sense they are typically growing rapidly, have more complex tasks or/and going through restructuring. On the other hand, corporations who make these filing the least were more diversified and were in better financial health. This has clear policy implications for regulators. Specifically, regulators who require these filings should be cognizant of the fact that filing for section 302 and 404 need not necessarily be a bad thing. Since, typically regulators want to encourage innovation and young firms it would

help give special accounting breaks to young enterprises going restructuring so they can catch up with their peers. This can be achieved by adding sunset clauses through a contractual agreement that ensures the relaxing of rule is temporary so that moral hazard problem does not become a concern in the future.

Beneish et al. (2008) extends this line of research by empirically investigating the effect of this statutory internal control weakness requirement on information uncertainty and financial health consequences. The empirical methodology applied in this study improves upon Doyle et al. (2007) since this study constructs matched pair based on a size and performance for also non-disclosing companies to serve as a counterfactual. This provides a more empirically rigorous way to interpret the causal mechanism as propounded in previous study. Beneish et al. (2008) find statistically significant negative stock price effect following the disclosure. This is consistent with the idea that information revelation that harbors uncertainty is detrimental for firm financial health. Further, analysis of these companies shows that the adverse consequences are worsened in some circumstances, particularly with high auditor turnover and membership in a high risk industry. This research also has important policy lessons both regulators and firms. For instance, it is found that adverse consequences due to disclosure can be dampened in case of companies' engagement with a high quality financial experts/ auditor. This hints towards strategy advice for the firm where it is in their own long-term best interest that they hire more qualified expert/auditors. Similarly, regulators can frame accounting rules or provide special subsidies to firms who hire more qualified auditors and financial experts.

While, this paper does not under – estimate other theories, but in order to contribute new knowledge to the accounting literature, a new theoretical framework was used, the

Throughput Model. This new theoretical framework distinguishes this paper from prior studies and will better explain the influences of financial experts on financial health

4.3 Theory and hypothesis

4.3.1 Throughput Model

The Throughput Model was selected since its six dominant decision-making pathways relate to six significant ethical positions (Rodgers, 1997). This Throughput Model is built on six ethical pathways. Each pathway represents fundamental principles that will be adopted by individuals, such as independent financial experts, or organizations in arriving at a decision (Rodgers, 1997). It must be noted that the individual viewpoint or organizational goals do play a predominant role in depicting the pathway employed that is considered highly or conversely less influential.

The Throughput Model

Figure 4.2

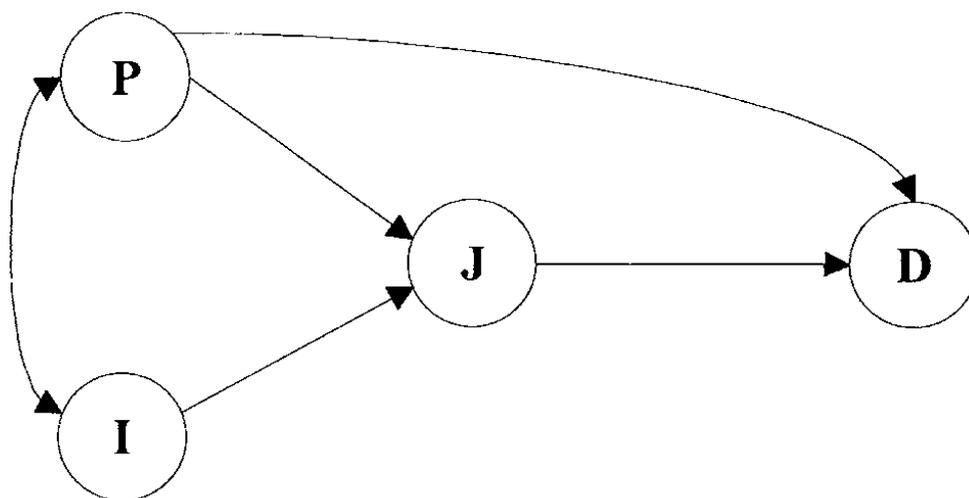


Fig.1 Where P is Perception, I is Information, J is Judgement and D is Decision

These viewpoints can form the basis of our perceptions, which will ultimately influence judgement or the analysis of evidence and subsequently, the final decision. The formation of audit committees with the viewpoint that the independent financial experts should choose collective interest over self-interest, for example can be depicted by the Throughput Model as a principle that shows concern for all or the majority of stakeholders. According to Rodgers *et al.* (2009, p. 350), “Decision making in the *Throughput Model* is defined here as a multi-stage, information-processing function in which cognitive, economic, political, and social processes are used to generate a set of outcomes.”

Based on Figure 1, we can establish six general pathways:

- P → D (1)**
- P → J → D (2)**
- I → J → D (3)**
- I → P → D (4)**
- P → I → J → D (5)**
- I → P → J → D (6)**

The Throughput Model (TM), according to Rodgers and Gonzalo (2009,p.350), “draws attention to: (1) only 2 – 4 major concepts that are instrumental in arriving at a decision; (2) the order of a particular pathway (and its strength) will greatly influence the outcome of a decision; and (3) each decision-making pathway relates to a particular ethical position”. There are many philosophies that are complex in nature. We discuss six prominent approaches depicted in the model’s six general pathways. The six ethical positions discussed below are ethical egoism, deontology, relativist, utilitarianism, virtue ethics, and ethics of care.

$P \rightarrow D$ represents the *ethical egoism position*, which lays emphasis on self-interest or greed. $P \rightarrow J \rightarrow D$ depicts the deontology position that emphasizes the compliance with rules, regulations or accounting standards, for example, and stresses the concept of equality in obeying those rules irrespective of size or location and gender. According to Rodgers and Gago (2004, p.351), “ $I \rightarrow J \rightarrow D$ reflects the utilitarian position that is concerned with consequences, as well as the greatest good for the greatest number of people. Utilitarianism is based on collective economic egoism”. Also Rodgers and Gago (2004, p .355), “ $I \rightarrow P \rightarrow D$ highlights the *relativist position*, which assumes that decision-makers use themselves or the people around them as their basis for defining ethical standards. In another study, Rodgers and Gonzalo (2009 p.351), noted that, “ $P \rightarrow I \rightarrow J \rightarrow D$ underscores the *virtue ethics position*, which is, whereby the cultivation of virtuous traits of character is viewed as morality’s primary function and $I \rightarrow P \rightarrow J \rightarrow D$ represents the *ethics of care position* (stakeholders perspective), which focuses on a willingness to listen to distinct and previously unacknowledged perspectives”

For the purpose of this paper, one of the six ethical pathways will be discussed. $P \rightarrow J \rightarrow D$. Subsequently, 2 hypothesis will be tested: (a) $P \rightarrow J$ and (b) $J \rightarrow D$

4.3.1.1 Rules – based Pathway

The rule-based pathway works on the premise that individuals are motivated to take their decisions based on the existence of laws, procedures, guidelines and rights of individuals according to Rodgers (2009). The decisions taken by individuals using this pathway are non-consequential, judgment-oriented and are conditioned by the individual’s perceptions of rules and laws. This pathway does not require information

because the decision makers have full knowledge of the regulations (Rodgers, 2009). The rule-based pathway can be illustrated by the following Figure below.

Figure 4.3.

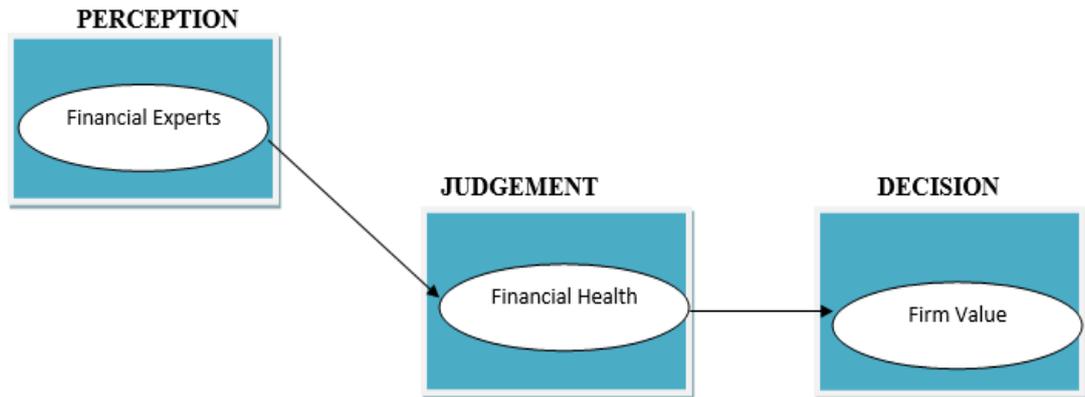


Figure 4.3: Research Model – Rule-based Pathway

Source: Based on Rodgers (2009)

The most significant feature in understanding the rule-based pathway is that the decisions are fully exclusive of any consequences and in this context, rules can be viewed as customs and practices that are formally recognised and are binding among a group of people. The purpose of establishing the rules and laws is to control the ways in which groups act such as financial experts. In the rule-based pathway, the decision-making process is judgment-oriented and the process is conditioned by the rules and laws as perceived by the individuals. In this pathway, it is to be noted that it, should not be influenced or such positions should not depend on the decision choices.

We argue therefore, that there are two important phase to this pathway. First:

(a). A judgemental phase, where the financial expert is expected to be well informed and have in – depth knowledge of rules or acts such as the Sarbanes – Oxley Act or accounting standards such as the US GAAP or International financial reporting standards (IFRS) – P → J based on financial statements review. . In the new paradigm shift, where audit committee financial experts based on the framework of (**P**) are considered to act as a bridge of confidence between their boards and customers, their assessments and analysis of evidence must not only be objective but act according to law. This means that financial experts should ensure that accounting information are accurately recorded and rules and principles are rightly applied. This view is strongly supported by Kant (1996), who indicated that adherence to law must be a moral obligation.

(b). the second phase of this pathway, is how the analysis of financial experts that must have affected the financial health of firms (**J**) may eventually influence firm value (**D**). Many prior studies have argued that because supervisory experts such as CEOs, have a fiduciary interest of the firm, they will do whatever it takes to maintain its goodwill as well their reputation.

The rules - based or the deontological view as it is otherwise called, is based on the principles of justice. Deontologists advocate that there are certain things that we should not engage in, even to maximize utility. Deontologists also regard the nature of moral principles as permanent and stable and that compliance with these principles defines ethicalness. Furthermore, they believe that individuals have certain absolute rights, which include (1) freedom of conscience, (2) freedom of consent, (3) freedom of privacy, (4) freedom of speech, and (5) due process (Rodgers, 2009).

In Figure 4.3, the financial expert forms a perception without the use of any information, weighs the possible outcomes before making any judgment and then concludes with a decision. These judgement decisions are for example:

- Decisions relating to financial reporting and disclosure process
- Decisions relating to monitoring choice of accounting policies and principles
- Decision relating to oversight of regulatory compliance and ethics
- Decision relating to risk management policies and practices with management

It implies, for example, that audit committee financial experts appointed to the board should use their experience and qualifications to understand, apply and adhere to (P) which can be referred to as acts, such as the Sarbanes–Oxley Act of 2002, properly analyzed (J) to form a judgement about the financial health of the firm to be able to affect firm value (D). Prior studies by Van Stavaren (2007) and Beattie et al (2013) are supporting evidences that the rules – based pathway has actually helped, when effectively applied in limiting fraud, improving monitoring and above all, it is inclusive of both small, medium and large companies.

The phase of $P \rightarrow J$ within the context of the Throughput Model is intended for rules to be adhered to, properly applied, and seen as a moral obligation according to Kant (1996) and above all to restore order. Subsequently, these intentions will impact the phase $J \rightarrow D$, the final outcome, firm value. “In order to make the adequate judgments, we have to understand what our ethical duties are and what correct rules exist to regulate those duties.” Rodgers et al (2009, p, 12). Throughput Modelling may assist us in understanding the important factors that can guide and increase our awareness of improving the financial reporting quality in the workplace

4.4 Hypothesis development

4.4.1 Financial experts (P) and financial health (J)

The studies of Xie et al (2003) as supported by Anderson et al (2004) reported the reduction of discretionary accruals as well as effective monitoring which were linked to the knowledge, skills and experiences of financial experts

Also, Abbot et al (2004) noted that the detection of financial malpractices that has to do with restatement occurrences are negatively linked to financial experts. Their expertise are essential to the growth of the firm.

However, Cohen (2008) noted that financial experts with supervisory expertise can foster the financial health of firms. These experts are believed to be better monitors. In addition to that, Erkens and Bonner (2013) found that the status of financial experts may as well influence their role and thus the financial health of the firm.

Thus we argue that:

H1: Financial experts with different expertise (P) (Accounting, Finance and Supervisory) may positively influence financial health (J) of firms in the US

4.4.2 Financial health (J) and firm value (D)

Dayton (1984) in an influential article goes on to argue that good management and good governance is not mutually exclusive bur rather are the opposite sides of the same coin: i.e. both are essential for the company's' performance and profits. The article attacked

the conventional notion that good management alone can lead to success in the corporate world.

In contrast, the view propounds that additionally, good governance when augmented with good management are the recipe for a company's survival prospects. This is because a robust board of directors is able to long beyond only the "next quarter" performance of the firm. Thus, a strong board makes a world-class management even more robust.

The role of financial experts in relation to judgement decisions such as those below have not only led to the strengthening of financial health but have subsequently influence firm value to a greater extent.

(a) Decisions relating to financial reporting and disclosure process

(b) Decisions relating to monitoring choice of accounting policies and principlesnt

(c) Decision relating to oversight of regulatory compliance and ethics

More specifically, audit committee financial experts will have to make:

- Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.
- Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.
- Decisions that ensure the firm adheres more closely to the rules or principles of good business practice so that there is less chance of fines or censure by regulatory

authorities.

- Decisions as to the best business practice or investment that a firm is advised to undertake
- Decision relating to risk management policies and practices with management

On the other hand, failure to meet the challenges above, will impact financial health negatively and hence firm value.

Thus we argue that:

H2: Financial health (J) may influence Firm value (D) in the US firms positively

4.5 Data and Method

The sample for this paper is the Nasdaq100 companies over the period 2009 to 2013. One of the reason for choosing these companies, quite apart from their market capitalization, is that they requested audit committee financial experts to possess financial management experience. We consider this additional requirement very important to firm value creation.

Consistent with prior studies, we excluded missing data, financial firms and outliers that may negatively impact the final outcome of empirical result. In common with most studies in this area this study excludes all financial firms, principally insurance companies and banks, as they have different regulatory environments as well as different reporting conventions to other companies.

To find outliers in updated data set the relationship between two main dependent variables is analysed. See Appendix 4.9.2.

The first step of the data analysis is data preparation. For this reason additional analysis was conducted to investigate whether there are unusual observations (mainly in two main variables of the study: Financial Health and Firm Value) in the data set.

We decided to remove from data set those observations, for which Financial Health values are below -20, and above 109. The reason for that is more than two standard deviation from the mean logically impossible. (Large negative values for leverages).

22 observations are treated as outliers and removed from data set as seen in Table 4.4 below

Table 4.4 Sample Structure

Description	2009	2010	2011	2012	2013	Total
NASDAQ100	100	100	100	100	100	500
Financial Institution	15	15	15	15	15	75
Missing values	4	6	5	2	11	28
Outliers	6	5	4	4	3	22
Final sample size	75	74	76	79	71	375

Conclusively, 375 firm years is the final sample.

4.5.1 Data Source

9 In Figure 2.1.1.1. unusual observations (Financial Health of which are below -20 and above 109) are highlighted

The proxy financial statements, Data Stream, Fame and Board ex databases have been the sources of all variables used in this study.

4.5.2 Variable definition

Using the Throughput Model as the main theoretical underpinning of this paper, the four pillars of Perception, Information, Judgement and Decision were used to define variables.

The variable P represents, the expertise of financial experts such as accounting, finance and supervisory. These were captured by looking at the education and professional background of each expert. Dummy variable (= 1 if AC has at least one expert with accounting, finance or supervisory expertise, otherwise 0. (See Table 4.5 below)

We defined the variable (I) as Audit Quality (audit fees and non – audit fees), AC characteristics (AC meetings and AC size), Leverage (Debt/Equity, Debt/Assets), Liquidity (Cash ratio and Quick ratio) and Profitability (ROA and Sales/Asset)

Variable (J) is defined as financial health, calculated using ZScores and variable (D) as firm value through the use of Tobin's Q.

Table 4.5

Table 4.5 Variable definition

Variable	Name	Variable definition	Sample Period
ACCEXP	P	1 assigned to ACCEXP if the expert have accounting qualifications such as ACCA, CIMA, CPA or else 0	2009 - 2013
FINEXP	P	1 assigned to FINEXP if the expert of AC have MBA, Investment banker, financial controller or else 0	2009 - 2013
SFEEXP	P	1 assigned to SFEEXP if the expert of AC is CEO, President and vice president of a board with experience or else 0	2009 - 2013
Audit Quality	I	Audit fee and Non-audit fee	2009 - 2013
AC_SIZE	I	The number of AC members on the average.	2009 - 2013
AC_MEET	I	The number of meetings on the average held by AC	2009 - 2013
Profitability	I	Net Income/Assets and Sales/Assets	2009 - 2013
Liquidity	I	Quick ratio and cash ratio	2009 - 2013
Leverage	I	Debt/Assets and Debt/Equity	2009 - 2013
Financial Health	J	Z score	2009 - 2013
Firm Value	D	Tobin's Q	2009 - 2013

4.6 Statistical Method

The statistical method used in this paper is the partial least square, a variance approach method. Given the fact that the data in this study is positively skewed, the PLS approach suits the study as normality test is irrelevant. The flexibility of the PLS approach and other advantages have led many researchers to use this statistical method. (Johansson and Yip, 1994; Lee et al, 2006; Julien and Ramangalahy, 2003, Mahmood, Bagchi, and Ford, 2004)

The simultaneous modelling of all variables and elimination of multicollinearity concerns are major advantages of the PLS method. (Inkpen and Birkenshaw, 1994)

Table 4.6 Prior studies that have used PLS statistical technique

Author	Date	Motivations for the use of PLS
Inkpen and Birkenshaw	1994	“All relationships are modelled simultaneously, eliminating concerns about multicollinearity”(p.208)
Johansson and Yip	1994	“Less stringent assumptions about the randomness of the sample and the normality of the distribution of variables”(p.587), “smaller sample sizes, as each causal sub system sequence of paths is estimated separately” (p.587)
Julien and Ramangalahy	2003	The robustness of PLS and flexibility are counted as an advantage
Lee, Yang, and Graham	2006	“PLS [. . .] is more appropriate for the exploratory nature of [a]study,” “[PLS] allows for formative indicators[...]and dichotomous constructs” (p.632)
Lee	2001	“PLS [...]can accommodate a small sample size”(p.153)
Lee	2000	“PLS avoids many of the restrictive assumptions imposed by other causal models that involve latent variables such as LISREL”, “PLS provides measurement assessment”, “Ajack-knife procedure[...] generates an approximate t-statistic. This overcomes the disadvantage of the lack of formal significance tests for parameters resulting from non-parametric methods”, “PLS enables the explicit estimation of the multiple item construct, which affords a comparison of[groups] at the construct level”(p.196)
Mahmood, Bagchi, and Ford	2004	PLS have less measurement restrictions and its tolerance enables non – normal data to be used.
Mintu-Wimsatt and Graham	2004	In comparing, PLS to correlation or regression, the conclusion can be drawn that PLS is more rigorous
Money	2004	In order to validate regression results

Source: Henseler, Ringle and Sinkovics, (2009, p.280)

4.6.1 Validation of Measurement Model

The validation of measurement models is considered as one of the most important section of this paper. The findings of the PLS path analysis are built on answers to questions relating to the reliability of individual items or construct, the convergent and composite reliability and above all, the discriminant validity.

4.6.1.1 Individual Construct Reliability

The individual construct reliability was assessed via factor loadings. Some researchers have argued that loadings of 0.70 should be the acceptable threshold. (Camines and Zeller, 1979). However, Julien and Ramangalahy, (2003) and Chin (1988a) advocated for lower levels of 0.50. Factor loadings lower than 0.50 needs to be explained as this will lead to questions of reliability. In this paper, 0.50 has been used as the threshold. With reference to figure all factor loadings are above 0.50, except for AC characteristics (AC Size and AC Meetings) where AC meetings did not meet the threshold of 0.50. On that AC meetings was deleted and AC size was chosen to be the indicator.

Table 4.7 Factor loading

Indicators US	Loadings	Threshold	Below Threshold
Audit fees	0,850	0,50	
Non - audit fees	0,916	0,50	
AC Size	0,544	0,50	
AC Meetings	0,497	0,50	0,497
ROA	0,944	0,50	
Sales - Assets	0,503	0,50	
Debt - Asset	0,962	0,50	
Debt - Equity	0,952	0,50	
Cash - Ratio	0,987	0,50	
Quick - Ratio	0,994	0,50	

The deletion of AC meetings below the 0.50 threshold was based on the findings of Hulland (1999) recommendations, in that, factor loadings below 0.40 or 0.50 should not be included in the estimation.

4.6.1.2 Convergent and Composite Reliability

The AVE and CR for all latent variables satisfy the minimum acceptable thresholds except AC Characteristics. So one of AC Characteristics indicators should be eliminated from further path analysis. In this case this variable is AC Meetings.

Table 4.8 Total Variance Explained and Composite Reliability – United States (US)

US	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		L 95% CI	U 95% CI		L 95% CI	U 95% CI
AC Characteristics	0.497	0.472	0.544	0.364	0.010	0.683
Audit Quality	0.781	0.679	0.842	0.877	0.803	0.914
Leverage	0.916	0.887	0.966	0.956	0.940	0.983
Liquidity	0.981	0.970	0.990	0.991	0.985	0.995
Profitability	0.572	0.535	0.614	0.710	0.656	0.754

Initially path analysis is performed and CFA is used to estimate all latent variables reliability and validity, which provides very useful information about possibility of combining individual indicators for latent variable values computation. Average Variance Explained (AVE) and Compositated Reliability (CR)) are used to evaluate CFA results.

4.6.1.3 Discriminant Validity

The AVE analysis in table above do play a significant role in assessing the discriminant validity. Hence, the discriminant validity is ascertained by testing to see whether the square root of every AVE of each latent construct is much larger than any correlation among any pair of latent construct.

Table 4.9 Discriminant Validity

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.884				
AC Characteristics	0.044	1.000			
Profitability	-0.151	0.030	0.756		
Leverage	0.181	0.073	-0.200	0.957	
Liquidity	-0.152	-0.059	-0.262	-0.172	0.990

4.6.1.4 Model Summary

The Model summary is also an important segment of any statistical calculations that should prove worthy. Two important items are noted here: (a) The R Square and (b) The adjusted R Square. With reference to the table below, the R Square and adjusted R Square are above 80% are very close, indicating a very strong model.

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 ^a	.806	.802	28.87122

a. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

Model summary shows R2 and adjusted R2

Table 4.11 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1266571.465	8	158321.433	189.937	.000 ^b
	Residual	305078.418	366	833.548		
	Total	1571649.882	374			

a. Dependent Variable: Financial Health (tr)

b. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

4.7 Empirical Result

This section shows descriptive analysis of dependent, independent variables.

Table 4.1.2 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable.

4.7.1 Descriptive Statistics

Table 4.12 Descriptive Statistics

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.14	0.00	0.35	0.00	1.00	2.07	2.29
FE Experts	0.85	1.00	0.35	0.00	1.00	-2.01	2.03
SFE Experts	0.89	1.00	0.32	0.00	1.00	-2.43	3.92
Audit fees	4.68	2.89	5.71	0.00	36.86	2.52	7.69
Non-Audit fees	1.58	0.30	3.66	0.00	25.63	3.98	17.45
Non-Audit fee Ratio	0.28	0.12	0.37	0.00	1.40	1.49	0.89
AC Size	3.70	4.00	0.82	3.00	7.00	1.21	1.62
AC Meetings	8.59	8.00	2.77	1.00	28.00	1.36	6.96
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.11	0.11	0.10	-0.47	0.55	-1.51	10.32
Sales/assets	0.92	0.63	0.77	0.00	4.83	2.46	7.34
Debt/assets	0.15	0.13	0.14	0.00	0.57	0.86	0.00
Debts/equity	0.36	0.21	0.50	0.00	4.28	3.36	17.51
Cash ratio	1.66	1.34	1.48	0.02	8.95	1.83	4.71
Quick ratio	2.23	1.85	1.62	0.10	10.12	1.62	3.88
Financial Health	4.16	4.59	1.44	-6.52	6.81	-3.32	16.11
Firm Value	2.77	2.29	1.81	0.52	10.67	1.77	3.69

As can be seen from the Table, the financial health ranges between a minimum of -6.52 to a maximum of 6.81, with an average of 4.16 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 1.44, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (*TQ*) ranges from a minimum of 0.52 to a maximum of 10.67, with an average of 2.77 for the whole period. The standard deviation is 1.81, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of Financial health is negative (-3.32), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 1.77. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and

corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur et al., 2008).

The investigation of the central tendency and variation measures we can see that the distributions of most part of variables are not normal. They have mainly right skewed distribution. This means that from descriptive analysis perspectives it's more preferable to observe the medians values.

The trends of median values across variables in observed period (2009-2013) are presented in following charts.

Figure 4.4. Median value of variables

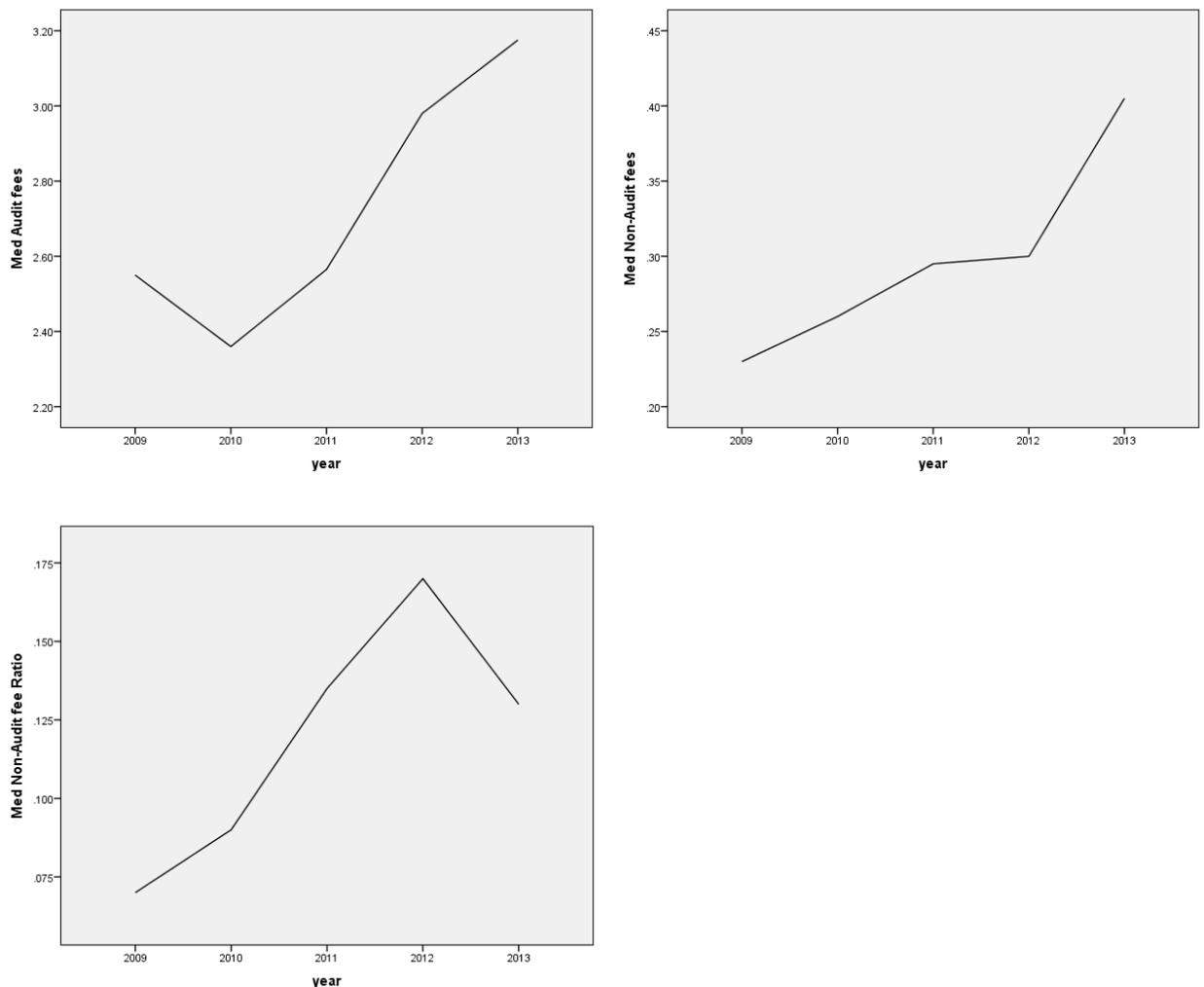


Figure 4.4. The median values of Audit Quality indicators (Audit fees; Non-Audit fees; Non-Audit fee Ratio) from 2009 to 2013

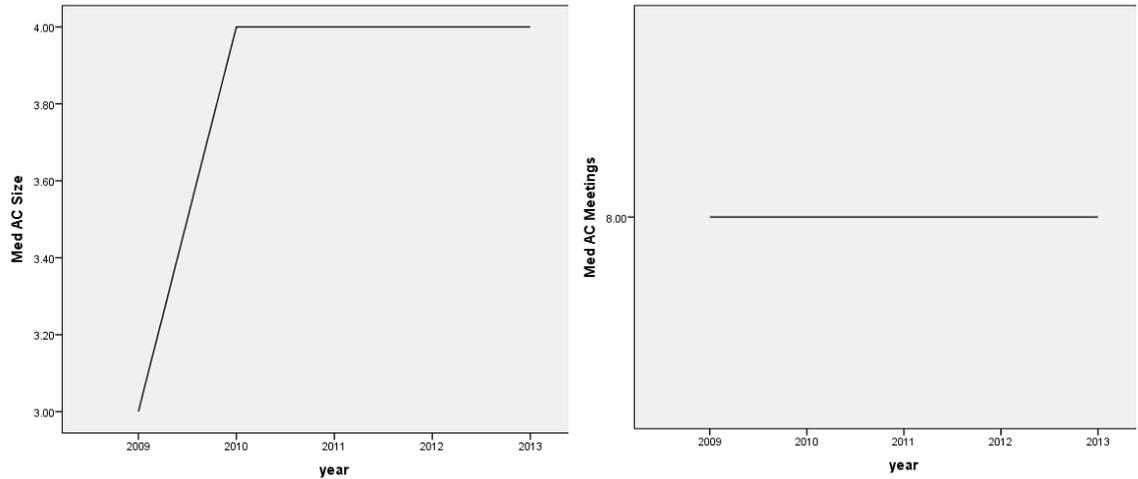


Figure.4.5 The median values of AC characteristic indicators (AC Size; AS meetings) from 2009 to 2013

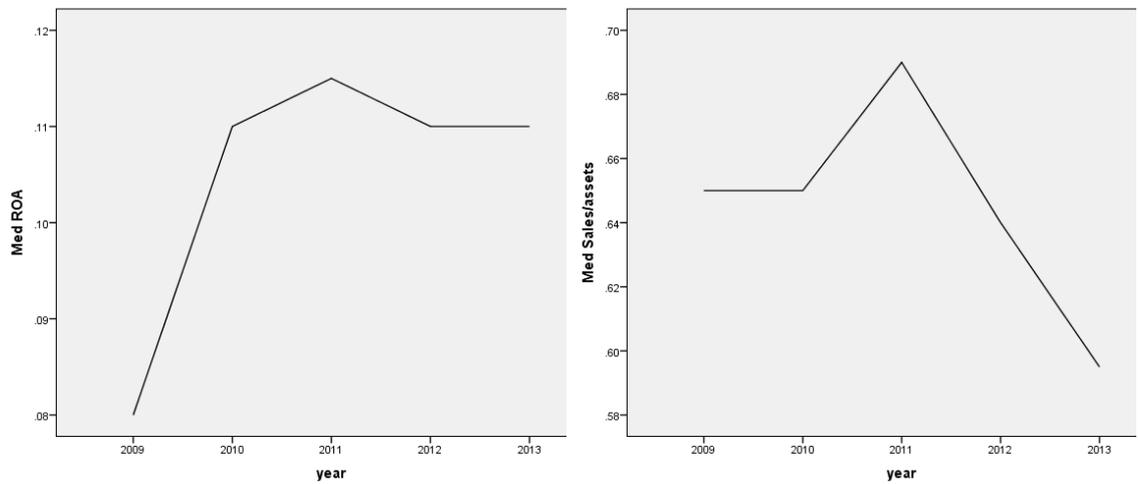


Figure.4.6 The median values of Profitability indicators (ROA; Sales/Assets) from 2009 to 2013

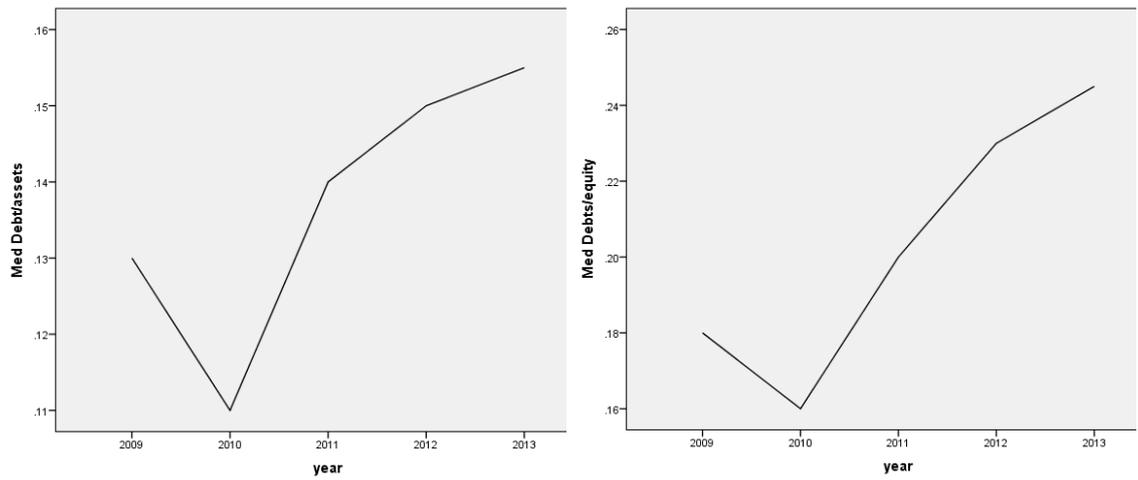


Figure 4.7. The median values of Leverage indicators (Debt/Assets; Debt/Equity) from 2009 to 2013

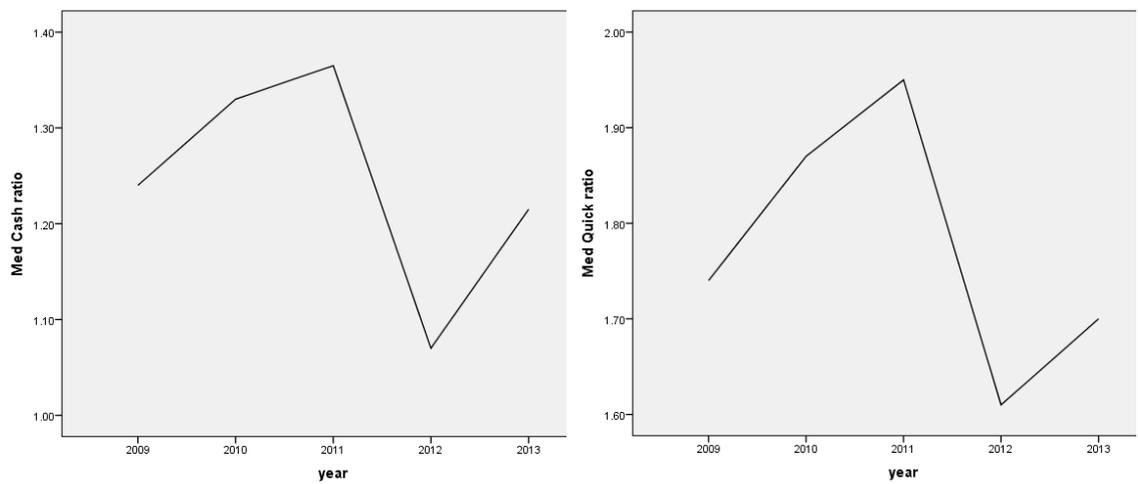


Figure 4.8. The median values of Liquidity indicators (Cash Ratio; Quick Ratio) from 2009 to 2013

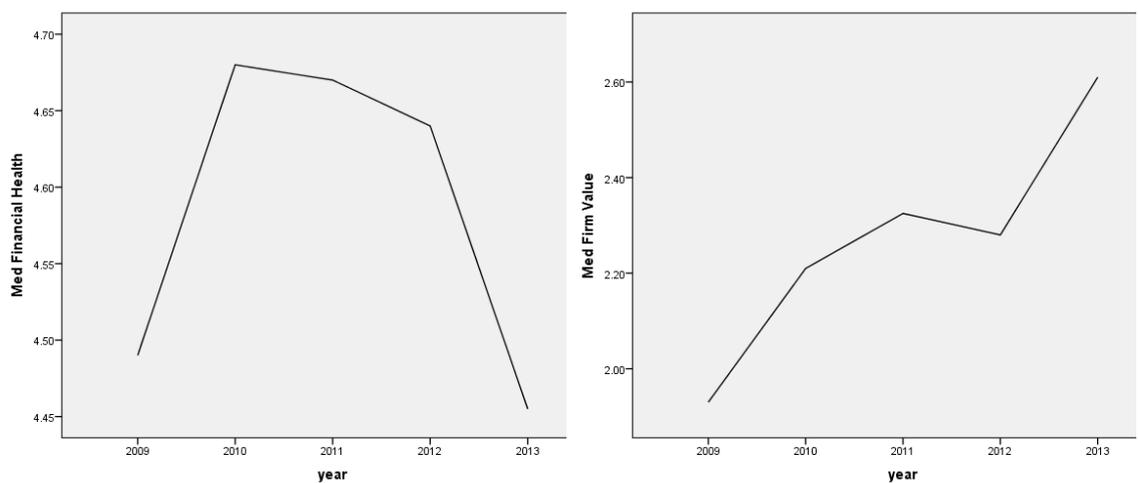


Figure 4.9. The median values of Financial Health (Z Score) and Firm Value (Tobin's Q) from 2009 to 2013

4.7.2 Correlation matrix

Correlation matrix shows that Financial Health and Firma Value have the highest significant positive correlation with ROA (0.512 and 0.268 correspondingly). At the same time Financial Health has the highest negative correlation with Leverage indicators: Debts/equity ratio (-0.941) and Debt/assets (-0.767).

Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.964)) and leverage indicators (Debt/assets and Debts/equity (0.833)).

Table 4.13 Correlation Matrix

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	-.048	1														
SFE Experts	-.887**	-.149**	1													
Audit fees	-.017	.103*	-.041	1												
Non-Audit fees	.101	.109*	-.145**	.567**	1											
Non-Audit fee Ratio	-.020	.135**	-.021	.118*	.629**	1										
AC Size	-.059	.062	.054	.019	.072	.050	1									
AC Meetings	.060	-.073	-.090	.114*	.027	-.045	.015	1								
ROA	-.013	-.060	.058	-.041	-.095	-.087	.035	.005	1							
Sales/assets	.183**	-.172**	-.171**	-.150**	-.100	.032	.026	-.238**	.190**	1						
Debt/assets	-.161**	.087	.110*	.206**	.198**	.109*	.047	.009	-.222**	-.226**	1					
Debts/equity	-.150**	.059	.116*	.144**	.143**	.091	.078	-.062	-.276**	-.148**	.833**	1				
Cash ratio	.058	.111*	-.074	-.150**	-.113*	-.141**	-.059	.077	.141**	-.290**	-.114*	-.182**	1			
Quick ratio	.055	.167**	-.084	-.166**	-.124*	-.138**	-.049	.044	.212**	-.260**	-.117*	-.196**	.964**	1		
Z Score	.119*	-.079	-.085	-.076	-.113*	-.106*	-.062	.074	.512**	.201**	-.767**	-.941**	.143**	.172**	1	
Tobin's Q	-.097	-.072	.105*	-.295**	-.251**	-.205**	-.076	-.033	.268**	.158**	-.196**	-.147**	.201**	.274**	.170**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in correlation matrix

Research Questions Analysis

Path analysis is conducted for all 4 models. Like German data analysis, ACC and SFE Experts cannot be included in model 4 because of very high correlation (-0.887), which can destroy the reliability of particular path coefficients because of multicollinearity issue.

4.7.3 PLS Result

Table 4.14. Path analysis outputs (Models 1; 2; 3; 4) for US

Path Coefficients	Model 1 ACC Experts	Model 2 FE Experts	Model 3 SFE Experts	Model 4 Financial Experts
AC Characteristics → Financial Health ¹⁰ (β_1)	-0.067***	0.065** *	- 0.068***	- -0.068***
Audit Quality → Financial Health (β_2)	-0.031	-0.040	-0.026	-0.034
Leverage → Financial Health (β_3)	-0.540***	0.531** *	- 0.541***	- -0.541***
Liquidity → Financial Health (β_4)	0.026	0.020	0.030	0.023
Profitability → Financial Health (β_5)	0.534***	0.535** *	0.532***	0.536***
Financial Health → Firm Value (β_6)	0.406***	0.396** *	0.399***	0.403***
ACC Experts → Financial Health (β_7)	-0.062***			-0.061***
ACC Experts → Firm Value (β_8)	-0.120***			-0.122***
FE Experts → Financial Health (β_9)		0.021		0.018
FE Experts → Firm Value (β_{10})		-0.038		-0.043
SFE Experts → Financial Health (β_{11})			0.079***	
SFE Experts → Firm Value (β_{12})			0.102***	
Multiple R² (explained variance)				
Financial Health	0.762	0.758	0.764	0.762
Firm Value	0.174	0.161	0.170	0.176

* Significant at p<0.1; ** significant at p<0.05; *** significant at p<0.01

¹⁰ Financial Health is the already transformed variable.

Table.4.15 Bootstrapping Results: Bias-corrected 95 % Confidence Interval

Model	Path Coefficients	Estimate	Lower 95% CI	Upper 95% CI	P Value
Model 1	AC Characteristics → Financial Health (β_1)	-0.067	-0.109	-0.017	0.004
Model 1	Audit Quality → Financial Health (β_2)	-0.031	-0.076	0.014	0.178
Model 1	Leverage → Financial Health (β_3)	-0.540	-0.648	-0.447	0.000
Model 1	Liquidity → Financial Health (β_4)	0.026	-0.024	0.075	0.307
Model 1	Profitability → Financial Health (β_5)	0.534	0.455	0.631	0.000
Model 1	Financial Health → Firm Value (β_6)	0.406	0.284	0.528	0.000
Model 1	ACC Experts → Financial Health (β_7)	-0.062	-0.097	-0.023	0.001
Model 1	ACC Experts → Firm Value (β_8)	-0.120	-0.181	-0.058	0.000
Model 2	FE Experts → Financial Health (β_9)	0.021	-0.027	0.061	0.351
Model 2	FE Experts → Firm Value (β_{10})	-0.038	-0.136	0.055	0.445
Model 3	SFE Experts → Financial Health (β_{11})	0.079	0.041	0.109	0.000
Model 3	SFE Experts → Firm Value (β_{12})	0.102	0.040	0.164	0.001

Bootstrap sample size=5000

Illustration of Results using Path analysis diagrams

Figure 4.10

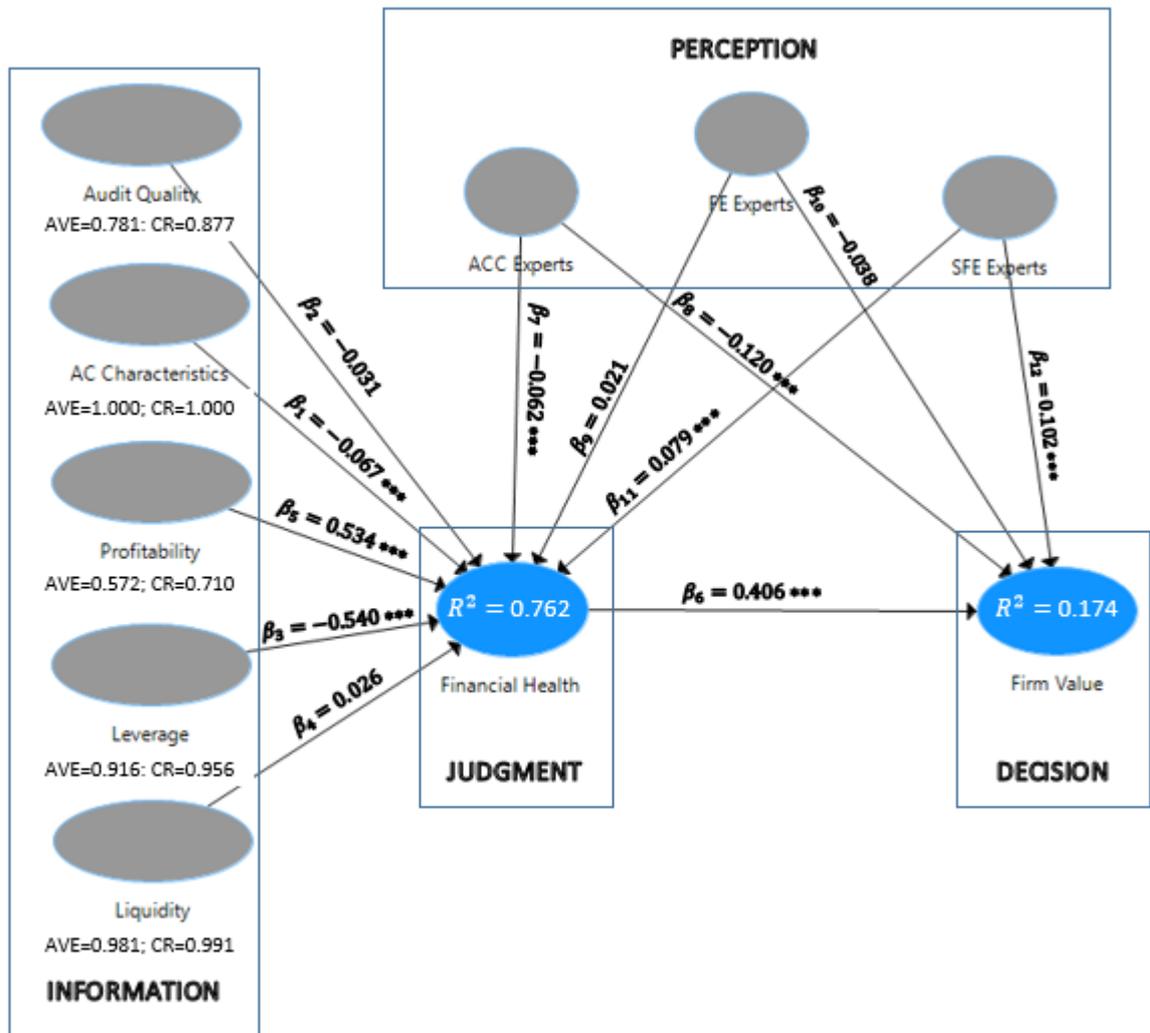


Figure 4.10 US PLS result, summarised from Model 1, 2, and 3

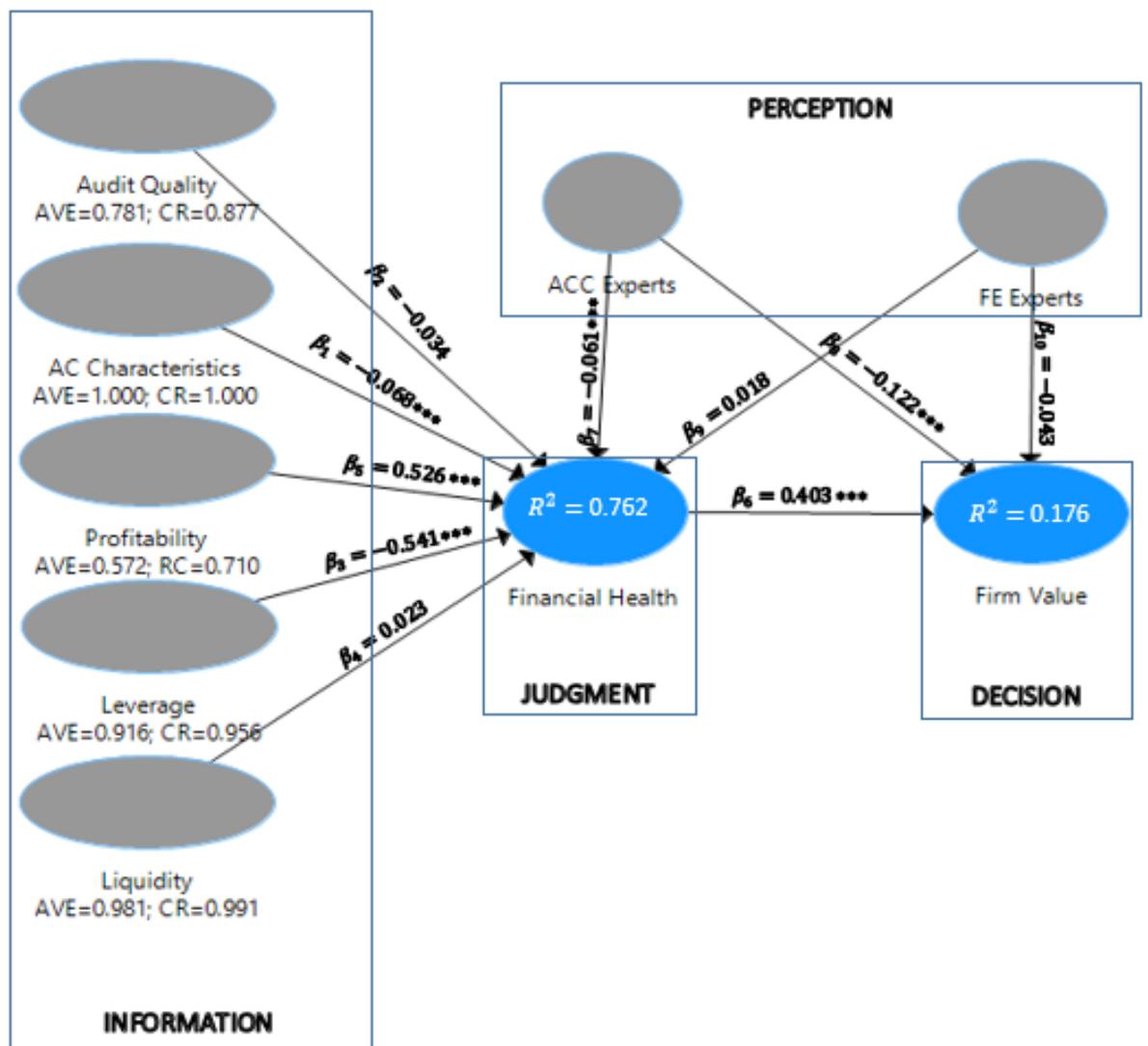
ACC Experts perception has significant negative impact on Financial Health and Firm Value ($\beta_7 = -0.062^{***}$ and $\beta_8 = -0.120^{***}$). However, we find evidence that SFE experts in model 3 exert significant influence on firm value.

However, Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.406^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.534^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.067^{***}$ and $\beta_3 = -0.540^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.406^{***}$).

The graphical outputs of all individual models are presented in appendix 2.3.

Figure 4.11. Impact of all Financial Experts on Firm Value (model 4) United States



In the combined model 4 ACC Experts perception have significant negative impact on Financial Health and Firm Value ($\beta_7 = -0.061^{***}$ and $\beta_8 = -0.122^{***}$ correspondingly). The impact of FE Experts perception on Financial Health and Firm Value is not significant ($\beta_9 = 0.018$ and $\beta_{10} = -0.043$ correspondingly)

Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.526^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.068^{***}$ and $\beta_3 = -0.541^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

4.8 Summary of hypothesis

Perceptions of Audit committee financial experts in terms of the level of his skills, experience and qualifications as required by regulation (P) may positively influence financial health in the US

Table 4.16

	US			P value
	Estimate	Lower 95% CI	Upper 95% CI	
ACC Experts → Financial Health	-0.062	-0.097	-0.023	0.001
FE Experts → Financial Health	0.021	-0.027	0.061	0.351
SFE Experts → Financial Health	0.079	0.041	0.109	0.000

ACC Experts exert a significant negative influence and SFE Experts influence (positive) levels are significant for US companies.

Audit committee characteristics (AC Characteristics) may positively influence the financial health of US companies.

Table 4.17.

	US			P value
	Estimate	Lower 95% CI	Upper 95% CI	
AC Characteristics → Financial Health	-0.067	-0.109	-0.017	0.004

AC Characteristics has a significant negative impact on financial health of US companies

Audit quality (Audit and non-audit fees, Non-audit fee ratio) may positively influence the financial health US companies.

Table. 4.18

	US			P value
	Estimate	Lower 95% CI	Upper 95% CI	
Audit Quality → Financial Health	-0.031	-0.076	0.014	0.178

Audit quality does not have significance influence on financial health of companies in the US

Leverage (Debts/Assets and Debts/Equity) may positively influence the financial health US companies.

Table 4.19

	US			P value
	Estimate	Lower 95% CI	Upper 95% CI	
Leverage → Financial Health	-0.540	-0.648	-0.447	0.000

Leverage has significant negative influence on financial health of companies in the US

Liquidity (Quick ratio and cash ratio) may positively influence the financial health US companies

Table .4.20

US				
	Estimate	Lower 95% CI	Upper 95% CI	P value
Liquidity → Financial Health	0.026	-0.024	0.075	0.307

Liquidity does not have any positive influence on financial health of companies in the US

Profitability (ROA and Revenue or Sales/Assets) may positively influence the financial health US companies

Table 4.21

US				
	Estimate	Lower 95% CI	Upper 95% CI	P value
Profitability → Financial Health	0.534	0.455	0.631	0.000

Profitability has a significant positive influence on financial health of companies in the US

Financial health influencing firm value

Table 4.22

US				
	Estimate	Lower 95% CI	Upper 95% CI	P value
Financial Health → Firm Value	0.406	0.284	0.528	0.000

Financial health impacts on firm value is significantly positive.

4.9 Conclusion

This paper has added to the accounting literature by using a new theoretical framework to explain how regulations can impact the performance of firms. The negative impact of ACC experts on financial health may be ascribed to the lack of confidence in accounting expertise.

Our result on SFE significantly influencing firm value is supported by Cohen (2008, 2010), in that independent directors or CEOs who are supervisory experts are better monitors. We disagree with Krishnan (2008, 2009) as well as Dhaliwal (2010), in that accounting regulations involve risk assessment and that SFE's are well placed to assist firm's regulatory, business and industrial risk. By so doing, SFE's may as well promote firm value.

We also agree with Erkens and Bonner (2013) that the status of SFE's such as independent directors or CEO's may contribute to their impact on firm value, since they have a fiduciary interest of the firm.

CHAPTER 5

THE IMPACT OF FINANCIAL EXPERTS ON FIRM VALUE: EVIDENCE FROM US, UK AND GERMANY

5.1 Introduction

This study adds to the literature of audit committee (“AC”) financial experts and their influences on financial health and firm value by using a conceptual framework, the *Process Thinking Model* to explain the decision making process. Corporate perspectives change substantially from the real economy to artificial engineering. In recent years, diverse opinions point to an "irrational exuberance" of creating value within companies. In modern society, governance is seen as an interrelated mechanism of government institutions, civil society and economic forces. (Chung-Ming Lau and Hang-Yue Ngo, 2001).

One area of such interrelated mechanism and regulatory requirement that has captured global attention is the appointment of financial experts to audit committees and the ambiguity that lies with how financial experts have been defined. (Dhaliwal, 2010; Erkens and Bonner, 2013). Over the years, the broad or narrow definition and interpretation of who a financial expert is in different jurisdictions has led to further widespread academic debates, with mixed results and unexplored conceptual or theoretical framework. (Cohen, Krishnamurthy and Wright, 2008; Hoitash et al, 2009; Dhaliwal et al; 2010).

As indicated by Dhaliwal et al (2010, p. 2), “The findings from these studies indicate that the presence of audit committee members with only accounting expertise is

positively related to financial reporting process and quality”. According to Cohen, Krishnamurthy, and Wright 2008, the predominant theoretical focus of such prior studies rests upon the foundation of Jensen and Meckling’s 1976 agency theory. Under this theoretical framework, improper financial accounting practices are assumed to obscure real performance and diminish investors’ ability to make informed decisions, leading to higher agency costs (Xie, Davidson, and DaDalt 2003). The AC plays a key role in reducing agency costs by overseeing the effectiveness of management’s financial reporting policies (Klein 2002; Beard, Chtourou, and Courteau, 2004; Archambeault, DeZoort, and Hermanson 2008). Moreover, Cohen et al. (2004) point out that various characteristics of ACs influence their effectiveness as corporate governance mechanisms. The findings of studies such as Zhang et al. 2007 and Krishnan and Visvanathan 2008 suggest that the domain-specific knowledge of AC accounting experts provides them with an effective means of monitoring management’s financial reporting practices and reducing associated agency costs.

Concerns raised by Beasley (2009) and Cohen et al (2010) in relation to the substantial variation or divergences in the structure, role and authority of audit committee and the requirements in different jurisdictions may impact the creation of value from the perspective of the financial reporting process.

Table 5.1. Corporate Governance Models

Anglo-Saxon-American Model	Continental Europe Model
• Large-scale publicly traded corporations	• Small and medium corporations
• Short-term management	• Long-term management
• Low concentration of institutional investors	• High concentration of private investors
• Decentralized markets and the individual interest function in a self-regulation framework	• The major role of banks and the interaction between corporations and banks creates a stable economic environment
• Profit orientated behaviours, individualism	• Long-term profit orientation
• Well-developed corporate governance mechanisms (the market for corporate control, regulation, contractual incentives)	• Corporate governance mechanisms are related to direct control and low managerial incentives
USA, UK	Germany

Accordingly, we address the following questions: (a) what level of perception (qualification, skill and experience) of audit committee financial experts influences financial health and firm value in the US, UK and Germany comparatively? Using a sample of 1427 firm years of FTSE100, Nasdaq100 and Dax100 collectively, we examine to what degree does audit committee financial experts categorised into accounting, finance and supervisory expertise influence financial health and subsequently firm value in the US, UK and Germany comparatively? (b) To what degree does a mixture of all these expertise influence firm value comparatively in the US, UK and Germany?

This study can generate a theoretical contribution to the literature on financial expert decision making within organizations in several ways.

First, the research attempts to chart the similarities and differences and attempt to resolve the differences in past research findings in regard to the role of ethical theories in a

decision making process by examining the influences of financial experts on financial health and firm value using a new theoretical framework, the Throughput Model.

Secondly, it can deepen our understanding about the role of audit committees, content of ethical reasoning by exploring the role of a wide range of ethical theories and rules financial experts can apply such as the preference – based, principles – based and rules – based theories to reason their ethical decision.

Thirdly, the use of a new theoretical framework, Throughput model opens door to researchers, universities etc. that may want to explore the role of audit committees rather than depending solely on the agency or resource - based theories.

Finally, the understanding of the behaviours and decision making processes of financial experts may have policy application in organization, help boards in their appointment as well the determination of their perceptions.

Our empirical results based on PLS and OLS statistical approach during the period (2009-2013) are consistent with prior research, (Dhaliwal et al, 2010; Cohen et al, 2013). Audit committee financial experts with accounting expertise, exerts significance influence on firm value across the three countries (UK, US and Germany). It is also clear, that these impacts vary considerably. This may be due to the role and authority exercised by each audit committee. Furthermore, the impact on financial health shows mixed results. These findings suggest that future research seeking to employ the path of agency theory to link AC accounting expertise and the financial health of companies should strive to explore other theoretical frameworks that will better explain these relationships

Our results from tests of the mix of financial expertise (Accounting, Finance and Supervisory) suggest that an increase of firm value is achieved when firms hire financial experts with a combination of these expertise. Hence, while most prior studies document insignificant benefits as related to the presence of finance experts in ACs. Our study is among the first to use the Process Thinking model to demonstrate that such audit committee financial experts can significantly influence firm value and foster the financial reporting process. Despite finance experts may lack an in-depth accounting knowledge, our arguments clearly shows that their knowledge relating to managing financial, business, regulatory and industrial risks, when combined with accounting and supervisory experts will greatly influence firm value in all countries differently. Our findings also shows that supervisory financial experts especially in Germany should not be underestimated as they have the fiduciary interest of the company. We strongly agree with Ji Li, Kevin Lam and Gongming (2001) that culture did affect the behaviour and performance of financial experts.

Our study is strongly supported by the findings of Dhaliwal et al (2010) in that, given that the SEC and U.S. stock exchanges continue to apply the broad definition of financial expertise, the results, particularly those from tests of the mix of accounting expertise, can have policy implications for the SEC and firms seeking to improve the effectiveness of their ACs". Our findings underscored the results of researchers such as Hoitash (2009) that laid emphasis for the use of a narrow definition that includes only accounting and auditing expertise. However, insignificant findings of financial experts as related to financial health of companies suggest a closer look at the extensive authority financial experts do have in executing their duties especially their influences of accounting policies.

Our study is relevant to organizations, academic institution who might want to closely look at the decision making processes of financial experts. However, insignificant findings of financial experts as related to financial health of companies suggest a closer look at the extensive authority financial experts do have in executing their duties especially their influences of accounting policies. Our study is relevant to organizations, academic institution who might want to closely look at the decision making processes of financial experts and leadership in general.

The remainder of this study is organized as follows. Section 2 discusses the theoretical framework and hypothesis, Sections 3, deals with the empirical findings and conclusion.

5.2 Theory and Hypothesis

Unlike prior studies which have examined firm value using firms from one single country, our study examines financial experts and their influences on firm value from the perspective of the financial reporting process in relation to the UK, US and Germany. Furthermore, prior studies have based their main theoretical underpinnings on the agency and resource dependence theories to explain the influences of financial experts (Kotha, S, Rindova.V.P and Rothaemel, 2001). Our study does not try to differentiate which of these theories drives the relationship between financial experts and firm value. Rather we adopt a new theoretical framework, the Financial Experts' Decision Making Model (*Process thinking Model*), to explain the influences of financial experts on firm financial health and firm value. The *Financial expert decision making Model* helps us to better understand the decision making process of an audit committee. This is also a respond to

a call made by Bedard and Gendron (2010), which encourage the application of different theoretical frameworks in the accounting literature.

5.2.1 Financial experts decision making Model (Process Thinking Model)

The research model for this research is based on the Throughput Model. As suggested by many philosophers and ethicists, ethical standards in general are governed by preferences, rules and principles.

Several authors have agreed that ethical decision making or the decision making process for both individuals or organizations constitute stages of perception, implying the recognition of a moral issue and with a viewpoint as to how to fix it based on the information at hand, analysing those information to make a judgement (**PJ**) that will ultimately lead to a constructive decision. (Bartlett, 2003; Loe, Ferrell, & Mansfield, 2000; Rest, 1986 & Rodgers, 2013). The influence of individual characteristics such as those in audit committees and environmental factors such as the framework of perceptions or rules under which they operate has been a major focus for most researchers over the years. Trevino (1986, 1992) proposed that “ethical decision making is the result of the interaction between individual and situational components, with the individual's way of thinking about ethical dilemmas being moderated by individually and situationally based moderators”. The *Throughput Model* recognised two general cognitive stages: a stage of perception, in which the decision maker perceives the ethical problems, the available alternatives, and the expected consequences of decisions; and a stage of rules and principle evaluations and judgment. According to this model, the first sense-making stage is affected by personal experience, qualifications, skills, organizational culture, and the wider cultural environment

The need to understand and explain unethical decision making caused by lack of auditor's independence or negligence of financial experts is encouraged by numerous cases that had indicated that frequently, auditors as well as financial experts do not display complete independence in mind and this leads to a decrease in audit quality and affects firm value. Consequently, without efficient and independent financial monitoring, the good corporate governance cannot be attained. Understanding what causes auditor's lack of independence may serve the legislature in adopting new rules and regulations that would improve the depth of auditors' independence, the role of financial experts and in turn, increase audit quality, creating more value for the shareholders. The aforementioned theories are concerned about the relationship between two variables. On the contrary, the Process Thinking Model is not only concerned about influences but probable reasons for a positive or negative influence.

In this vein, the Process Thinking Model is seen shedding more light on findings that cannot be explained by other theories. For example, the agency theory simply concluded that the reason why financial experts may arrive at a decision, without considering other alternatives is as a result of self – interest or greed. While this may be true, the Process Thinking Model went further to explain probable reasons and not to be confined only to self – interest. Probable reasons may be (1) Time pressure, (2) Insufficient information to act on, (3) Mixed signals, (4) No information, (5) Regulatory differences and (6) Ethical and cultural differences.

There are number of factors that can affect decision making in corporate environment with most of processes being interconnected. The four processes described by the Process Thinking Model are perception, information, judgement, and decision (Rodgers, 2007).

There is no unified view in the literature on what constitutes each phase exactly and whether all phases are always present in decision making process (Hogarth, 1987; Simon, 1957). The three phases in the Process Thinking Model proposed by Rodgers are the most frequently used in a decision making process, (a) perception and information gathering, (b) analysis of information and processing (i.e., judgment), and (c) choice (Rodgers, 2007).

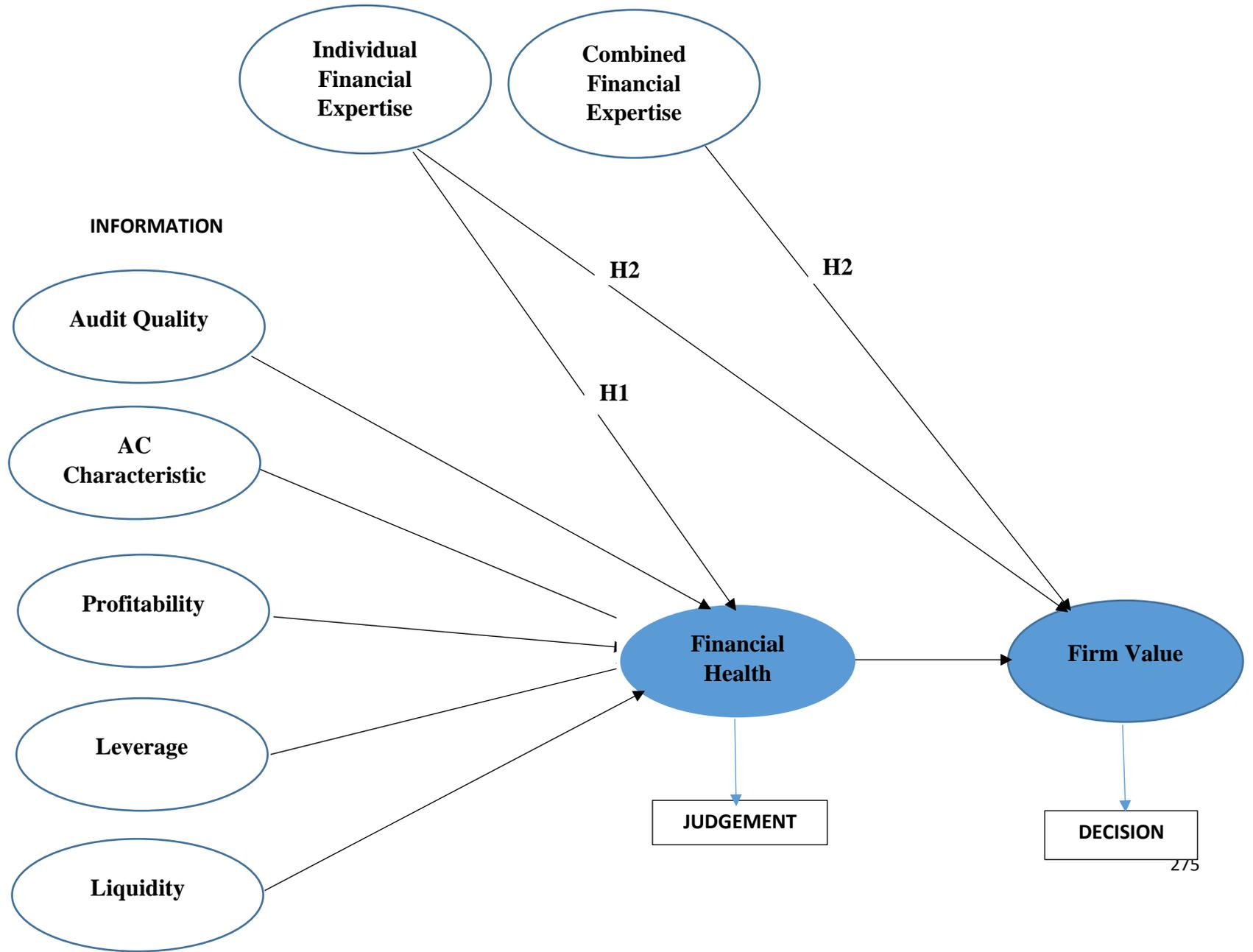
While the Financial expert decision making has a wide range of applications in analyzing ethical decision making in corporate setting, it can also allocate different players to particular stages of decision making. For instance, the outside auditor plays a significant role in creating the perception of the problem. Moreover, audit services aid the analysis of information and perceptual framing in the judgment stage.

To the best of my knowledge, no study in the accounting literature has used the Throughput Model. This paper will then add to the accounting literature, looking at decision – making process from a different perspective, thereby contributing new knowledge.

Theoretical framework provided by Throughput Model (TM) may serve as a useful tool in analyzing individual decision-making in a corporate environment (Rodgers and Gago, 2003). The need to understand and explain unethical decision making caused by lack of auditor's independence is encouraged by numerous cases that had indicated that frequently, auditors do not display complete independence in mind and this leads to a decrease in audit quality. Consequently, without efficient and independent financial monitoring, the good corporate governance cannot be attained. Understanding what

causes auditor's lack of independence may serve the legislature in adopting new rules and regulations that would improve the depth of auditors' independence and in turn, increase audit quality, creating more value for the shareholders.

Figure 5.1 Process Thinking Model



There are number of factors that can affect decision making in corporate environment with most of processes being interconnected. The four processes described by the Process Thinking Model are perception, information, judgement, and decision (Rodgers, 2007).

There is no unified view in the literature on what constitutes each phase exactly and whether all phases are always present in decision making process. The three phases in the Process Thinking Model (Throughput Model) proposed by Rodgers are the most frequently used when applying TM to corporate governance: “(a) perception and information gathering, (b) analysis of information and processing (i.e., judgment), and (c) choice” (Decision) (Rodgers, 2007). In the Process Thinking Model, we can categorize and apply Rodgers (2007) proposal into two stages of connections:

P → J

P → D

Where P is the perception of the financial experts in terms of his skills, qualification, experience and J represents financial health, I refers to accounting and non – accounting information and D represent firm value.

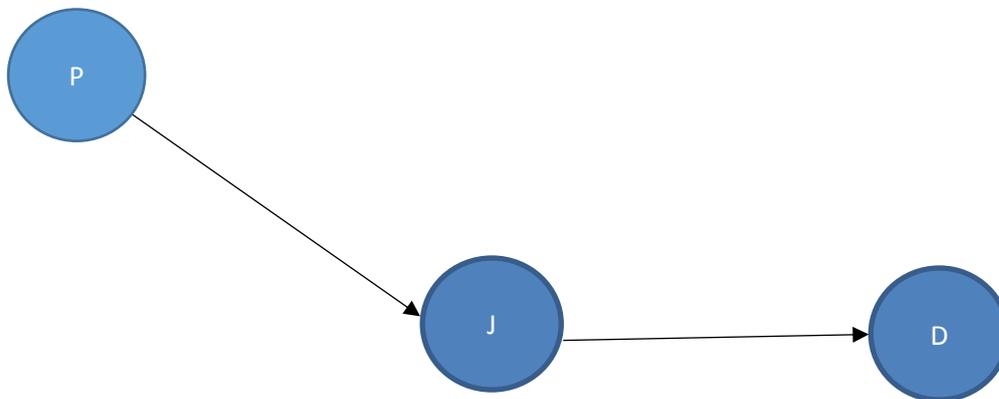
5.2.1.1 Judgemental Stage/Rules –based pathway (P → J →D)

The recent financial crisis was attributed to internal control weaknesses in organizations. This however led to legitimate questions regarding the objectives of the audit committee in the UK, US and Germany as well as the compliance to guided rules. Gaining an effective internal control system within an organization has been considered as the primary

objective of the audit committee. These objective has been influenced by set of rules, recommendations and laws. It has been argued that an effective internal control system is a major way of preventing financial malpractices or fraudulent activities. (BRC, 1999; Carcello et al, 2002; Abott L, J et al, 2012; RAE & Subramaniam, 2008 and Anderson.U.L et al(2012)

The fundamental principle in the judgemental/Rules – based pathway is that, it regards moral rules as a duty that has to be followed. It highlights what is wrong and right and this can be healthy professionally. Fig.5.2 below therefore can be described as “P” is rules and laws that are framed, “J” is the application and analysis of those rules and laws in a given situation and “D” the expected outcome or before a decision is made (Rodgers, 2009). Audit committee financial experts are therefore expected to have substantial knowledge and understanding of the rules.

Fig. 5.2 Judgemental/ Rules – based pathway



The understanding of rules or standards by financial experts is critical in the sense that, this may influence their analysis of evidence or judgements. These judgements may be for example:

- The analysis of how rules, auditing and accounting standards are applied based on the review of financial statements.
- The understanding, application and interpretation of these rules and accounting standards by the audit committee financial experts is also critical.

Many studies have argued that accounting financial experts are well equipped and conversant with accounting and auditing standards as compared to those financial experts with finance and supervisory expertise.(Krishnan and Visvanathan, 2008; Dhaliwal et al, 2010 and Cohen et al, 2010). Others disagree with this notion and argued that these rules may have to deal with financial and risk analysis, of which the financial experts with finance and supervisory expertise will be of immense significance.

In the Process Thinking Model, perception and information are interdependent. In other words, information may have an effect on audit committee financial expert's perception of the problem. This in turn affects the framing of the issue. However, the influence can appear in a reversed order, such as the manner in which audit committee financial experts frames a problem (reflecting financial expert's' perception) can affect the selection of information to be used in their prescribed tasks. It is possible that a financial expert can fall in a "vicious circle" where selective information enhances financial expert's belief in the accuracy of his/hers perception of a problem. This, in turn will steer financial experts into search of information that could further increase their confidence in the formed perception.

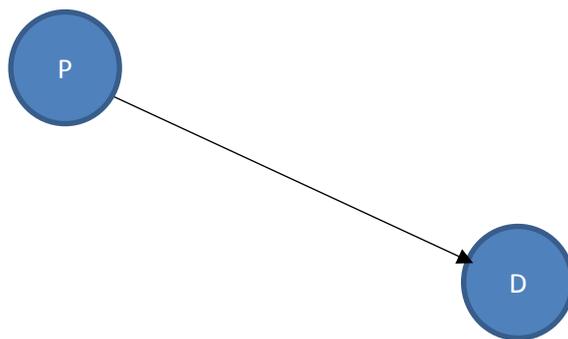
The selected information with formed perception of a problem results in a judgement or in other words, an evaluation of financial viability. This stage lay emphasis on how financial

experts will exercise their judgement of rules pertaining to the affirmation of a going concern statement's approval that will promote a firm's financial health.

5.2.1.2 Perception Stage/Preference – based pathway (P → D)

Many have linked this stage to the agency theory. Decisions using this pathway are not taken using any additional information that could be connected with the problem. If the information available is not in agreement with the perception (P) of the individual, such information is ignored (Rodgers, 2006). It is therefore concluded by prior research that such action can only be based on self – interest or greed.

Figure 5.3



Where P = Perceptions of the audit committee and “D”, the expected outcome, the firm value

The agency theory simply concluded that the reason why financial experts may arrive at a decision, without considering other alternatives is as a result of self – interest or greed. One of the primary objective of audit committees in the UK, US and Germany is to oversee financial reporting, act as proxy for shareholders who is the owner of the firm, align management strategies to the philosophy or core strategy of the firm as expected. However, because of the structural set up of corporations whereby directors are being elected by shareholders, who in turn will appoint the management of the company, there is often a conflict of interest. (Jensen

and Meckling 1976, Fama and Jensen 1983). This separation in terms of control is however the driving force of an agency cost.

It raises the questions as to whether:

- A. Audit committees do always act in the interest of the firm or shareholders/Principal?
- B. What is considered ethical or illegal act on the side of the audit committee and management?

The Process Thinking Model may help explain probable reasons and not to be confined only to self – interest. Probable reasons may be (1) Time pressure, (2) Insufficient information to act on, (3) Mixed signals, (4) No information, (5) Regulatory differences and (6) Ethical and cultural differences.

Therefore, critical decisions that audit committee financial experts may be facing for example that may result in the influence on firm value for examples are:

- Decisions that affect the reliability and accuracy of the reported accounts so that shareholders can make judgements as to the value of the firm with more certainty.
- Decisions that ensure the accounts more accurately reflect management decisions and constrain managers to more closely adhere to the interests of shareholders in their decision making.
- Decisions that ensure the firm adheres more closely to the rules or principles of good

business practice so that there is less chance of fines or censure by regulatory authorities.

- Decisions as to the best business practice or investment that a firm is advised to undertake (this should still be decisions that come from the audit committee).

Managers before the introduction of legislations have greater flexibility to manipulate financial statements, ethical egoism or the agency problem was a major issue. Audit committees with at least one independent financial experts are therefore established in these countries to overcome information asymmetries so as to help stakeholders to make constructive and important decisions based on financial health and firm value.

The perceptions of financial experts such as the qualifications, experience etc of financial experts may play a major role. The Throughput model helps us therefore to explain the importance of decision –making process by financial experts based solely on their perceptions.

5.3 Hypothesis development

We employ the Financial expert decision making Model to explain the impacts of financial experts in an audit committee on a firm's financial health and value. Three hypotheses are proposed below.

5.3.1 Financial experts (P) and financial health of Firms (J)

The audit committee, through their examination of annual reports delivered by the

management to the shareholders, are supposed to protect shareholders from misrepresentation of information and abuse of trust based upon it. Glassman (2005) argues that the main objective of an audit committee is to restore confidence in the profession of external auditing, improving management behaviour and financial report quality. There has been several studies on the financial health of firms.

McMullen and Raghunandan (1996) discover that in the absence of financial experts with the requisite professional qualification such as CPAs, financial reporting problems are inevitable. This may affect the value creation within firms. Xie et al (2003) found that the reduction of discretionary accruals and a negative association with restatement occurrences have been linked to audit committee financial experts. Firms with the right experts and sound financial background are an asset to the financial health of firms.

However, Peasnell et al. (2005) , noted that while AC may be necessary in a firm, their impact as far as manipulations especially when threshold are exceeded by pre – managed earnings are ineffective. Also their presence is irrelevant to manipulations whether downward or instances of income increasing manipulations

Lary and Taylor (2012) reported that lower incidence of fraud or severity of financial restatements are positively linked to the presence of financial expertise. AC members with financial background are assets and intellectual capital to the firm. Krishnan and Visvanathan (2008) reported that the knowledge and expertise of financial experts especially with accounting expertise gives them an added advantage in dealing with complex financial and

accounting matters that directly relates to the financial health of firms. Hence they are better positioned to influence the performance of firms. This imply that a positive financial health of firms are linked with the presence of financial experts with accounting expertise

On the contrary, better and efficient monitoring has been ascribed by several studies to the supervisory financial experts such as independent directors. (Klein, 2002; Carcello & Neal, 2000). Cohen (2008) argued that supervisory financial experts have commanding knowledge in areas of risk assessment such as business, industry and regulatory risks, which can be of immense benefit to audit committees. Hence, a supervisory financial expert with a fiduciary interest of the company ensures the continuous goodwill and aversion of any application of accounting methods that may put the company in jeopardy (Hope. Thomas. and Vyas., 2011). Krishnan and Lee. (2009 Found that, there is a higher probability for firms were financial malpractices and the issue of litigations are common, to hire financial experts with accounting expertise.

This fundamental differences in experiences and structural divergences in their various board structure may influence financial health differently.

We argue, therefore, that:

H1: The individual level of qualifications, skills and experiences (P) of the audit committee financial experts are likely to be positively linked with the different levels of financial health outcomes (J) in the UK, US and Germany comparatively.

5.3.2 Financial experts (P) and Firm value (D)

Davidson III et al (2004), find that the appointment of financial experts to audit committees serves as a driving force for the rise in stock price. Likewise, Defond et al (2005) find the creation of firm value was obvious based on p market reaction, as consumer confidence tend to be positively linked with financial experts with accounting expertise. Bedard et al. (2004), noted that financial expertise, measured using a strict definition based on accounting/auditing experience, is associated with less earnings management and better internal control. Erkens and Bonner (2013) noted that, Status of these experts play a predominant role in influencing market reactions, investor's confidence and value of the firm.

However, Anderson et al. (2004) do not find any relation between debt costs and financial experts serving on the audit committee. They attribute this to the fact that the creditors focus on audit committee independence and not necessarily on its expertise. Carcello et al. (2006) found that most financial experts did not have a background in accounting or finance and the stock exchange affiliation moderated this factor.

Moreover, the specific skills of financial experts matter when we examine the effects of financial experts on firm value. McDaniel, Martins and Maines (2002) categorize financial experts into accounting experts and finance experts. And they find that the detection of reporting problems in relation to regular business activity is associated with financial experts with accounting expertise. Also financial experts with finance expertise who have scanty knowledge of specific accounting issues are likely to detect reporting problems linked to non-

reporting business activity. These findings suggest that the role that these accounting and finance experts play in terms of value creation may differ.

We argue, therefore, that:

H2: The level of qualifications, skills and experiences (P) of the audit committee financial experts are positively linked with an increase in firm value (D) differently in the UK and US and Germany.

5.4 Data and Method

The population for the study consists of FTSE 100, Nasdaq100 and Dax100 firms over the period 2009 – 2013. The preparation of each data in terms of exclusions of outliers and missing data is shown in appendix 5.9.4, 5.9.5 and 5.9.6.

These companies were selected as a sample for this paper based on their market capitalization and more importantly, the accessibility of data.

The main theoretical framework used in this study is the Process Thinking Model and the hypothesis are formed from this model. This study employs an OLS and panel data as well as PLS path analysis.

5.4.1 Data sources

The audit committee variables (**P**) are collected via board ex database. The variable (**I**) are accessed using audit analytics, proxy statements and Data stream database. (**J**) Was calculated using ZScores and (**D**), through the Tobin's Q.

5.4.2 Variable Definition

The variable **P** represents the qualification, skills and experiences of financial experts categorised into accounting, finance and supervisory expertise. This was captured by looking at the biographical background of each member of the audit committee. Based on the SEC final rule of 2003, we define financial experts with accounting expertise as those with the requisite professional certification such as CPA, ACCA, CA and CIMA etc. Using dummy variables, we assign 1 to accounting expertise if an audit committee member is a holder of any of the above qualification or else 0. The procedure is repeated for both finance and supervisory expertise. (See appendix 5.4.2).

I represents (a) Audit quality, defined by two indicators (audit and non – audit fee). (b) AC characteristics, composed of (AC Size and AC Meeting). (c) Profitability, composed of (ROA and Sales/Assets), (d) Liquidity is defined by (Cash ratio and Quick ratio) and Leverage (Debt/Asset and Debt/Equity).

J represents financial health. Financial health was captured using Z scores and firm value (**D**), via Tobin's Q.

Consistent with Rodgers (2013), we use a firm's financial health status as a proxy for the firm's accounting-based. This serves as a benchmark against which we can measure the contribution of the perception of financial experts to the overall market value of a firm relative to the financial viability. We use -1 times the Zmijewski score (Zmijewski 1984) as a proxy (i.e., -1 * Zmijewski score) for financial health. This financial health score measures a firm's financial viability. The higher the score, the higher the probability a firm will stay financially healthy.

The Zmijewski score is constructed based on a firm's profitability, liquidity, and leverage ratios as follows:

$$ZFC = -4.336 - 4.513 (\text{ROA}) + 5.679 (\text{FINL}) + 0.004 (\text{LIQ})$$

Where "ROA is the return on assets, FINL is the financial leverage, and LIQ is the liquidity measure. The financial health measure is computed as $-ZFC$. We consider three sets of financial measures that are likely to be significant determinants of a firm's financial health: profitability, liquidity, and leverage". (Rodgers, 2013). As cited in Rodgers (2013), "these measures have been widely used in prior research as a measure of a firm's performance". (Smith and Watts, 1992; Kaplan and Zingales, 1997; Pava and Krausz, 1996; Garcia-Castro et al, 2010). For Firm value, the Tobin's Q was used as a proxy. We used the educational and biographical to determine financial expertise via dummy variables, with the SEC final rule of 2003 as our basis for definition.

Two empirical methods are used to test the hypotheses proposed above. The ordinary least squares (OLS) method and the partial least squares (PLS) met

5.5 Method explanation

In carrying out our PLS estimates, three fundamental criteria or assumptions were met. (a) Individual construct reliability, (b) Convergent and composite reliability and (c) Discriminant validity. We also conducted a principal component analysis to avoid the issue of multi collinearity. Unlike the OLS method, we supported the robustness of our PLS results by employing a Bootstrapping technique of 5000 sample items. Each country was separately analysed with graphical representation of the results. Two major hypothesis were tested based on the Throughput Model:

P → J

P → D

Table 5.2 Prior studies that have used PLS statistical method

Author	Date	Key findings
Nijssen and Douglas	2008	One major advantage of PLS is that formative scales can be dealt with as compared to LISREL.
O’Cass and Fenech	2003,	“[PLS] circumvent[s]the necessity for the multivariate normal assumption” (p.377)
Pavlou and Chai	2002	Simultaneous analysis can be done.
Pullman, Granzin, and Olsen	1997	PLS has an explanatory and predictive power.
Pinto, Rodrí’guez Escudero, and Guti’errez Cilla’n	2008	PLS can handle both formative and reflective models
Singh, Fassott,Chao,and Hoffmann	2006a	PLS does not lay emphasis on normality rules
Tsang	2002	Where theoretical model and its measures are not well formed, PLS technique is applicable.

Source: Henseler, Ringle, and Sinkovics, (2009, p.281)

5.6 Empirical Results

5.6.1 PLS Results

Consistent with prior studies, we first of all validate our variables and their different individual indicators by making sure that (a) Individual construct reliability, (b) Convergent

and composite reliability and (c) Discriminant validity are in conformity with set rules as propounded by Fornell and Larcker (1981), Chin (1988) and Hair et al (2010). See appendix 5.9.3

5.6.2 OLS Results

First, we test Hypothesis 1 by examining the effect of an audit committee's composition (P) and on a firm's financial health (J). The most commonly used regression method, ordinary least squares (OLS), is employed to test the hypothesis. Standard errors are adjusted for potential heteroscedasticity and within firm serial correlations.

Considering that many other variables would also exert significant impact on a firm's financial health, we include five composite variables in the regression. These composite variables include audit committee (AC) characteristics, audit quality, profitability, leverage and liquidity.

Each composite variable is generated through a set of financial measures. AC characteristics equals to a weighted average of the size of an audit committee (AC_Size) and the number of meetings held by an audit committee each year (AC_Meetings). The weights of AC_Size and AC_Meetings are determined by the average number of AC members and AC Meetings of a firm yearly. Audit quality equals to a weighted average of a firm's yearly audit fees (Audit_Fees) and non-audit fees (Non-Audit_Fees). Profitability equals to a weighted average of a firm's return on assets (ROA) and its sales over assets ratio (Sales_Assets). Leverage equals to a weighted average of a firm's debt over assets ratio (Debt_Assets) and debt over equity ratio (Debt_Equity). Liquidity equals to a weighted average of Cash_Ratio, a firm's cash and equivalents divided by its current liability, and Quick Ratio, the sum of a firm's cash

and equivalents, marketable securities and accounts receivable, divided by its current liability. The weights of each set of financial measures are calculated similarly as the weights of AC_Size and AC_Meetings.

We study each country separately. First, we present the results of Hypothesis 1 for UK in Table 2, Panel A. We find that ACC Experts, FE experts and SFE experts have no significant impact on a firm's financial health, individually, in models 1, 2 and 3. When all three types of experts are all included in the regression, see model 4, their results remain insignificant. Regarding other controlling variables, we see that AC characteristics generally has a positive effect from model 1 to model 4, though not significant at 10% level, on a firm's financial health. Both Audit quality and Profitability are positively significantly related with a firm's financial health. While Leverage and Liquidity are negatively significantly related with a firm's financial health.

We present the results of Hypothesis 2 for UK in Table 2, Panel B. ACC Experts, whether entered into the regression individually in models 1, or collectively in model 4, where firm value was influenced by a positive significant effect. FE Experts have a positive significant effect on a firm's value in model 2, a positive but insignificant effect on a firm's value in model 4. SFE Experts have a positive but insignificant effect on a firm's value in model 3, a positive significant effect on a firm's value in model 4. Among all the models, a firm's financial health always has positive significant effect on a firm's value.

In sum, the results of UK indicate that an audit committee's composition positively affects a firm's value through P→D pathway, but does not affect a firm's value through a firm's financial health through P→J→D pathway.

In order to make our UK findings robust, Path analysis using PLS and Bootstrapping was done.

Table 5.3

Panel A-The Effects of Financial Experts on Financial Health-UK				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics	0.07	0.06	0.07	0.07
	0.14	0.17	0.11	0.15
Audit Quality	0.02 ***	0.02 ***	0.02 ***	0.02 ***
	0.00	0.00	0.00	0.00
Leverage	-2.71 ***	-2.71 ***	-2.71 ***	-2.72 ***
	0.00	0.00	0.00	0.00
Liquidity	-0.14 ***	-0.14 ***	-0.14 ***	-0.14 ***
	0.00	0.00	0.00	0.00
Profitability	3.54 ***	3.58 ***	3.59 ***	3.51 ***
	0.00	0.00	0.00	0.00
ACC Experts	-0.10			-0.11
	0.37			0.31
FE Experts		0.09		0.10
		0.64		0.59
SFE Experts			-0.17	-0.16
			0.42	0.45
Obs	370	370	370	370
R ²	0.93	0.93	0.93	0.93

Panel B-The Effects of Financial Experts on Firm Value-UK				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
Financial Health	0.04 **	0.04 **	0.04 **	0.04 **
	0.05	0.02	0.03	0.02
ACC Experts	0.43 ***			0.40 ***
	0.00			0.00
FE Experts		0.44 **		0.36
		0.05		0.11
SFE Experts			0.36	0.42 *
			0.16	0.10
Obs	370	370	370	370
R ²	0.04	0.02	0.02	0.05

Table 5.3 OLS and Panel data

Table 5.4 Path analysis outputs (Models 1; 2; 3; 4) below

Path Coefficients	Model 1	Model 2	Model 3	Model 4
	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics Financial Health ¹¹ ()	-0.070***	-0.065***	-0.073***	-0.065***
Audit Quality Financial Health ()	0.045	0.037	0.043	0.045
Leverage Financial Health ()	-0.591***	-0.589***	-0.594***	-0.586***
Liquidity Financial Health ()	-0.009	-0.002	-0.005	-0.004
Profitability Financial Health ()	0.553***	0.551***	0.550***	0.555***
Financial Health Firm Value ()	0.407***	0.428***	0.419***	0.424***
ACC Experts Financial Health ()	0.043			0.048**
ACC Experts Firm Value ()	0.149***			0.131***
FE Experts Financial Health ()		-0.025		-0.032
FE Experts Firm Value ()		0.130***		0.117***
SFE Experts Financial Health ()			0.014	0.011
SFE Experts Firm Value ()			0.085***	0.100***
Multiple (explained variance)				
Financial Health	0.722	0.721	0.721	0.723
Firm Value	0.194	0.189	0.180	0.215

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

Table 5.4 PLS results

Table 3 shows that Financial Health has high explained variance in all models: which means that all observed variables explain approximately 72% of Financial Health variable variance. All observed variables explain more than 18% of Firm Value variance (in all models).

Before making conclusion (interpretation of path coefficients significance, etc.), bootstrap analysis was performed to check whether table 3 coefficients are robust or not. In practical researches several sample sizes are used most often: 1000; 5000; 10000. In our study we used 5000 bootstrapping sample size. One of the main outcomes of bootstrapping is the construction of bias-corrected confidence intervals for models coefficients.

Table 5.5 Bootstrapping Results: Bias-corrected 95 % Confidence Interval

Model	Path Coefficients	Estimate	Lower 95% CI	Upper 95% CI	P Value
Model 1	AC Characteristics Financial Health ()	-0.070	-0.107	-0.026	0.001
Model 1	Audit Quality Financial Health ()	0.045	-0.021	0.094	0.134
Model 1	Leverage Financial Health ()	-0.591	-0.763	-0.482	0.000
Model 1	Liquidity Financial Health ()	-0.009	-0.042	0.061	0.717
Model 1	Profitability Financial Health ()	0.553	0.337	0.675	0.000
Model 1	Financial Health Firm Value ()	0.407	0.154	0.606	0.000
Model 1	ACC Experts Financial Health ()	0.043	-0.009	0.093	0.104
Model 1	ACC Experts Firm Value ()	0.149	0.053	0.217	0.000
Model 2	FE Experts Financial Health ()	-0.025	-0.079	0.049	0.506
Model 2	FE Experts Firm Value ()	0.130	0.041	0.182	0.000
Model 3	SFE Experts Financial Health ()	0.014	-0.048	0.037	0.492
Model 3	SFE Experts Firm Value ()	0.085	0.027	0.140	0.003

Bootstrap sample size=5000

According to the theoretical concept of confidence if the lower and upper values of confidence intervals have the same sign (both are positive or both are negative), then we can conclude that the particular coefficient is significant at corresponding significance level. Thus from bootstrapping results we can conclude that all significant path coefficients in table 3 are significant also by bootstrap analysis, and as a result they can be used to investigate research questions.

Using table 3 coefficients, results can be interpreted by the following way:

H1 analyse whether financial experts (skills, experience and qualifications such as Accounting experts, Finance Experts and Supervisory financial experts) influence the Financial Health in the UK. $P \rightarrow J$. Exploring models 1, 2, and 3 we can conclude that all three financial experts don't have significant impact on Financial Health (for all three dummies). At the same time Financial Health has significant positive impact on Firm value (for all four models).

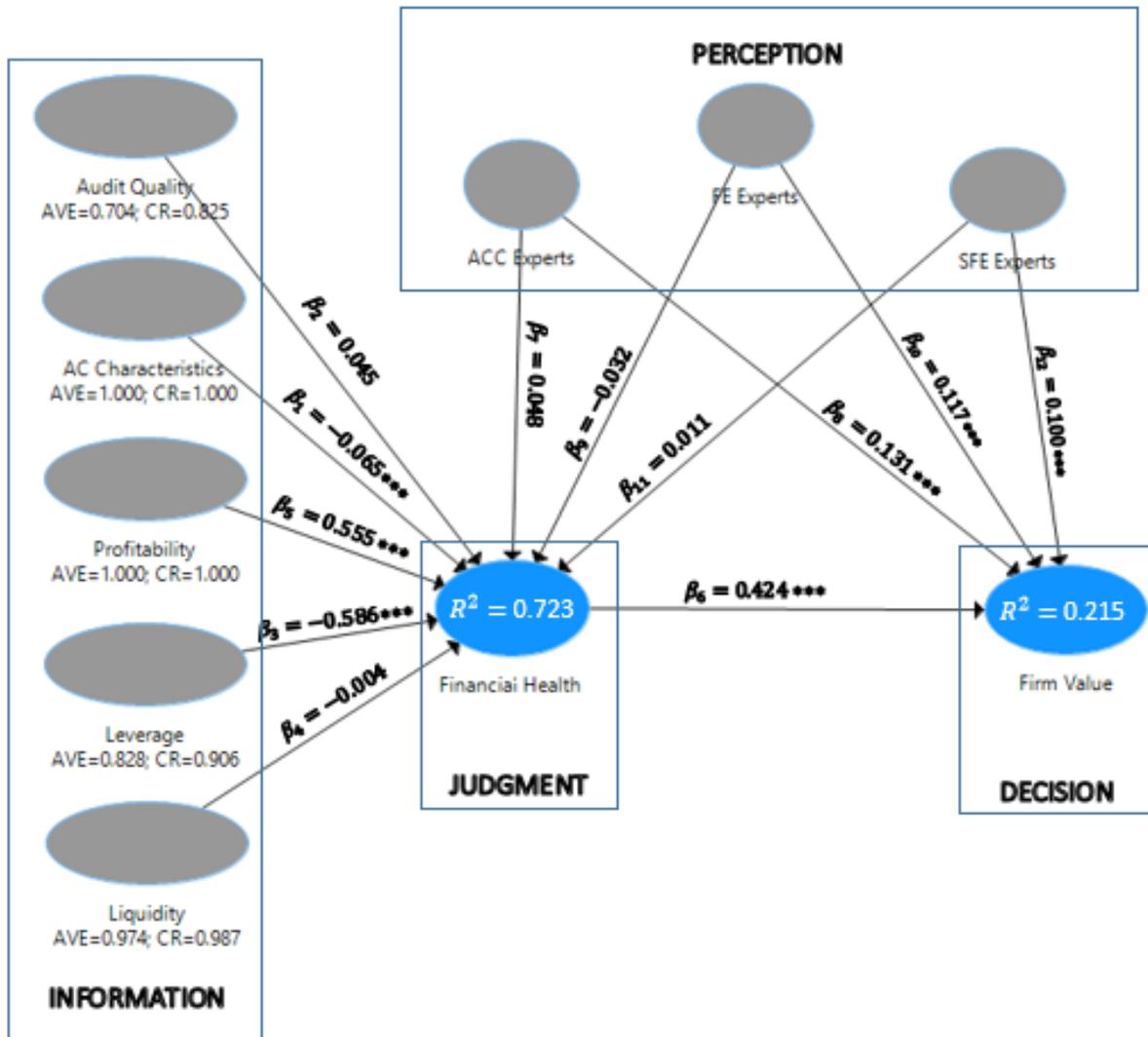
For H2, Models 1, 2 and 3 show that the perception of ACC, FE, and SFE experts qualification perception have significant (at the 0.01 significance level) positive impact on Firm Value in UK (β , $p < 0.01$, β , $p < 0.01$, β , and β , $p < 0.01$, correspondingly). ($P \rightarrow D$).

Summarizing we can say that the impact of financial experts qualifications don't have significant impact on Financial Health (Financial Health doesn't have mediation role between financial experts types and Firm Value). Although they influence directly the Firm Value. In analysing the relationship between other factors (Audit Quality; Audit committee

characteristics, Profitability, Liquidity and Leverage and Financial Health and subsequently, Firm Value from the perspective of the financial reporting process in the UK. I → J.

Summarizing path analysis and models 1-4 results we can conclude that from observed five constructs only three have significant influence on Financial Health. This influence is positive only for Profitability ($p < 0.01$). Leverage and AC Characteristics have negative impact on Financial Health ($p < 0.01$, $p < 0.01$). All these negative and positive impacts of latent variables on Financial Health subsequently influence positively Firm Value (for all four models). See graphical representation below.

Figure 5.4 PLS summarised results UK



Second, we present the results of Hypothesis 1 for Germany in Table 5, Panel A. We find that ACC Experts have positive but insignificant effect on a firm's financial health in models 1 and 4. FE experts have positively significant effect on a firm's financial health in models 2 and 4. Yet the effects of SFE experts on a firm's financial health are negligible. In terms of the results of Hypothesis 2 for Germany in Table 4, Panel B, we find that the impact of ACC Experts on a firm's value is positively significant, in both model 1 and model 4. FE Experts have no significant effect on a firm's value. However, the impact of SFE Experts on a firm's value is negatively significant in model 3, and insignificant in model 4. Hence, in

Germany, we find some evidence that ACC Experts affect a firm's value through the P→D pathway, FE Experts affect a firm's value through the P→J→D pathway, and SFE Experts do not seem to add to a firm's value.

Table 5.6

Panel A-The Effects of Financial Experts on Financial Health-Germany				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics	0.21 ***	0.17 ***	0.21 ***	0.18 ***
	0.00	0.00	0.00	0.00
Audit Quality	0.00	0.00	0.00	0.00
	0.58	0.66	0.60	0.59
Leverage	-2.85 ***	-2.85 ***	-2.85 ***	-2.85 ***
	0.00	0.00	0.00	0.00
Liquidity	0.10	0.11 *	0.11	0.10
	0.12	0.09	0.11	0.13
Profitability	0.36	0.45 *	0.37	0.44 *
	0.15	0.08	0.15	0.08
ACC Experts	0.38			0.57
	0.18			0.44
FE Experts		0.49 **		0.47 **
		0.01		0.02
SFE Experts			-0.36	0.36
			0.23	0.64
Obs	382	382	382	382
R ²	0.87	0.87	0.87	0.87

Panel B-The Effects of Financial Experts on Firm Value-Germany				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
Financial Health	0.03 ***	0.03 ***	0.03 ***	0.03 ***
	0.00	0.00	0.00	0.00
ACC Experts	0.38 ***			1.00 ***
	0.01			0.00
FE Experts		-0.04		-0.05
		0.68		0.61
SFE Experts			-0.26 *	0.70
			0.07	0.06
Obs	382	382	382	382
R ²	0.05	0.03	0.04	0.06

Table 5.6 OLS and Panel data results Germany

In testing how robust our findings are, a Path analysis using PLS and Bootstrapping was also done.

Table 5.7. Path analysis outputs (Models 1; 2; 3; 4) below

	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics Financial Health ¹² ()	-0.022	-0.018	-0.024	-0.016
Audit Quality Financial Health ()	-0.019	-0.024	-0.020	-0.020
Leverage Financial Health ()	-0.491***	-0.488***	-0.491***	-0.491***
Liquidity Financial Health ()	0.119***	0.122***	0.121***	0.119***
Profitability Financial Health ()	0.527***	0.532***	0.528***	0.526***
Financial Health Firm Value ()	0.438***	0.448***	0.444***	0.437***
ACC Experts Financial Health ()	0.036			0.040
ACC Experts Firm Value ()	0.086			0.088
FE Experts Financial Health ()		-0.014		-0.022
FE Experts Firm Value ()		0.010		-0.006
SFE Experts Financial Health ()			-0.031	
SFE Experts Firm Value ()			-0.052	
Multiple (explained variance)				
Financial Health	0.765	0.764	0.765	0.766
Firm Value	0.207	0.200	0.202	0.207

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

Table 5.7 PLS results Germany (Models 1 – 4)

Multiple of Financial Health is about 0.76 in all models, which means that all observed variables explain approximately 76% of Financial Health variance. For Firm Value dependent

¹²Financial Health is the already transformed variable.

variable Multiple is approximately 0.200. It is lower than for Financial Health case, but anyway it is significantly higher from zero.

Bootstrap analysis (sample size=5000) is performed to check whether table 7. Coefficients are robust or not. Bias-corrected confidence intervals are constructed.

Insert Table 5.8

Bootstrapping Results: Bias-corrected Confidence Interval (95%)

Model number	Pathway	Estimate	Lower 95% CI	Upper 95% CI	P value
Model 1	Audit fees → Financial Health (β_1)	-0.004	-0.058	0.052	0.760
Model 1	Non-Audit fees → Financial Health (β_2)	-0.024	-0.078	0.025	0.336
Model 1	Non-Audit fee Ratio → Financial Health (β_3)	0.034	-0.041	0.076	0.312
Model 1	AC Size → Financial Health (β_4)	-0.078	-0.127	-0.027	0.004
Model 1	AC Meetings → Financial Health (β_5)	0.105	0.056	0.154	0.000
Model 1	ROA → Financial Health (β_6)	0.631	0.522	0.722	0.000
Model 1	Sales/assets → Financial Health (β_7)	0.010	-0.041	0.070	0.666
Model 1	Liquidity → Financial Health (β_8)	0.073	0.012	0.137	0.014
Model 1	Leverage → Financial Health (β_9)	-0.564	-0.641	-0.484	0.001
Model 1	Financial Health → Firm Value (β_{10})	0.407	0.280	0.514	0.000
Model 1	ACC Experts → Financial Health (β_{11})	0.018	-0.050	0.091	0.554
Model 1	ACC Experts → Firm Value (β_{12})	0.088	-0.025	0.216	0.133
Model 2	FE Experts → Financial Health (β_{13})	-0.055	-0.108	-0.001	0.044
Model 2	FE Experts → Firm Value (β_{14})	0.010	-0.080	0.091	0.830
Model 3	SFE Experts → Financial Health (β_{15})	-0.009	-0.083	0.064	0.789
Model 3	SFE Experts → Firm Value (β_{16})	-0.053	-0.186	0.064	0.379

Bootstrap sample size=5000

According to bootstrapping results we can conclude that path analysis results are robust, so they can be used to investigate research questions.

Using path analysis results research questions are observed.

In Germany the financial experts perceptions don't influence significantly the Firm Value (p values of, are higher than 0.1).

H1: analyse whether financial experts (skills, experience and qualifications such as Accounting experts, Finance Experts and Supervisory financial experts) influence the Financial Health and subsequently the Firm value from a financial reporting perspective in the Germany or not. $P \rightarrow J$

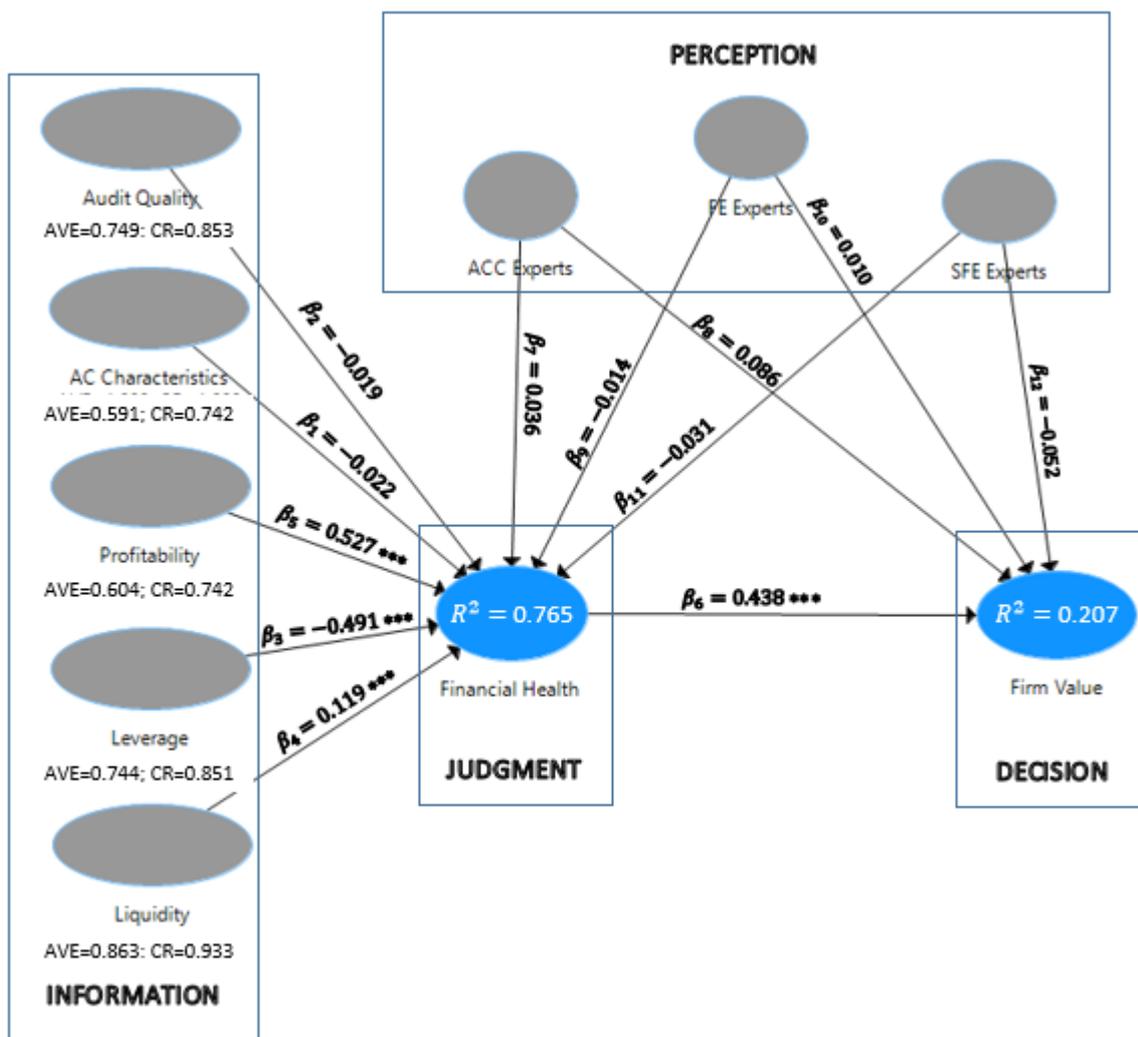
H2: In Germany the financial experts perceptions don't influence significantly the Firm Value (p values of, are higher than 0.1). ($P \rightarrow D$)

Exploring models 1, 2, and 3 and bootstrapping results financial experts' perception don't influence significantly Financial Health. At the same time Financial Health has significant positive impact on Firm value (for all four models).

Summarizing we can say that Financial Health doesn't mediate between financial experts perception and Firm Value. In analysing relationship between independent factors and Financial Health in Germany, I → J, we can conclude that AC Characteristics and Audit Quality don't have significant impact on financial Health of German companies. The Financial Health is positively affected by Profitability and Liquidity variables ($p < 0.01$, and $p < 0.01$). Leverage has the significant negative impact on Financial Health ($p < 0.01$).

Graphical representation are seen below.

Figure 5. 5 PLS Summarised results Germany



5.5 PLS result, summarised from Model 1, 2, and 3

Third, we present the results of Hypothesis 1 and 2 for the US in Table 5, Panels A and B. ACC Experts is negatively significantly linked with a firm’s financial health and a firm’s value in model 1, insignificant linked with each of the two dependent variables in model 4. The

effects of FE experts on either a firm's financial health or a firm's value are insignificant in model 2 and model 4. SFE experts have positively significant effect on a firm's financial health in models 3, and positively significant effect on a firm's value in both models 3 and 4. Therefore, in the US, we find some evidence that SFE Experts affect a firm's value both through the P→D pathway and the P→J→D pathway. ACC Experts and FE Experts do not have a desirable effect on either a firm's financial health or a firm's value.

Table 5.9

Panel A-The Effects of Financial Experts on Financial Health-US				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics	-0.01	0.00	-0.01	-0.01
	0.78	0.95	0.78	0.80
Audit Quality	0.02 ***	0.02 ***	0.02 ***	0.02 ***
	0.00	0.00	0.00	0.00
Leverage	-2.22 ***	-2.20 ***	-2.22 ***	-2.22 ***
	0.00	0.00	0.00	0.00
Liquidity	0.02 **	0.02 **	0.02 **	0.02 **
	0.03	0.05	0.02	0.02
Profitability	0.47 ***	0.43 ***	0.47 ***	0.47 ***
	0.00	0.00	0.00	0.00
ACC Experts	-0.22 ***			-0.10
	0.00			0.56
FE Experts		-0.05		-0.03
		0.51		0.70
SFE Experts			0.25 ***	0.15
			0.00	0.44
Obs	375	375	375	375
R ²	0.89	0.88	0.89	0.89

Panel B-The Effects of Financial Experts on Firm Value-US				
	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
Financial Health	0.23 ***	0.21 ***	0.23 ***	0.22 ***
	0.00	0.00	0.00	0.00
ACC Experts	-0.62 **			-0.53
	0.02			0.39
FE Experts		-0.30		-0.30
		0.25		0.29
SFE Experts			0.68 **	0.12 **
			0.02	0.87
Obs	375	375	375	375
R ²	0.04	0.03	0.04	0.05

Table 5.9 OLS and Panel data US

We also did a Path analysis using PLS to show robustness.

Table 5.10 Path analysis outputs (Models 1; 2; 3; 4)

	Model 1	Model 2	Model 3	Model 4
Path Coefficients	ACC Experts	FE Experts	SFE Experts	Financial Experts
AC Characteristics Financial Health ¹³ ()	-0.067***	-0.065***	-0.068***	-0.068***
Audit Quality Financial Health ()	-0.031	-0.040	-0.026	-0.034
Leverage Financial Health ()	-0.540***	-0.531***	-0.541***	-0.541***
Liquidity Financial Health ()	0.026	0.020	0.030	0.023
Profitability Financial Health ()	0.534***	0.535***	0.532***	0.536***
Financial Health Firm Value ()	0.406***	0.396***	0.399***	0.403***
ACC Experts Financial Health ()	-0.062***			-0.061***
ACC Experts Firm Value ()	-0.120***			-0.122***
FE Experts Financial Health ()		0.021		0.018
FE Experts Firm Value ()		-0.038		-0.043
SFE Experts Financial Health ()			0.079***	
SFE Experts Firm Value ()			0.102***	
Multiple (explained variance)				
Financial Health	0.762	0.758	0.764	0.762
Firm Value	0.174	0.161	0.170	0.176

* Significant at $p < 0.1$; ** significant at $p < 0.05$; *** significant at $p < 0.01$

Multiple of Financial Health is about 0.76 in all models, which means that all observed variables explain approximately 76% of Financial Health variance. For Firm Value dependent variable Multiple is higher than 0.16. It is lower than for Financial Health case, but anyway it is significantly higher from zero.

Bootstrap analysis (sample size=5000) is performed to check whether table 9, coefficients are robust or not. Bias-corrected confidence intervals are constructed and presented in below table.

¹³Financial Health is the already transformed variable.

Table 5.11

Bootstrapping Results: Bias-corrected 95 % Confidence Interval

Model	Path Coefficients	Estimate	Lower 95% CI	Upper 95% CI	P Value
Model 1	AC Characteristics Financial Health ()	-0.067	-0.109	-0.017	0.004
Model 1	Audit Quality Financial Health ()	-0.031	-0.076	0.014	0.178
Model 1	Leverage Financial Health ()	-0.540	-0.648	-0.447	0.000
Model 1	Liquidity Financial Health ()	0.026	-0.024	0.075	0.307
Model 1	Profitability Financial Health ()	0.534	0.455	0.631	0.000
Model 1	Financial Health Firm Value ()	0.406	0.284	0.528	0.000
Model 1	ACC Experts Financial Health ()	-0.062	-0.097	-0.023	0.001
Model 1	ACC Experts Firm Value ()	-0.120	-0.181	-0.058	0.000
Model 2	FE Experts Financial Health ()	0.021	-0.027	0.061	0.351
Model 2	FE Experts Firm Value ()	-0.038	-0.136	0.055	0.445
Model 3	SFE Experts Financial Health ()	0.079	0.041	0.109	0.000
Model 3	SFE Experts Firm Value ()	0.102	0.040	0.164	0.001

Bootstrap sample size=5000

Comparing bootstrapping results with models 1, 2, and 3 we can conclude that the estimation is fairly robust. So path analysis models coefficients are robust can be used to test research questions.

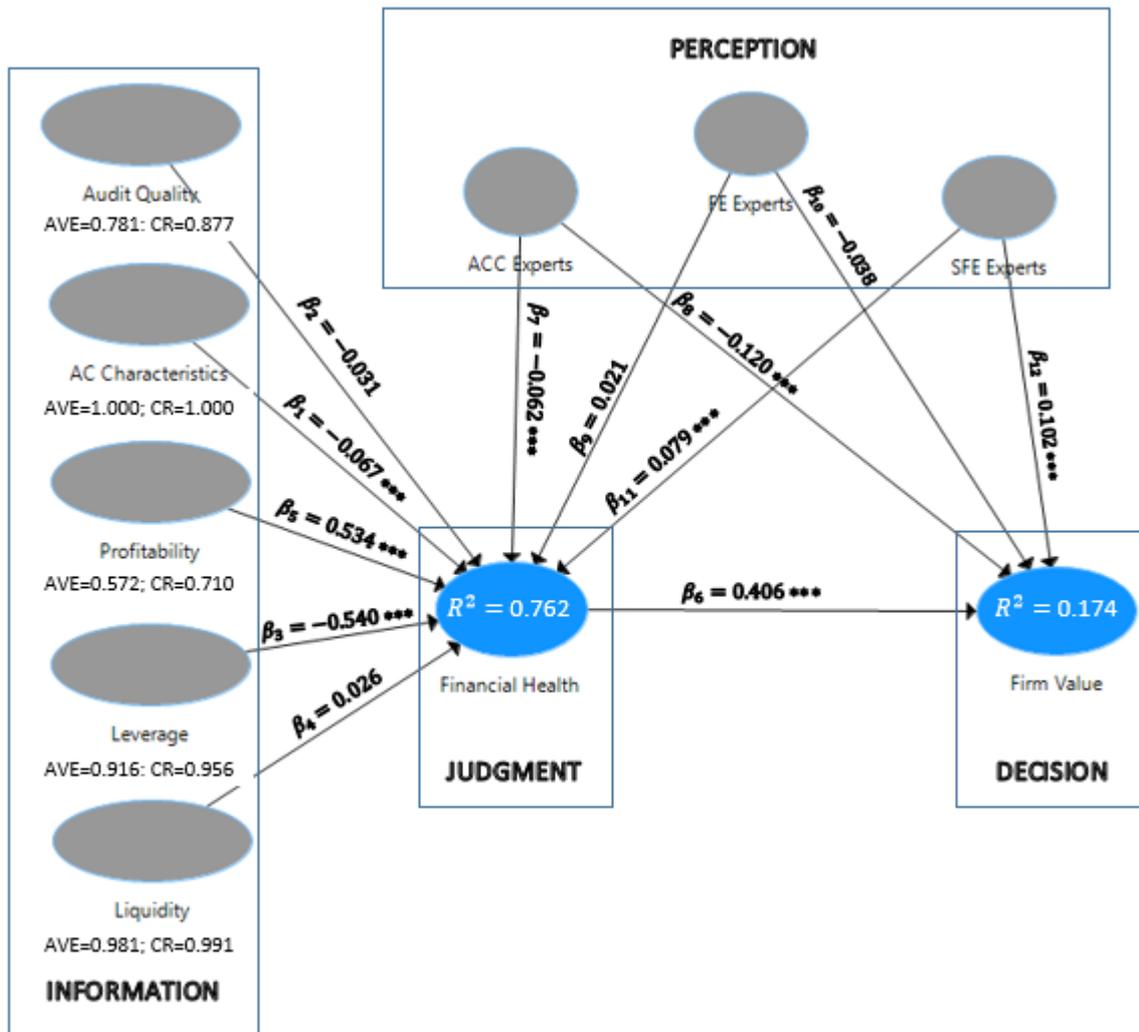
In analysing H1 whether financial experts (skills, experience and qualifications such as Accounting experts, Finance Experts and Supervisory financial experts) influence the Financial Health.

The perception of ACC has significant negative impact on Financial Health value in US ($p < 0.01$, SFE experts perception influence Financial Health Value positively (model 3) at the 0.05 significance level ($p < 0.05$), FE experts' perception don't influence significantly the Financial Health.

H2: Model 1 shows that the perception of ACC has significant (at the 0.05 significance level) negative impact on Firm Value in US ($p < 0.01$, SFE experts perception influence Firm Value positively (model 3) at the 0.05 significance level ($p < 0.05$), FE expert's perception don't influence significantly the Firm Value.

At the same time Financial Health has significant positive impact on Firm value (for all four models).

Figure 5.6. Path analysis US



5.6 PLS result, summarised from Model 1, 2, and 3

In analysing relationship between other factors (Audit quality, Audit committee characteristics, Profitability, Liquidity and Leverage) and Financial Health and subsequently, Firm Value from the perspective of the financial reporting process in US. Models 1-4 results show that AC Characteristics and Leverage have significant negative impact on Financial Health ($p < 0.01$, $= -0.540$).

The influence of Audit Quality and Liquidity impacts on Financial Health are not significant. Only profitability influence positively Financial Health ($p < 0.01$). Subsequently Financial Health has significant positive impact on Firm value (for all four models).

It is worth noting that one of the fundamental reason for the variation on the impact of financial experts on firm value may be associated with the percentages of accounting experts on audit committees in the UK. (See Table 11 in Appendix). The UK have 57, 3% of accounting expertise as compared to Germany and UK. The proportion of qualified FE Experts is significantly lower in Germany (65.4%) compared with UK (90.0%) and US (85.3%). The proportion of qualified SFE Experts don't differ significantly across countries

5.6.3 Cross Country analysis of Variables

Before testing research hypotheses, it will be better to make cross country analysis of independent and dependent variables.

Financial experts' perception variables are dummy variables (not numerical), so for cross country analysis Chi square test is used. With Chi square test we test the null hypothesis about not significant difference between the proportions of ACC Experts (FE Experts, and SFE Experts) across countries.

Table 5.12 ACC Experts across countries

			ACC Experts		ACC Experts
			No	Yes	
Country	UK	Count	158	212	370
		Expected Count	268.6	101.4	370.0
		% within Country	42.7%	57.3%	100.0%
	Germany	Count	338	44	382
		Expected Count	277.3	104.7	382.0
		% within Country	88.5%	11.5%	100.0%
	US	Count	322	53	375
		Expected Count	272.2	102.8	375.0
		% within Country	85.9%	14.1%	100.0%
Total		Count	818	309	1127
		Expected Count	818.0	309.0	1127.0
		% within Country	72.6%	27.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	247.77 ^a	2	.000

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 101.45.

As we see the null hypothesis is rejected (Asymp. Sig. (2-sided) =0.000 and is less than 0.05) at the 0.05 significance level, so we can conclude that, the proportion of qualified ACC Experts is significantly higher in UK (57.3%) compared with Germany (11.5%) and US (14.1%)¹⁴.

¹⁴ The pairwise comparison shows that this proportion is not significantly different between Germany and US.

Table 5.13 FE Experts across countries

			FE Experts		Total
			No	Yes	
Country	UK	Count	37	333	370
		Expected Count	73.5	296.5	370.0
		% within Country	10.0%	90.0%	100.0%
	Germany	Count	132	250	382
		Expected Count	75.9	306.1	382.0
		% within Country	34.6%	65.4%	100.0%
	US	Count	55	320	375
		Expected Count	74.5	300.5	375.0
		% within Country	14.7%	85.3%	100.0%
Total		Count	224	903	1127
		Expected Count	224.0	903.0	1127.0
		% within Country	19.9%	80.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	80.74 ^a	2	.000

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 73.54.

The proportion of qualified FE Experts is significantly lower in Germany (65.4%) compared with UK (90.0%) and US (85.3%)

Table 5.14. SFE Experts across countries

			SFE Experts		Total
			.No	Yes	
Country	UK	Count	27	343	370
		Expected Count	35.5	334.5	370.0
		% within Country	7.3%	92.7%	100.0%
	Germany	Count	38	344	382
		Expected Count	36.6	345.4	382.0
		% within Country	9.9%	90.1%	100.0%
	US	Count	43	332	375
		Expected Count	35.9	339.1	375.0
		% within Country	11.5%	88.5%	100.0%
Total		Count	108	1019	1127
		Expected Count	108.0	1019.0	1127.0
		% within Country	9.6%	90.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.825 ^a	2	.148

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 35.46.

The proportion of qualified SFE Experts don't differ significantly across countries

As we saw in descriptive analysis of variables for each country's most of variables distributions were deviated from normal distributions. So instead of comparing mean values of numerical variables across countries (ANOVA analysis) we suggest using median values comparison (Chi square) test (nonparametric analogue of ANOVA).

As can be seen, except Audit fees median, the median values of other independent variables are significantly different across countries, which mean that for at least one country the median value of corresponding variable is significantly different.

5.7 Summary of Hypothesis

Hypothesis Testing Approach – US, UK and Germany

To check the research hypotheses the following approach (based on bias-corrected confidence interval of bootstrap analysis) is used.

Let's assume that according to analysis we know that Factor X influence significantly Y in countries A and B. Now we want to test whether these differ significantly across countries (A and B).

The influences (standardized regression coefficients) of X on Y for country A and B are β_A and β_B correspondingly.

Bias-corrected 95% Confidence intervals (constructed at the bootstrap analysis) for each of these coefficients are:

$$\begin{array}{ll} 95\% \text{ CI of } \beta_A & [L_{\beta_A}; U_{\beta_A}] \\ 95\% \text{ CI of } \beta_B & [L_{\beta_B}; U_{\beta_B}] \end{array}$$

Our Null and alternative hypotheses are:

$$H_0: \beta_A = \beta_B$$

$$H_1: \beta_A \neq \beta_B$$

The decision rule is:

If above two confidence intervals don't have interaction, then we reject the Null hypothesis and conclude that there is significant difference between Influences of X on Y across countries

A and B. Moreover, if at the same time $L_{\beta_A} > (<)U_{\beta_B}$, then this means that influence of X on Y in country A is significantly higher (lower) compared with country B.

Using research hypotheses testing approach described above, research hypotheses are tested and results are presented by simple tables:

Hypothesis H1

Perceptions of Audit committee financial experts in terms of the level of his skills, experience and qualifications influencing financial health in the UK, US and German companies differently

Table 5.15.

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
ACC Experts → Financial Health	0.043	0.009	0.093	0.104	0.036	-0.017	0.101	0.238	-0.062	-0.097	-0.023	0.001
FE Experts → Financial Health	-0.025	0.079	0.049	0.506	-0.014	-0.058	0.037	0.557	0.021	-0.027	0.061	0.351
SFE Experts → Financial Health	0.014	0.048	0.037	0.492	-0.031	-0.098	0.027	0.329	0.079	0.041	0.109	0.000

	ACC Experts → Financial Health			FE Experts → Financial Health			SFE Experts → Financial Health		
	UK	Germ	US	UK	Germ	US	UK	Germ	US
UK	No			No			No		
Germ		No			No			No	
US			Yes			No			Yes

In UK and Germany all three financial experts’ perceptions don’t significant influence Financial Health. At the same time ACC (negative) and SFE Experts influence (positive) levels are significant for US companies

Hypothesis H2

Perceptions Audit committee financial experts in terms of the level of his skills, experience and qualifications influencing firm value in the UK, US and German companies differently
 Bootstrapping results: Financial experts perception → Firm Value across countries

Table 5.16

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
ACC Experts → Firm Value	0.149	0.053	0.217	0.000	0.086	-0.027	0.205	0.140	-0.120	-0.181	-0.058	0.000
FE Experts → Firm Value	0.130	0.041	0.182	0.000	0.010	-0.071	0.095	0.815	-0.038	-0.136	0.055	0.445
SFE Experts → Firm Value	0.085	0.027	0.140	0.003	-0.052	-0.176	0.071	0.407	0.102	0.040	0.164	0.001

	ACC Experts → Firm Value			FE Experts → Firm Value			SFE Experts → Firm Value		
	UK	Germ	US	UK	Germ	US	UK	Germ	US
UK	Yes ¹⁵		high ¹⁶	Yes			Yes		equal
Germ		No			No			No	
US			Yes			No			Yes

ACC Experts influence on Firm Value in UK and US, moreover in UK this influence is positive unlike US, where the influence is negative

FE Experts influence on Firm Value is significant only for UK companies.

SFE Experts influence levels on Firm Value are significant only for UK and US companies, however these influence levels don't differ significantly across these two countries.

¹⁵ In diagonal we can have two options "Yes" and "NO". "Yes" means that the corresponding influence is significant. In this case we can say that ACC expert's qualification significantly influence Firm Value in UK.

¹⁶ In three cells above diagonal we can have three possible options: "high"; "equal"; "low". "High" means that in countries, located in rows, the influence level of the factor on dependent variable is significantly higher comparing the same relationship for countries shown in columns. In current cell we have "equal", which means that in UK and in Germany ACC experts perceptions impacts on Firm Value are not significantly different.

Summary of control variables

Audit committee characteristics (AC Characteristics) influencing the financial health and Firm value in the UK, US and German companies differently.

Table 5.17

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
AC Characteristics → Financial Health	-0.070	0.107	-0.026	0.001	-0.022	-0.088	0.028	0.467	-0.067	-0.109	-0.017	0.004

	UK	Germ	US
UK	Yes		equal
Germ		No	
US			Yes

AC Characteristics has significant negative impact on Financial Health of UK and US companies: the influence levels don't change significantly across these countries. This influence is not significant for German companies

Audit quality (Audit and non-audit fees, Non-audit fee ratio) influencing the financial health and firm value In the UK, US and German companies differently.

Table 5.18

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Audit Quality → Financial Health	0.045	0.021	0.094	0.134	-0.019	-0.066	0.023	0.392	-0.031	-0.076	0.014	0.178

	UK	Germ	US
UK	No		
Germ		No	
US			No

Audit Quality doesn't have significance influence on Financial Health of companies in all countries

Leverage (Debts/Assets and Debts/Equity) influencing the financial health and Firm value in the UK, US and Germany differently

Table 5.19

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Leverage → Financial Health	-0.591	0.763	0.482	0.000	-0.491	-0.585	-0.411	0.000	-0.540	-0.648	-0.447	0.000

	UK	Germ	US
UK	Yes	equal	equal
Germ		Yes	equal
US			Yes

Leverage, which is a combination of two indicators: Debts/Assets and Debts/Equity, has significant negative (and significantly not different) influence on Financial health of companies in all three countries.

Liquidity (Quick ratio and cash ratio) influencing the financial health and Firm value in the UK, US and Germany differently

Table 5.20

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Liquidity → Financial Health	-0.009	0.042	0.061	0.717	0.119	0.047	0.162	0.000	0.026	-0.024	0.075	0.307

	UK	Germ	US
UK	No		
Germ		Yes	
US			No

Liquidity, as a combination of two indicators (Quick ratio and cash ratio), has significant positive influence on Financial health only in Germany.

Profitability (ROA and Revenue or Sales/Assets) influencing the financial health and firm value in the UK, US and Germany differently.

Table 5.21

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Profitability → Financial Health	0.553	0.337	0.675	0.000	0.527	0.425	0.605	0.000	0.534	0.455	0.631	0.000

Profitability → Financial Health			
	UK	Germ	US
UK	Yes	Equal	Equal
Germ		Yes	Equal
US			Yes

Profitability has equally significant positive impact on financial health in all countries.

Summary- Hypotheses 3.1.2 to 3.1.7.

Considering all independent variables effects on financial health in all three countries vary and we can say that subsequently Financial Health impacts on Firm Value are significantly positive, but don't significantly differ across all countries. However, the impacts of individual expertise vary considerably.

It is also clear, while results of accounting experts impacting firm value in the UK differently is consistent with prior research, the relevance of finance experts is worth noting across borders. Results also shows that, a team work of all experts will impact firm value more positively as compared to individual expertise. Also while we demonstrate that financial expertise does not necessary influence financial health of companies, factors like profitability and liquidity does and differ from country to country.

Table 5.22

	UK				Germany				US			
	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value	Estimate	Lower 95% CI	Upper 95% CI	P value
Financial Health → Firm Value	0.407	0.154	0.606	0.000	0.438	0.309	0.557	0.000	0.406	0.284	0.528	0.000

Financial Health → Firm Value

	UK	Germ	US
UK	Yes	Equal	Equal
Germ		Yes	Equal
US			Yes

5.8 Conclusion

The paper reflects rigorously and a thorough insight of the Process Thinking Model as to the influences of audit committee financial experts on firm value. The result suggest that financial experts with accounting expertise, that is with the requisite professional certification have a profound positive influence on firm value in all countries differently. The results also suggest that audit committee with a combination of these expertise may be linked to an increase in firm value. It implies therefore that financial experts should not only possess accounting expertise but also finance and supervisory expertise. The study also demonstrates that quite apart from the agency theory, the need for a new theoretical framework that better explain these interactions is necessary and added to the accounting literature.

. Consistent with Dhaliwal (2010, p.791), the result further suggest that, using the broader definition, the element of bias was avoided and “supports the regulatory stance of including finance experts in the definition of AC financial experts”. Conversely, our mixed

results on financial health may warrant future research as organizational settings continues to evolve.

One limitation to our study is that, we only consider the top 100 companies of the FTSE, NASDAQ and Dax100. The findings may not be generalised as they are specifically related to companies within the same level of market capitalizations. Nevertheless, our findings are robust and consistent with prior research such as (Dhaliwal, 2010 and Chen et al, 2013), adding new knowledge of a theoretical framework that has never been used in this discipline

CHAPTER 6

6.1 Conclusions and Originality of Research.

Corporate governance and mechanisms such as audit committee affects the development and functioning of capital markets such as FTSE100, Nasdaq100 and Dax100 companies and exerts a strong influence on financial health, resource allocation and firm value. In an era of increasing capital mobility, the major contributions of intellectual capital such as financial experts categorised into accounting, finance and supervisory expertise are of immense significance.

This study set out to further develop our understanding of governance and corporate control. In doing so, it addresses some of the underlying factors that promote efficient corporate governance, and examines some of the strengths, weaknesses and policy implications associated with various corporate governance systems. It also provided a theoretical and empirical evidence and contributions on the link between audit committee financial experts as a corporate governance mechanism, financial health and firm value, identifying areas in which a consensus view appears to have emerged in the literature and areas in which further research is still needed.

One of the most striking differences between countries' corporate governance systems is the

difference in the regulatory, board, ownership and control of firms that exist across countries, such as the UK operating under a principles – based regulatory system, the US, rules – based system and Germany, a rules – based system but more of a stakeholder based approach.

Audit committees have been identified as a powerful source for improvement in corporate governance. In the UK for example, Cadbury (1992) argued that appropriately structured audit committees have the potential to restore the integrity of financial information dealings that may improve the financial health of firms, improve both the quality of companies' financial reporting, as well as firm value. Subsequent governance reports have sought to build on this by introducing further refinements focusing on audit committee composition, independence and expertise (Smith, 2003; UK Corporate Governance Code, 2010). This has resulted, not only in audit committees becoming a 'comply or explain' obligation for all listed companies in the UK, but also being subject to ongoing scrutiny into the potential for certain characteristics to impact corporate decision-making and behaviour.

This study firstly sets out to investigate the impact of financial experts categorised into accounting, finance and supervisory expertise on financial health and firm of FTSE100 and Nasdaq100 companies from the perspective of the unitary board structure. Secondly, the study took a deeper view of ethical considerations and their influences on three different board structures. More so, how financial experts may influence firm value in Dax100 firms within a dual board structure in Germany. Thirdly, the study also investigate the impact of regulation on firm performance in Nasdaq100 firms in the US with particular reference of the impact of financial experts on the financial health of these firms. Finally, the study comparatively investigated the impact of financial experts on firm value in the US, UK and Germany.

This study draws on both the established literature on board structures as well as the emerging literature on the impact of audit committee governance on financial health and firm value. The study investigates the impact of audit quality, audit committee size, profitability, liquidity and leverage on the financial health of firms. Furthermore, this study utilises alternative measures of both financial expertise as well as new composite measures of financial health. One of the main challenges facing policy makers is how to develop a good corporate governance framework which can secure the benefits associated with controlling shareholders acting as direct monitors.

In this study, we have employed the Throughput model to explain and highlight the impact of the competences and experiences as well as the conflict of interest of financial experts in a decision-making process. To the best of our knowledge, this is the first study that uses a throughput model as a theoretical framework in examining the impact of financial experts on firm value from the perspective of the financial reporting process. This implies that this study has not only updated earlier researches but added to the accounting literature. The study will serve as an encouragement and motivation to researchers to focus on other theoretical frameworks in the study of audit committees so as to add new knowledge to the literature.

Our theoretical contribution on the understanding of governance and control is well explained in the financial expert decision model (Throughput Model). The study explored how decision – making processes can be depicted by different ethical pathways. In other words, the environment, controlling mechanism, board structures under which financial experts do operate may have tremendous effect on their role and authority. The study highlighted why the approaches of financial experts based on their perceptions (Qualification, skills or experience) may influence the decision – making process differently. The study underscored the agency

theory, especially reflecting on the German board structure, where checks and balances are well in place. Hence, the model used in this study (Throughput) will not only benefit researchers to explore decision making in marketing, finance and management studies but add new knowledge to the literature.

The first empirical analysis shows that, the notion that accounting financial experts exerts a superior positive significant influences on firm value holds in the UK as compared to the US. This may be due to the fact that the proportion of accounting experts based of our descriptive statistical findings in the UK resulted to 57.3% as compared to 14.1% in the US. Furthermore, finance experts in the UK exerts a positive significant influence on firm value. In both UK and US, supervisory financial experts exert a positive significant influence on firm value. This may be due to the fact that CEO's who are considered as supervisory experts have a fiduciary responsibility and interest in these firms. The study also provide evidence to affirm that leverage influences financial health negatively. This may suggest that the debt – equity decisions of these firms by financial experts may be generally based on trade- offs between interest tax shield and costs of financial stress (Upneja & Dalbor, 2001). Evidence is also provided to infer that liquidity play an immense role in the financial health of firms. This may also imply that firms may use their liquid assets to finance other activities and investments, especially in a situation where external finance is not obtainable or expensive. (Liargovas and Skandalis, 2008). On the other hand, too much of liquidity may do more harm than good to the company. Conversely, "higher liquidity can allow a firm to deal with unexpected contingencies and to cope with its obligations during periods of low earnings" (Omondi and Matturi (2013, p.100)

Our results justify the fundamental reasons why boards of directors value accounting expertise with the requisite professional certification. However, the growing percentages of finance and supervisory financial experts appointed to audit committees is gradually sending a signal that resonates with our findings of mixed expertise being much more productive. These results are positive findings given that prior research shows that accounting knowledge, audit experience and financial management experience are valuable and they result in less earnings management, better internal control and firm value creation (Defond *et al*, 2005; Carcello *et al*, 2006 Carcello *et al* 2011; Beatie *et al*, 2013; Dhaliwal *et al*, 2010; Chan and Li, 2008 and Cohen *et al*, 2010).

The findings of the second empirical analysis of the impact of financial experts on firm value in Germany affirmed that, there is a policy shift within the German dual board system as with regards to the role and authority of audit committees. For the first time, accounting financial experts have exerted a positive significant influence on firm value. This may be considered a major contribution and a call on researchers to further investigate the monitoring role and decision –making processes of audit committee financial experts within the dual board system, not only in Germany but countries like Austria and Switzerland as well.

The findings also, of the third empirical analysis suggest that audit committee accounting financial experts do influence firm value but significantly negative in the US. This findings may suggest that despite the US and UK operates within the unitary board system, the impact of financial experts differ considerably. From the board and regulatory point of view, the result will also inform directors about knowledge, experience, skills and qualifications of experts that may contribute to an increase in firm value and improve financial health of firms. The study

has shed light on the intricacies and complexities of the working environment in which financial experts may operate under, such as the different board structures where their role may be limited, passive, well – defined and in some cases not defined as in the case of Germany. No study to the best of the author’s knowledge has linked the impact of financial experts on firm value from the perspective of board structures.

With the higher percentages of accounting financial experts appointed to audit committees in FTSE100 companies in the UK as compared to the US and Germany, our results support the findings of Erkens and Bonner (2013) that pointed to the impact of status. We disagree in the case of the US, as we see accounting experts exerting a negative impact on firm value but supervisory financial expert significantly influencing firm value positively. This is due to the fact that financial management experiences which are mostly possessed by supervisory financial expert’s plays a central role in the creation of firm value. The lagged effects supported the view that firms are much more concerned about experts who can deliver rather than status.

The study has failed to find other key characteristics of audit committees having an impact on financial health, for example audit quality. In spite of this, by using a new theoretical framework, the Throughput model, the study has added new knowledge to the accounting literature.

We can therefore conclude that based on Philips (1992) and Collin and Hussey(2009), who defined originality as an introduction of a new methodology, theoretical framework, the continuation of a previous work, undertaken an empirical work that has not been done before and a new area of discipline, this study has fulfilled these terms in the following way:

- The Theoretical framework used in this research, *The Throughput Model*, has not been used in this discipline. This is the first application dealing with financial experts.
- No study has looked at financial experts and their impact on firm value from the perspective of the one and two – tier board structure using a financial expert decision model (Throughput Model).
- No study has combined both a systematic literature review and a throughput Model investigating Dax100 companies in Germany.
- Combining OLS and Panel data together with PLS and with lagged effects in looking at the impact of financial experts on firm value in the UK, US and Germany.
- Looking at ethical pathways that may influence different board structures as in chapter 2 has not been done before.
- Finally, the empirical presentation of findings.

Our research has several implications for research and practice. In our analysis, we have demonstrated that the decisions taken by financial experts (P→D) might not necessarily result to an element of self - interest, rather the lack of adequate information which will prompt the financial expert to employ creativity that carries a calculated risk in making critical decisions relating to the creation of firm value. However, the underlying question of a conflict of interest even when making decisions that will foster firm value creation is debatable. We

clearly demonstrated that the expertise of financial experts are not sufficient to boost the financial reporting process but a critical evaluation of their ethical applications in a decision making process from time to time is a pre-requisite that will foster the process forward.

Secondly, a negative impact of accounting experts on firm value in the US may be debatable. However, given that the firm under research is Nasdaq100 and has additional requirements for the appointment of financial experts such as possessing a financial management experience, which an accounting expert may lack, this may be a supporting argument

6.2 Limitations

We note several limitations to our study. Firstly, due to the limited sample size, our study does not control for industry differentiation as suggested by Hull and Rothenberg (2008). Secondly, our sample is comprised of firms in the Top 100 firms of the FTSE100, Nasdaq100 and Dax100. Despite this limitation, we still observe a significant impact of financial experts on firm value and financial health.

6.3 Further research opportunities

From a public policy perspective these findings should provide new insight to board of directors, supervisory and management board as well as governance regulators as the positive impact of a range of audit committee characteristics on the financial health and firm value could be interpreted as a positive input.

However, what this analysis cannot show is exactly why this positive and in some cases, negative relationship exists. Despite the Throughput Model may help in explaining probable reasons, further research that may thoroughly deal with a qualitative approach such as in-depth interviews of experts within the management of these companies may help. Further research could usefully explore whether more effective audit committees really encourage more extensive audits or whether their presence, and the buffer they represent between company management and auditors and management, merely facilitates auditors to do their audit as thoroughly as they would wish.

Further questions raised by this study include:

- (a) To what extent do supervisory boards transfer their monitoring responsibilities to audit committees within a dual board structure and the extent to which improved governance characteristics facilitate this? There is growing evidence that audit committee financial experts within the dual board structure have recently gained recognition, however the dominance of the supervisory board may affect their role and authority.

- (b) The findings relating to the insignificant relationship between audit quality and financial health in the UK, US and Germany have led to further question as also raised by Ghafran (2013, p.221), as to “what extent do audit committees simply transfer their monitoring responsibilities to auditors and the extent to which improved governance characteristics facilitate this also”? In a related vein, it seems rather peculiar that there is growing evidence that financial expertise actually leads to more audit work, at least as reflected by higher fees. It could be countered that more effective audit committees should result in less need for intensive audits and consequently lower fees.

Due to the focus and length of this research, there are few other areas that can also be looked into for future research as listed below:

- The impact of supervisory and management boards on corporate decisions in a dual board structure. Evidence from Germany, Austria and Netherland and Switzerland
- The impact of financial experts on audit quality, financial health and firm value in Germany
- How does Audit quality and the Size of audit committees influence financial experts, financial health and firm value? Evidence from Germany

In closing remarks, the study can be counted on as one of the first to explore the study of audit committees using a new theoretical framework, the Throughput Model. Overall, the contribution of this research has added new knowledge to the accounting literature and will benefit boards, regulators as well as universities.

APPENDICES

CHAPTER 2

Appendices 2.9.5

2.9.5.1 Companies excluded from studies – UK and US

(UK) Table 1

Carnival Plc
Evraz plc
Eurasian Natural Resources
Friends Life Group Ltd.
Fresnillo plc
Glencore International
Intercontinental Consolidated Airlines Group
SA
Land Securities Group
Lloyds Banking Group
Xstrata
Coca-Cola HBC AG
British Land Co.
Hammerson
Royal Bank of Scotland Group
Schroders
RSA Insurance Group
Standard Chartered
HSBC
Reed Elsevier¹⁷

¹⁷ * **Reed Elsevier** is removed from data as Sales/assets, Debt/assets, Debts/equity, Cash ratio, Quick ratio are 0 for all 5 years

(US)

Baidu.com, Inc
Check Point Software Technologies Ltd.
Express Scripts, Inc.
Liberty Interactive
NXP Semiconductors
VimpelCom Ltd.
Facebook, Inc.
TripAdvisor
Vodafone Group, plc
Kraft Foods
Liberty Globals plc.
Tractor Supply Company
SeaGate Technology Holdings
Liberty Media C
Liberty Media A

2.9.5.2 Sample structure

Table 2 UK data sample structure

Description	2009	2010	2011	2012	2013	Total
FSTE100	100	100	100	100	100	500
Financial Institution	18	18	18	18	18	90
Missing values	3	2	1	2	9	17
Outliers	5	5	4	4	5	23
Final sample size	74	75	77	76	68	370

US Sample structure

Table 3 US data sample structure

Description	2009	2010	2011	2012	2013	Total
NASDAQ100	100	100	100	100	100	500
Financial Institution	15	15	15	15	15	75
Missing values	4	6	5	2	11	28
Outliers	6	5	4	4	3	22
Final sample size	75	74	76	79	71	375

2.9.5.3 Descriptive statistics (Mean, Skewness) UK

Table 4 Descriptive Statistics – UK for 2009 - 2013

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.57	1.00	0.50	0.00	1.00	-0.30	-1.92
FE Experts	0.90	1.00	0.30	0.00	1.00	-2.68	5.20
SFE Experts	0.93	1.00	0.26	0.00	1.00	-3.30	8.92
Audit fees	6.62	3.30	9.88	0.10	57.00	3.02	9.46
Non-Audit fees	2.66	1.40	3.91	0.00	38.00	5.04	37.39
Non-Audit fee Ratio	0.61	0.43	0.78	0.00	9.00	5.86	51.00
AC Size	4.61	4.00	1.24	3.00	10.00	0.95	1.22
AC Meetings	5.12	4.00	2.26	3.00	17.00	2.14	5.50
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.08	0.07	0.07	-0.10	0.59	2.29	11.56
Sales/assets	0.84	0.76	0.56	0.00	3.71	1.12	2.49
Debt/assets	0.23	0.22	0.14	0.00	0.62	0.36	-0.24
Debts/equity	1.09	0.60	1.38	0.00	8.17	2.66	7.72
Cash ratio	0.46	0.26	0.68	0.01	5.42	4.29	22.13
Quick ratio	0.92	0.78	0.80	0.01	6.51	3.71	18.12
Financial Health	2.53	3.88	3.68	-18.64	6.97	-2.80	8.70
Firm Value	1.39	1.06	1.29	0.02	9.79	3.63	17.11

Table 4 above shows descriptive analysis of dependent and independent variables. Table 3 shows the descriptive statistics for the variables of this study over a period of five years. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table, the average number of financial experts with accounting expertise is 57%, finance expertise is 86% and those with supervisory expertise is 92%. The financial health ranges between a minimum of -18.64 to a maximum of 6.97, with an average of 2.53 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 3.68, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (*TQ*) after winsorisation ranges from a minimum of 0.02 to a maximum of 9.79, with an average of 1.39 for the whole period. The standard deviation is 1.29, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of financial health is negative (-2.80), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 3.63. Nonetheless, the kurtosis statistics of Tobin's Q and financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q. This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006 and Francoeur *et al.*2008).

Descriptive statistics (Mean, Skewness) US

Table 5 Descriptive Statistics US for 2009 - 2013

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.14	0.00	0.35	0.00	1.00	2.07	2.29
FE Experts	0.85	1.00	0.35	0.00	1.00	-2.01	2.03
SFE Experts	0.89	1.00	0.32	0.00	1.00	-2.43	3.92
Audit fees	4.68	2.89	5.71	0.00	36.86	2.52	7.69
Non-Audit fees	1.58	0.30	3.66	0.00	25.63	3.98	17.45
Non-Audit fee Ratio	0.28	0.12	0.37	0.00	1.40	1.49	0.89
AC Size	3.70	4.00	0.82	3.00	7.00	1.21	1.62
AC Meetings	8.59	8.00	2.77	1.00	28.00	1.36	6.96
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.11	0.11	0.10	-0.47	0.55	-1.51	10.32

Sales/assets	0.92	0.63	0.77	0.00	4.83	2.46	7.34
Debt/assets	0.15	0.13	0.14	0.00	0.57	0.86	0.00
Debts/equity	0.36	0.21	0.50	0.00	4.28	3.36	17.51
Cash ratio	1.66	1.34	1.48	0.02	8.95	1.83	4.71
Quick ratio	2.23	1.85	1.62	0.10	10.12	1.62	3.88
Financial Health	4.16	4.59	1.44	-6.52	6.81	-3.32	16.11
Firm Value	2.77	2.29	1.81	0.52	10.67	1.77	3.69

This section shows descriptive analysis of dependent, independent variables. Table 5 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table, the financial health ranges between a minimum of -6.52 to a maximum of 6.81, with an average of 4.16 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 1.44, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (TQ) ranges from a minimum of 0.52 to a maximum of 10.67, with an average of 2.77 for the whole period. The standard deviation is 1.81, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of Financial health is negative (-3.32), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 1.77. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur *et al.*, 2008).

2.9.5.4 Correlation Matrix

Table 6 Correlation Matrix UK

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	.168**	1														
SFE Experts	-.032	-.094	1													
Audit fees	-.132*	-.021	.020	1												
Non-Audit fees	-.088	-.063	-.287**	.426**	1											
Non-Audit fee Ratio	.091	.021	-.166**	-.178**	.316**	1										
AC Size	-.055	.149**	.163**	.214**	.230**	-.106*	1									
AC Meetings	-.128*	.062	.052	.580**	.310**	-.049	.196**	1								
ROA	-.038	.039	-.010	-.163**	-.106*	-.076	-.072	-.168**	1							
Sales/assets	-.087	-.137**	.215**	-.132*	-.216**	-.085	-.118*	-.180**	.139**							
Debt/assets	-.031	.134**	.051	-.051	.030	.171**	-.025	-.114*	-.081	.017	1					
Debts/equity	-.082	.137**	.041	.136**	.058	.120*	-.031	.146**	-.121*	-.149**	.664**	1				
Cash ratio	.070	.115*	-.122*	-.132*	-.045	.125*	-.178**	.046	.131*	-.223**	-.196**	-.136**	1			
Quick ratio	.092	.078	-.062	-.125*	-.082	.087	-.172**	-.006	.206**	-.098	-.179**	-.155**	.949**	1		
Z Score	.047	-.131*	-.050	-.056	-.020	-.155**	.073	-.073	.161**	.164**	-.739**	-.948**	.085	.107*	1	
Tobin's Q	.170**	.086	.067	-.249**	-.179**	-.003	-.085	-.180**	.551**	.019	-.100	-.124*	.248**	.297**	.110*	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in the correlation matrix

The correlation matrix shows that among several significant independent variables Financial Health and Firm Value have the highest significant positive correlation with ROA (0.161 and 0.551 correspondingly). At the same time financial health has the highest negative correlation with one of the leverage indicators: Debt/equity ratio (-0.948). Additionally very high correlation can be observed between liquidity (cash ratio and quick ratio, 0.949) and leverage indicators (debt/assets and debt/equity, 0.664).

From the current research perspective one of the main interesting relationships is the relationship between financial health and firm value. The main hypothesis is that the financial health of the company plays a mediating role between main indicators of company performance and overall firm value. From the correlation matrix we see that the correlation between these two variables (0.110) is significant at the 0.05 significance level. However as described in the data preparation section instead of the initial financial health variable the exponentially transformed variable should be used in all models. In the framework of Model 1 the initial path analysis is implemented and CFA is used to estimate the latent variables reliability and validity, which provides very useful information about the possibility of combining individual indicators for the latent variable values computation. Two measures, Average Variance Explained (AVE) and Composited Reliability (CR) are used to evaluate the CFA results.

Table 7 UK Variance Inflation Factor

Model	Coefficients						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	110.396	10.576		10.439	.000		
Debts/equity	-1.448	1.921	-.025	-.754	.451	.476	2.101
Debt/assets	-284.290	18.343	-.519	-	.000	.481	2.079
Sales/assets	-19.711	3.495	-.142	-5.641	.000	.853	1.173
ROA	662.351	24.958	.637	26.538	.000	.938	1.066
AC Meetings	.807	1.055	.023	.765	.445	.596	1.677
AC Size	-4.354	1.576	-.069	-2.762	.006	.878	1.139
Non-Audit fees	-.490	.538	-.024	-.909	.364	.764	1.309
Audit fees	.042	.247	.005	.170	.865	.568	1.760
Cash ratio	-9.401	2.944	-.080	-3.193	.002	.852	1.173

a. Dependent Variable: Financial Health (tr)

The highest value of variance inflation factor is 2.101. This is below 10, which shows that there is no sign of multicollinearity

Table 8 Correlation Matrix -US

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	-.048	1														
SFE Experts	-.887**	-.149**	1													
Audit fees	-.017	.103*	-.041	1												
Non-Audit fees	.101	.109*	-.145**	.567**	1											
Non-Audit fee Ratio	-.020	.135**	-.021	.118*	.629**	1										
AC Size	-.059	.062	.054	.019	.072	.050	1									
AC Meetings	.060	-.073	-.090	.114*	.027	-.045	.015	1								
ROA	-.013	-.060	.058	-.041	-.095	-.087	.035	.005	1							
Sales/assets	.183**	-.172**	-.171**	-.150**	-.100	.032	.026	-.238**	.190**	1						
Debt/assets	-.161**	.087	.110*	.206**	.198**	.109*	.047	.009	-.222**	-.226**	1					
Debts/equity	-.150**	.059	.116*	.144**	.143**	.091	.078	-.062	-.276**	-.148**	.833**	1				
Cash ratio	.058	.111*	-.074	-.150**	-.113*	-.141**	-.059	.077	.141**	-.290**	-.114*	-.182**	1			
Quick ratio	.055	.167**	-.084	-.166**	-.124*	-.138**	-.049	.044	.212**	-.260**	-.117*	-.196**	.964**	1		
Z Score	.119*	-.079	-.085	-.076	-.113*	-.106*	-.062	.074	.512**	.201**	-.767**	-.941**	.143**	.172**	1	
Tobin's Q	-.097	-.072	.105*	-.295**	-.251**	-.205**	-.076	-.033	.268**	.158**	-.196**	-.147**	.201**	.274**	.170**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation matrix for US shows that Financial Health and Firma Value have the highest significant positive correlation with ROA (0.512 and 0.268 correspondingly). At the same time Financial Health has the highest negative correlation with Leverage indicators: Debts/equity ratio (-0.941) and Debt/assets (-0.767). Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.964)) and leverage indicators (Debt/assets and Debts/equity (0.833)).

– US VIF

Coefficients

Table 9 Values of Tolerance and Variance Inflation Factor for Nasdaq100 US companies

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	1 (Constant)	125.654	8.143				15.431
Cash ratio	-1.274	1.123	-.029	-1.135	.257	.812	1.232
Debts/equity	4.191	5.532	.033	.757	.449	.288	3.475
Debt/assets	-281.441	20.161	-.600	-13.960	.000	.287	3.479
Sales/assets	1.171	2.180	.014	.537	.591	.790	1.265
ROA	351.397	15.452	.562	22.741	.000	.868	1.152
AC Size	-5.795	1.842	-.073	-3.145	.002	.982	1.019
Non-Audit fees	-.789	.500	-.045	-1.578	.115	.663	1.507
Audit fees	.041	.325	.004	.126	.900	.646	1.549

Table 10. Definition of Variables

Variable	Name	Variable definition	Sample Period
ACCEXP	P	1 assigned to ACCEXP if the expert have accounting qualifications such as ACCA, CIMA, CPA or else 0	2009 - 2013
FINEXP	P	1 assigned to FINEXP if the expert of AC have MBA, Investment banker, financial controller or else 0	2009 - 2013
SFEEXP	P	1 assigned to SFEEXP if the expert of AC is CEO, President and vice president of a board with experience or else 0	2009 - 2013
Audit Quality	I	Audit fee and Non-audit fee	2009 - 2013
AC_SIZE	I	The number of AC members on the average.	2009 - 2013
AC_MEET	I	The number of meetings on the average held by AC	2009 - 2013
Profitability	I	Net Income/Assets and Sales/Assets	2009 - 2013
Liquidity	I	Quick ratio and cash ratio	2009 - 2013
Leverage	I	Debt/Assets and Debt/Equity	2009 - 2013
Financial Health	J	Z score	2009 - 2013
Firm Value	D	Tobin's Q	2009 - 2013

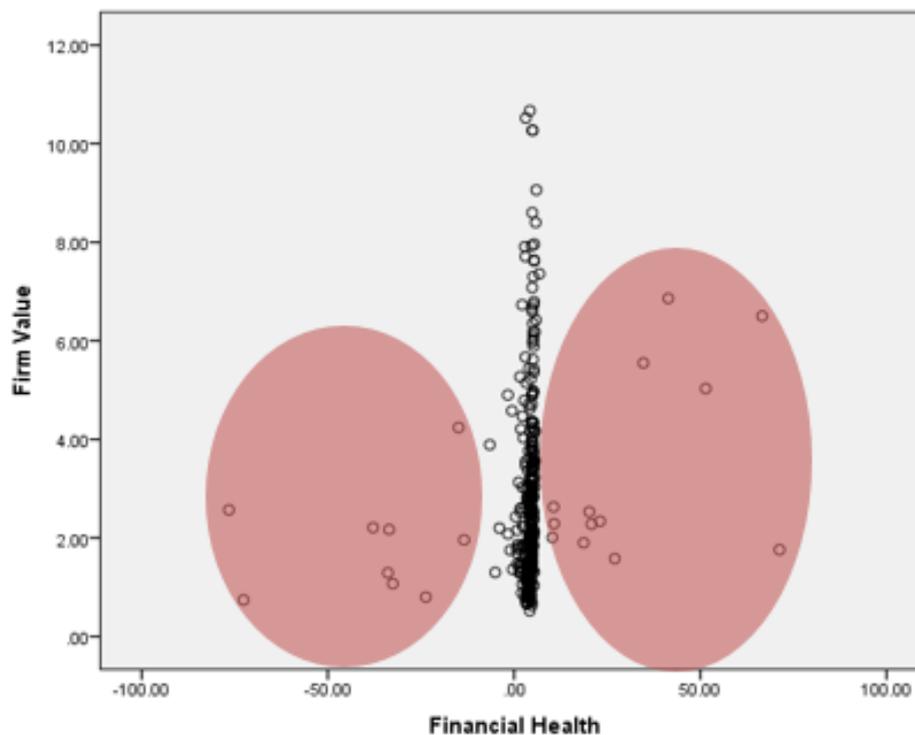
2.9.5.5 Data Preparation (US)

Outlier Detection (US)

Nasdaq 100 company's data are used to investigate influence of company's performance indicators and financial expert's qualification perceptions on Financial Health and Firm Value.

Like UK and Germany studies financial institutions (15 companies) are removed from data set¹⁸. Missing value analysis shows that some values of variables for several companies are absent, so the corresponding observations are also removed.

To find outliers in updated data set the relationship between two main dependent variables is analysed.

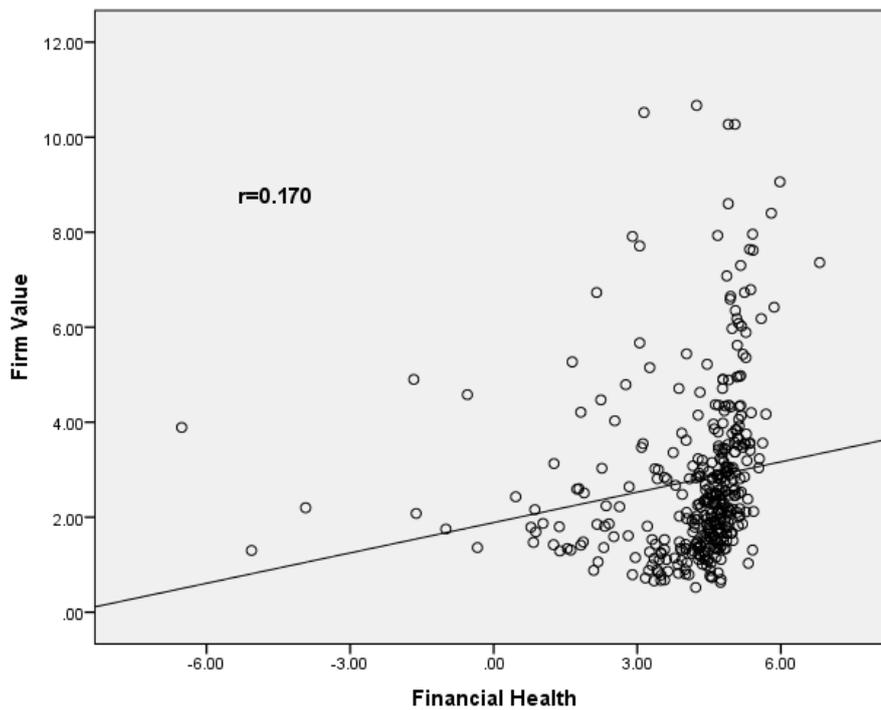


¹⁸ The list of these companies are presented in appendix 1.3.

22 observations are treated as outliers and removed from data set.

In below chart the relationship between Financial Health and Firm Value is presented for the final data set.

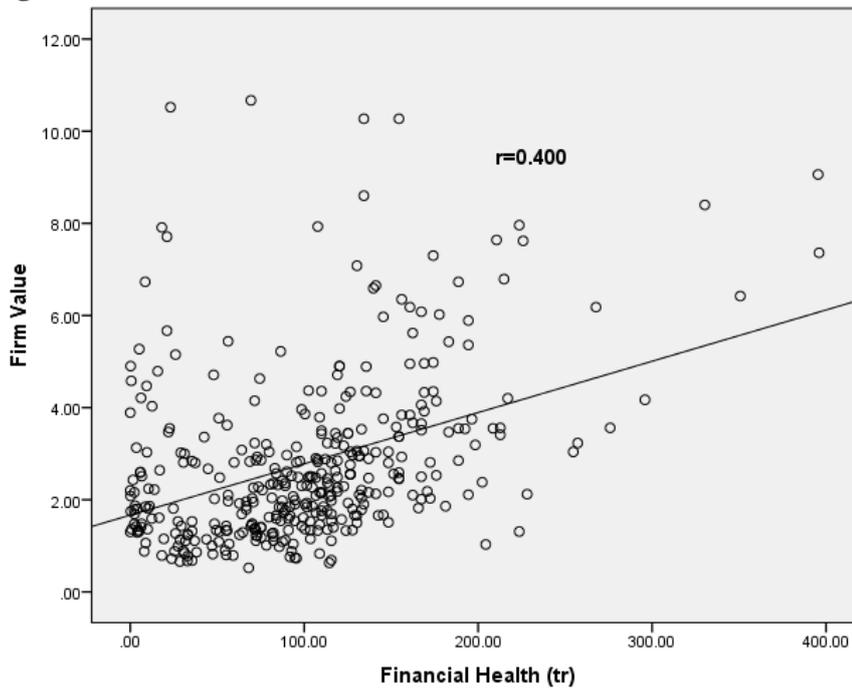
Fig 2



Scatter diagram of Financial Health and Firm Value (N=375)

The linear correlation between Financial Health and Firm Value is 0.170. As in previous two countries studies above relationship can be described better by exponential function.

Fig .3

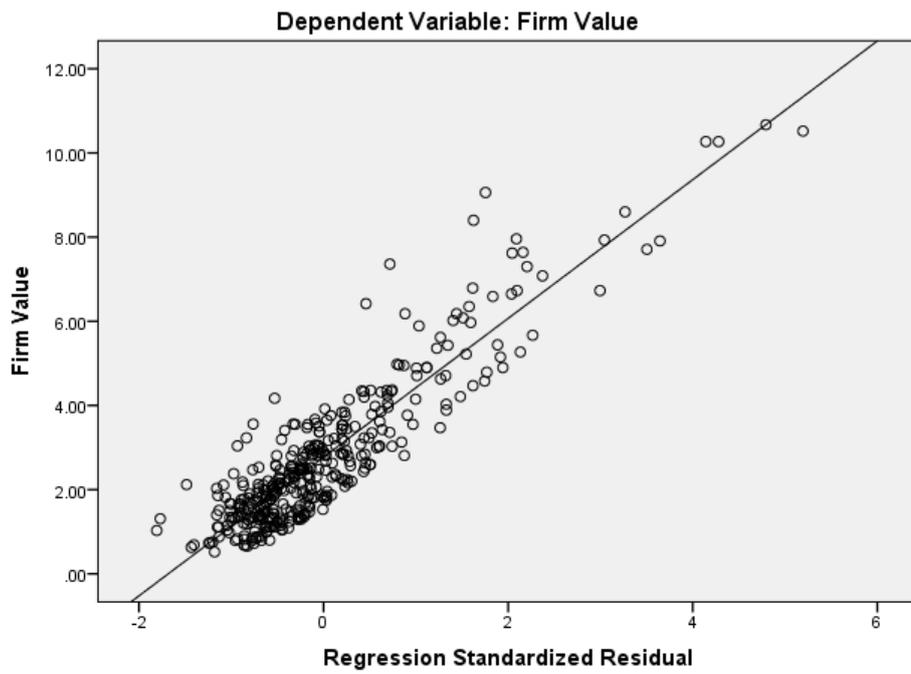


Scatter diagram of Financial Health Transformed and Firm Value

The correlation improves significantly (from 0.170 to 0.400) after Financial Health transformation. So in further path analysis transformed Financial Health variable is used.

Homoscedasticity testing shows that the residuals of the Firm Value dependent variable model are homoscedastic.

Fig 4



Scatter diagram for homoscedasticity analysis

Data Preparation UK

The first step of the data analysis is data preparation. For this reason additional analysis was conducted to investigate whether there are unusual observations (mainly in two main variables of the study: Financial Health and Firm Value) in the data set.

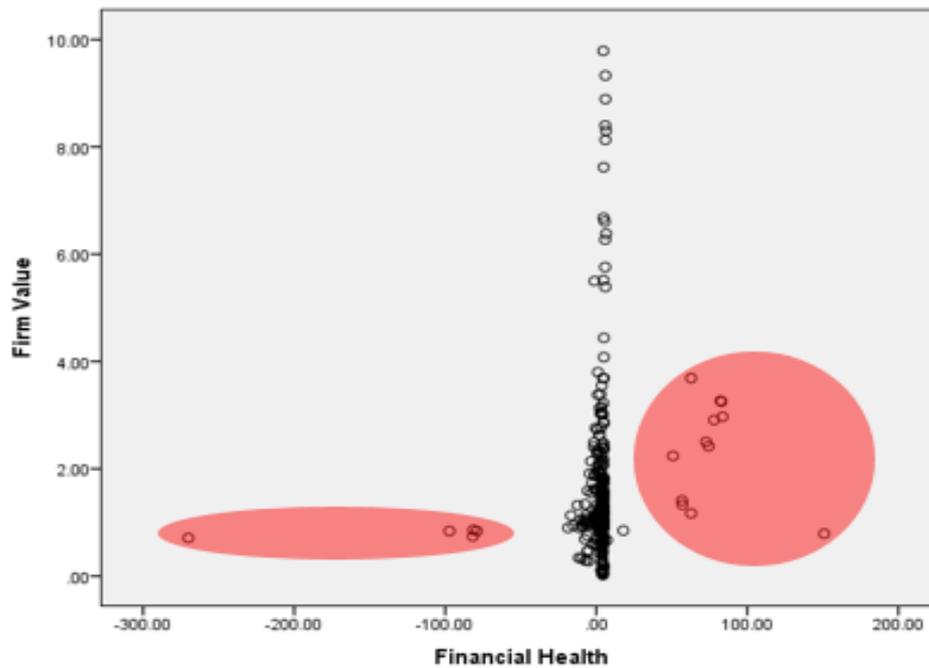


Figure 5. Scatter diagram of Financial Health and Firm Value variables (N=393)

Obviously there are some outlier (unusual) observations in the relationship, so they should be removed from data set to understand the actual form of relationship between these two variables. We decided to remove from data set those observations, for which Financial Health values are below -20, and above 10¹⁹.

Thus 18 observations are treated as outliers and removed from the UK data set. Additional investigation of data set indicated that for one companies the main independent variables values equal 0 for all observed period (5 years). So this company is also eliminated from data set. At the result the final revised data set includes 370 observations.

Figure 6

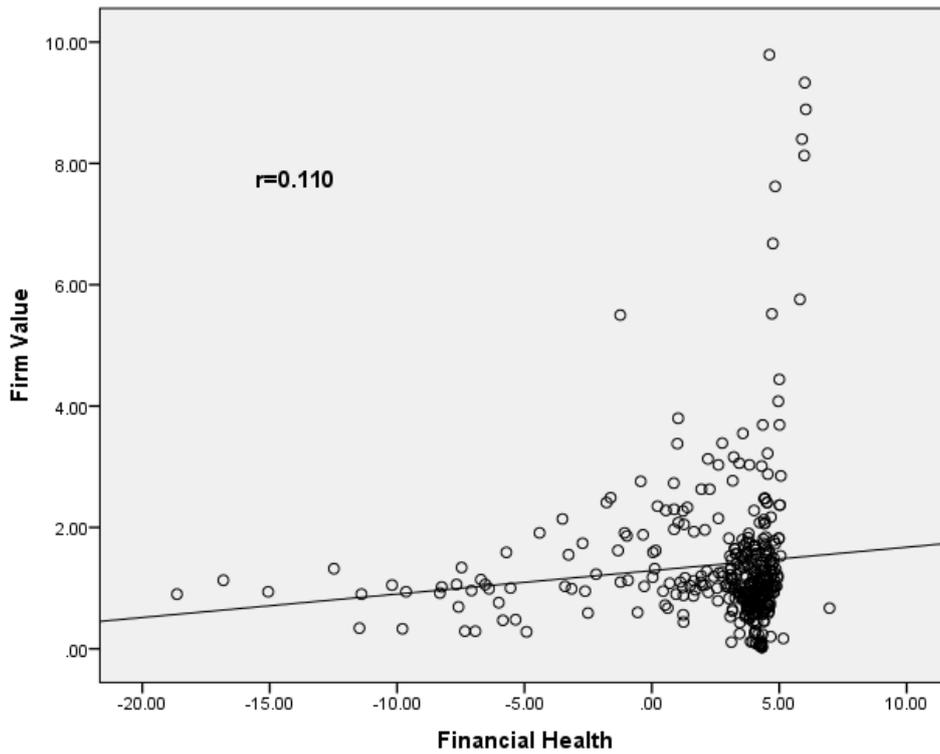


Figure 6. Scatter diagram of Financial Health and Firm Value (N=370)

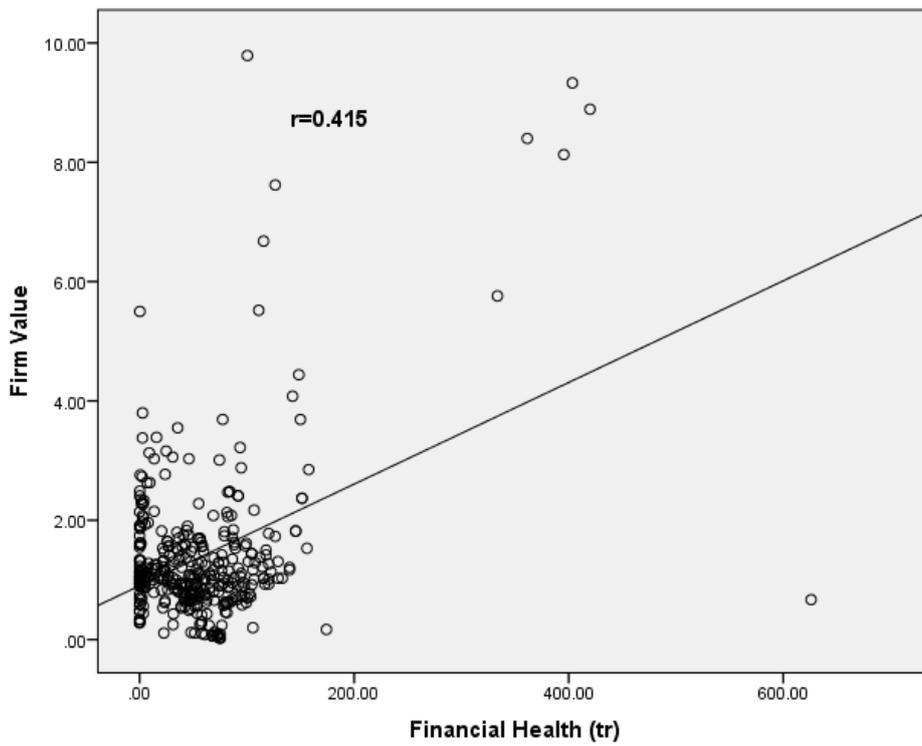


Figure 7. Scatter diagram of Financial Health Transformed and Firm Value

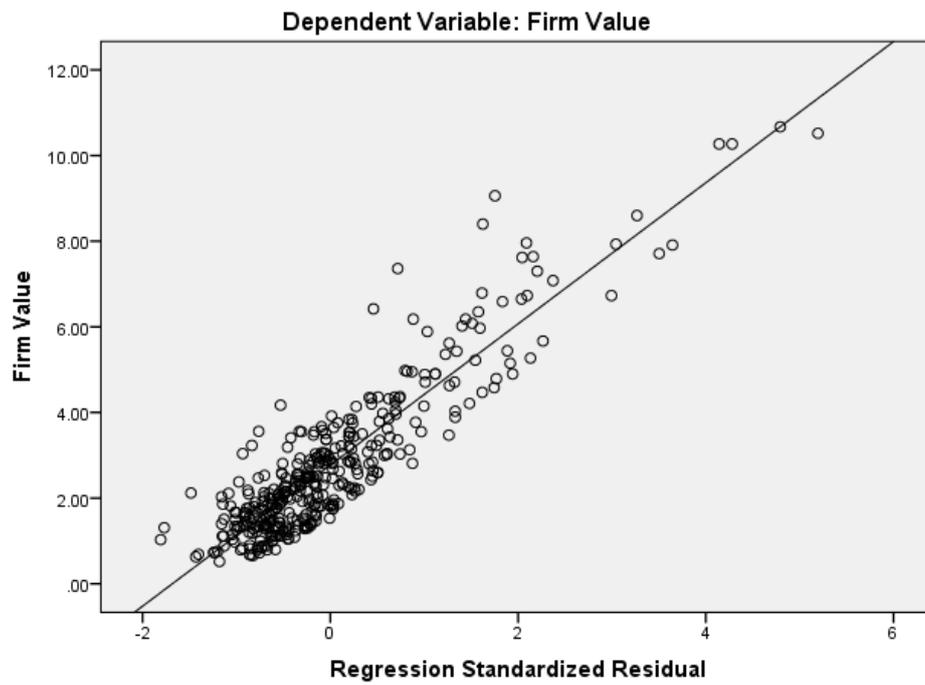
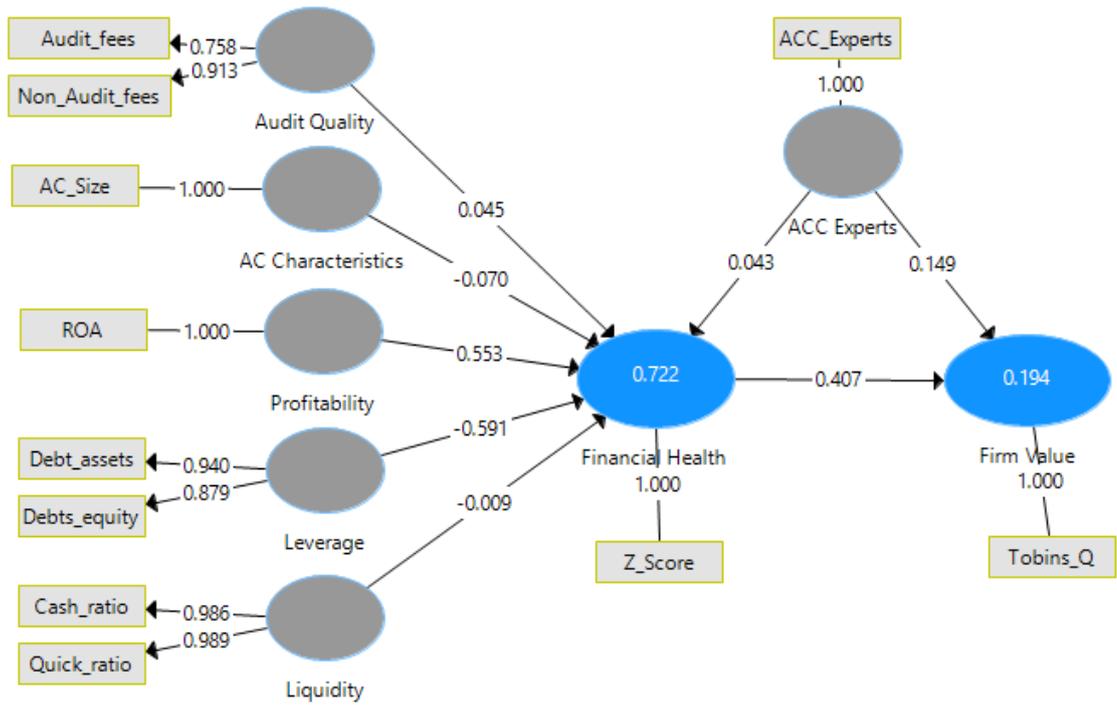


Figure 8. Scatter diagram for homoscedasticity analysis

Additional PLS Results

2.9.5.6 Impact of ACC Experts on Firm Value (model 1) UK

Figure 9



Impact of FE Experts on Firm Value (model 2)

Figure 10

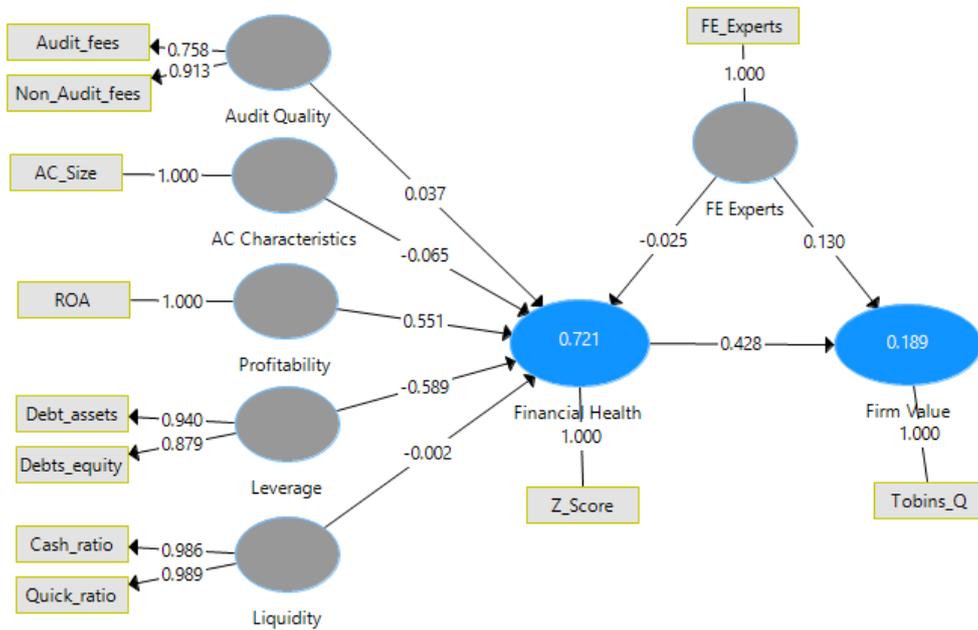


Figure 11 Impact of SFE Experts on Firm Value (model 3)

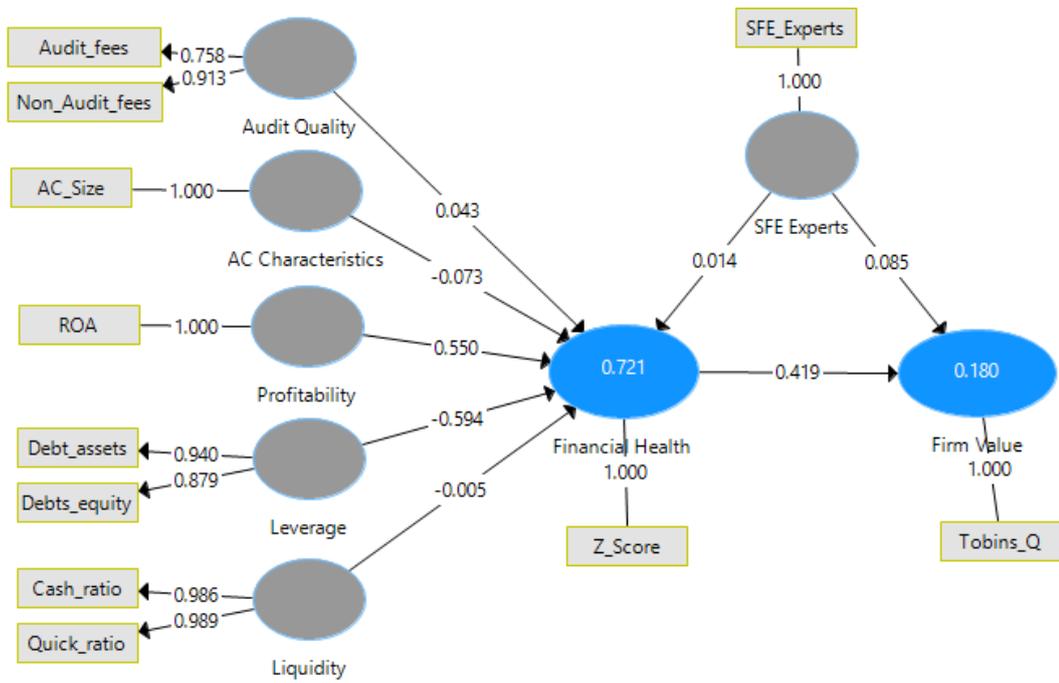


Figure 12 Impact of ACC Experts on Firm Value (model 1) US

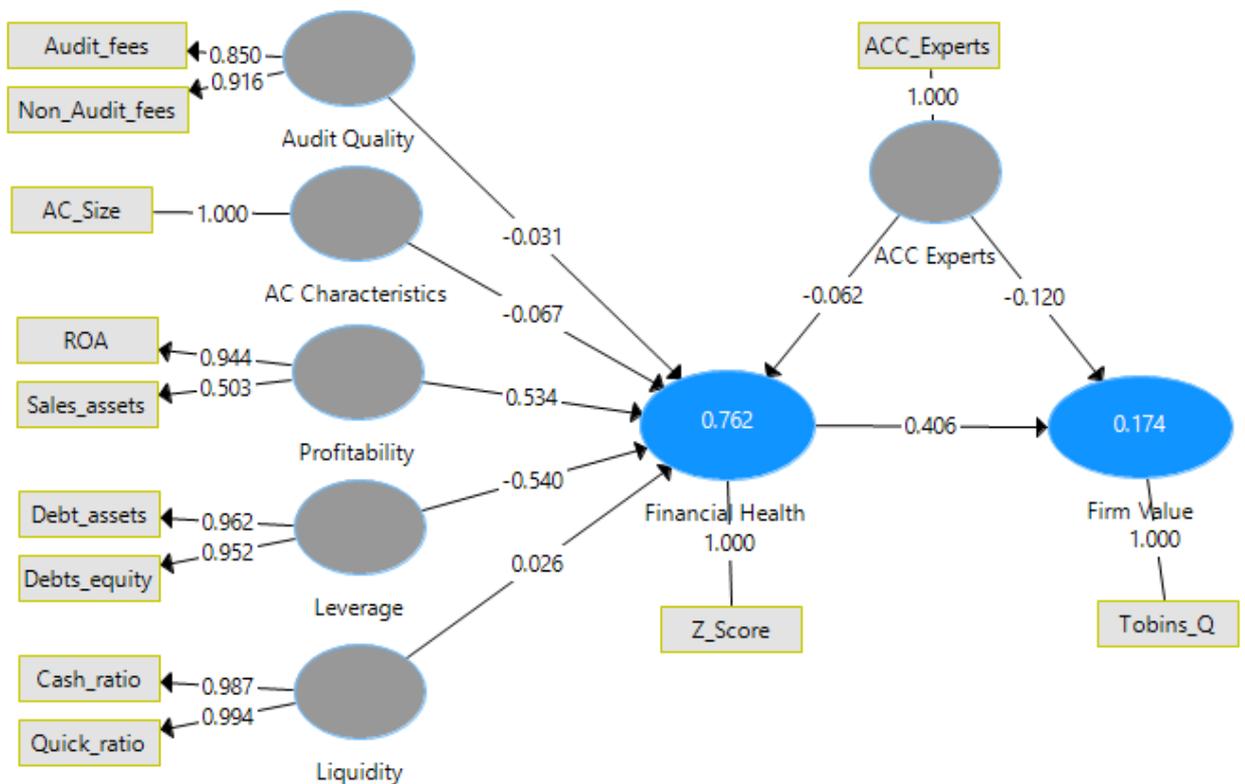


Figure 13 Impact of FE Experts on Firm Value (model 2)

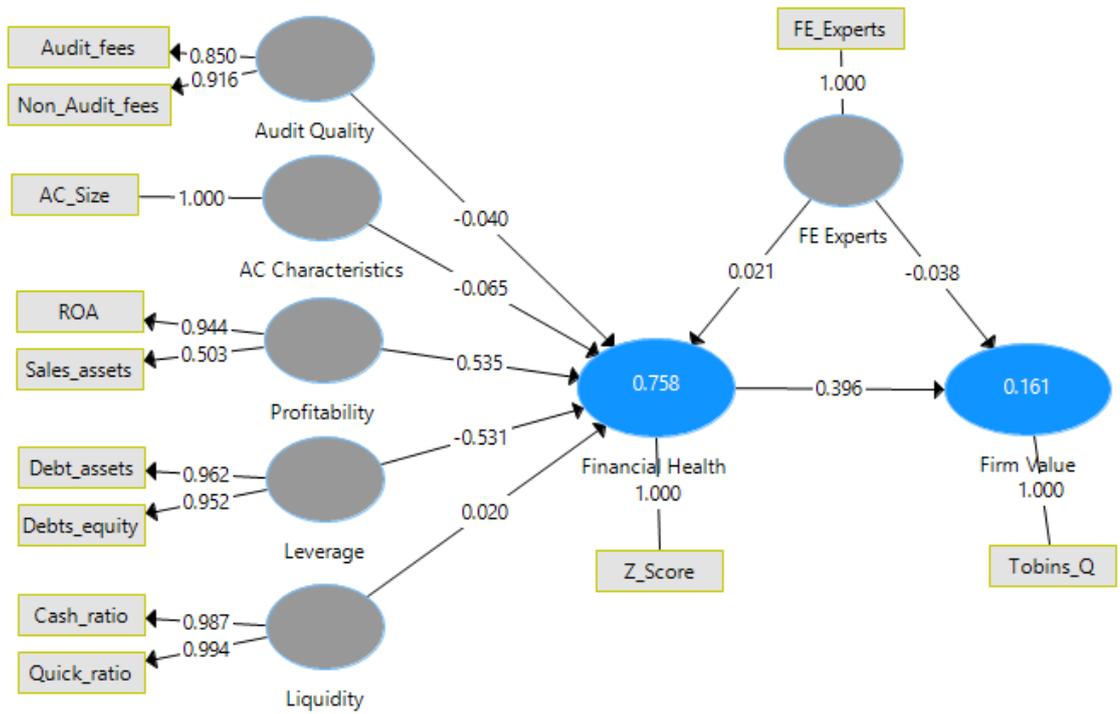
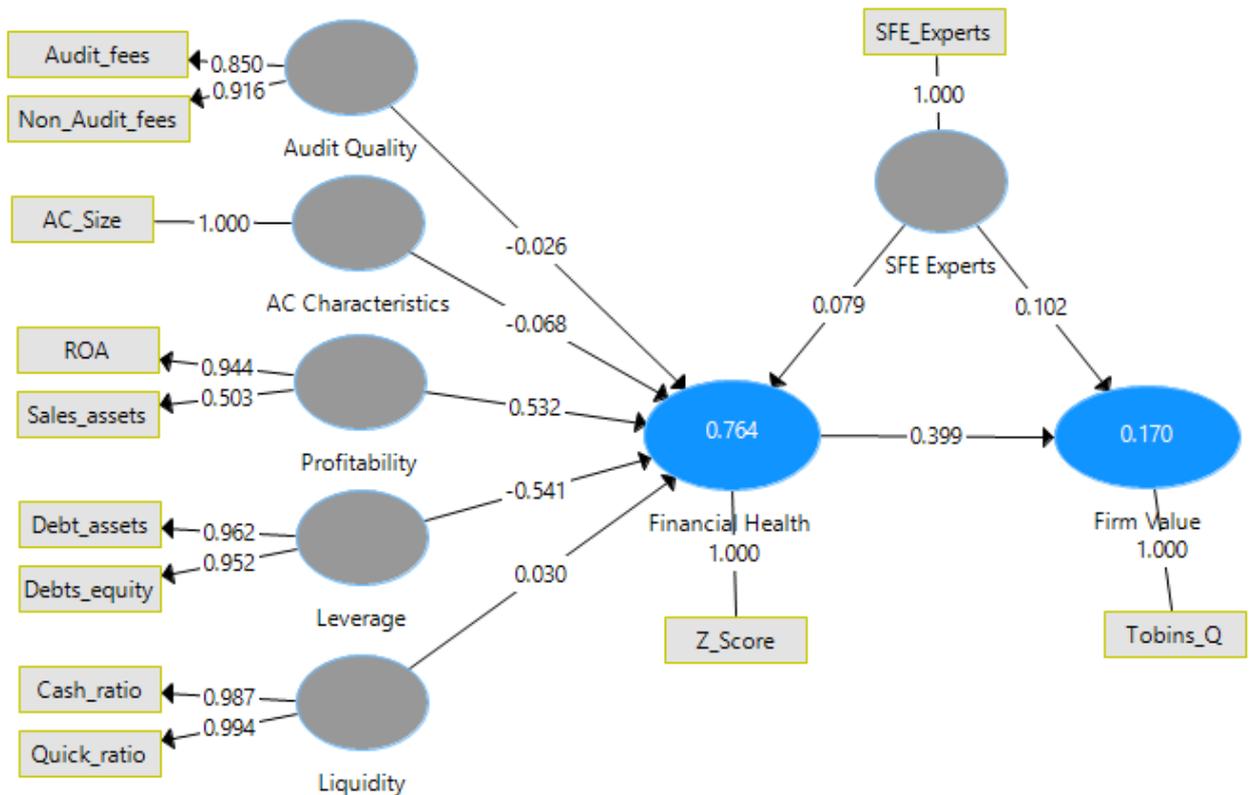


Figure 14 Impact of SFE Experts on Firm Value (model 3)



CHAPTER 3

Appendix 3.9.5

3.9.5.1 Companies excluded Table 1

Balda AG O.N No AC
Brenntag AG
Delticom AG
Douglas Hldg AG NPV
Fielmann AG O.N
GSW Immobilien AG NPV(BR)
SAF Holland S.A EO-,01
Utd. Internet AG NA
Wirecard AG
Dialog Semicond LS, 10
FRESEN.MED.CARE KgaA O.N
Hann.Rueck SE NA O.N
SMA Solar Technology
Solarworld AG O.N
Suess Microtec NA O.N
Tognum AG
Gagfah S.A NOM EO 1.25
Deutz AG O.N

3.9.5.2 Figure 1. Outlier detection analysis in DAX100 Company's data set

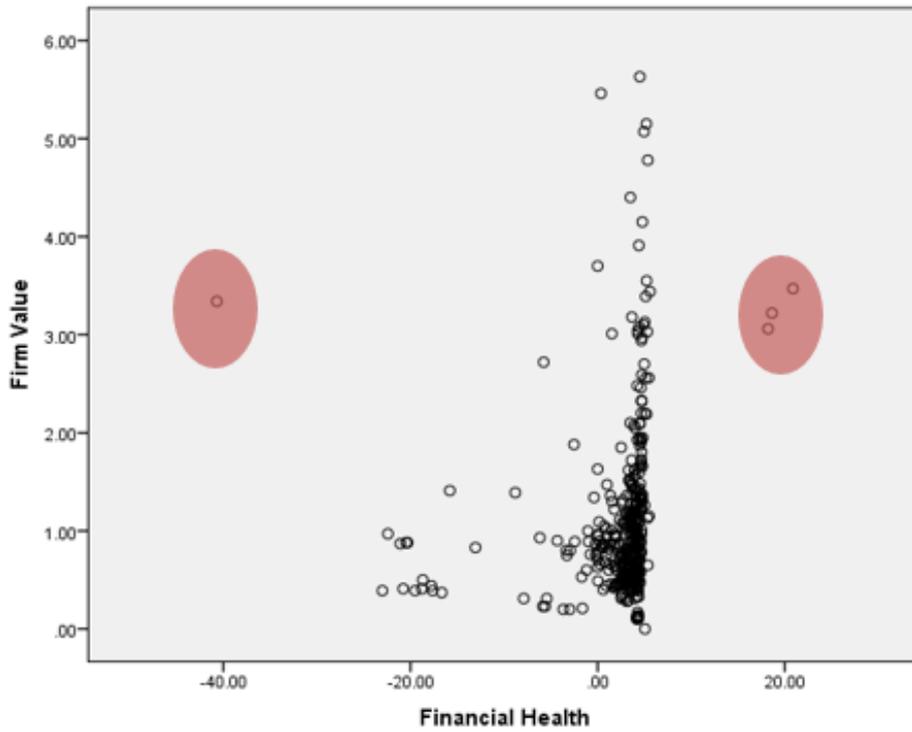


Figure 1. Scatter diagram of Financial Health and Firm Value variables (N=386)

After removing outliers the updated scatter diagram looks like:
Figure 2

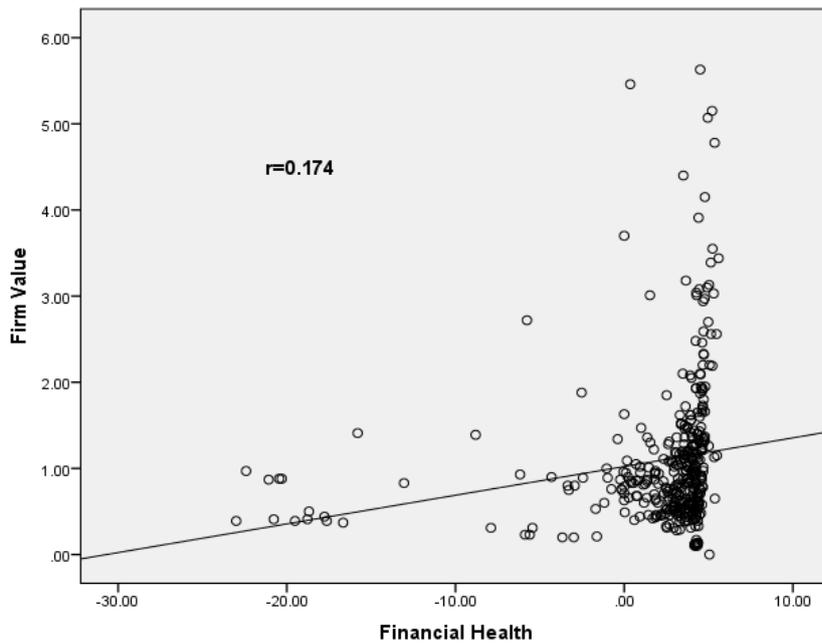


Figure 2. Scatter diagram of Financial Health and Firm Value (N=382)

The linear correlation between Financial Health and Firm Value is 0.174. Also we can say the liner relationship is not a good way to describe the relationship. Like in UK study we have transformed Financial Health variable using exponential function.

Figure 3

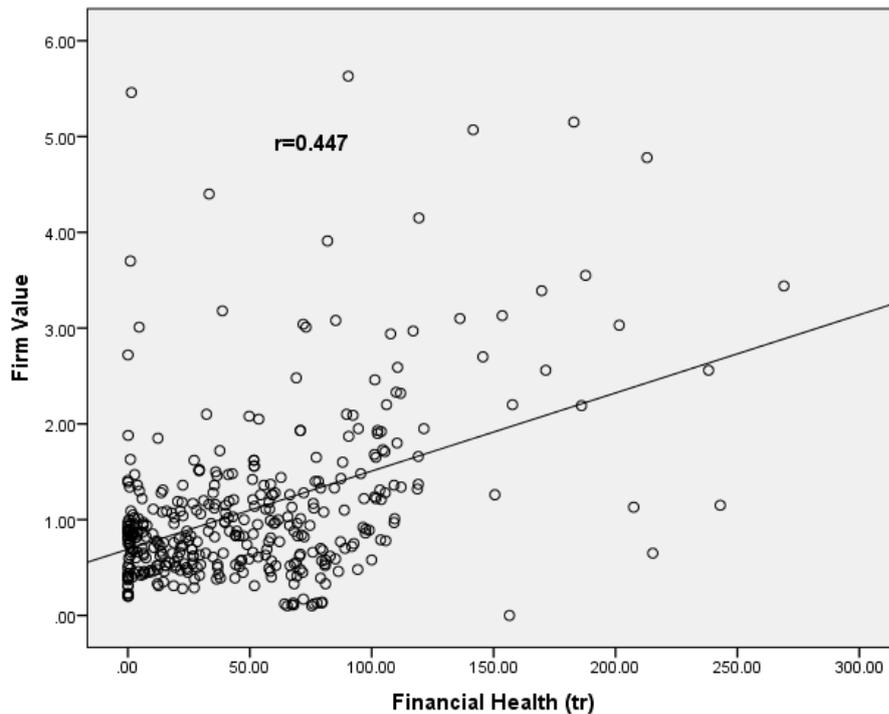


Figure 3. Scatter diagram of Financial Health Transformed and Firm Value

As we see the new correlation improves significantly (from 0.174 to 0.447). This fact indicates that for path analysis we should use transformed Financial Health.

Homoscedasticity of errors is also tested for the model 4²⁰.

$$Firm\ Value = \beta_6 \cdot Financial\ Health + \beta_8 \cdot ACC\ Experts + \beta_{10} \cdot FE\ Experts + \varepsilon_{42}$$

²⁰ The correlation analysis for DAX100 companies in the next chapter shows that there is very high negative correlation between ACC Experts and SFE Experts (-0.921). This can cause multicollinearity issue in model for, that's why SFE Experts is removed from general specification of model 4 (the correlation between ACC Experts and Firm Value is significantly higher compared with correlation between SFE Experts and Firm Value).

Figure 4

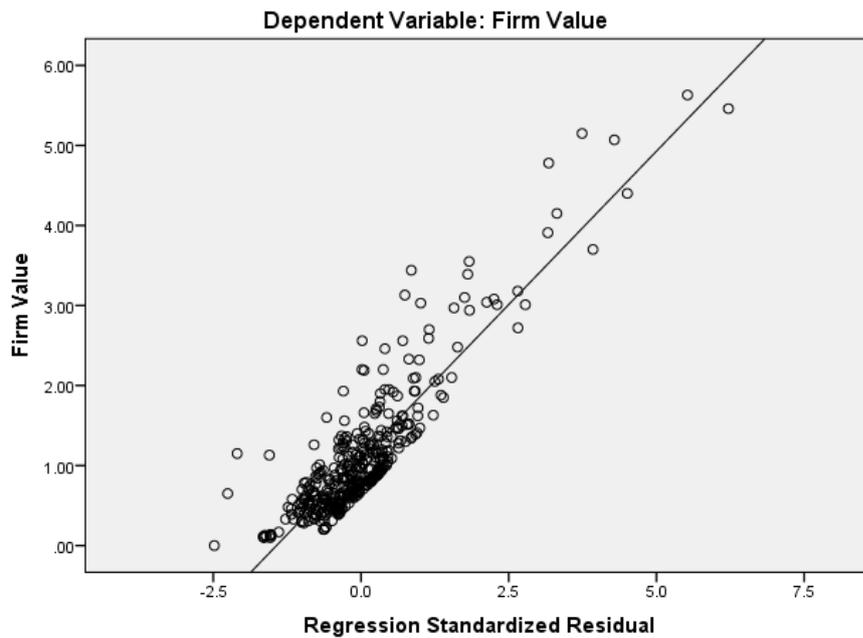


Figure 4 . Scatter diagram for homoscedasticity analysis

From above figure we can state the model 4 residual are homoscedastic.

3.9.5.3 Table 2. Articles from the systematic literature review.

Author	Year	Title	Type	Journal and Vol.	Times Cited/Cited Out	Cited Reference count	Cited Value in %	Category
	1992	AUDIT COMMITTEE EFFECTIVENESS CHECKLIST	Article	Journal of Accountancy 174(1): 44-44	0	0	0%	Accounting
Abbott, L. J., et al	2010	"Serving Two Masters: The Association between Audit Committee Internal Audit Oversight and Internal Audit Activities."	Article	Accounting Horizons 24(1): 1-24.	8	39	0.70	Accounting
Abbott, L. J., et al	2012	"Audit Fee Reductions from Internal Audit-Provided Assistance: The Incremental Impact of Internal Audit Characteristics."	Article	Contemporary Accounting Research 29(1): 94-+.	3	40	0.26	Accounting

Agoglia, C. P., et al	2011	"Principles-Based versus Rules-Based Accounting Standards: The Influence of Standard Precision and Audit Committee Strength on Financial Reporting Decisions."	Article	Accounting Review 86(3): 747-767.	9	48	0.78	Accounting
Ahmed, A. S. and S. Duellman	2007	"Accounting conservatism and board of director characteristics: An empirical analysis."	Article	Journal of Accounting & Economics 43(2-3): 411-437.	47	67	4.08	Management
Anderson, R. C., et al	2004	"Board characteristics, accounting report integrity, and the cost of debt"	Article	Journal of Accounting & Economics 37(3): 315-342	119	39	10.34	Business
Anderson, U. L., et al.	2012	"A Post-SOX Examination of Factors Associated with the Size of Internal Audit Functions."	Article	Accounting Horizons 26(2): 167-191.	1	50	0.09	Business
Archambeault, D. S., et al	2008	"The Need for an Internal Auditor Report to External Stakeholders to Improve Governance Transparency."	Article	Accounting Horizons 22(4): 375-388.	5	60	0.43	Business
Armstrong, C. S., et al	2010	"The role of information and financial reporting in corporate governance and debt contracting."	Article	Journal of Accounting & Economics 50(2-3): 179-234.	27	310	2.35	Management
Beattie, V., et al	2012	"Do UK audit committees really engage with auditors on audit planning and performance?"	Article	Accounting and Business Research 42(3): 349-375.	0	55	0	Business
Beattie, V., et al	2013	"Perceptions of factors affecting audit quality in the post-SOX UK regulatory environment."	Article	Accounting and Business Research 43(1): 56-81.	0	67	0	Business
Botzem, S. and S. Quack	2009	"(No) Limits to Anglo-American accounting? Reconstructing the	Article	Accounting Organizations and Society	12	40	1.04	Management

		history of the International Accounting Standards Committee: A review article."		34(8): 988-998.				
Braiotta, L. and D. M. Lang	1982	"WORKING WITH THE AUDIT COMMITTEE."	Article	Journal of Accountancy 154(1): 48-&.	0	4	0	Management
Bull, I. and F. C. Sharp	1989	"ADVISING CLIENTS ON TREADWAY AUDIT COMMITTEE RECOMMENDATIONS."	Article	Journal of Accountancy 167(2): 46-&.	3	0	0.26	Business
Cao, Y., et al	2012	"Does Company Reputation Matter for Financial Reporting Quality? Evidence from Restatements."	Article	Contemporary Accounting Research 29(3): 956-+.	3	146	0.26	Business
Carcello, J. V., et al	2009	"Responses of the American Accounting Association's Tracking Team to the Recommendations of the Advisory Committee on the Auditing Profession."	Article	Accounting Horizons 23(1): 69-84.	2	41	0.17	Business
Carcello, J. V., et al	2011	"CEO Involvement in Selecting Board Members, Audit Committee Effectiveness, and Restatements."	Article	Contemporary Accounting Research 28(2): 396-+.	7	75	0.61	Business
Caskey, J., et al	2010	"Reporting Bias with an Audit Committee"	Article	Accounting Review 85(4): 1479-1479.	0	1	0	Management
Chen, C., et al.	2013	"Insider Trading, Litigation Concerns, and Auditor Going-Concern Opinions."	Article	Accounting Review 88(2): 365-393.	0	77	0	Business
Chen, J. J. and H. T. Zhang	2010	The Impact of Regulatory Enforcement and Audit upon IFRS Compliance - Evidence from China.	Article	European Accounting Review 19(4): 665-692.	1	40	0.09	Management
Chiu, P. C., et al	2013	"Board Interlocks and Earnings Management Contagion."	Article	Accounting Review 88(3): 915-944.	0	45	0	Business

Cohen, J., et al	2010	"Corporate Governance in the Post-Sarbanes-Oxley Era: Auditors' Experiences."	Article	Contemporary Accounting Research 27(3): 751-+.	28	40	2.43	Business
Collier, P. and M. Zaman	2005	"Convergence in European corporate governance: The audit committee concept."	Article	Corporate Governance- an International Review 13(6): 753-768.	26	93	2.26	Business
Cormier, D., et al	2011	"Revisiting the Relevance and Reliability of Non-GAAP Reporting: The Case of the Income Trusts."	Article	Contemporary Accounting Research 28(5): 1585-+.	0	54	0	Business
Dao, M., et al	2013	"The Effects of Audit Committee Members' Age and Additional Directorships on the Cost of Equity Capital in the USA."	Article	European Accounting Review 22(3): 607-643.	0	71	0	Business
Dao, M., et al	2012	"Shareholder Voting on Auditor Selection, Audit Fees, and Audit Quality."	Article	Accounting Review 87(1): 149-171.	1	56	0.09	Business
Defond, M. L., et al	2005	"Does the market value financial expertise on audit committees of boards of directors?"	Article	Journal of Accounting Research 43(2): 153-193.	82	37	7.12	Business
Dewing, I. P. and P. O. Russell	2012	"Auditors as Regulatory Actors: The Role of Auditors in Banking Regulation in Switzerland."	Article	European Accounting Review 21(1): 1-28.	0	72	0	Business
Dey, A	2008	"Corporate Governance and Agency Conflicts."	Article	Journal of Accounting Research	10	87	0.87	Business
Dezoort, F. T	1998	"An analysis of experience effects on audit committee members' oversight judgments."	Article	Accounting Organizations and Society 23(1): 1-21.	18	71	1.56	Business
Engel, E.	2005	Discussion of does the market value financial expertise on audit	Article	Journal of Accounting Research	6	8	0.52	Business

		committees of boards of directors?"		43(2): 195-204				
Engel, E., et al	2010	Audit committee compensation and the demand for monitoring of the financial reporting process."	Article	Journal of Accounting & Economics 49(1-2): 136-154.	6	41	0.52	Business
Erkens, D. H. and S. E. Bonner	2013	"The Role of Firm Status in Appointments of Accounting Financial Experts to Audit Committees."	Article	Accounting Review 88(1): 107-136.	0	67	0	Business
Flesher, D. L., et al	2005	"Auditing in the United States: A historical perspective	Article	Abacus-a Journal of Accounting Finance and Business Studies 41(1): 21-39.	1	38	0.09	Management
Fornaro, J. M. and H. W. Huang	2012	"Further evidence of earnings management and opportunistic behavior with principles-based accounting standards: The case of conditional asset retirement obligations."	Article	Journal of Accounting and Public Policy 31(2): 204-225.	1	70	0.09	Business
Garcia-Hejl, C., et al.	2013	"Internal audit in medical laboratory: what means of control for an effective audit process?"	Article	Annales De Biologie Clinique 71(5): 624.615-	0	10	0	Business
Gendron, Y. and J. Bedard	2006	"On the constitution of audit committee effectiveness."	Article	Accounting Organizations and Society 31(3): 211-239.	19	61	1.65	Business
Glaum, M., et al	2013	"Compliance with IFRS 3-and IAS 36-required disclosures across 17 European countries: company- and country-level determinants."	Article	Accounting and Business Research 43(3): 163-204.	1	139	0.09	Business
Gleason, C. A. and L. F. Mills	2011	"Do Auditor-Provided Tax Services Improve	Article	Contemporary Accounting	7	61	0.61	Business

		the Estimate of Tax Reserves?"		Research 28(5): 1484-+.				
Grayson, M. M	1982	"AUDIT COMMITTEE SELECTIONS - MORE LARGE FIRMS THAN SMALL."	Article	Journal of Accountancy 153(4): 92-92.	0	1	0	Accounting
Groetzner, J., et al.	2002	"The new German allocation system for donated thoracic organs causes longer ischemia and increased costs."	Article	Thoracic and Cardiovascular Surgeon 50(6): 376-379	7	14	0.61	Business
Grove, H., et al.	2011	"Corporate Governance and Performance in the Wake of the Financial Crisis: Evidence from US Commercial Banks."	Article	Corporate Governance- an International Review 19(5): 418-436.	3	57	0.26	Business
Hardwick, P., et al.	2011	"Board Characteristics and Profit Efficiency in the United Kingdom Life Insurance Industry."	Article	Journal of Business Finance & Accounting 38(7-8): 987-1015.	1	85	0.09	Business
Hoitash, R., et al	2012	"Internal Control Material Weaknesses and CFO Compensation."	Article	Contemporary Accounting Research 29(3): 768-+.	0	104	0	Business
Hooghiemstra, R	2012	"What determines the informativeness of firms' explanations for deviations from the Dutch corporate governance code?"	Article	Accounting and Business Research 42(1): 1-27.	0	90	0	Business
Hunton, J. E., et al	2011	"The Relationship between Perceived Tone at the Top and Earnings Quality."	Article	Contemporary Accounting Research 28(4): 1190-+.	2	82	0.17	Business
Hunton, J. E. and J. M. Rose	2008	"Can directors' self-interests influence accounting choices?"	Article	Accounting Organizations and Society	10	50	0.87	Accounting
Jeppesen, K. K. and A. Loft	2011	"Regulating Audit in Europe: The Case of the Implementation of the EU Eighth Directive	Article	European Accounting Review 20(2): 321-354.	4	67	0.35	Business

		in Denmark 1984-2006."						
Johnson, O	1992	"BUSINESS JUDGMENT V AUDIT JUDGMENT - WHY THE LEGAL DISTINCTION	Article	Accounting Organizations and Society 17(3-4): 205-222.	1	21	0.09	Business
Johnstone, K., et al	2011	"Changes in Corporate Governance Associated with the Revelation of Internal Control Material Weaknesses and Their Subsequent Remediation."	Article	Contemporary Accounting Research 28(1): 331-383.	12	48	1.04	Business
Karamanou, I. and N. Vafeas	2005	"The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis."	Article	Journal of Accounting Research 43(3): 453-486.	93	68	8.08	Business
Keune, M. B. and K. M. Johnstone	2012	"Materiality Judgments and the Resolution of Detected Misstatements: The Role of Managers, Auditors, and Audit Committees "	Article	Accounting Review 87(5): 1641-1677.	1	86	0.09	Business
Klein, A	2002	"Audit committee, board of director characteristics, and earnings management."	Article	Journal of Accounting & Economics 33(3): 375-400.	345	45	29.97	Business
Krishnan, G. V., et al	2011	"CFO/CEO-Board Social Ties, Sarbanes-Oxley, and Earnings Management."	Article	Accounting Horizons 25(3): 537-557.	1	36	0.09	Business
Krishnan, J., et al.	2011	"Legal Expertise on Corporate Audit Committees and Financial Reporting Quality."	Article	Accounting Review 86(6): 2099-2130.	4	59	0.35	Business
Kunitake, W.	1982	"AUDIT COMMITTEE SELECTIONS - MORE LARGE FIRMS THAN SMALL - RESPONSE."	Article	Journal of Accountancy 153(4): 92-&.	0	0	0	Accounting

Lara, J. M. G., et al	2007	"Board of directors' characteristics and conditional accounting conservatism: Spanish evidence."	Article	European Accounting Review 16(4): 727-755	12	71	1.04	Business
Lee, G. and N. Fargher	2013	"Companies' Use of Whistle-Blowing to Detect Fraud: An Examination of Corporate Whistle-Blowing Policies	Article	Journal of Business Ethics 114(2): 283-295.	0	46	0	Business
Lei, Q. H., et al	2013	Types of agency cost, corporate governance and liquidity	Article	Journal of Accounting and Public Policy 32(3): 147-172.	0	86	0	Business
Li, J., et al	2008	"Intellectual capital disclosure and corporate governance structure in UK firms."	Article	Accounting and Business Research 38(2): 137-159.	19	76	1.65	Management
MacGregor, J.	2012	"Audit committee equity holdings, the risk of reporting problems, and the achievement of earnings thresholds."	Article	Journal of Accounting and Public Policy 31(5): 471-491.	0	80	0	Business
Maier, W., et al.	1999	"Audit and quality control in angioplasty in Europe: procedural results of the AQUA Study 1997..."	Article	European Heart Journal 20(17): 1261-1270.	10	27	0.87	Business
Mande, V., et al	2012	"Equity or Debt Financing: Does Good Corporate Governance Matter?"	Article	Corporate Governance- an International Review 20(2): 195-211.	0	85	0	Business
Mangena, M. and V. Taurigana	2007	"Corporate compliance with non-mandatory statements of best practice: The case of the ASB statement on interim reports."	Article	European Accounting Review 16(2): 399-427.	1	89	0.09	Management
Marsh, H. L. and T. E. Powell	1989	"THE AUDIT COMMITTEE CHARTER	Article	Journal of Accountancy 167(2): 55-57.	1	0	0.09	Accounting

		- RX FOR FRAUD PREVENTION."						
Naiker, V., et al	2013	"Do Former Audit Firm Partners on Audit Committees Procure Greater Nonaudit Services from the Auditor?"	Article	Accounting Review 88(1): 297-326.	0	70	0	Business
Norman, C. S., et al	2010	"Internal audit reporting lines, fraud risk decomposition, and assessments of fraud risk."	Article	Accounting Organizations and Society 35(5): 546-557.	2	51	0.17	Business
Norman, C. S., et al	2011	"The effects of disclosure type and audit committee expertise on Chief Audit Executives' tolerance for financial misstatements."	Article	Accounting Organizations and Society 36(2): 102-108.	1	44	0.09	Business
Ojo, M	2010	"The Role of the IASB and Auditing Standards in the Aftermath of the 2008/20091 Financial Crisis	Article	European Law Journal 16(5): 604-623.	0	13	0	Law
Osma, B. G. and B. Noguera	2007	"The effect of the board composition and its monitoring committees on earnings management: evidence from Spain."	Article	Corporate Governance- an International Review 15(6): 1413-1428.	9	49	0.78	Accounting
Palmrose, Z. V.	2010	"Balancing the Costs and Benefits of Auditing and Financial Reporting Regulation Post-SOX, Part II: Perspectives from the Nexus at the SEC."	Article	Accounting Horizons 24(3): 487-507.	0	46	0	Business
Piot, C. and R. Janin	2007	"External auditors, audit committees and earnings management in France."	Article	European Accounting Review 16(2): 429-454.	9	49	0.78	Business
Pomeroy, B. and D. B. Thornton	2008	"Meta-analysis and the accounting literature: The case of audit committee independence and	Article	European Accounting Review 17(2): 305-330.	6	57	0.52	Business

		financial reporting quality."						
Purtill, J. S	1988	"WORKING WITH THE AUDIT COMMITTEE."	Article	Journal of Accountancy 166(4): 140-&.	1	0	0.09	Management
Rainsbury, E. A., et al	2008	"Firm characteristics and audit committees complying with 'best practice' membership guidelines."	Article	Accounting and Business Research 38(5): 393-408.	3	72	0.26	Business
Richardson, G., et al	2013	"The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis."	Article	Journal of Accounting and Public Policy 32(3): 68-88.	0	91	0	Business
Richardson, S. A	2005	"Discussion of consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members."	Article	Journal of Accounting Research 43(2): 335-342.	1	13	0.09	Business
Rose, J. M., et al	2013	"The influence of director stock ownership and board discussion transparency on financial reporting quality."	Article	Accounting Organizations and Society 38(5): 397-405.	0	45	0	Business
Salleh, Z. and J. Stewart	2012	"The role of the audit committee in resolving auditor-client disagreements: a Malaysian study."	Article	Accounting Auditing & Accountability Journal 25(8): 1340-1372.	0	91	0	Management
Sharma, D. S., et al	2008	"The impact of non-mandatory corporate governance on auditors' client acceptance, risk and planning judgments."	Article	Accounting and Business Research 38(2): 105-120.	3	37	0.26	Business
Sharma, V., et al	2009	"Determinants of Audit Committee Meeting Frequency: Evidence from a Voluntary Governance System."	Article	Accounting Horizons 23(3): 245-263.	7	42	0.61	Management

Singhvi, M., et al	2013	"Market reactions to appointment of audit committee directors post-SOX: A note."	Article	Journal of Accounting and Public Policy 32(1): 84-89.	0	15	0	Business
Sommer, A. A	1992	"AUDITING AUDIT COMMITTEES - AN EDUCATION OPPORTUNITY FOR AUDITORS."	Article	Journal of Accountancy 173(6): 112-112.	0	0	0	Accounting
Song, C. J., et al	2010	"Value Relevance of FAS No. 157 Fair Value Hierarchy Information and the Impact of Corporate Governance Mechanisms."	Article	Accounting Review 85(4): 1375-1410.	14	79	1.22	Business
Srinivasan, S	2005	"Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members."	Article	Journal of Accounting Research 43(2): 291-334.	111	58	9.64	Business
Subramaniam, N., et al	2013	"Understanding corporate governance in the Australian public sector A social capital approach."	Article	Accounting Auditing & Accountability Journal 26(6): 946-977	0	87	0	Management
Temple, J. F	1986	"WHAT SHOULD MY AUDIT COMMITTEE BE CONCERNED ABOUT."	Article	Journal of Accountancy 162(1): 114-116.	0	0	0	Management
Velte, P	2010	"The link between supervisory board reporting and firm performance in Germany and Austria."	Article	European Journal of Law and Economics 29(3): 295-331.	0	61	0	Business
Verriest, A., et al	2013	"The Impact of Corporate Governance on IFRS Adoption Choices."	Article	European Accounting Review 22(1): 39-77.	0	58	0	Management
Verschoor, C. C	1993	"BENCHMARKING THE AUDIT COMMITTEE."	Article	Journal of Accountancy 176(3): 59-&.	2	0	0.17	Business

Wysocki, P	2010	"Corporate compensation policies and audit fees."	Article	Journal of Accounting & Economics 49(1-2): 155-160.	2	27	0.17	Business
					1151			

CHAPTER 4

Appendix 4.9.1

Table 1. Companies excluded

(US)

Baidu.com, Inc
 Check Point Software Technologies Ltd.
 Express Scripts, Inc.
 Liberty Interactive
 NXP Semiconductors
 VimpelCom Ltd.
 Facebook, Inc.
 TripAdvisor
 Vodafone Group, plc
 Kraft Foods
 Liberty Globals plc.
 Tractor Supply Company
 SeaGate Technology Holdings
 Liberty Media C
 Liberty Media A

4.9.2 Data Preparation (US)

4.9.2 Outlier Detection (US)

Nasdaq 100 company's data are used to investigate influence of company's performance indicators and financial expert's qualification perceptions on Financial Health and Firm Value.

Like UK and Germany studies financial institutions (15 companies) are removed from data set. Missing value analysis shows that some values of variables for several companies are absent, so the corresponding observations are also removed.

To find outliers in updated data set the relationship between two main dependent variables is analysed.

Figure 1.

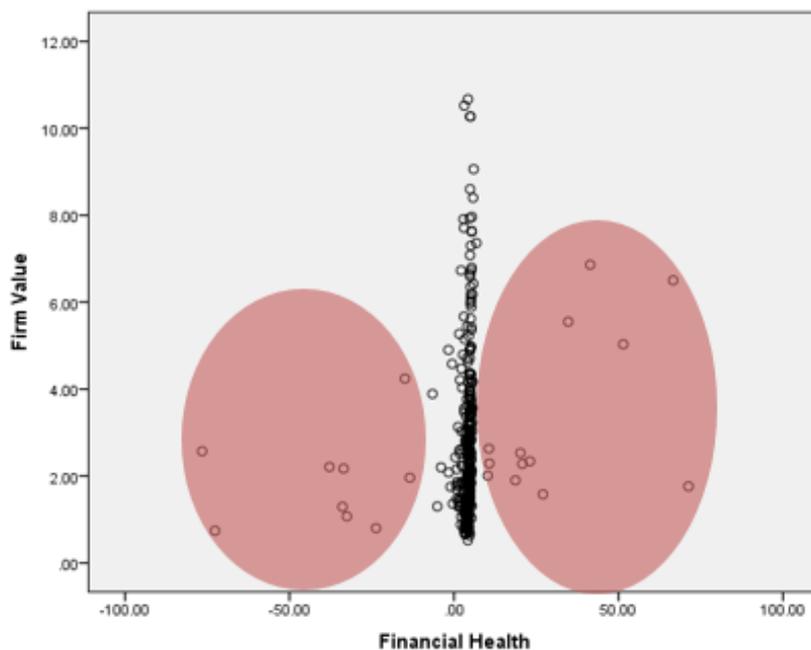


Figure 1 Scatter diagram of Financial Health and Firm Value variables (N=397)

22 observations are treated as outliers and removed from data set.

In below chart the relationship between Financial Health and Firm Value is presented for the final data set.

Figure 2

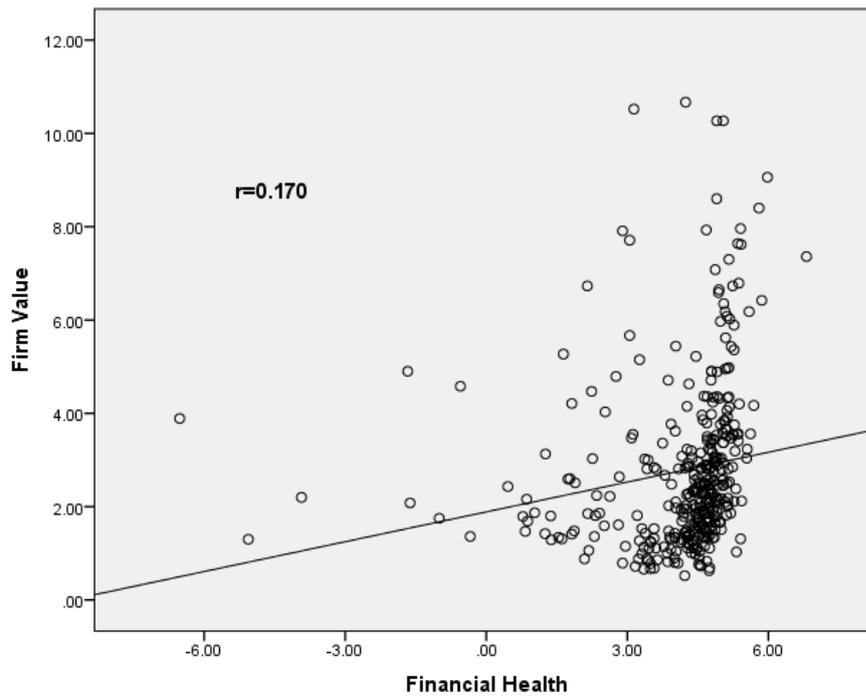


Figure 2 Scatter diagram of Financial Health and Firm Value (N=375)

The linear correlation between Financial Health and Firm Value is 0.170. As in previous two countries studies above relationship can be described better by exponential function.

Figure 3

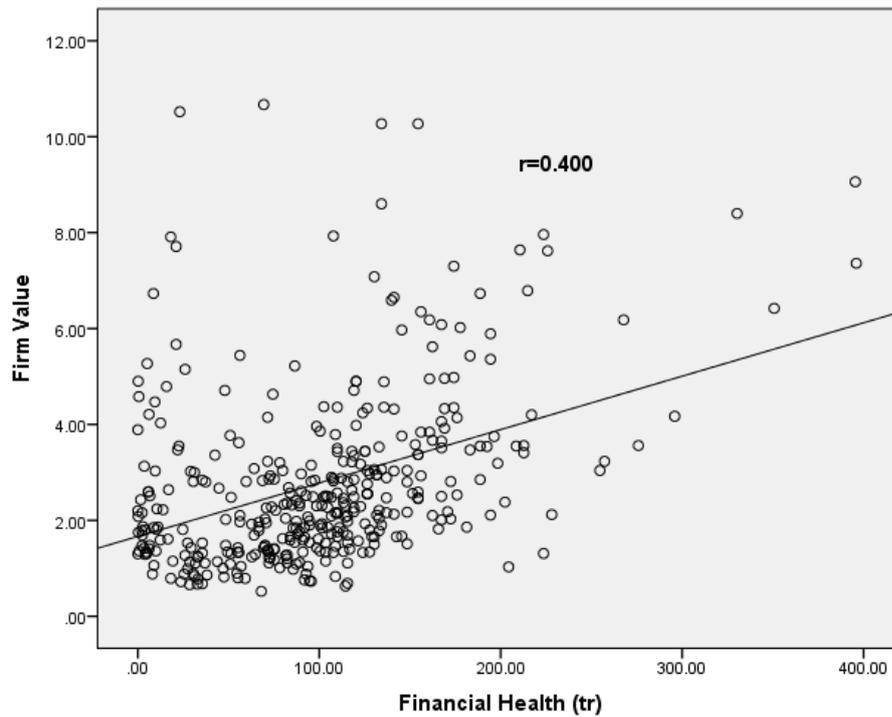


Figure. 3 Scatter diagram of Financial Health Transformed and Firm Value

The correlation improves significantly (from 0.170 to 0.400) after Financial Health transformation. So in further path analysis transformed Financial Health variable is used.

Homoscedasticity testing shows that the residuals of the Firm Value dependent variable model are homoscedastic.

Figure 4

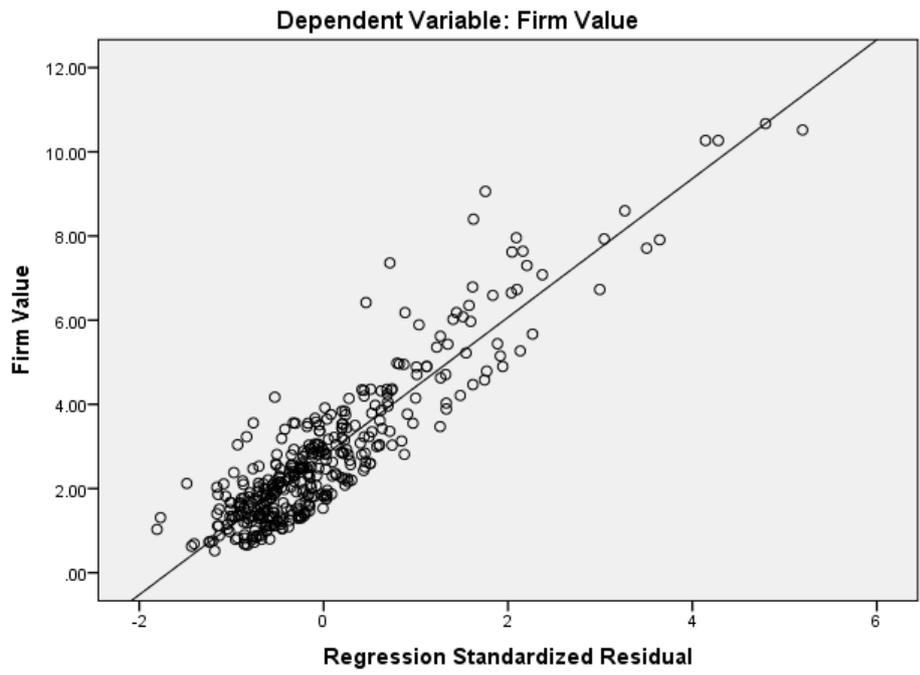


Figure 4. Scatter diagram for homoscedasticity analysis

CHAPTER 5

5.9 Appendix

5.9.1 Table 1 Companies excluded from study at the results of missing value analysis (UK)

Carnival Plc
Evraz plc
Eurasian Natural Resources
Friends Life Group Ltd.
Fresnillo plc
Glencore International
Intercontinental Consolidated Airlines Group SA
Land Securities Group
Lloyds Banking Group
Xstrata
Coca-Cola HBC AG
British Land Co.
Hammerson
Royal Bank of Scotland Group
Schroders
RSA Insurance Group
Standard Chartered
HSBC
Reed Elsevier²¹

Appendix 1.2. Companies excluded from study at the results of missing value analysis (Germany)

Balda AG O.N No AC
Brenntag AG
Delticom AG
Douglas Hldg AG NPV
Fielmann AG O.N
GSW Immobilien AG NPV(BR)
SAF Holland S.A EO-,01
Utd. Internet AG NA

²¹ * **Reed Elsevier** is removed from data as Sales/assets, Debt/assets, Debts/equity, Cash ratio, Quick ratio are 0 for all 5 years

Wirecard AG
Dialog Semicond LS, 10
FRESEN.MED.CARE Kgaa O.N
Hann.Rueck SE NA O.N
SMA Solar Technology
Solarworld AG O.N
Suess Microtec NA O.N
Tognum AG
Gagfah S.A NOM EO 1.25
Deutz AG O.N

Appendix . Companies excluded from study at the results of missing value analysis (US)

Baidu.com, Inc
Check Point Software Technologies Ltd.
Express Scripts, Inc.
Liberty Interactive
NXP Semiconductors
VimpelCom Ltd.
Facebook, Inc.
TripAdvisor
Vodafone Group, plc
Kraft Foods
Liberty Globals plc.
Tractor Supply Company
SeaGate Technology Holdings
Liberty Media C
Liberty Media A

5.9.2 Table 5.2. Definition of variables

Variable	Name	Variable definition	Sample Period
ACCEXP	P	1 assigned to ACCEXP if the expert have accounting qualifications such as ACCA, CIMA, CPA or else 0	2009 - 2013
FINEXP	P	1 assigned to FINEXP if the expert of AC have MBA, Investment banker, financial controller or else 0	2009 - 2013
SFEEXP	P	1 assigned to SFEEXP if the expert of AC is CEO, President and vice president of a board with experience or else 0	2009 - 2013
Audit Quality	I	Audit fee and Non-audit fee	2009 - 2013
AC_SIZE	I	The number of AC members on the average.	2009 - 2013
AC_MEET	I	The number of meetings on the average held by AC	2009 - 2013
Profitability	I	Net Income/Assets and Sales/Assets	2009 - 2013
Liquidity	I	Quick ratio and cash ratio	2009 - 2013
Leverage	I	Debt/Assets and Debt/Equity	2009 - 2013
Financial Health	J	Z score	2009 - 2013
Firm Value	D	Tobin's Q	2009 - 2013

5.9.3 Table.3 Descriptive statistics UK from 2009 - 2013

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.57	1.00	0.50	0.00	1.00	-0.30	-1.92
FE Experts	0.90	1.00	0.30	0.00	1.00	-2.68	5.20
SFE Experts	0.93	1.00	0.26	0.00	1.00	-3.30	8.92
Audit fees	6.62	3.30	9.88	0.10	57.00	3.02	9.46
Non-Audit fees	2.66	1.40	3.91	0.00	38.00	5.04	37.39
Non-Audit fee Ratio	0.61	0.43	0.78	0.00	9.00	5.86	51.00
AC Size	4.61	4.00	1.24	3.00	10.00	0.95	1.22
AC Meetings	5.12	4.00	2.26	3.00	17.00	2.14	5.50
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.08	0.07	0.07	-0.10	0.59	2.29	11.56
Sales/assets	0.84	0.76	0.56	0.00	3.71	1.12	2.49
Debt/assets	0.23	0.22	0.14	0.00	0.62	0.36	-0.24
Debts/equity	1.09	0.60	1.38	0.00	8.17	2.66	7.72
Cash ratio	0.46	0.26	0.68	0.01	5.42	4.29	22.13
Quick ratio	0.92	0.78	0.80	0.01	6.51	3.71	18.12
Financial Health	2.53	3.88	3.68	-18.64	6.97	-2.80	8.70
Firm Value	1.39	1.06	1.29	0.02	9.79	3.63	17.11

This section shows descriptive analysis of dependent, independent variables. Table 3 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table, after winsorisation the financial health ranges between a minimum of -18.64 to a maximum of 6.97, with an average of 2.53 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 3.68, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (TQ) ranges from a minimum of 0.02 to a maximum of 9.79, with an average of 1.39 for the whole period. The standard deviation is 1.29, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of Financial health is negative (-2.80), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 3.63. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur *et al*, 2008).

Comparing mean and median values, skewness and kurtosis of variables (except first three dummy variables) we can conclude that for almost all variables mean value is higher than the median (except first three variables, which are dummy variables), which means that the distributions of corresponding variables are right skewed, so the median values are more preferable measures of central tendency than arithmetic mean.

Table 4 Descriptive statistics Germany from 2009 - 2013

	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.12	0.00	0.32	0.00	1.00	2.42	3.88
FE Experts	0.65	1.00	0.48	0.00	1.00	-0.65	-1.58
SFE Experts	0.90	1.00	0.30	0.00	1.00	-2.69	5.25
Audit fees	86.56	2.28	276.72	0.17	1592.00	3.80	14.38

Non-Audit fees	54.79	1.00	225.36	0.00	2472.00	6.42	50.93
Non-Audit fee Ratio	0.75	0.45	1.86	0.00	27.54	10.44	130.29
AC Size	4.82	5.00	1.45	3.00	11.00	0.81	0.54
AC Meetings	4.72	5.00	1.66	1.00	12.00	0.66	1.82
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.05	0.05	0.05	0.00	0.44	2.28	9.16
Sales/assets	0.96	0.86	0.64	0.00	4.35	1.48	4.04
Debt/assets	0.23	0.21	0.15	0.00	0.82	0.79	1.07
Debts/equity	1.14	0.65	1.85	0.00	12.47	3.76	15.18
Cash ratio	0.53	0.34	0.70	0.02	6.49	4.90	32.52
Quick ratio	1.19	0.90	0.90	0.10	6.80	3.16	13.43
Financial Health	2.24	3.69	4.69	-23.00	5.60	-3.70	14.39
Firm Value	1.10	0.87	0.86	0.00	5.63	2.40	7.43

This section shows descriptive analysis of dependent, independent variables. Table 4 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table. The financial health ranges between a minimum of -23 to a maximum of 5.60, with an average of 2.24 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 4.69, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (*TQ*) ranges from a minimum of 0.00 to a maximum of 5.63, with an average of 1.10 for the whole period. The standard deviation is 0, 86, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of Financial health is negative (-3.70), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 2.40. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur et al., 2008).

Table 5.

Descriptive Statistics US from 2009 - 2013							
	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
ACC Experts	0.14	0.00	0.35	0.00	1.00	2.07	2.29
FE Experts	0.85	1.00	0.35	0.00	1.00	-2.01	2.03
SFE Experts	0.89	1.00	0.32	0.00	1.00	-2.43	3.92
Audit fees	4.68	2.89	5.71	0.00	36.86	2.52	7.69
Non-Audit fees	1.58	0.30	3.66	0.00	25.63	3.98	17.45
Non-Audit fee Ratio	0.28	0.12	0.37	0.00	1.40	1.49	0.89
AC Size	3.70	4.00	0.82	3.00	7.00	1.21	1.62
AC Meetings	8.59	8.00	2.77	1.00	28.00	1.36	6.96
AC Indp.	1.00	1.00	0.00	1.00	1.00		
ROA	0.11	0.11	0.10	-0.47	0.55	-1.51	10.32
Sales/assets	0.92	0.63	0.77	0.00	4.83	2.46	7.34
Debt/assets	0.15	0.13	0.14	0.00	0.57	0.86	0.00
Debts/equity	0.36	0.21	0.50	0.00	4.28	3.36	17.51
Cash ratio	1.66	1.34	1.48	0.02	8.95	1.83	4.71
Quick ratio	2.23	1.85	1.62	0.10	10.12	1.62	3.88

Financial Health	4.16	4.59	1.44	-6.52	6.81	-3.32	16.11
Firm Value	2.77	2.29	1.81	0.52	10.67	1.77	3.69

This section shows descriptive analysis of dependent, independent variables. Table 4.2.2 shows the descriptive statistics for the variables of this study over five years' period. The Table displays the mean, median, standard deviation, skewness, kurtosis, and minimum and maximum values for each variable. As can be seen from the Table, the financial health ranges between a minimum of -6, 52 to a maximum of 6.81, with an average of 4.16 for the whole sample over the period.

Furthermore, the standard deviation of financial health is 1.44, suggesting that there is a significant variation in the financial health. In addition, Tobin's Q (TQ) ranges from a minimum of 0.52 to a maximum of 10.67, with an average of 2.77 for the whole period. The standard deviation is 1.81, suggesting that the data is very close to the mean.

However, the skewness and kurtosis statistics suggest that Tobin's Q and Financial health are mildly non-normal (the absolute critical value for accepting skewness is zero). For example, the skewness of Financial health is negative (-3.32), indicating that the distribution tends to have longer than a normal left tail. Similarly, the skewness statistic of Tobin's Q seems to have the opposite direction but with less value: it is positive and equal to 1.77. Nonetheless, the kurtosis statistics of Tobin's Q and Financial health are positive and more than the absolute critical value, which is three, and this is also the case for Tobin's Q.

This indicates that the distribution is mildly non-normal, and the positive sign of both values suggests that the both variables have longer tails than that of a normal distribution. However, the non-normal distribution by the variables has been indicated in prior studies that have examined the relationship between corporate governance mechanisms and corporate performance (Cheung and Wei, 2006; Haniffa and Hudaib, 2006 and Francoeur *et al.*, 2008).

Correlation Matrix for the three countries are as follows:

Table 6 Correlation Matrix UK

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	.168**	1														
SFE Experts	-.032	-.094	1													
Audit fees	-.132*	-.021	.020	1												
Non-Audit fees	-.088	-.063	-.287**	.426**	1											
Non-Audit fee Ratio	.091	.021	-.166**	-.178**	.316**	1										
AC Size	-.055	.149**	.163**	.214**	.230**	-.106*	1									
AC Meetings	-.128*	.062	.052	.580**	.310**	-.049	.196**	1								
ROA	-.038	.039	-.010	-.163**	-.106*	-.076	-.072	-.168**	1							
Sales/assets	-.087	-.137**	.215**	-.132*	-.216**	-.085	-.118*	-.180**	.139**							
Debt/assets	-.031	.134**	.051	-.051	.030	.171**	-.025	-.114*	-.081	.017	1					
Debts/equity	-.082	.137**	.041	.136**	.058	.120*	-.031	.146**	-.121*	-.149**	.664**	1				
Cash ratio	.070	.115*	-.122*	-.132*	-.045	.125*	-.178**	.046	.131*	-.223**	-.196**	-.136**	1			
Quick ratio	.092	.078	-.062	-.125*	-.082	.087	-.172**	-.006	.206**	-.098	-.179**	-.155**	.949**	1		
Z Score	.047	-.131*	-.050	-.056	-.020	-.155**	.073	-.073	.161**	.164**	-.739**	-.948**	.085	.107*	1	
Tobin's Q	.170**	.086	.067	-.249**	-.179**	-.003	-.085	-.180**	.551**	.019	-.100	-.124*	.248**	.297**	.110*	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in the correlation matrix

Correlation matrix shows that among several significant independent variables Financial Health and Firm Value have the highest significant positive correlation with ROA (0.161 and 0.551 correspondingly). At the same time Financial health has the highest negative correlation with one of Leverage indicator: Debts/equity ratio (-0.948).

Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.949)) and leverage indicators (Debt/assets and Debts/equity (0.664)).

Table 7. Correlation Matrix Germany

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	.176**	1														
SFE Experts	-.921**	-.242**	1													
Audit fees	-.111*	-.013	.102*	1												
Non-Audit fees	-.086	-.100*	.079	.627**	1											
Non-Audit fee Ratio	-.038	.045	.039	-.019	.137**	1										
AC Size	-.002	.220**	-.034	-.055	-.125*	-.018	1									
AC Meetings	-.038	.219**	-.035	-.197**	-.107*	.040	.184**	1								
ROA	.164**	-.036	-.122*	.045	-.023	.032	-.139**	-.246**	1							
Sales/assets	-.085	-.166**	.090	.154**	-.011	-.123*	.032	-.110*	.245**	1						
Debt/assets	-.042	-.022	.012	.042	.196**	-.020	.026	.022	-.225**	-.340**	1					
Debts/equity	.087	.130*	-.118*	-.033	.020	-.019	.110*	.281**	-.283**	-.352**	.501**	1				
Cash ratio	.054	-.048	.003	-.100*	-.031	.313**	-.140**	-.088	.168**	-.169**	-.100	-.156**	1			
Quick ratio	.173**	.030	-.120*	-.117*	-.088	.216**	-.138**	.008	.097	-.234**	-.092	.259**	.759**	1		
Z Score	-.050	-.051	.079	.036	-.056	.001	-.021	-.219**	.300**	.358**	-.632**	-.914**	.123*	-.174**	1	
Tobin's Q	.131*	-.030	-.076	.071	.032	-.024	-.106*	-.197**	.560**	.192**	-.159**	-.234**	.208**	.123*	.182**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in correlation matrix

Correlation matrix shows that among several significant independent variables Financial Health and Firma Value have the highest significant positive correlation with ROA (0.300 and 0.560 correspondingly). Financial Health has the highest negative correlation with one of Leverage indicator: Debts/equity ratio (-0.914).

Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.759)) and leverage indicators (Debt/assets and Debts/equity (0.501)).

Table 8. Correlation Matrix US

Indicator	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ACC Experts	1															
FE Experts	-.048	1														
SFE Experts	-.887**	-.149**	1													
Audit fees	-.017	.103*	-.041	1												
Non-Audit fees	.101	.109*	-.145**	.567**	1											
Non-Audit fee Ratio	-.020	.135**	-.021	.118*	.629**	1										
AC Size	-.059	.062	.054	.019	.072	.050	1									
AC Meetings	.060	-.073	-.090	.114*	.027	-.045	.015	1								
ROA	-.013	-.060	.058	-.041	-.095	-.087	.035	.005	1							
Sales/assets	.183**	-.172**	-.171**	-.150**	-.100	.032	.026	-.238**	.190**	1						
Debt/assets	-.161**	.087	.110*	.206**	.198**	.109*	.047	.009	-.222**	-.226**	1					
Debts/equity	-.150**	.059	.116*	.144**	.143**	.091	.078	-.062	-.276**	-.148**	.833**	1				
Cash ratio	.058	.111*	-.074	-.150**	-.113*	-.141**	-.059	.077	.141**	-.290**	-.114*	-.182**	1			
Quick ratio	.055	.167**	-.084	-.166**	-.124*	-.138**	-.049	.044	.212**	-.260**	-.117*	-.196**	.964**	1		
Z Score	.119*	-.079	-.085	-.076	-.113*	-.106*	-.062	.074	.512**	.201**	-.767**	-.941**	.143**	.172**	1	
Tobin's Q	-.097	-.072	.105*	-.295**	-.251**	-.205**	-.076	-.033	.268**	.158**	-.196**	-.147**	.201**	.274**	.170**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

AC indp is not included (it is constant variable) in correlation matrix

Correlation matrix shows that Financial Health and Firma Value have the highest significant positive correlation with ROA (0.512 and 0.268 correspondingly). At the same time Financial Health has the highest negative correlation with Leverage indicators: Debts/equity ratio (-0.941) and Debt/assets (-0.767).

Very high correlation can be observed between liquidity (Cash ratio and Quick ratio (0.964)) and leverage indicators (Debt/assets and Debts/equity (0.833)).

Table 9 Factor Loadings

Indicators UK	Loadings	Threshold	Below Threshold
Audit fees	0,758	0,50	
Non - audit fees	0,913	0,50	
AC Size	0,978	0,50	
AC Meetings	0,398	0,50	0,398
ROA	0,988	0,50	
Sales - Assets	0,112	0,50	0,112
Debt - Asset	0,940	0,50	
Debt - Equity	0,879	0,50	
Cash - Ratio	0,986	0,50	
Quick - Ratio	0,989	0,50	
Indicators US	Loadings	Threshold	
Audit fees	0,850	0,50	
Non - audit fees	0,916	0,50	
AC Size	0,544	0,50	
AC Meetings	0,497	0,50	0,497
ROA	0,944	0,50	
Sales - Assets	0,503	0,50	
Debt - Asset	0,962	0,50	
Debt - Equity	0,952	0,50	
Cash - Ratio	0,987	0,50	
Quick - Ratio	0,994	0,50	
Indicators Germany	Loadings	Threshold	
Audit fees	0.716	0,50	
Non - audit fees	0.993	0,50	
AC Size	0.817	0,50	
AC Meetings	0.717	0,50	
ROA	0.932	0,50	
Sales - Assets	0.580	0,50	
Debt - Asset	0.923	0,50	
Debt - Equity	0.795	0,50	
Cash - Ratio	0.961	0,50	
Quick - Ratio	0.909	0,50	

Table. 10 Convergent and composite reliability

Total Variance Explained and Composite Reliability						
UK*	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		2.50%	97.50%		2.50%	97.50%
AC						
Characteristics	0.553	0.407	0.617	0.674	0.047	0.763
Audit Quality	0.704	0.405	0.789	0.825	0.392	0.882
Leverage	0.828	0.797	0.868	0.906	0.887	0.93
Liquidity	0.974	0.954	0.983	0.987	0.976	0.992
Profitability	0.506	0.478	0.536	0.554	0.402	0.641
* <i>Reed Elsevier</i> is removed from data as Sales/assets, Debt/assets, Debts/equity, Cash ratio, Quick ratio are 0 for all 5 years						
US	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		2.50%	97.50%		2.50%	97.50%
AC						
Characteristics	0.497	0.472	0.544	0.364	0.010	0.683
Audit Quality	0.781	0.679	0.842	0.877	0.803	0.914
Leverage	0.916	0.887	0.966	0.956	0.940	0.983
Liquidity	0.981	0.970	0.990	0.991	0.985	0.995
Profitability	0.572	0.535	0.614	0.710	0.656	0.754
GERMANY	AVE	Bias-corrected 95% CI of AVE		CR	Bias-corrected 95% CI of CR	
		L 95% CI	U 95% CI		L 95% CI	U 95% CI
AC Characteristics	0.591	0.523	0.630	0.742	0.630	0.769
Audit Quality	0.749	0.245	0.890	0.853	0.226	0.943
Leverage	0.744	0.709	0.790	0.851	0.828	0.882
Liquidity	0.863	0.711	0.937	0.933	0.831	0.968
Profitability	0.604	0.544	0.671	0.742	0.674	0.801

As can be seen from the table below, AVE of all latent variables for UK are higher than 0.5, however for AC Characteristics and Profitability CR values are less than 0.7. In this situation we have decided to exclude from those indicators from these latent variables construction, which have lower loading (lower correlation) for the particular latent variable. Thus AC Meetings and Sales/assets indicators are eliminated from the final path analysis for UK

In the US data above, AVE and CR for all latent variables satisfy the minimum acceptable thresholds except AC Characteristics. So one of AC Characteristics indicators should be eliminated from further path analysis. In this case this variable is AC Meetings.

In the case of Germany, all values are above the Threshold.

Table 11 Discriminant validity UK

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.839				
AC Characteristics	0.250	0.744			
Profitability	-0.162	-0.071	0.711		
Leverage	0.121	-0.030	-0.152	0.910	
Liquidity	-0.120	-0.175	0.080	-0.137	0.987

Table 12 Discriminant validity. US

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.884				
AC Characteristics	0.044	1.000			
Profitability	-0.151	0.030	0.756		
Leverage	0.181	0.073	-0.200	0.957	
Liquidity	-0.152	-0.059	-0.262	-0.172	0.990

Table 13 Discriminant validity: Germany

Variables	Audit Quality	AC Characteristics	Profitability	Leverage	Liquidity
Audit quality	0.865				
AC Characteristics	-0.178	0.769			
Profitability	0.088	-0.076	0.777		
Leverage	0.000	0.253	-0.379	0.863	
Liquidity	-0.077	-0.145	-0.152	-0.158	0.929

From above Tables, discriminant validity are all in conformity. This imply that our PLS estimates can be reliable.

Table 14 UK Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896 ^a	.803	.798	35.35614

a. Predictors: (Constant), Cash ratio, Non-Audit fees, ROA, Debts/equity, AC Size, Sales/assets, AC Meetings, Audit fees, Debt/assets

Table 15 UK residual Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1859083.470	9	206564.830	165.244	.000 ^b
	Residual	456270.596	365	1250.056		
	Total	2315354.066	374			

a. Dependent Variable: Financial Health (tr)

Table 16 US Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 ^a	.806	.802	28.87122

a. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

Table 17 US Regression Residual**ANOVA^a**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1266571.465	8	158321.433	189.937	.000 ^b
	Residual	305078.418	366	833.548		
	Total	1571649.882	374			

a. Dependent Variable: Financial Health (tr)

b. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

Table 18 Model Summary - Germany

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898 ^a	.806	.802	28.87122

a. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

Model summary shows R2 and adjusted R2

Table 19 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1266571.465	8	158321.433	189.937	.000 ^b
	Residual	305078.418	366	833.548		
	Total	1571649.882	374			

a. Dependent Variable: Financial Health (tr)

b. Predictors: (Constant), Audit fees, AC Size, ROA, Cash ratio, Debt/assets, Sales/assets, Non-Audit fees, Debts/equity

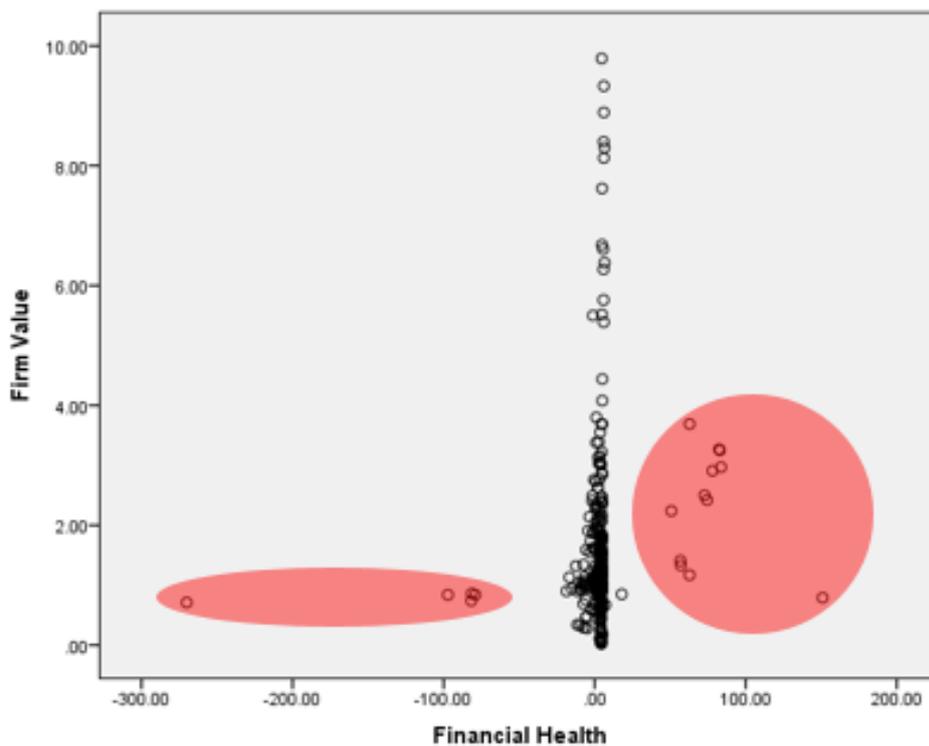
5.9.4 Data Preparation (UK)

5.9.4 Data Preparation (UK)

Outlier Detection (UK)

The first step of the data analysis is data preparation. For this reason additional analysis was conducted to investigate whether there are unusual observations (mainly in two main variables of the study: Financial Health and Firm Value) in the data set.

Figure 1



Scatter diagram of Financial Health and Firm Value variables (N=393)

Obviously there are some outlier (unusual) observations in the relationship, so they should be removed from data set to understand the actual form of relationship between these two variables.

We decided to remove from data set those observations, for which Financial Health values are below -20, and above 1022.

Thus 18 observations are treated as outliers and removed from the UK data set. Additional investigation of data set indicated that for one companies the main independent variables values equal 0 for all observed period (5 years). So this company is also eliminated from data set. At the result the final revised data set includes 370 observations.

Linear assumption of relationship between Financial Health and Firm Value (UK)

Figure 2

The revised relationship between Financial Health and Firm Value is presented in below scatter diagram:

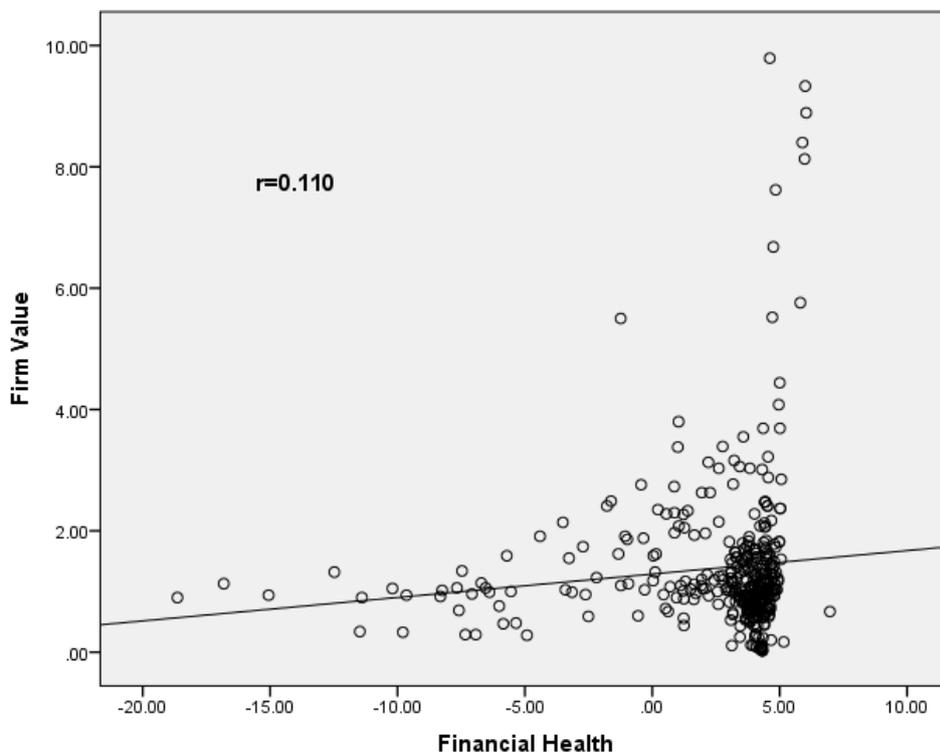


Figure 2.Scatter diagram of Financial Health and Firm Value (N=370)

Above scatter diagram shows that the relationship between Financial Health and Firm Value cannot be described accurately by the linear function (the linear correlation coefficient is 0.110). As we know one of the main assumptions of path and regression analysis is the linear relationship between independent and dependent variables. So we can conclude that in this particular case the linearity assumption is violated.

22 In Figure 2.1.1.1. unusual observations (Financial Health of which are below -20 and above 10) are highlighted

The distribution of points indicates that exponential curve can describe the relationship more clearly. To check this assumption we transformed Financial Health variable's values using $\exp(\text{Financial Health})$ transformation and call the new variable "Financial Health (transformed)":

$$\text{Financial Health (transformed)} = \exp(\text{Financial Health}) = e^{\text{Financial Health}}$$

The scatter diagram for Financial Health (transformed) and Firm Value shows that the correlation improved significantly ($r=0.415$)

Figure 3

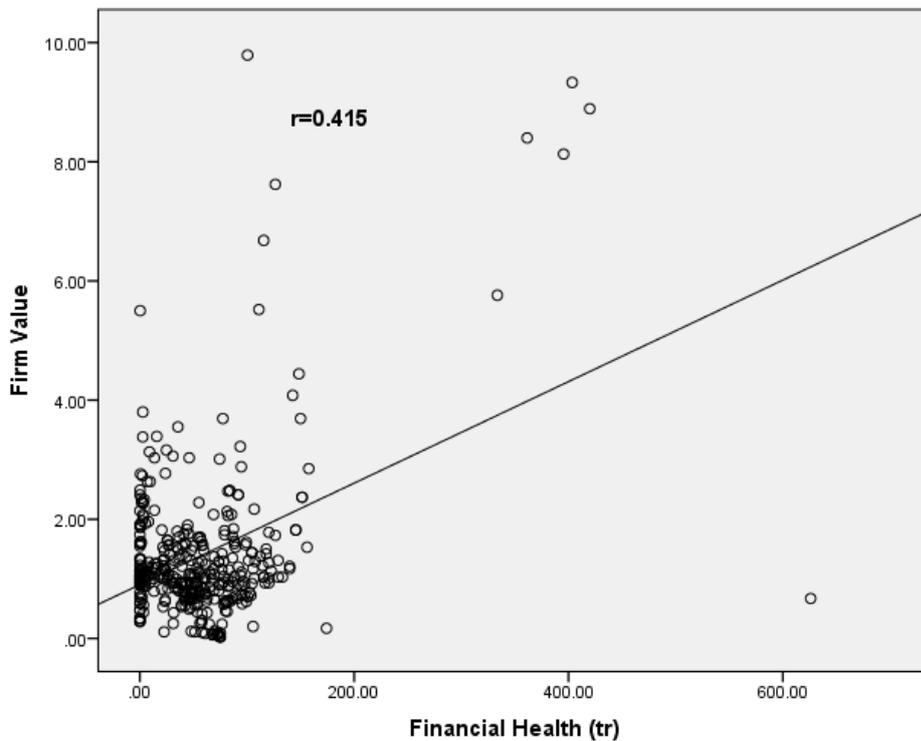


Figure 3. Scatter diagram of Financial Health Transformed and Firm Value

So instead of initial Financial Health variable the Financial Health (transformed) variable will be used in path analysis.

The other assumption of multiple regression or path analysis is the homoscedasticity of errors (constant variance in residuals).

We checked this assumption only for the second regression model of Model 4.

$$\text{Firm Value} = \beta_6 \cdot \text{Financial Health} + \beta_8 \cdot \text{ACC Experts} + \beta_{10} \cdot \text{FE Experts} + \beta_{12} \cdot \text{SFE Experts} + \varepsilon_{42}$$

The results indicate that above model residuals are homoscedastic:

Figure.4

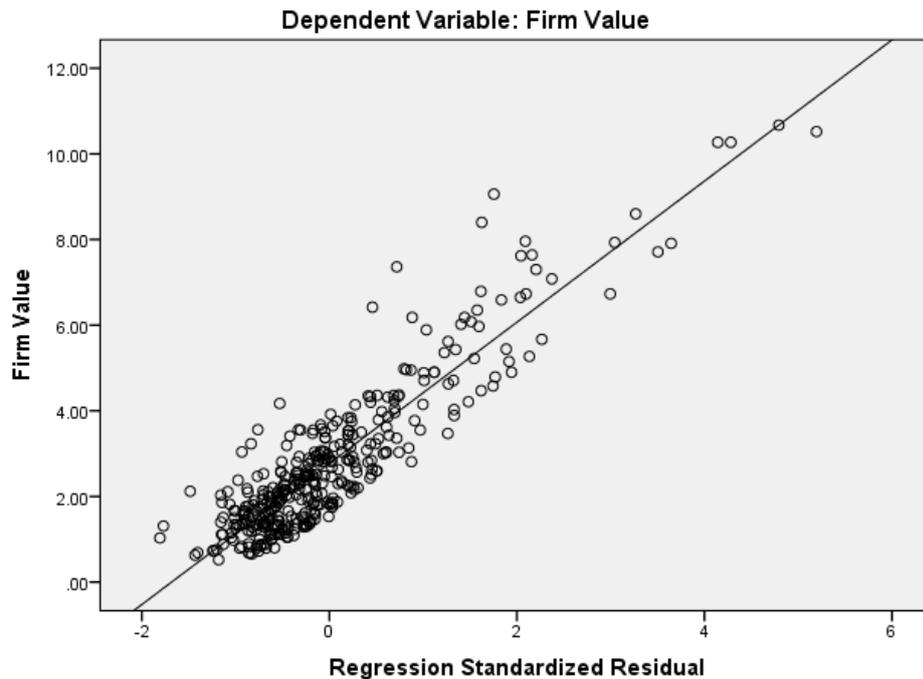


Figure 4. Scatter diagram for homoscedasticity analysis

5.9.5 Data Preparation (Germany)

Outlier Detection (Germany)

For research questions analysis DAX 100 company's data are used. Financial institutions are removed from data set. At the same time missing value analysis indicates that some values of variables for some companies are absent, so the corresponding observations are also removed. At the results overall 18 companies are excluded from the further analysis. The list of these companies are presented in appendix 1.

Outlier detection analysis in DAX100 companies data set revealed 4 unusual observations (see below table).

Figure 5

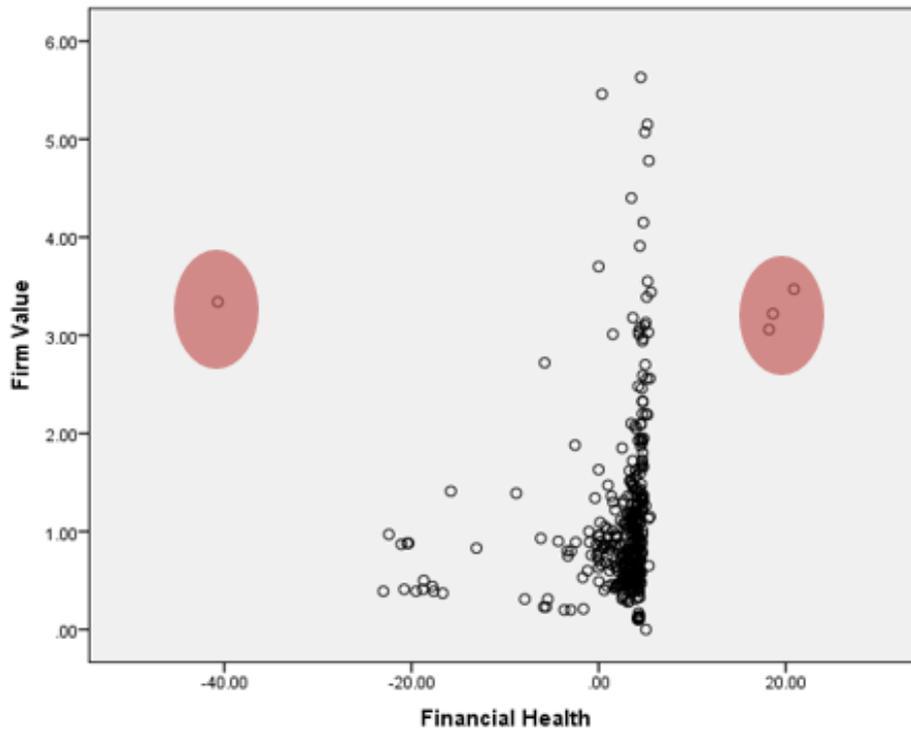


Figure 5. Scatter diagram of Financial Health and Firm Value variables (N=386)

After removing outliers the updated scatter diagram looks like:

Figure 6

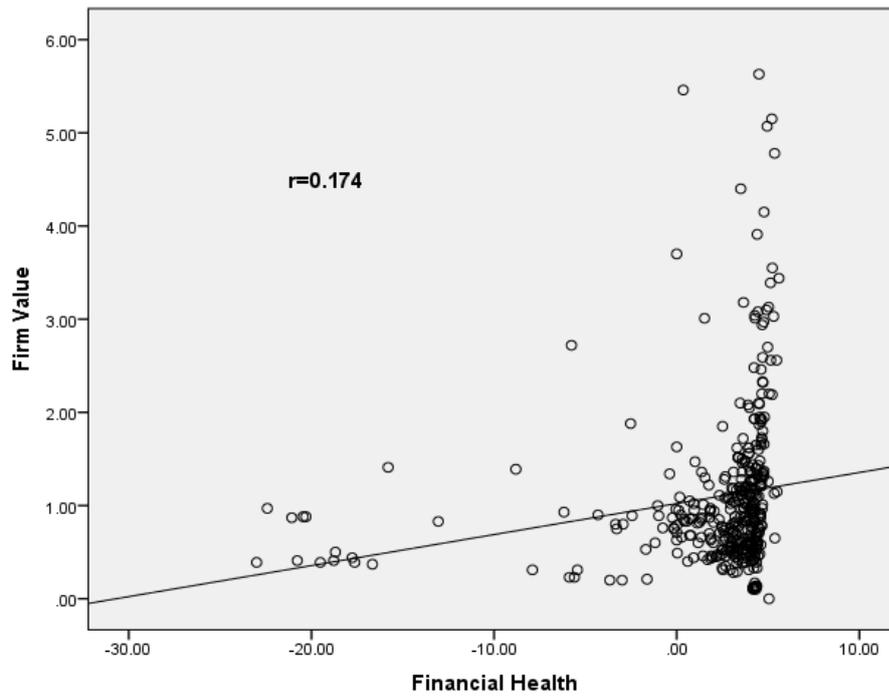


Figure 6 Scatter diagram of Financial Health and Firm Value (N=382)

The linear correlation between Financial Health and Firm Value is 0.174. Also we can say the linear relationship is not a good way to describe the relationship. Like in UK study we have transformed Financial Health variable using exponential function.

Figure 7

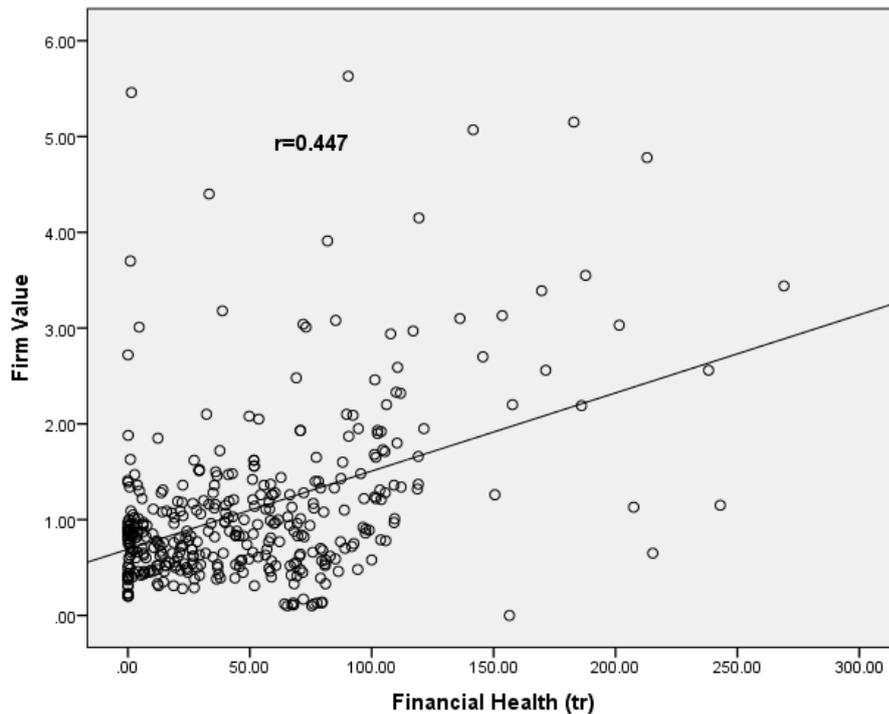


Figure 7 Scatter diagram of Financial Health Transformed and Firm Value

As we see the new correlation improves significantly (from 0.174 to 0.447). This fact indicates that for path analysis we should use transformed Financial Health.

Homoscedasticity of errors is also tested for the model 423.

$$Firm\ Value = \beta_6 \cdot Financial\ Health + \beta_8 \cdot ACC\ Experts + \beta_{10} \cdot FE\ Experts + \varepsilon_{42}$$

23 The correlation analysis for DAX100 companies in the next chapter shows that there is very high negative correlation between ACC Experts and SFE Experts (-0.921). This can cause multicollinearity issue in model for, that's why SFE Experts is removed from general specification of model 4 (the correlation between ACC Experts and Firm Value is significantly higher compared with correlation between SFE Experts and Firm Value).

Figure 8

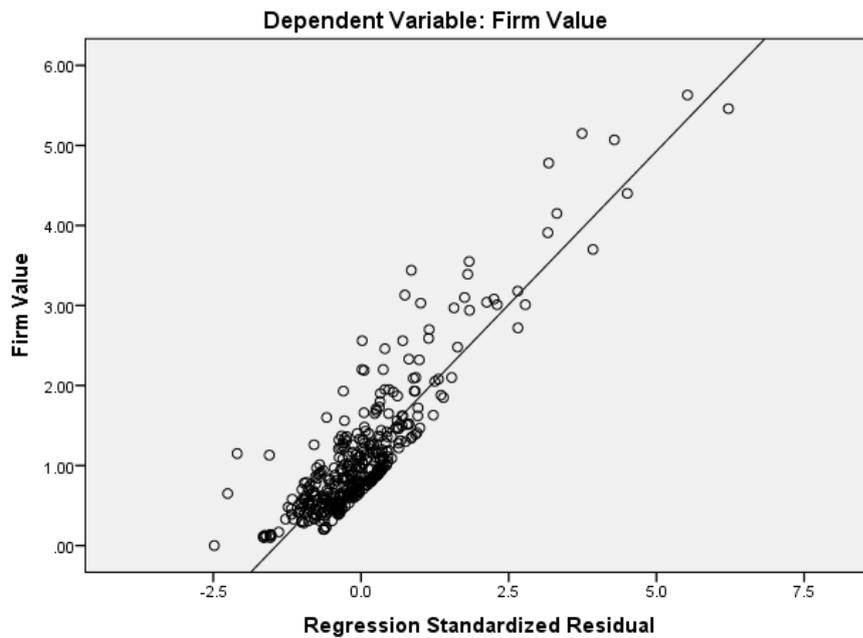


Figure 8. Scatter diagram for homoscedasticity analysis

From above figure we can state the model 4 residual are homoscedastic.

5.9.6 Data Preparation (US)

Outlier Detection (US)

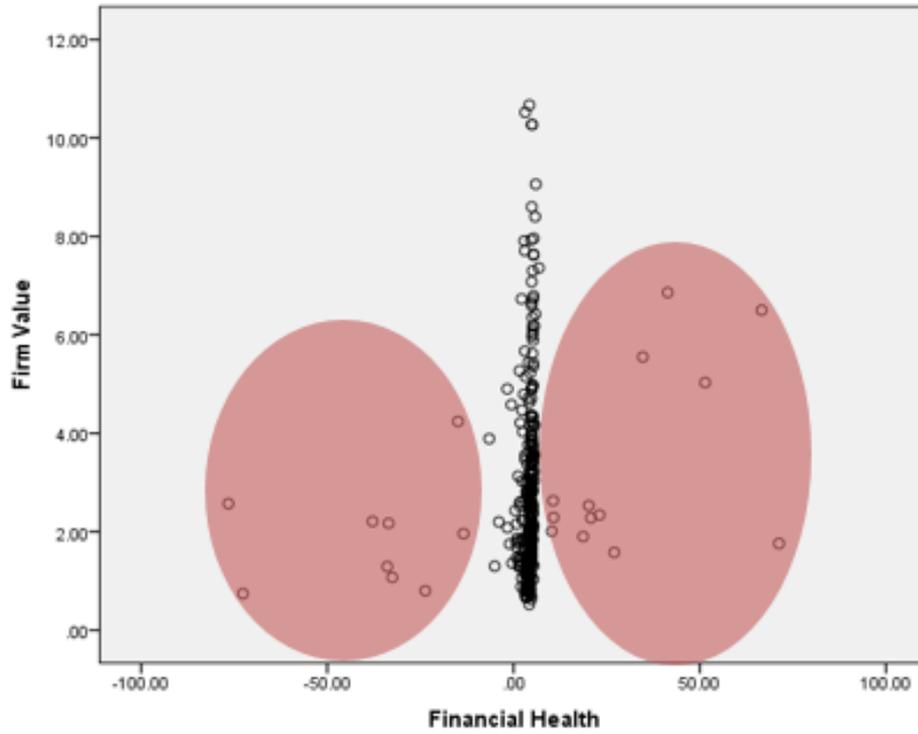
Nasdaq 100 company's data are used to investigate influence of company's performance indicators and financial experts qualification perceptions on Financial Health and Firm Value.

Like UK and Germany studies financial institutions (15 companies) are removed from data set²⁴. Missing value analysis shows that some values of variables for several companies are absent, so the corresponding observations are also removed.

To find outliers in updated data set the relationship between two main dependent variables is analysed.

Figure 9

²⁴ The list of these companies are presented in appendix 1.3.



Scatter diagram of Financial Health and Firm Value variables (N=397)

Figure 9

22 observations are treated as outliers and removed from data set.

In below chart the relationship between Financial Health and Firm Value is presented for the final data set.

Figure 10

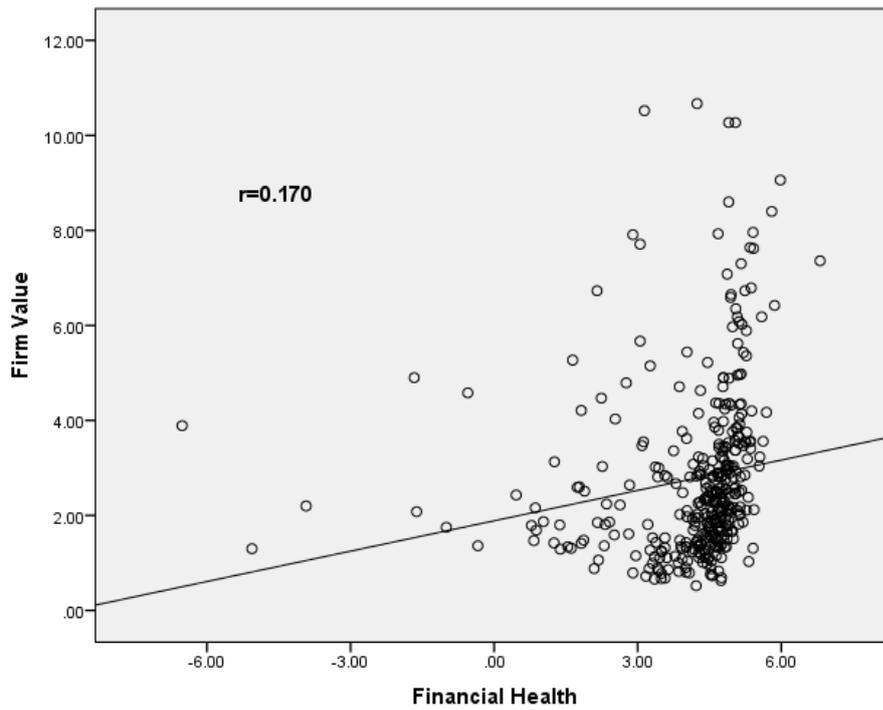
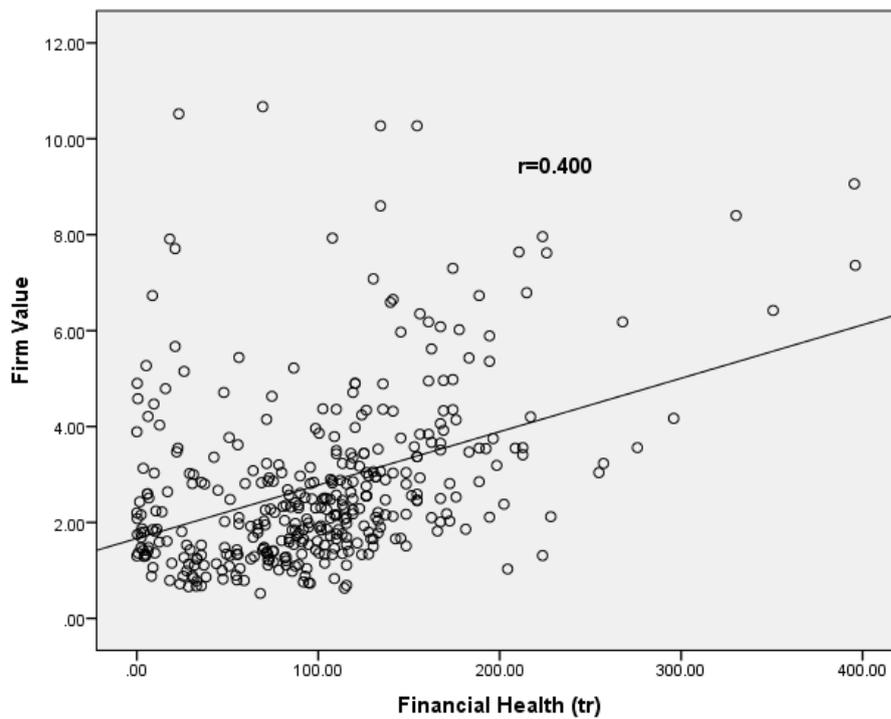


Figure 10. Scatter diagram of Financial Health and Firm Value (N=375)

The linear correlation between Financial Health and Firm Value is 0.170. As in previous two countries studies above relationship can be described better by exponential function.

Figure 11

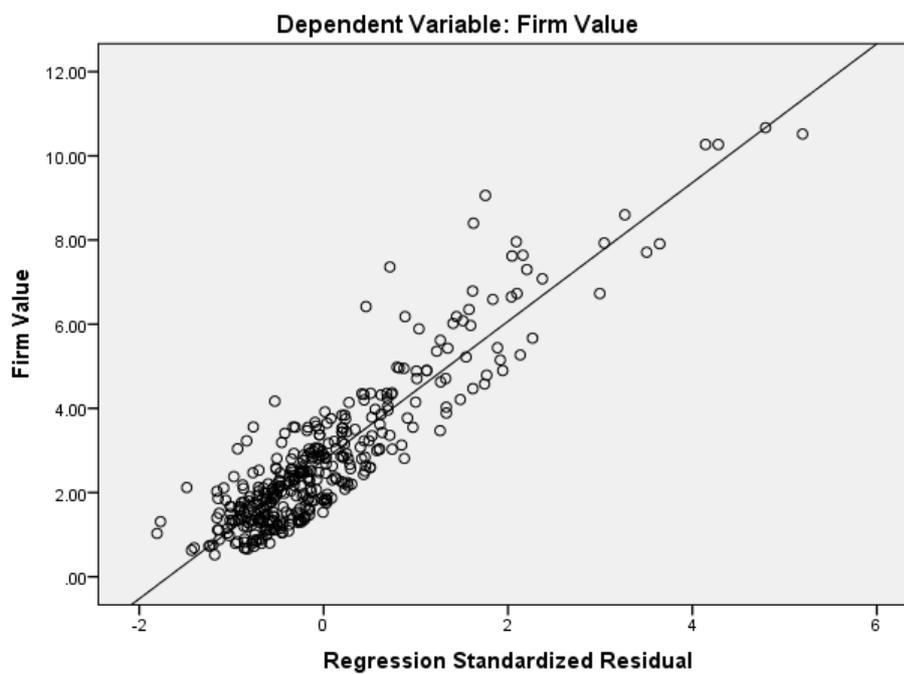


Scatter diagram of Financial Health Transformed and Firm Value

The correlation improves significantly (from 0.170 to 0.400) after Financial Health transformation. So in further path analysis transformed Financial Health variable is used.

Homoscedasticity testing shows that the residuals of the Firm Value dependent variable model are homoscedastic.

Figure 12

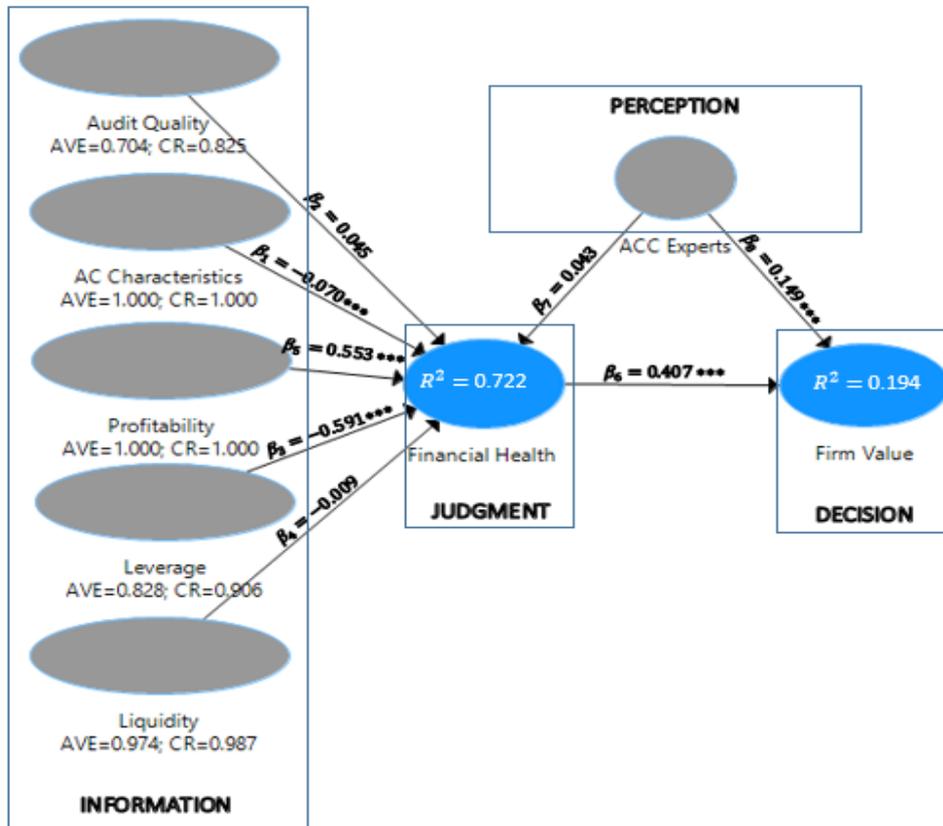


Scatter diagram for homoscedasticity analysis

5.9.7 Additional PLS Results - diagrams of individual models

Path Analysis Graphical Outputs - UK

Figure 13 Impact of ACC Experts on Firm Value (model 1)

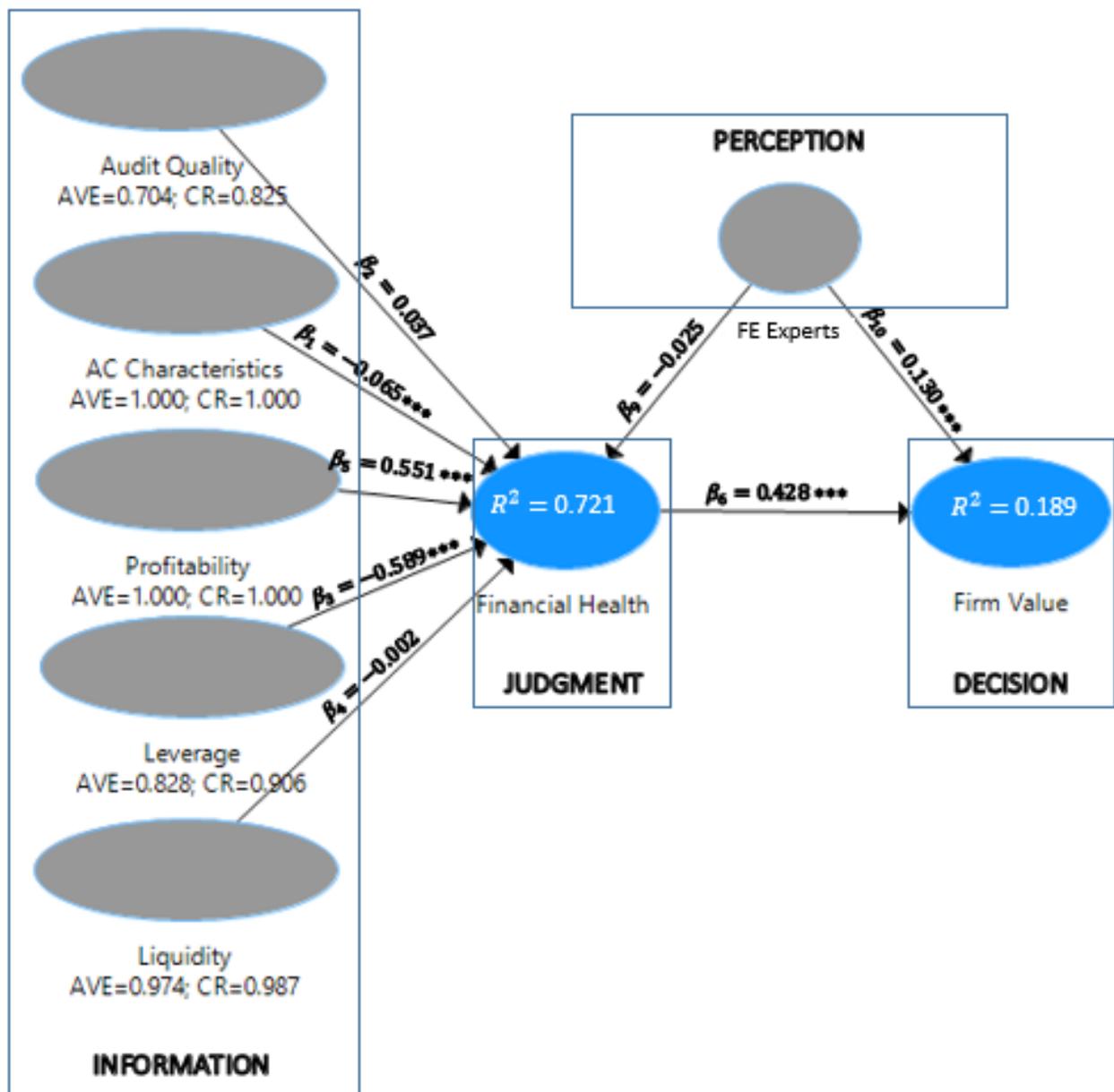


ACC Experts perception has significant positive impact on Firm Value ($\beta_8 = 0.149^{***}$).

Financial Health doesn't play mediated role between ACC Experts and Firm Value: as we see the impact of ACC Experts on Financial Health is not significant ($\beta_7 = 0.043$). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.407^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.553^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.070^{***}$ and $\beta_3 = -0.591^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.407^{***}$).

Figure 14. Impact of FE Experts on Firm Value (model 2)

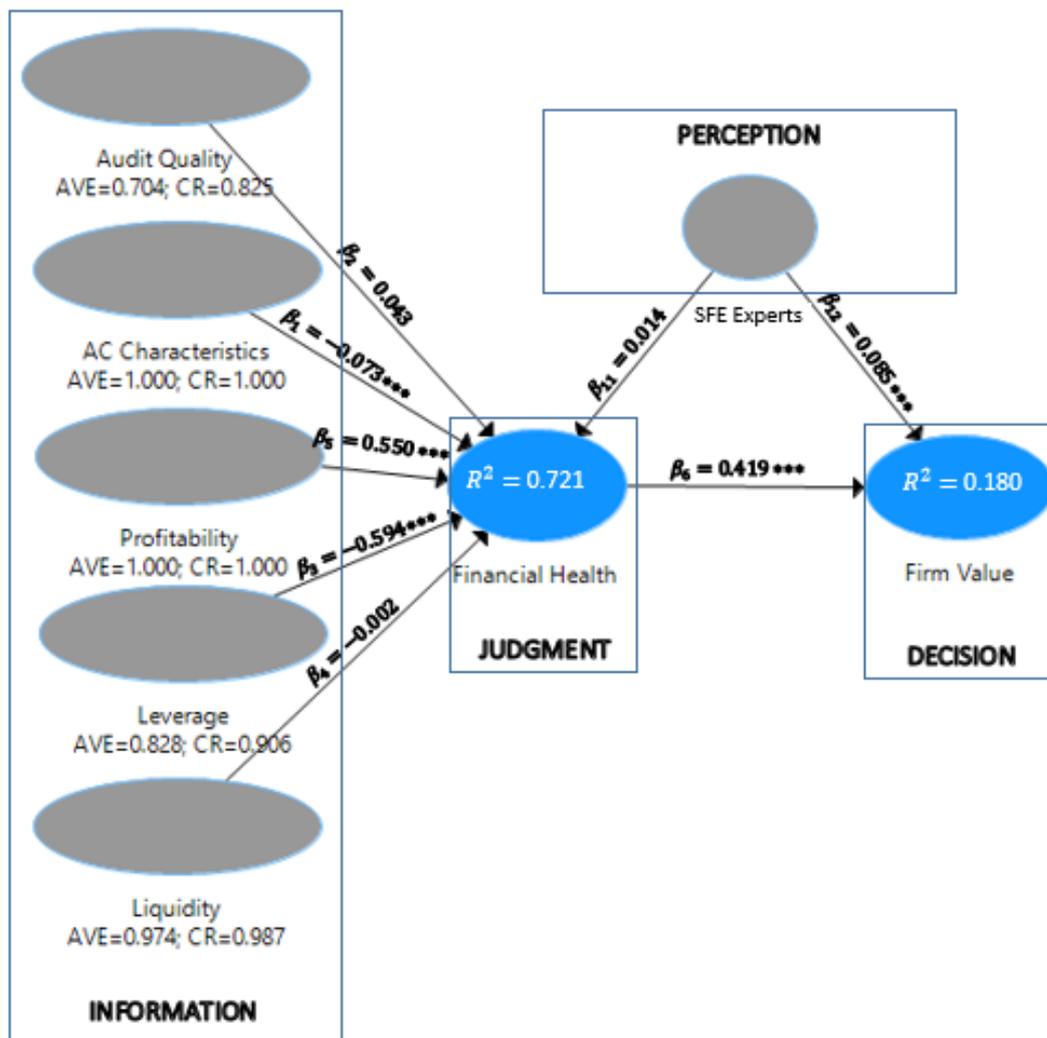


FE Experts perception has significant positive impact on Firm Value ($\beta_{10} = 0.130^{***}$).

Financial Health doesn't play mediated role between FE Experts and Firm Value: the impact of FE Experts on Financial Health is not significant ($\beta_9 = -0.025$). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.428^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.551^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.065^{***}$ and $\beta_3 = -0.589^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.428^{***}$).

Figure 15. Impact of SFE Experts on Firm Value (model 3)

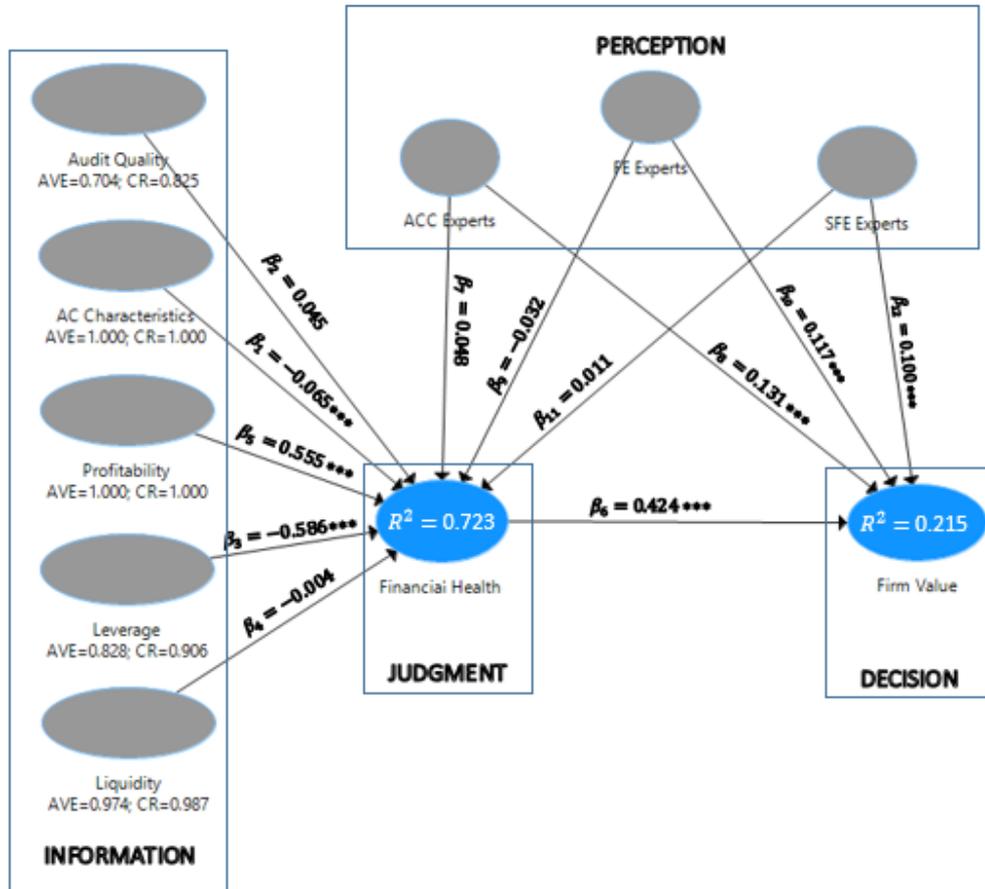


SFE Experts perception has significant positive impact on Firm Value ($\beta_{12} = 0.085^{***}$).

Financial Health doesn't play mediated role between FE Experts and Firm Value: the impact of FE Experts on Financial Health is not significant ($\beta_{11} = 0.014$). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.419^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.550^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.073^{***}$ and $\beta_3 = -0.594^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm value ($\beta_6 = 0.419^{***}$).

Figure 16 Impact of all Financial Experts on Firm Value (model 4)



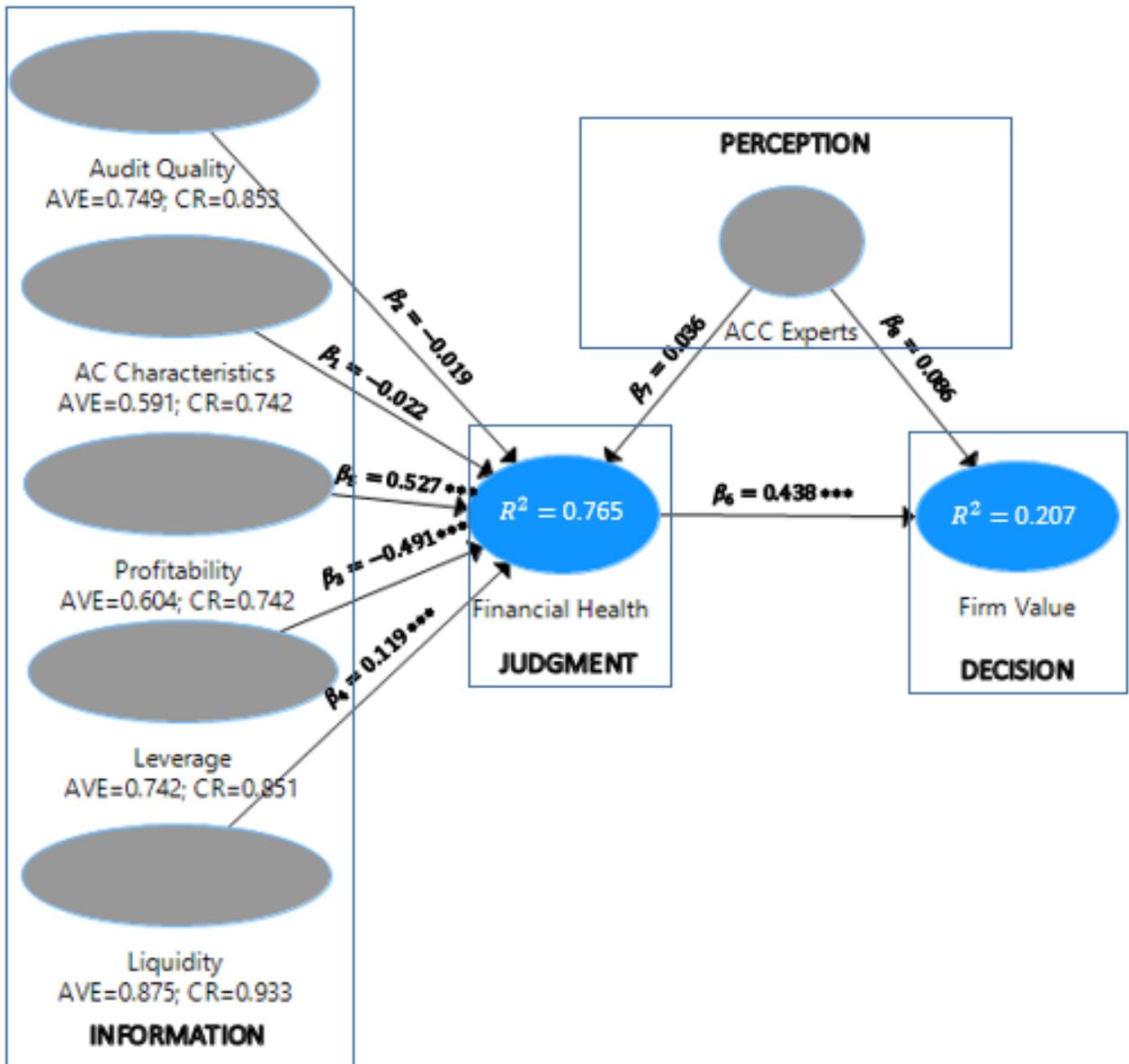
In the combined model 4 all three financial experts perceptions (ACC, FE, and SFE) have significant positive impact on Firm Value ($\beta_8 = 0.131^{***}$, $\beta_{10} = 0.117^{***}$ and $\beta_{12} = 0.100^{***}$ correspondingly).

Financial Health doesn't play mediated role between financial experts perceptions (ACC, FE, and SFE) and Firm Value ($\beta_7 = 0.048$, $\beta_9 = -0.032$, and $\beta_{11} = 0.011$ correspondingly). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.424^{***}$).

The profitability influence positively ($\beta_5 = 0.555^{***}$) the Financial Health; the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.065^{***}$ and $\beta_3 = -0.586^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.424^{***}$).

Path analysis graphical outputs (Germany)

Figure 17. Impact of ACC Experts on Firm Value (model 1)

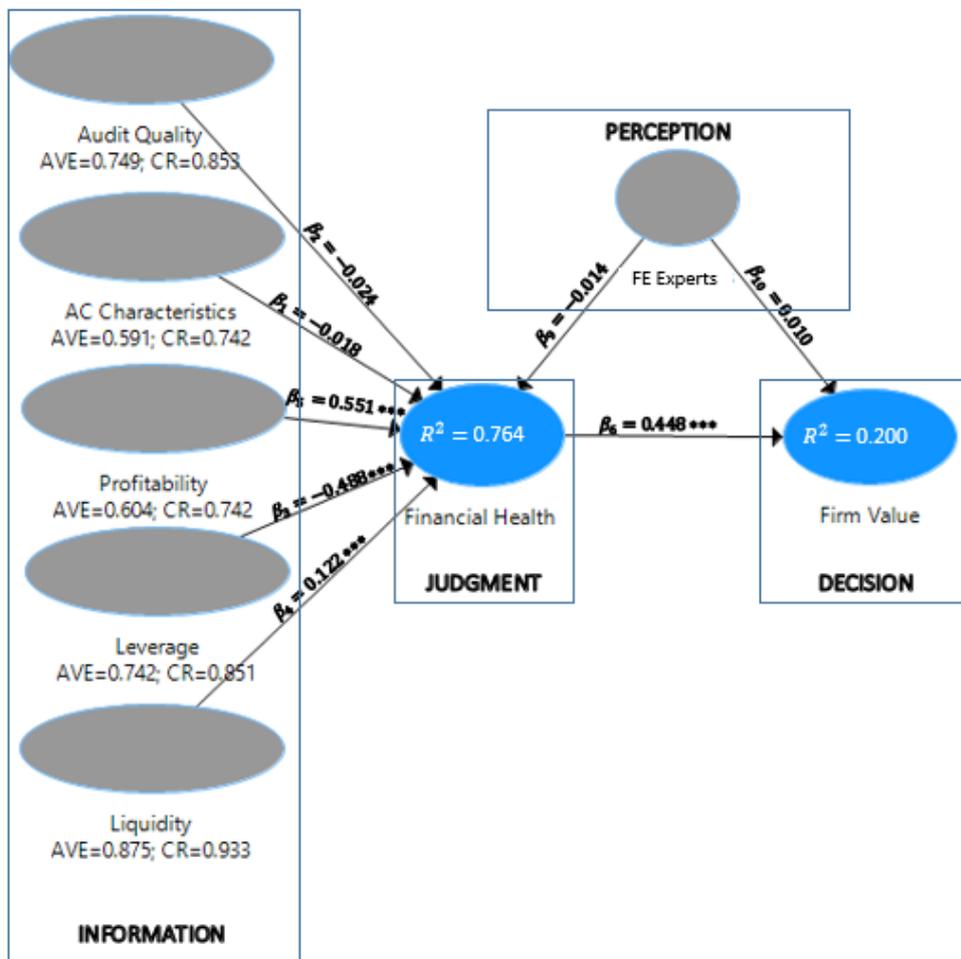


ACC Experts perception doesn't have significant impact on Financial Health ($\beta_8 = 0.036$) and Firm Value ($\beta_8 = 0.086$).

At the same time Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.438^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability and liquidity influence positively ($\beta_5 = 0.527^{***}$ and $\beta_4 = 0.119^{***}$ correspondingly); the impact of Leverage on Financial Health is negative ($\beta_3 = -0.491^{***}$). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.438^{***}$).

Figure 18. Impact of FE Experts on Firm Value (model 2)

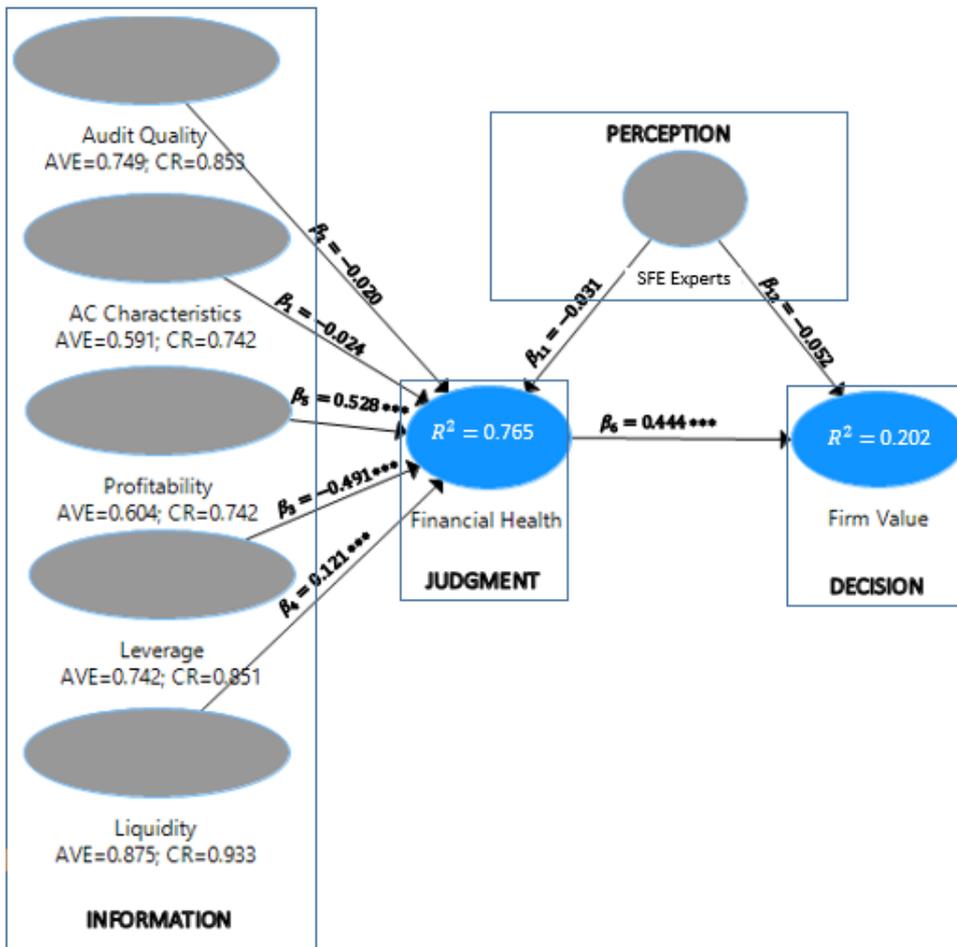


FE Experts perception doesn't have significant impact on Financial Health ($\beta_9 = -0.014$) and Firm Value ($\beta_{10} = 0.010$).

At the same time Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.448^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability and liquidity influence positively ($\beta_5 = 0.551^{***}$ and $\beta_4 = 0.122^{***}$ correspondingly); the impact of Leverage on Financial Health is negative ($\beta_3 = -0.488^{***}$). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.448^{***}$).

Figure 19. Impact of SFE Experts on Firm Value (model 3)

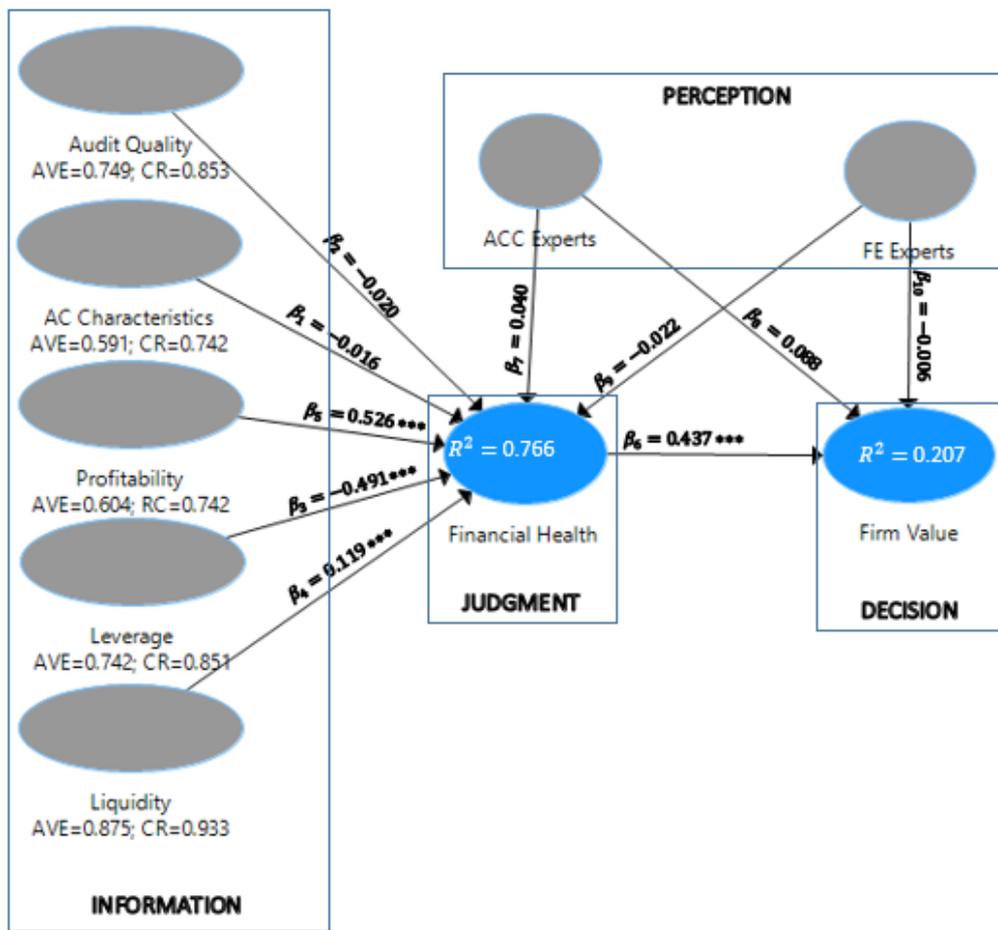


SFE Experts perception doesn't have significant impact on Financial Health ($\beta_{11} = -0.031$) and Firm Value ($\beta_{12} = -0.052$).

At the same time Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.444^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability and liquidity influence positively ($\beta_5 = 0.528^{***}$ and $\beta_4 = 0.121^{***}$ correspondingly); the impact of Leverage on Financial Health is negative ($\beta_3 = -0.491^{***}$). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.444^{***}$).

Figure 20 Impact of all Financial Experts on Firm Value (model 4)



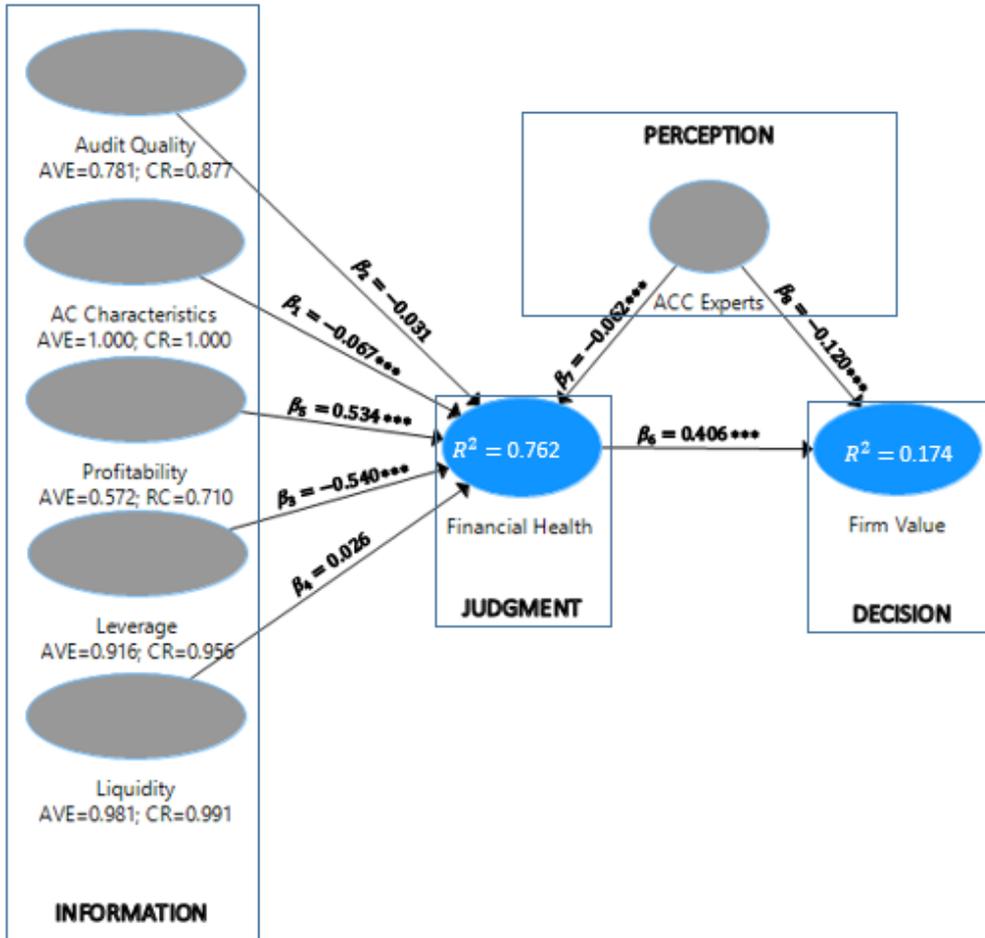
In the combined model 4 both financial experts' perceptions (ACC and FE) don't have significant impact on Firm Value ($\beta_8 = 0.088$, $\beta_{10} = -0.006$ correspondingly).

Financial Health doesn't play mediated role between financial expert's perceptions (ACC and FE) and Firm Value ($\beta_7 = 0.040$, $\beta_9 = -0.022$ correspondingly). Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.437^{***}$).

The profitability and liquidity influence positively ($\beta_5 = 0.526^{***}$ and $\beta_4 = 0.119^{***}$ correspondingly) on Financial Health; the impact of Leverage on Financial Health is negative ($\beta_3 = -0.491^{***}$). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.437^{***}$).

Path analysis graphical outputs (US)

Figure 21 Impact of ACC Experts on Firm Value (model 1)

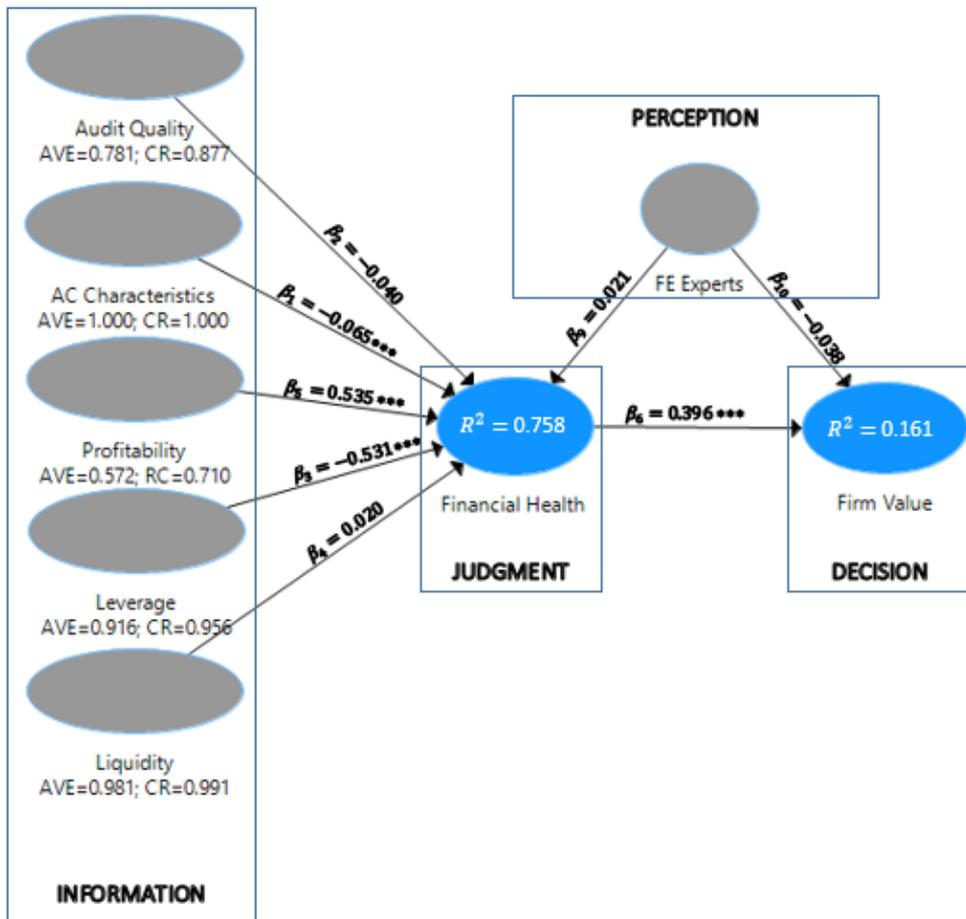


ACC Experts perception has significant negative impact on Financial Health and Firm Value ($\beta_7 = -0.062^{***}$ and $\beta_8 = -0.120^{**}$).

Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.406^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.534^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.067^{***}$ and $\beta_3 = -0.540^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.406^{***}$).

Figure 22. Impact of FE Experts on Firm Value (model 2)

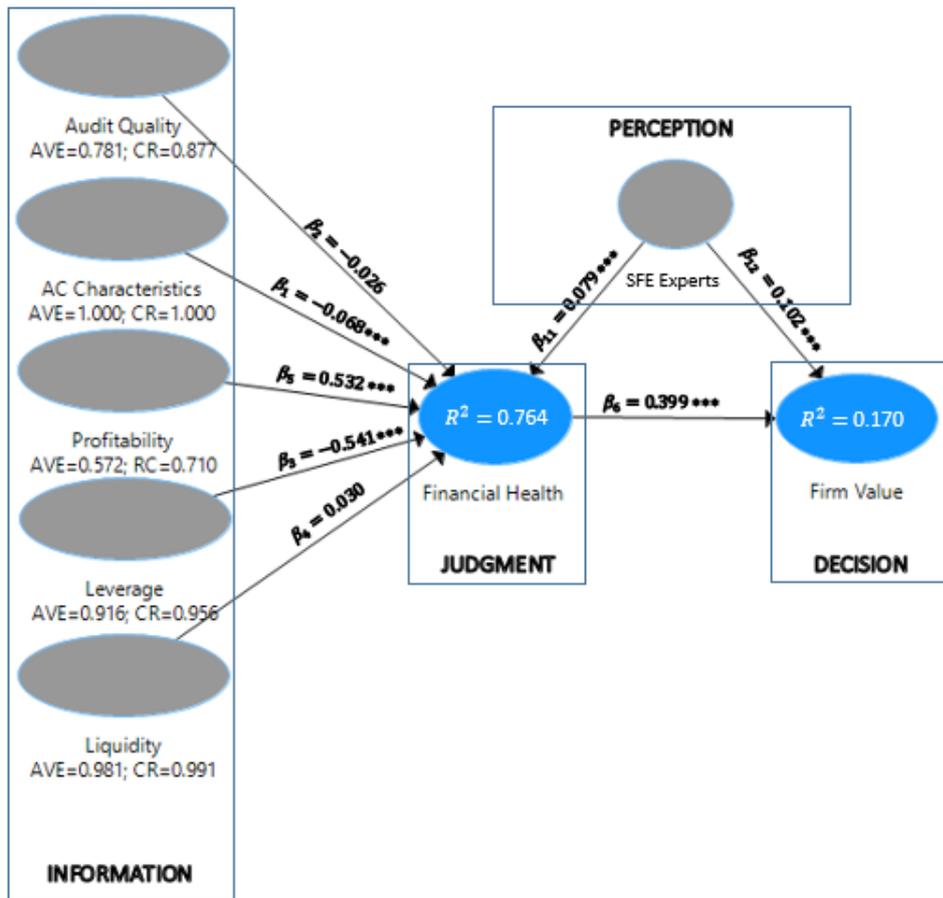


FE Experts perception doesn't have significant impact on Financial Health and Firm Value ($\beta_9 = 0.021$ and $\beta_{10} = -0.038$).

Anyway Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.396^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.535^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.065^{***}$ and $\beta_3 = -0.531^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.396^{***}$).

Figure 23 Impact of SFE Experts on Firm Value (model 3)

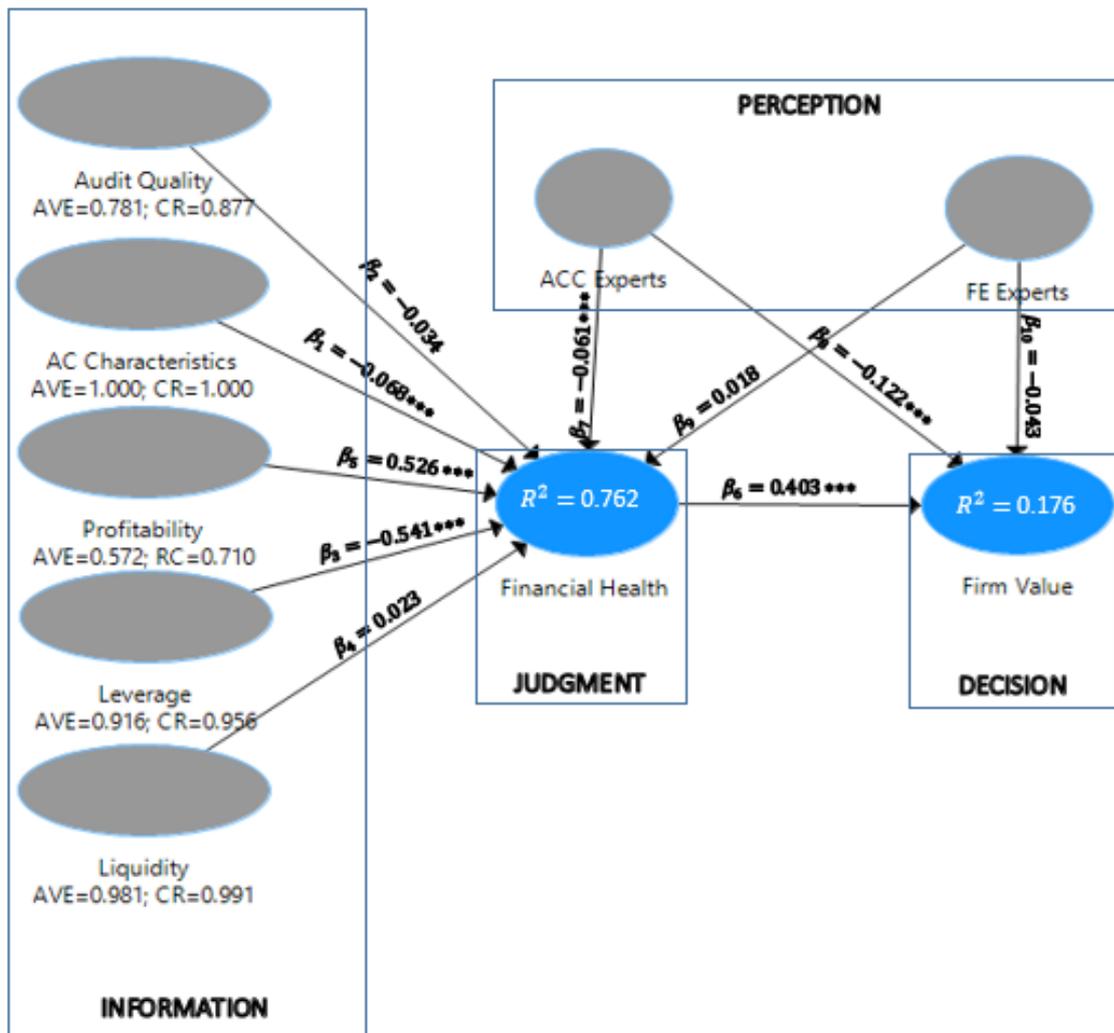


SFE Experts perception has significant positive impact on Financial Health and Firm Value ($\beta_{11} = 0.079^{***}$ and $\beta_{12} = 0.102^{***}$).

Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.399^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.532^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.068^{***}$ and $\beta_3 = -0.541^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.399^{***}$).

Figure 24. Impact of all Financial Experts on Firm Value (model 4)



In the combined model 4 ACC Experts perception have significant negative impact on Financial Health and Firm Value ($\beta_7 = -0.061^{***}$ and $\beta_8 = -0.122^{***}$ correspondingly). The impact of FE Experts perception on Financial Health and Firm Value is not significant ($\beta_9 = 0.018$ and $\beta_{10} = -0.043$ correspondingly)

Financial Health itself has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

From observed five factors only three have significant impact on Financial Health, from which the profitability influence positively ($\beta_5 = 0.526^{***}$); the impact of AC characteristics and Leverage on Financial Health is negative ($\beta_1 = -0.068^{***}$ and $\beta_3 = -0.541^{***}$ correspondingly). Subsequently the Financial Health has significant positive impact on Firm Value ($\beta_6 = 0.403^{***}$).

In below chart pairwise comparison of median values are presented, which indicate the countries with significantly different median values.

Figure 25 pairwise median comparison test

Non-Audit fees

Non-Audit fee Ratio

AC Size

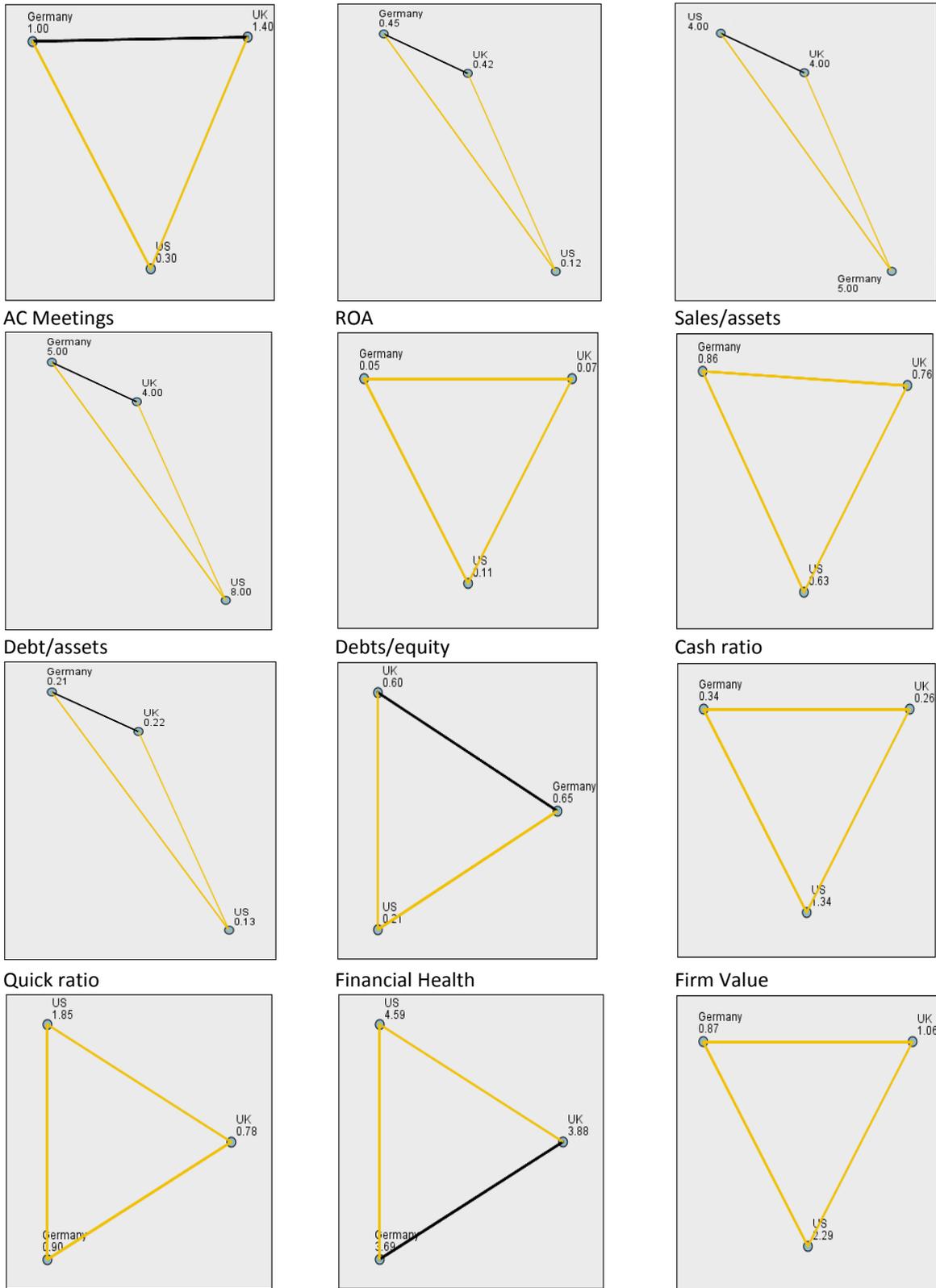


Figure 5. Pairwise median comparison test results (Each node shows the median value of the country. Yellow line shows significant difference between corresponding pair of countries)

Pairwise median comparison test results show that:

The median Non-Audit fees and Non-Audit fee Ratio are significantly lower in US comparing with UK and Germany

The median AC size is significantly higher in Germany compared with UK and US

The median AC size is significantly higher in Germany compared with UK and US

The median AC Meetings is significantly higher in US compared with UK and Germany

The median ROA is significantly higher in US compared with UK, which is also higher than in Germany

The median Sales/assets ratio is significantly higher in Germany compared with UK, which is also higher than in US

The median Leverage indicators (Debt/assets and Debts/equity ratios) are significantly lower in US compared with UK and Germany

The median Liquidity indicators (Cash and Quick ratios) are significantly higher in US compared with Germany, which is also higher than in UK

The median Financial Health is significantly higher in US compared with UK and Germany

The median Firm Value is significantly higher in US compared with UK, which is also higher than in Germany

References

- Abbott, L. J., and S. Parker. (2000). Fraudulent financial reporting: Auditor selection And audit committee characteristics. *Auditing: A Journal of Practice & Theory* 19 (2): 47–66.
- Abbott, L. J., S. Parker, and Y. Park. (2000). The effects of audit committee activity And independence on corporate fraud. *Managerial Finance* 26 (11): 55–67.
- Abbott, L. J., Parker, S., Peters, G. F. and Raghunandan, K. (2003a). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory*, 22, pp. 17–32.
- Abbott, L. J., Parker, S. and Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23, pp. 69–87.
- Abbott, L. J., et al (2010) "Serving Two Masters: The Association between Audit Committee Internal Audit Oversight and Internal Audit Activities." *Accounting Horizons* 24(1): 1-24.
- Abbott, L. J., et al (2012) Audit Fee Reductions from Internal Audit-Provided Assistance: The Incremental Impact of Internal Audit Characteristics." *Contemporary Accounting Research* 29(1): 94-+
- Acedo, F.J., & Jones, M.V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42(3), 236–252.
- Adams, C. (2004). The ethical, social and environmental reporting performance gap. *Accounting, Auditing and Accountability Journal*. 17, 5, 731-757. Agrawal, A., & Sahiba C. (2005). Corporate governance and accounting scandals. *Journal of law and economics*, 48, 371-406.

- Adelopo, I. (2010). *The impact of corporate governance on auditor independence: A study of audit committees in UK listed companies*. (Doctoral Thesis). De Montfort University, Leicester, UK. <http://www.dora.dmu.uk/Ismail>. Retrieved: 20/06/16.
- Agoglia, C. P., et al (2011) "Principles-Based versus Rules-Based Accounting Standards: The Influence of Standard Precision and Audit Committee Strength on Financial Reporting Decisions." *Accounting Review* 86(3): 747-767.
- Agrawal, A and Knoeber, C (1996), 'Firm performance and mechanisms to control agency problems between managers and shareholders', *Journal of Financial and Quantitative Analysis*, vol. 31, no. 3, pp. 377-397.
- Agrawal, A., and S. Chadha. 2005. Corporate governance and accounting scandals. *Journal of Law and Economics* 48 (2): 371–406.
- Ahmed, A. S. and S. Duellman (2007) "Accounting conservatism and board of director characteristics: An empirical analysis." *Journal of Accounting & Economics* 43(2-3): 411-437.
- Ainuddin, R.A., Beamish, P.W., Hulland, J.S., & Rouse, M.J. (2007). Resource attributes and firm performance in international joint ventures. *Journal of World Business*, 42(1), 47–60.
- Aldamen, H., Duncan, K., Kelly, S., McNamara, R. and Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting and Finance*, DOI - 10.1111/j.1467-629X.2011.00447.x
- Aljifri, K. & Moustafa, M. (2007). "The impact of corporate governance mechanisms on the on performance of UAE firms: an empirical analysis" *Journal of Economic & Administrative Sciences* Vol. 23, No. 2, PP. 71-93.
- Almajali, Y. A., Alamro, S. H., & Al-Soub, Y. Z. (2012). Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange. *Journal of Management Research*, 4(2).

- Alpert, F., Kamins, M., Sakano, T., Onzo, N., & Graham, J. (2001). Retail buyer beliefs, attitude, and behaviour toward pioneer and me-too follower brands. *International Marketing Review*, 18(2), 160–187.
- Alviana, Nurhairani (2013). “Analisis Pengaruh Rasio Profitabilitas, Likuiditas, dan Leverage Terhadap Pertumbuhan Laba Pada Perusahaan Property dan Real Estate yang Terdaftar di Bursa Efek Indonesia”, *Jurnal Manajemen*, Volume 2 Nomor 3.
- Alzharani, A.M; Che-Ahmad, A and Aljaaidi, K.S. (2012). Factors Associated with Firm Performance: Empirical Evidence from the Kingdom of Saudi Arabia. Online, Available from: <ftp://ftp.repec.org/opt/ReDIF/RePEc/ibf/acttax/at-v4n2-2012/AT-V4N2-2012-5.pdf> (Accessed 15.006.2016)
- Anderson, R. C., et al (2004) "Board characteristics, accounting report integrity, and the cost of debt" *Journal of Accounting & Economics* 37(3): 315-342
- Anderson, U. L., et al. (2012) "A Post-SOX Examination of Factors Associated with the Size of Internal Audit Functions." *Accounting Horizons* 26(2): 167-191.
- Archambeault, D. S., et al (2008) "The Need for an Internal Auditor Report to External Stakeholders to Improve Governance Transparency."
- Armstrong, C. S., et al (2010) "The role of information and financial reporting in corporate governance and debt contracting." *Journal of Accounting & Economics* 50(2-3): 179- 234
- Avadanei, A (2011), A Comparative Analysis of Corporate Governance Structures in Europe, USA and Latin America (online), Available from: <https://ideas.repec.org/a/ovi/oviste/v11y2011i1p120-126.html> (Accessed 01.10.2016)
- Ball, R; Kothari, S, P. & Robin. A. (2000). The effect of international institutional Factors on properties of accounting earnings. *Journal of Accounting and Economics*. 29, pp, 1-52.

- Bartlett, Christopher A., Sumantra Ghoshal, and Julian Birkinshaw. (2003) *Transnational Management: Text, Cases and Readings in Cross Border Management*. 4th ed. Burr Ridge, IL: McGraw-Hill, 2003
- Barth, M.E., and Clinch, G. (1998) Revalued financial tangible, and intangible assets: Associations with share prices and non-market-based value estimates. *Journal of Accounting Research*. 36. p. 199–233.
- Barton, D. and Wiseman, M. (2015) Where Boards Fall Short. *Harvard Business Review*., January, [Online], Available: <https://hbr.org/2015/01/where-boards-fall-short> [July 2016].
- Baxter, P. and Cotter, J. (2009). Audit committees and earnings quality. *Accounting and Finance*, 49, pp. 267–290.
- Beasley, Mark S. (1996) an empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review* .p. 443-465.
- Beasley, M. S., J. V. Carcello, D. R. Hermanson, and T. L. Neal. (2009). The audit committee oversight process. *Contemporary Accounting Research* 26 (1): 65–122.
- Beattie, V., and Fearnley, S. (2002). *Auditor independence and non-audit services: A literature review*, Institute of Chartered Accountants of England and Wales (ICAEW): London.
- Beattie, V., et al (2012) "Do UK audit committees really engage with auditors on audit planning and performance? *Accounting and Business Research* 42(3): 349-375.
- Beattie, V., et al (2013) "Perceptions of factors affecting audit quality in the post-SOX UK regulatory environment." *Accounting and Business Research* 43(1): 56-81.
- Be´dard, J., S. M. Chtourou, and L. Courteau. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management.

Auditing: A Journal of Practice & Theory 23 (2): 13–35.

Bedard, J., Coulombe, D. and Courteau, L. (2008). Audit committee, under-pricing of IPOs, and accuracy of management earnings forecasts. *Corporate Governance: An International Review*, 16, pp. 519–535.

Bedard, J., and Y. Gendron. (2010). Strengthening the financial reporting system: Can audit committees deliver? *International Journal of Auditing* (forthcoming).

Beiner, S and Schmid, M (2005), ‘Agency conflicts, corporate governance, and corporate diversification evidence from Switzerland’, SSRN, available at : http://papers.ssrn.com/sol3/papers.cfm?abstract_id=666264#PaperDownload, Accessed (15 July 2016).

Beneish, M., Billings, M., Hodder, L. (2008) Internal control weaknesses and information uncertainty. *The Accounting Review* 83. p. 665-703.

Benston, M. B. G. (2006). Principles- Versus Rules-Based Accounting Standards: The FASB's Standard Setting Strategy. Accounting Foundation. The University of Sydney. (42). p. 165-171.

Berger, A., & Bonaccorsi di Patti, E. (2006). Capital Structure and Financial performance: A New Approach to Testing Agency Theory and an Application to the Banking Industry. *Journal of Banking and Finance*, 30, 1065-1102.

Bhagat, S and Jefferis R (1994), ‘The causes and consequences of takeover defense: Evidence from green mail’, *Journal of Corporate Finance*, vol. 1, no. 2.

Bhagat, Sanjai, and Bernard S. Black. (1999) The uncertain relationship between board composition and firm performance. *Business Lawyer* 54. p. 921-963.

Birkinshaw, J., Morrison, A., & Hulland, J. (1995). Structural and competitive determinants of a global integration strategy. *Strategic Management Journal*, 16(8), 637–655.

- Blanchard, Oliver J., Mitali Das and Hamid Faruquee. (2010) The Initial Impact of the Crisis on Emerging Market Countries. *Brookings Papers on Economic Activity*. p. 263-307.
- Bliss, M. A. (2011). Does CEO duality constrain board independence? Some evidence from audit pricing. *Accounting and Finance*, 51, pp. 361 – 380.
- Bloom, N., R. Sadun, and J. Van Reenen. (2012). Americans do I.T. better. US multinationals and the productivity miracle. *American Economic Review*. 102 (1): 167-201.
- Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. (1999). Report and recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. New York: New York Stock Exchange and the National Association of Securities Dealers.
- Botzem, S. and S. Quack (2009) "(No) Limits to Anglo-American accounting? Reconstructing the history of the International Accounting Standards Committee: A review article." *Accounting Organizations and Society* 34(8): 988-998.
- Boyd, B. (1995) CEO Duality and Firm Performance: A Contingency Model *Strategic Management Journal*. 16(1). p. 301-312.
- Bowman, C., & Ambrosini, V. (2000). Value Creation versus Value Capture: Towards a Coherent Definition of Value in Strategy. *British Journal of Management*, 11, 1-15.
- Braiotta, L. and D. M. Lang (1982) "WORKING WITH THE AUDIT COMMITTEE." *Journal of Accountancy* 154(1): 48-&.
- Brick, I. E. and Chidambaran, N. K. (2010). Board meetings, committee structure, and firm value. *Journal of Corporate Finance*, 16, pp. 533–553.
- Buckland, R. (2001) 'UK IPO Board Structures and Post-Issue Performance' Aberdeen Papers in Accountancy, Finance & Management, Working Paper01-05.

- Bull, I. and F. C. Sharp (1989) "ADVISING CLIENTS ON TREADWAY AUDIT COMMITTEE RECOMMENDATIONS." *Journal of Accountancy* 167(2): 46- &.
- Cadbury Report, (1992), The Financial Aspects of Corporate Governance (Online), Available from: http://www.ecgi.org/codes/code.php?code_id=132(Accessed 15.03.2016)
- Calantone, R.J., Graham, J.L., & Mintu-Wimsatt, A. (1998). Problem-solving approach in an international context: Antecedents and outcomes *International Journal of Research in Marketing*. 15(1), 19–35.
- Cao, Y., et al (2012) "Does Company Reputation Matter for Financial Reporting Quality? Evidence from Restatements." *Contemporary Accounting Research* 29(3): 956-+.
- CAQ. (2013). Global Observation on the Role of the Audit Committee. (Online). Available from: <http://www.thecaq.org/docs/reports-and-publications/globalobservationsontheroleoftheauditcommittee.pdf?sfvrsn=2> (Accessed 15.03.2016).
- Carcello, J. V., Hermanson, D., Neal, T. and Riley, R. (2002b). Board characteristics and audit fees. *Contemporary Accounting Research*, 19, pp. 365–384.
- Carcello, J. V., and T. L. Neal. (2003). Audit committee characteristics and auditor dismissals following “new” going-concern reports. *Accounting Review* 78 (1): 95–117.
- Carcello, J. V., C. W. Hollingsworth, A. Klein, and T. L. Neal. (2006). Audit Committee financial expertise, competing governance mechanisms, and earnings management. Working paper, University of Tennessee.
- Carcello, J. V., et al (2009) "Responses of the American Accounting Association's Tracking Team to the Recommendations of the Advisory Committee on the Auditing Profession." *Accounting Horizons* 23(1): 69-84.
- Carcello, J. V., et al (2011) "CEO Involvement in Selecting Board Members, Audit Committee Effectiveness, and Restatements." *Contemporary Accounting Research* 28(2): 396-+.

- Caskey, J., et al (2010) "Reporting Bias with an Audit Committee" *Accounting Review* 85(4): 1479-1479.
- Camines, E and Zeller, R., (1979), "Reliability and validity assessment", Sage Paper Series on Quantitative Applications, No. 07 -017, Beverly Hills, CA, Sage Publications Inc.
- Chan, K. C., & Li, J. (2008). Audit Committee and Firm Value: Evidence on Outside Top Executives as Expert-Independent Directors. *Corporate Governance: An International Review*, 16, 1, 16-31.
- Charkham, J., (2005) *Keeping good company: a study of corporate governance ten Years on*, Oxford University Press, Oxford
- Chen, K. Y. and Zhou, J. (2007). Audit committee, board characteristics, and auditor switch decisions by Andersen's clients. *Contemporary Accounting Research*, 24, pp. 1085–1117.
- Chen, C. Y., Lin, C. J., & Lin, Y. C. (2008). Audit Partner Tenure, Audit Firm Tenure, and Discretionary Accruals: Does Long Auditor Tenure Impair Earnings Quality? *Contemporary Accounting Research*, 25, 2, 415-445
- Chen, C., et al. (2013) Insider Trading, Litigation Concerns, and Auditor Going-Concern Opinions." *Accounting Review* 88(2): 365-393.
- Chen, J. J. and H. T. Zhang (2010). The Impact of Regulatory Enforcement and Audit upon IFRS Compliance - Evidence from China. *European Accounting Review* 19(4): 665- 692.
- Cheung, W. K. A., & Wei, K. C. J. (2006). Insider Ownership and Corporate Performance: Evidence from the Adjustment Cost Approach. *Journal of Corporate Finance*, 12, 906-925.
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modelling approach for measuring interaction effects: Results from a

Monte Carlo simulation study and an electronic mail emotion/adoption study. *Information Systems Research*, 14, 189–217.

Chiu, P. C., et al (2013) "Board Interlocks and Earnings Management Contagion." *Accounting Review* 88(3): 915-944.

Chung – Ming Lau and Hang – Yue Ngo. (2001). Organization Developed and Firm Performance: A Comparison of Multinational and Local Firms. *Journal of International Business Studies*. Vol.32, No.1, pp.95 – 114

Claessens, S, Djankov, S and Pohl, G (1997), 'Ownership and corporate governance: Evidence from the Czech Republic, *World Bank Policy Research working paper* no. 1737, Washington DC.

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33, 303-327.

Clegg, S., Kornberger, M & Rhodes, C. (2006). Business ethics as practice. *British Journal of Management*, 17, 1-16.

Coffee, John C., Jr. (2005) A Theory of Corporate Scandals: Why The USA and Europe Differ. *Oxford Review of Economic Policy* 21. p. 198-211.

Cohen, S., Chang, L., & Ledford, G. (1997). A Hierarchical Construct of Self-management Leadership and its Relationship to Quality of Work Life and Perceived Work Group Effectiveness . *Personnel Psychology*, 275-308.

Cohen, J., G. Krishnamoorthy, and A. M. Wright. 2004. The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature* 23 (1): 87–152.

Cohen, J., G. Krishnamoorthy, and A. M. Wright. (2008). Form versus substance: The implications for auditing practice and research of alternative perspectives on corporate governance. *Auditing: A Journal of Practice and Theory* 27 (2): 181–98.

Cohen, J., et al (2010) "Corporate Governance in the Post-Sarbanes-Oxley Era: Auditors' Experiences." *Contemporary Accounting Research* 27(3): 751-+.

- Collier, P. and Gregory, A. (1999). Audit committee activity and agency costs. *Journal of Accounting and Public Policy*, 18, pp, 311–332.
- Collier, P. and M. Zaman (2005) "Convergence in European corporate governance: The audit committee concept." *Corporate Governance-an International Review* 13(6): 753-768.
- Collis, J. and Hussey, R., (2009), "Business research: a practical guide for undergraduates and postgraduates students, Third edition, MacMillan: Palgrave.
- Copeland, T.E and Weston, J.F (1992), *Financial Theory and Corporate Policy*, 3rd Edition, Addition-Wesley.
- Cormier, D., et al (2011) "Revisiting the Relevance and Reliability of Non-GAAP Reporting: The Case of the Income Trusts." *Contemporary Accounting Research* 28(5): 1585-+.
- Craswell, A. T., Francis, J. R., and Taylor, S. L. (1995). Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics*, 20, pp. 297-322.
- CreAM. 2014. UCL Centre for Research and Analysis of Migration. <http://www.ucl.ac.uk/news/news-articles/1114/051114-economic-impact-EU-immigration#sthash.1qetFXLL.dpuf> (Accessed 21.September.2015).
- Cullinan, C. (2004). Enron as a symptom of audit process breakdown: Can the Sarbanes-Oxley Act cure the disease? *Critical Perspectives on Accounting*, Vol. 15, No. 6–7: 853–64.
- Cullinan, C. P., Du, H. and Wright, G. B. (2008). Is there an association between director option compensation and the likelihood of misstatement? *Advances in Accounting*, 24, pp. 16–23.

- Dao, M., et al (2013) "The Effects of Audit Committee Members' Age and Additional Directorships on the Cost of Equity Capital in the USA." *European Accounting Review* 22(3): 607-643.
- Dao, M., et al (2012) "Shareholder Voting on Auditor Selection, Audit Fees, and Audit Quality." *Accounting Review* 87(1): 149-171.
- Davidson, W. N., B. Xie, and W. Xu. (2004). Market reaction to voluntary announcements of audit committee appointments: The effect of financial expertise. *Journal of Accounting and Public Policy* 23 (4): 279–93.
- Davidson, R., Goodwin-Stewart J. and Kent, P. (2005). Internal governance structures and earnings management. *Accounting and Finance*, 45, pp. 241–67.
- Davies, P. (1987) "Gower's Principles of Modern Company Law" Sweet & Maxwell : London
- Davies, P. (1997, 1978) Gower's Principles of Modern Company Law Sweet & Maxwell. London.
- Davies, P. L. (2001) The Board of Directors: Composition, Structure, Duties and Powers. *Organization for Economic Co-operation and Development*.
- Davies, P. L. (2001) Board Structure in the UK and Germany: Convergence or Continuing Divergence. **Article (PDF Available)** in SSRN Electronic Journal · January 2001 *with* 336 Reads
DOI: 10.2139/ssrn.262959
- DeAngelo, L. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, pp. 183-199.
- Defond, M. L., et al (2005) "Does the market value financial expertise on audit committees of boards of directors?" *Journal of Accounting Research* 43(2): 153-193.
- Deloitte (2011) Corporate Governance Forum. Information for Supervisory Board and Audit Committee members. (Online), Available from: <http://www2.deloitte.com/content/dam/Deloitte/de/Documents/governance-risk-compliance/GRC-Newsletter-CGF-4-2012-english.pdf> (Accessed 15.07.2016).

- Demb, A. and Neubauer, F. (1992) *The Corporate Board: Confronting the Paradoxes*. Oxford University Press.
- Demsetz, H. and Villalonga, B., (2001). Ownership structure and corporate performance. *Journal of Corporate finance*, 7 (3), 209–233.
- Dewing, I. P. and P. O. Russell (2012) "Auditors as Regulatory Actors: The Role of Auditors in Banking Regulation in Switzerland." *European Accounting Review* 21(1): 1-28.
- DeZoort, F. T. (1997). An investigation of audit committees' oversight responsibilities. *Abacus* 33 (2): 208–27.
- DeZoort, F. T. (1998). An analysis of experience effects on audit committee members' oversight judgments. *Accounting, Organizations and Society* 23 (1): 1–21.
- DeZoort, F. T., D. R. Hermanson, D. S. Archambeault, and S. A. Reed. (2002). Toward a theory of audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature* 21 (1): 38–75.
- Dey, A (2008) "Corporate Governance and Agency Conflicts." *Journal of Accounting Research*
- Dezoort, F. T (1998) "An analysis of experience effects on audit committee members' oversight judgments." *Accounting Organizations and Society* 23(1): 1-21.
- DeZoort, F. T., Hermanson, D. R. and Houston, R. W. (2003a). Audit committee member support for proposed audit adjustments: a source credibility perspective. *Auditing: A Journal of Practice & Theory*, 22, pp. 189–205.
- Dhaliwal, D., Subramanyam, K. R., and Trezevant R. (1999). Is comprehensive income superior to net income as a measure of firm performance? *Journal of Accounting & Economics*, 26 (Jan): 43-67.

- Dhaliwal, D., Naiker, V. and Navissi, F. (2007) Audit Committee Financial Expertise, Corporate Governance and Accruals Quality: An Empirical Analysis
- Dhaliwal, D., Naiker, V. and Navissi, F. (2010). The association between accruals quality and the characteristics of accounting experts and mix of expertise on audit committees. *Contemporary Accounting Research*, 27 (3), pp. 787-827.
- Downen, R.J. (1995). Board Director Quality and Firm Performance. *International Journal of the Economics of Business*, 2, 123-32.
- Edwards, J. and M. Nibler. (2000) Corporate governance in Germany: The role of banks and ownership concentration. *Economic Policy*. 15. p. 237-267.
- Elitzur, R. and Falk, H. (1996). Planned audit quality. *Journal of Accounting and Public Policy*, 15, pp. 247-269.
- Engel, E. (2005) Discussion of does the market value financial expertise on audit committees of boards of directors?" *Journal of Accounting Research* 43(2): 195-204
- Engel, E., et al (2010) Audit committee compensation and the demand for monitoring of the financial reporting process." *Journal of Accounting & Economics* 49(1-2): 136-154.
- Erkens, D. H. and S. E. Bonne (2013) "The Role of Firm Status in Appointments of Accounting Financial Experts to Audit Committees." *Accounting Review* 88(1): 107- 136.
- Ettenson, R., Shanteau, J. and Krogstad, J. (1987), "Expert judgment: is more information better?" *Psychological Reports*, pp. 227-238.
- European Commission (2011). *Proposal for a Regulation of the European Parliament and the Council on Specific Requirements Regarding Statutory Audit of Public-Interest Entities*. Brussels: European Commission.
- E & Y. (2010) www.ey.com/Publication/...86_GL.../Supplement_86_GL_IFRS.pdf

- Faccio, M. and Lasfer, M. (1999). Managerial Ownership. Board Structure and Firm Value. City University Business School.
- Fama, E. F., and M. C. Jensen. (1983). Separation of ownership and control. *Journal of Law and Economics* 26 (2): 301–25
- Farber, D. B. (2005). Restoring trust after fraud: does corporate governance matter? *The Accounting Review*, 80, pp. 539–561
- Felo, Andrew J., Srinivasan Krishnamurthy, and Steven A. Solieri. (2003). Audit committee characteristics and the perceived quality of financial reporting: an empirical analysis. Available at SSRN 401240.
- Felo, Andrew J., and Steven A. Solieri. (2009) Are all audit committee financial experts created equally & quest. *International Journal of Disclosure and Governance*. p. 150-166.
- Festge, F., & Schwaiger, M. (2007). The drivers of customer satisfaction with industrial goods: An international study. In: C.R. Taylor & D.-H. Lee (Eds), *Advances in international marketing* (Vol. 18, pp.179–207). Amsterdam: Elsevier.
- Financial Accounting Standards Board (FASB). (2002, 2009). Codification Project. Available at: https://asc.fasb.org/section&trid%2197888&analyticsAssetName%4subtopic_page_subsectin&nav_type%4subtopic_page#d3e131766-111767 (Accessed 15.07.2016)
- Financial Reporting Council. (2003, 2009). *Review of the effectiveness of the combined code: Call for evidence*. London: FRC.
- Financial Reporting Council, UK. (2010a). *The UK corporate governance code*. London: FRC.
- Financial Reporting Council, UK. (2010b). *Guidance on Audit Committees*. London: FRC.
- Financial Reporting Council. (2012) *The UK Corporate Governance Code*. London: FRC.

- Flesher, D. L., et al (2005) "Auditing in the United States: A historical perspective
Abacus-a Journal of Accounting Finance and Business Studies 41(1): 21-39.
- Fornaro, J. M. and H. W. Huang (2012) "Further evidence of earnings management and opportunistic behaviour with principles-based accounting standards: The case of conditional asset retirement obligations." *Journal of Accounting and Public Policy* 31(2): 204-225.
- Fornell, C., (1982), "A second generation of multivariate analysis methods", vol. 1, Praeger Publishers, New York, USA.
- Fornell, C. and Larcker, D. F., (1981), "Evaluation structural equations models with unobservable variables and measurement error", *Journal of Marketing Research* 18, 39-50.
- Foss, K., & Rodgers, W. (2011). Enhancing Information Usefulness by Line Managers' Involvement in Cross-Unit Activities. *Organization Studies*, 32, 2011, 683-703,
- Francis, J., LaFond, R., Olsson, P., and Schipper, K. (2004). Costs of equity and earnings attributes, *Accounting Review*, 79, pp. 967–1010.
- Francoeur C., Labelle, R. & Sinclair-Desgagné, B. (2008). Gender Diversity in Corporate Governance and Top Management. *Journal of Business Ethics*, 81, 83-95.
- Frankel, R.M., Johnson, M.F., and Nelson, K.K. (2002). The relation between auditors' fees for non-audit services and earnings management. *The Accounting Review*, 77, pp. 71-105.
- Freeman, R.E (1984) Strategic Management, A stakeholder Approach. Boston: Pitman
- GAO (General Accounting Office) (1991). Audit committees: legislation needed to strengthen bank oversight. Report to the US Congressional Committees.

- Garcia-Hejl, C., et al. (2013) "Internal audit in medical laboratory: what means of control for an effective audit process?" *Annales De Biologie Clinique* 71(5): 624.615-
- Gefen, D., Straub, D.W., & Boudreau, M.-C. (2000).Structuralequationmodellingand regression: Guide lines for research practice. *Communications of the Associationfor Information Systems*, 4(7), 1–78.
- Gerpott, T., & Jakopin, N. (2005). International marketing standardization and financial performanceofmobilenetworkoperators–Anempiricalanalysis.*Schmalenbach Business Review*, 57(3), 198–228.
- Gendron, Y. and Bedard, J. (2010). Strengthening the financial reporting systems: Can audit committees deliver? *International Journal of Auditing*, 14(2), pp. 1–37.
- German Code of Corporate Governance (GCCG), 2006 (Online), Available from: <http://www.corporate-governance-code.de/index-e.html> (Accessed 15.07.2016).
- Gendron, Y. and J. Bedard (2006) "On the constitution of audit committee effectiveness." *Accounting Organizations and Society* 31(3): 211-239.
- German Co-Determination Act (1976), (*Mitbestimmungsgesetz*), 1976
<http://www.gesetze-im-internet.de/mitbestg/index.html>(Accessed 15.07.2016)
- Ghafran, C. (2013). Governance Role of Audit committees: Reviewing a Decade of Evidence. *International Journal of Management Reviews*, Vol. 15, 381–407 (2013) DOI: 10.1111/j.1468-2370.2012.00347.x
- Ghafran, C and Noel, O, (2012) “The Governance Role of Audit Committee: Reviewing a Decade of Evidence: The Governance Role of Audit Committee”, *International Journal of Management Review*. DOI:10:1111/.1468 – 2370.2012.00347.x
- Gini, A. (2004). Business, ethics, and leadership in a post Enron era. *Journal of Leadership & Organizational Studies*, 1, 1, 9-15
Burak, G. A., Malmendier, U., & Tate, G. (2008). [Financial expertise of directors](#). *Journal of Financial Economics* 88, 2, 323-354

Glaum, M., et al (2013) "Compliance with IFRS 3-and IAS 36-required disclosures across 17 European countries: company- and country-level determinants." *Accounting and Business Research* 43(3): 163-204.

Glassman, C.A,(2005), Board Diversity: The 21st Century Challenge" The New Regulatory Climate and Impact on Board Composition" Online, Available from: <https://www.sec.gov/news/speech/spch111105cag.htm>(Accessed 01.10.2016)

Glass. (2005). Sarbanes – Oxley Act. Online, available from GlassLewis.com

Gleason, K., Mathur, L., & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *Journal of Business Research*, 50, 185-191.

Gleason, C. A. and L. F. Mills (2011) "Do Auditor-Provided Tax Services Improve the Estimate of Tax Reserves?" *Contemporary Accounting Research* 28(5): 1484-+.

Gompers, P, Ishii, J and Metrick, A (2003), 'Corporate governance and equity prices', *Quarterly Journal of Economics*, vol. 118, no. 1, pp. 107-155.

Gorton, G. and F.A. Schmid (2000), Universal banking and the performance of German firms, *Journal of Financial Economics*, 58, pp. 29-80.

Ghosh, C., Nag, R., & Sirmans, C. (2000). The pricing of seasoned equity offerings: Evidence from REITs. *Real Estate Economics*, 28, 363-384.

Graham, J.L., Mintu, A.T., &Rodgers, W. (1994).Explorations of negotiation behaviors in ten foreign cultures using a model developed in the United States. *Management Science*, 40(1), 72–95.

Grant Thornton (2015), Economic Impact of AIM (online), Available from: <http://www.ukbusinessangelsassociation.org.uk/sites/default/files/media/files/economic-impact-of-aim-report-2015.pdf> (Accessed 15.07.2016).

- Grayson, M. M (1982) "AUDIT COMMITTEE SELECTIONS - MORE LARGE FIRMS THAN SMALL." *Journal of Accountancy* 153(4): 92-92
- Green, D.H., & Ryans, A.B. (1990).Entry strategies and market performance: Causal modelling of a business simulation. *Journal of Product Innovation Management*, 7(1), 45–58.
- Griliches, Z. (1981). Market Value, R&D and Patents. *Economics Letters*, 7, 183-187.
- Groetzner, J., et al. (2002) "The new German allocation system for donated thoracic organs causes longer ischemia and increased costs." *Thoracic and Cardiovascular Surgeon* 50(6): 376-379.
- Grove, H., et al (2011) "Corporate Governance and Performance in the Wake of the Financial Crisis: Evidence from US Commercial Banks." *Corporate Governance-an International Review* 19(5): 418-436.
- Grossman, S. J., & Hart, O. D. (1982). Corporate financial structure and managerial incentives: UMI.
- Gupta, A. D. (2010). Corporate social responsibility and human resources management : A strategic balanced model. In S. O. Idowu, & L. F. Walter (Eds.), *Professionals' perspectives of corporate social responsibility* (1st ed., pp. 393-407). London: Springer.
- Gugler, K., Mueller, D.C., and Yurtoglu, B.B., (2008). Insider ownership, ownership concentration and investment performance: an international comparison. *Journal of corporate finance*, 14 (5), 688–705.
- Gul, F.A. and Goodwin, J. 2010. Short-term debt maturity structures, credit ratings, and the pricing of audit services. *The Accounting Review*, 85, pp. 877–909.
- Gunasekarage, A., Hess, K., and Hu, A.J., 2007. The influence of the degree of state ownership and the ownership concentration on the performance of listed Chinese companies. *Research in international business and finance*, 21, 379–395.

- Hagel, H., Brown, J. and Davison, L. (2010). The Best Way to Measure Company Performance. *Harvard Business Review*. August 2015, from <https://hbr.org/2010/03/the-best-way-to-measure-compan.html>.
- Hamid, M. R., Mustafa, Z., Idris, F, Abdullah, N., & Suradi, R. M. (2010) Measuring Value – Based Productivity: A Confirmatory Factor Analytic (CFA) Approach. *International Journal of Business & Social Science*, 2, 6, 85-93.
- Hair, J., Black, W., Babin, B., and Anderson, R. (2010). *Multivariate data analysis* (7th Ed.): Prentice-Hall, Inc. Upper Saddle River, NJ, USA.
- Haniffa, R. & Hudaib, M. (2006). “Corporate governance structure and performance of Malaysian Listed Companies” *Journal of Business Finance & Accounting*, Vol. 33, No.7/8, PP. 1034-1062.
- Hardwick, P., et al. (2011) "Board Characteristics and Profit Efficiency in the United Kingdom Life Insurance Industry." *Journal of Business Finance & Accounting* 38(7- 8): 987-1015.
- Harrison, J. S. (1992). GAO report on audit committees. Texas Banking, February, 12-14.
- Henry, D. (2008). Corporate governance structure and the valuation of Australian firms: Is there value in ticking the boxes? *Journal of Business Finance and Accounting*, 35, pp. 912-942.
- Henseler, J.; Ringle, C.M and Sinkovics, R.R (2009) The Use of Partial Least Squares Path Modeling in International Marketing. PDF (Accessed 15.07.2016)
- Higgins JPT, Green S (2011). *Cochrane Handbook for Systematic Reviews of Interventions* Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from www.handbook.cochrane.org.(Accessed 01.10.2016)
- Hirshleifer, D. and A. V. Thakor. (1994) Managerial performance, boards of directors and takeover bidding. *Journal of Corporate Finance* 1. p. 63-90.

- Hoitash, R., and U. Hoitash. (2009). The role of audit committees in managing relationships with external auditors after SOX. *Managerial Auditing Journal* 24 (4): 368–397.
- Hoitash, R., U. Hoitash, and J. C. Bedard. (2009). Regulatory intent and political reality: Evidence on corporate governance and internal controls in the post-SOX world. *The Accounting Review* 84 (3): 839–867.
- Hoitash, R., et al (2012) "Internal Control Material Weaknesses and CFO Compensation." *Contemporary Accounting Research* 29(3): 768-+.
- Holzmu"ller, H.H., &Kasper, H. (1991).On a theory of export performance: Personal and organizational determinants of export trade activities observed in small and medium- sized firms. *Management International Review*, 31(Special Issue), 45–70.
- Holzmu"ller, H.H., & Sto"ttinger, B. (1996). Structural modelling of success factors in exporting: Cross-validation and further development of an export performance model. *Journal of International Marketing*, 4(2), 29–55.
- Hooghiemstra, R (2012) "What determines the informativeness of firms' explanations for deviations from the Dutch corporate governance code? *Accounting and Business Research* 42(1): 1-27.
- Hermalin, B.E. and Weisbach, M.S., (1991). The effects of board composition and direct incentives on firm performance. *Financial management*, 20 (4), 101–121
- Himmelberg, C.P., Hubbard, R.G., and Palia, D., (1999). Understanding the determinants of Managerial ownership and the link between ownership and performance. *Journal of financial economics*, 53 (3), 353–384.
- Hoitash, R., Markelevich, A., and Barragato, C.A. (2007). Auditor fees and audit quality. *Managerial Auditing Journal*, 22, pp. 761-786.

- Hoitash, R., & Hoitash, U. (2009). The role of audit committees in managing relationships with external auditors after SOX. *Managerial Auditing Journal*, 24(4): 368-397.
- Hoitash, U., Hoitash, R. and Bedard, J. (2009). Corporate governance and internal control over financial reporting: a comparison of regulatory regimes. *The Accounting Review*, 84, pp. 839–867.
- Holderness, C.G., Kroszner, R.S., and Sheehan, D.P., (1999). Were the good old days that good? Changes in managerial stock ownership since the great depression. *Journal of finance*, 54 (2), 435–469.
- Holthausen, R. W., and R. L. Watts. (2001) The relevance of the value relevance literature for financial accounting standard setting. *Journal of Accounting and Economics*. 31. (1). P.3–75.
<http://www.idw.de/idw/portal/n589244/n589356/index.jsp>(Accessed 15.07.2016)
- Hopt, Klaus J.; Leyens, Patrick C (2004) “Board Models in Europe –Recent Developments of Internal Corporate Governance Structures in Germany, the United Kingdom, France, and Italy.” *European Company & Financial Law Review*, Vol. 1, Issue 2, pp135-168, Aug 2004.
- Hsueh-En Hsu.2007. Board of Director and Audit Committees in Initial Public Offering. Available from:
<https://books.google.co.uk/books?id=f6kuWcuUXDUC&pg=PA31&lpg=PA31&dq=Aud>(Accessed 15.07.2016)
- Hull, C. E., & Rothenberg, S. (2008). Firm performance: The interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29, 781–789.
- Hulland, J., (1999), “Use of Partial Least Squares (PLS) in strategic management research: a review of four recent studies” *Strategic Management Journal*, 20, 2, 195 – 204.

- Hunton, J. E., et al (2011) "The Relationship between Perceived Tone at the Top and Earnings Quality." *Contemporary Accounting Research* 28(4): 1190-+.
- Hunton, J. E. and J. M. Rose (2008) "Can directors' self-interests influence accounting choices?" *Accounting Organizations and Society*.
- Inkpen, A.C., & Birkenshaw, J. (1994). International joint ventures and performance: An interorganizational perspective. *International Business Review*, 3(3), 201–217.
- Janos Renz – Holz (2006), Audit Committee in a European Context, a Study of UK, German and French companies.
- Jeanjean, T., & Stolowy, H. (2009). “Determinants of Board Members’ Financial Expertise - Empirical Evidence from France”, *International Journal of Accounting*, 44(4): 378-402.
- Jones, M.J., & Solomon, J.F. (2010). “Social and Environmental Report Assurance: Some Interview Evidence”, *Accounting Forum*, 34(1): 20-31.
- Jovanovic, B. (1982). Selection and the evolution of industry. *Econometrics*, 50, 649-670.
- Jensen, M., and W. Meckling. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics* 3 (4): 305–60.
- Jeppesen, K. K. and A. Loft (2011) "Regulating Audit in Europe: The Case of the Implementation of the EU Eighth Directive in Denmark 1984-2006." *European Accounting Review* 20(2): 321-354.
- Ji Li, Kevin Lam and Gongming Qian. (2001). Does Culture Affect Behaviour. *Journal of International Business Studies* Vol. 32, No.1 [pp. 115 – 131
- Johansson, J.K., & Yip, G.S. (1994). Exploiting globalization potential: U.S. and Japanese strategies. *Strategic Management Journal*, 15(8), 579–601.

- Johnson, M.D., Herrmann, A., & Gustafsson, A. (2002). Comparing customer satisfaction across industries and countries. *Journal of Economic Psychology*, 23(6), 749–769.
- Johnson, O (1992) "BUSINESS JUDGMENT V AUDIT JUDGMENT - WHY THE LEGAL DISTINCTION" *Accounting Organizations and Society* 17(3-4): 205-222.
- Johnson, Simon, Peter Boone, Alasdair, and Eric Friedman. (2000) corporate governance in the Asian financial crisis. *Journal of Financial Economics*. 58.
- Johnstone, K., et al (2011) "Changes in Corporate Governance Associated with the Revelation of Internal Control Material Weaknesses and Their Subsequent Remediation." *Contemporary Accounting Research* 28(1): 331-383.
- Julien, P.A., & Ramangalahy, C. (2003). Competitive strategy and performance of exporting SMEs: An empirical investigation of the impact of their export information search and competencies. *Entrepreneurship Theory and Practice*, 27(3), 227–245.
- Kalbers, L. P., and T. J. Fogarty. (1993). Audit committee effectiveness: An empirical investigation of the contribution of power. *Auditing: A Journal of Practice & Theory* 12 (1): 24–49.
- Kant, I.: (1996), *Religion and Rational Theology* (Cambridge University Press, Cambridge).
- Kaplan, S., & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints? *Quarterly Journal of Economics*, 112, 169–215.
- Karamanou, I. and N. Vafeas (2005) "The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis." *Journal of Accounting Research* 43(3): 453-486.

- Keasey, K., Thompson S., and Wright M. (2005) Corporate Governance: Accountability, Enterprise and International Comparisons. *John Wiley and Sons*.
- Kee – Hong Bae, Lynette Purda, Michael Welker and Ligang Zhang. (2013). Credit Rating Initiation and Accounting Quality for Emerging – Market Firms. *Journal of International and Business Studies* 44, 216 – 234
- Kelton, A. S. and Yang, Y. W. (2008). The impact of corporate governance on Internet financial reporting. *Journal of Accounting and Public Policy*, 27, pp. 62–87.
- Keune, M. B. and K. M. Johnstone (2012) "Materiality Judgments and the Resolution of Detected Misstatements: The Role of Managers, Auditors, and Audit Committees" *Accounting Review* 87(5): 1641-1677.
- Kieso, D. E., Waygandt, J. J., & Warfield, T. D. (2005) *Intermediate Accounting*. (11). Wiley Publisher.
- Kim, K., Mauldin, E. & Patro, S. (2014). Outside directors and board advising and monitoring performance. *Journal of Accounting and Economics*, 57, 23, 110-131.
- Klein, a (2002) "Audit committee, board of director characteristics, and earnings management." *Journal of Accounting & Economics* 33(3): 375-400.
- Knechel, W. R. and Willekens, M. (2006). The role of risk management and governance in determining audit demand. *Journal of Business Finance and Accounting*, 33, pp. 1344–1367.
- Köhler A. G. (2005) “Audit Committees in Germany – Theoretical Reasoning and Empirical Evidence” *Schmalenbach Business Review*, Vol. 57, pp229 – 252, Jul 2005.
- Kotha.S, Rindova.V.P and Rothaernel.F.T, (2001). Asset and Action Firm Specific Factors in the Internalization of US Internet. *Journal of International Business Studies* Vol.32 No.4 pp.769 – 791.

- KPMG' Audit Committee Institute. (2007). (Online). Available from: <http://www.auditcommittee.ch/> (Accessed 21 September 2015).
- Krishnan, J. (2005). Audit committee quality and internal control: An empirical analysis. *Accounting Review* 80 (2): 649–75.
- Krishnamurthy, A., and Vissing-Jorgensen, A. (2012) The aggregate demand for treasury debt. *Journal of Political Economy* 120. p. 233-267.
- Krishnan, G. V., and G. Visvanathan. (2008). Does the SOX definition of an Accounting expert matter? The association between audit committee directors' Accounting expertise and accounting conservatism. *Contemporary Accounting Research* 25 (3): 827–57.
- Krishnan, Gopal, and Gnanakumar Visvanathan. (2009) Do auditors price audit committee's expertise? The case of accounting versus non-accounting financial experts. *Journal of Accounting, Auditing & Finance*.
- Krishnan, G. V., et al (2011) "CFO/CEO-Board Social Ties, Sarbanes-Oxley, and Earnings Management." *Accounting Horizons* 25(3): 537-557.
- Krishnan, J., et al. (2011) "Legal Expertise on Corporate Audit Committees and Financial Reporting Quality." *Accounting Review* 86(6): 2099-2130.
- Kunitake, W. (1982) "AUDIT COMMITTEE SELECTIONS - MORE LARGE FIRMS THAN SMALL - RESPONSE." *Journal of Accountancy* 153(4): 92-&.
- Weir, C., Laing, D. & McKnight, P.J., (2002). Internal and External Governance Mechanisms: Their Impact on the Performance of Large UK Public Companies. *Journal of Business Finance & Accounting*, 29, 579-611.
- Lambert R, C Leuz and R Verrecchia. (2007) Accounting Information, Disclosure and the Cost of Capital. *Journal of Accounting Research*. 45. p. 385-420.

- Lara, J. M. G., et al (2007) "Board of directors' characteristics and conditional accounting conservatism: Spanish evidence." *European Accounting Review* 16(4): 727-755
- Larcker, D.F. (2011) Board of Directors: Structure and Consequences. Stanford Graduate School of Business, Corporate Governance Research Program.
- La Porta, Lopez-de-Silanes, Schleifer and Vishny. (1997) Legal Determinants of External Finance. *Journal of Finance*. 52. p. 1131-1150.
- La Porta, R., F. Lopez-de-Silanes., A. Shleifer, and R. Vishny, (1999), Ownership around the world, *Journal of Finance*. 54. p. 471–517.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. (2002) Investor protection and corporate valuation. *Journal of Finance*. 57. p. 1147 – 1170.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny. (2000) Investor Protection and Corporate Governance. *Journal of Financial Economics* 58. p. 3-27
- Lary, A. K. and Taylor, D. W. (2012). Governance characteristics and role effectiveness of audit committees. *Managerial Auditing Journal*, 27, pp. 336 – 354.
- Liargovas, P., & Skandalis, K. (2008). *Factor affecting firms financial performance : The Case of Greece*. Athens: University of Peloponnese Press.
- Lee, D.Y.(2000).Retail bargaining behaviour of American and Chinese customers. *European Journal of Marketing*, 34(1/2), 190–206.
- Lee, D.Y. (2001).Power, conflict and satisfaction in IJV supplier–Chinese distributor channels. *Journal of Business Research*, 52(2), 149–160.
- Lee, G. and N. Fargher (2013) "Companies' Use of Whistle-Blowing to Detect Fraud: An Examination of Corporate Whistle-Blowing Policies *Journal of Business Ethics* 114(2): 283-295.

- Lee, K.-H., Yang, G., &Graham, J.L. (2006).Tension and trust in international business negotiation: American executives negotiating with Chinese executives. *Journal of International Business Studies*, 37(5), 623–641.
- Lei, Q. H., et al (2013) Types of agency cost, corporate governance and liquidity. *Journal of Accounting and Public Policy* 32(3): 147-172.
- Levitt, A. (2000), Serving Two Masters: Remarks delivered at the New York University,, May 10, Online, Available from:
<https://www.sec.gov/news/speech/spch370.htm>(Accessed 01.10.2016)
- Li, J., et al (2008) "Intellectual capital disclosure and corporate governance structure in UK firms." *Accounting and Business Research* 38(2): 137-159.
- Lo, A. W. Y., Wong, R. M. K. and Firth, M. (2010). Can corporate governance deter management from manipulating earnings? Evidence from related-party sales transactions in China. *Journal of Corporate Finance*, 16, pp. 225–235.
- Loderer, C and Peyer, U (2002), ‘Board overlap, seat accumulation and share prices’, *European Financial Management*, vol. 8, no. 2, pp. 165-192.
- Lombardo D and M Pagano. (2000) Legal Determinants of the Return on Equity. Centre for Studies in Economics and Finance, Working Paper No 24.
- Lorsch, J., and E. MacIver. (1989). The Reality of America’s Corporate Board. *Harvard Business School Press*.
- MacGregor, J. (2012) "Audit committee equity holdings, the risk of reporting problems, and the achievement of earnings thresholds." *Journal of Accounting and Public Policy* 31(5): 471-491.
- Mahmood, M.A., Bagchi, K., &Ford, T.C. (2004).On-line shopping behaviour: Cross-country empirical research. *International Journal of Electronic Commerce*, 9(1), 9–30.

- Maines, L. A. (2007). Spotlight on principles-based financial reporting. *Business Horizons* 50
- Maier, W., et al. (1999) "Audit and quality control in angioplasty in Europe: procedural results of the AQUA Study 1997..." *European Heart Journal* 20(17): 1261-1270.
- Mallin. A (2013). Corporate Governance. *Oxford University Press*.
- Mande, V., et al (2012) "Equity or Debt Financing: Does Good Corporate Governance Matter?" *Corporate Governance-an International Review* 20(2): 195-211.
- Mangena, M. and Pike, R. (2005). The effect of audit committee shareholding, financial expertise and size on interim financial disclosures. *Accounting and Business Research*, 35, pp. 327-349.
- Mangena, M. and V. Taurigana (2007) "Corporate compliance with non-mandatory statements of best practice: The case of the ASB statement on interim reports." *European Accounting Review* 16(2): 399-427.
- Marsh, H. L. and T. E. Powell (1989) "THE AUDIT COMMITTEE CHARTER - RX FOR FRAUD PREVENTION." *Journal of Accountancy* 167(2): 55-57.
- Martinez, M. C. P. and Fuentes, C. D. (2007). The impact of audit committee characteristics on the enhancement of the quality of financial reporting: an empirical study in the Spanish context. *Corporate Governance*, 15, pp. 1394-1412.
- McConnell, J.J. and Servaes, H., (1995). Equity ownership and the two faces of debt. *Journal of Financial economics*, 39 (1), 131–157.
- McDaniel, L., R. D. Martin, and L. A. Maines. (2002). Evaluating financial reporting Quality: The effects of financial expertise vs. financial literacy. *Accounting Review* 77 (Supplement): 139–67.

- McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of Management Journal*, 31(4), 854-872.
- Mckinsey (2011), [McKinsey-Debt and deleveraging: The global credit bubble and its economic consequences-Updated-July 2011](#)". Mckinsey.com. 2013-03-13. Retrieved 2013-08-17.
- McKinsey & Company (2010). Automotive and corporate finance. Industry Report.
- McMullen, D. A., and K. Raghunandan. (1996). Enhancing audit committee Effectiveness. *Journal of Accountancy* 182 (2): 79–81
- Messier, W. F. (1983).The effect of experience and firm type on materiality/disclosure judgments.*Journal of AccountingResearch*,21, 611-618.
- Mian, A. (2006). Distance constraints: The limits of foreign lending in poor economies. *Journal of Finance*. 61 (3). p. 1465-505.
- Mian, Sufi, and Trebbi. (2014) “**Resolving Debt Overhang: Political Constraints in the Aftermath of Financial Crises**”. *American Economic Journal: Macroeconomics* 6.2 (2014):
- Mintu-Wimsatt, A., &Graham, J.L. (2004).Testing a negotiation model on Canadian Anglophone and Mexican exporters. *Journal of the Academy of Marketing Science*, 32(3), 345–356.
- Mitton, Todd. (2000) Across-firm analysis of the impact of corporate governance on the East Asian financial crisis. Working paper, Brigham Young University.
- Morck, R., A. Shleifer and R. W. Vishny. (1988) Management ownership and market valuation. An empirical analysis. *Journal of Financial Economics*. (20). p. 293-315.
- Musa, UOH (2013), Web of Science (online), Available from:

http://apps.webofknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=S2CK1BHR7sfBwQsZ4&preferencesSaved (Accessed 26.03.2014)

Myers, R. (1990). *Classical and Modern Regression with Application*. Boston, MA: Duxbury.

Naiker, V., et al (2013) "Do Former Audit Firm Partners on Audit Committees Procure Greater Nonaudit Services from the Auditor?" *Accounting Review* 88(1): 297-326.

Nelson, M. W., J. A. Elliott, and R. L. Tarpley. (2003). Behavioural evidence on the effects of principles- and rules-based standards. *Accounting Horizons* 17 _1_: 91–104.

Ningsih, Indah Widya (2011). "*Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba Pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek*", Thesis, Accounting Department, Faculty of Economics Universitas Sumatera Utara, Medan.

Norman, C. S., et al (2010) "Internal audit reporting lines, fraud risk decomposition, and assessments of fraud risk." *Accounting Organizations and Society* 35(5): 546-557.

Norman, C. S., et al (2011) "The effects of disclosure type and audit committee expertise on Chief Audit Executives' tolerance for financial misstatements." *Accounting Organizations and Society* 36(2): 102-108.

Nijssen, E.J., & Douglas, S.P. (2008). Consumer world-mindedness, social-mindedness and store image. *Journal of International Marketing*, 16(3), 84–107.

O’Cass, A., & Fenech, T. (2003). Web retailing adoption: Exploring the nature of internet user’s web retailing behaviour. *Journal of Retailing and Consumer Services*, 10(2), 81–94.

- OECD (2009). Principle of Corporate Governance (Online), Available from: <http://www.financialtaskforce.org/2009/07/04/oecd-principles-of-corporate-governance/>(Accessed 15.07.2016)
- Ojo, M (2010) "The Role of the IASB and Auditing Standards in the Aftermath of the 2008/2009 Financial Crisis. *European Law Journal* 16(5): 604-623.
- Osma, B. G. and B. Noguera (2007) "The effect of the board composition and its monitoring committees on earnings management: evidence from Spain." *Corporate Governance-an International Review* 15(6): 1413-1428.
- Oxelheim, L. and Randøy, T., (2003). The impact of foreign board membership on firm value. *Journal of banking and finance*, 27 (12), 2369–2392.
- Palmrose, Z. V. (2010) "Balancing the Costs and Benefits of Auditing and Financial Reporting Regulation Post-SOX, Part II: Perspectives from the Nexus at the SEC." *Accounting Horizons* 24(3): 487-507.
- Pasternak, S (2013) The role of Ethical Theories in Ethical Reasoning and Behaviour within Organization, online, Available from: <http://www.infusedlearning.org.uk/media/files/Literature%20review%20on%20business%20ethics%20theories.pdf>(Accessed 01.10.2016)
- Pandey, I. M. (2007). *Financial management* (9th Ed.). New Delhi: Vikas Publishing House Ltd.
- Pava, M. L., & Krausz, J. (1996). The association between corporate social-responsibility and financial performance: The paradox of social cost. *Journal of Business Ethics*, 15, 321–357.
- Pavlou, P.A., &Chai, L. (2002). What drives electronic commerce across cultures? Cross-cultural empirical investigation of the theory of planned behaviour. *Journal of Electronic Commerce Research*, 3(4), 240–253.

- Peasnell, K. V., P. Pope, and S. Young. (2000). Accrual management to meet earnings targets: UK evidence pre- and post-Cadbury. *The British Accounting Review* 32 _4_: 415– 445.
- Peasnell, K. V., Pope, R. F. and Young, S. (2005). Board monitoring and earnings management: do outside directors' influence abnormal accruals? *Journal of Business Finance and Accounting*, 32, pp. 1311–1346.
- Penman, S. H. & Sougiannis, T. (1998) A comparison of dividend, cash flow, and earnings approaches to equity valuation. *Contemporary Accounting Research* 15(3). p. 343-383.
- Penrose, E. T. (1959). *The Theory of Growth of the Firm*. New York.
- Peteraf, M. A. (1993) The Cornerstone of Competitive Advantage: A Resource-based View. *Strategic Management Journal*. 14. p. 179-191.
- Philips, E. M. (1992). *How to Get a PhD*. (5th Ed.). Open University Press: 2010.
- Pinto, J.R., RodríguezEscudero, A.I., & Gutiérrez Cilla' n J. (2008). Order, positioning, scope and outcomes of market entry. *Industrial Marketing Management*, 37(2), 154–166.
- Piot, C. and R. Janin (2007) "External auditors, audit committees and earnings management in France." *European Accounting Review* 16(2): 429-454.
- Pomeroy, B. and D. B. Thornton (2008) "Meta-analysis and the accounting literature: The case of audit committee independence and financial reporting quality." *European Accounting Review* 17(2): 305-330.
- Proctor, M. (2002) *Corporate Governance*. Cavendish publishing.
- PricewaterhouseCoopers. (2002, 2003). *Audit committees: Good practices for meeting market expectations*. Retrieved from

[http://www.pwc.com/extweb/pwcpublications.nsf/4bd5f76b48e282738525662b00739e22/253e1c17db806b13802569a10036c92d/\\$FILE/Audit_Committees_2nd_Ed.pdf](http://www.pwc.com/extweb/pwcpublications.nsf/4bd5f76b48e282738525662b00739e22/253e1c17db806b13802569a10036c92d/$FILE/Audit_Committees_2nd_Ed.pdf).

Public Oversight Board. (1993) and (2010). *In the public interest: Issues confronting the accounting profession*. Stamford, CT: American Institute of Certified Public Accountants.

Public Company Accounting Oversight Board (PCAOB). (2004). Auditing Standard (AS) No. 2, An audit of internal control over financial reporting performed in conjunction with an audit of financial statements. Washington, DC: PCAOB

Pullman, M.E., Granzin, K.L., & Olsen, J.E. (1997). The efficacy of cognition- and emotion-based "buy domestic" appeals: Conceptualization, empirical test, and managerial implications. *International Business Review*, 6(3), 209–231.

Purtill, J. S (1988) "WORKING WITH THE AUDIT COMMITTEE." *Journal of Accountancy* 166(4): 140-&.

Qin, B. (2007). The influence of audit committee financial expertise on earnings quality: U.S. Evidence. *ICFAI Journal of Audit Practice* 4 (3): 8–28.

Rainsbury, E. A., et al (2008) "Firm characteristics and audit committees complying with 'best practice' membership guidelines." *Accounting and Business Research* 38(5): 393-408.

Ramli, A(2013) Usage of and Satisfaction with Accounting Information System in the Hotel Industry: The case of Malaysia Pdf

Richardson, G., et al (2013) "The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis." *Journal of Accounting and Public Policy* 32(3): 68-88.

Richardson, S. A (2005) "Discussion of consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members." *Journal of Accounting Research* 43(2): 335-342.

- Richardson, S., Larcker, D., and Tuna, İ. (2007) Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review* 82(1). p. 963-1008.
- Roche, J. (2005) *Corporate Governance in Asia*. London and New York: Routledge Taylor & Francis Group.
- Rodgers, W (1991) How do loan officers make their Decisions about Credit Risk? A study of Parallel distributed processing. *Journal of Economic Psychology* 12(1991) 243 – 265 North Holland
- Rodgers, W. (1997). *Throughput Modelling: Financial Information Used by Decision Makers*. Greenwich, CT: JAI Press, 1997.
- Rodgers, W. (2009). *Ethical Beginnings: Preferences, rules, and principles influencing decision making*. NY: I Universe, NC.
- Rodgers, W. and Gago, S. (2001). Cultural and ethical effects on managerial decisions: Examined in a Throughput Model,” *Journal of Business Ethics*, 31, 355-367.
- Rodgers, W., Guiral, A. and Gonzalo, J.A. (2009). Different Pathways that suggest whether Auditors Going Concern Opinions are Ethically Based. *Journal of Business Ethics* 86, 2009, 347–361.
- Rodgers, W., Guiral, A (2009) Potential Model Misspecification bias: Formative indicators enhancing Theory for Accounting Researchers. *The International Journal of Accounting*. 46 (2011) 25 - 50
- Rodgers, W., Choy, H., & Guiral, A. (2013). Do Investors Value a Firm's Commitment to Social Activities? *Journal of Business Ethics*, 114, 4, 607-623.
- Rose, J. M., et al (2013) "The influence of director stock ownership and board discussion transparency on financial reporting quality." *Accounting Organizations and Society* 38(5): 397-405.

- Rosenstein, S. and Wyatt, J. (1997). 'Inside directors, board effectiveness, and shareholder wealth'. *Journal of Financial Economics*, 44(2): 229–251.
- Rowe, M. (2013) European corporate governance models. Discussion Paper Series– University of Liverpool.
- Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, 40(3), 534–559.
- Rouf.A (2011) The Financial Performance (Profitability) and Corporate Governance Disclosure in the Annual Report of listed Companies of Bangladesh: *Journal of Economics and Business Research*, ISSN: 2068 - 3537, E – ISSN (online) 2069 – 9476, ISSN – L = 2068 – 3537 Volume XVII, No. 2, 2011, pp. 103-117
- Salleh, Z. and J. Stewart (2012) "The role of the audit committee in resolving auditor-client disagreements: a Malaysian study." *Accounting Auditing & Accountability Journal* 25(8): 1340-1372.
- Sarbanes-Oxley Act. (2002). *107th Congress of the United States of America*. Washington DC.
- Sarbanes-Oxley Act (SOX). (2002). Public Law No. 107-204, 116 Stat. 745, Sec. 1-1107. Securities and Exchange Commission, (2003). Final Rule: Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002 (Rel. No. 33-8177). Washington, DC: SEC.
- Securities and Exchange Commission (SEC). (2003); (2008). Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002. Available at: <http://www.sec.gov/rules/final/33-8177.htm>(Accessed 15.07.2016)
- Setiawan, Indra (2012). "Pengaruh Cash Ratio, Debt Ratio, Perputaran Aktiva dan Return on Assets Terhadap Pertumbuhan Laba Pada Perusahaan Otomotif yang Terdaftar di Bursa Efek Indonesia", Thesis, Faculty of Economics Universitas Pembangunan Nasional "Veteran".

- Sharma, D. S., et al (2008) "The impact of non-mandatory corporate governance on auditors' client acceptance, risk and planning judgments." *Accounting and Business Research* 38(2): 105-120.
- Sharma, V., et al (2009) "Determinants of Audit Committee Meeting Frequency: Evidence from a Voluntary Governance System." *Accounting Horizons* 23(3): 245-263.
- Simerly, R., & Li, M. (2000). Environmental dynamism, financial leverage and performance: A theoretical integration and an empirical test. *Strategic Management Journal*, 21(1), 31-49.
- Singhvi, M., et al (2013) "Market reactions to appointment of audit committee directors post- SOX: A note." *Journal of Accounting and Public Policy* 32(1): 84-89.
- Singh, N., Fassott, G., Chao, M. C., & Hoffmann, J. A. (2006a). Understanding international web site usage: A cross-national study of German, Brazilian, and Taiwanese online consumers. *International Marketing Review*, 23(1), 83–97.
- Securities and Exchange Commission (2003c). Final Rule: Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002 (Rel. No. 33-8177). Washington, DC: SEC.
- Seifert, B., Gonenc, H. and J. Wright. (2005) the international evidence on performance and equity ownership by insiders, block holders and institutions. *Journal of Multinational Financial Management*. 15. p. 171-191.
- Short, H. & Keasey K. (1999). "Managerial ownership and the performance of firms: evidence from the UK" *Journal of corporate finance* Vol. 5 No. 1 PP. 79-101.
- Shortridge, R. T., and M. Myring. (2004) Defining principles-based accounting standards. *The CPA Journal* [Online], Available at: www.nysscpa.org/cpajournal/2004/804/essentials/p34.htm (Accessed 15.07.2016)

- Shroff, Nemit, Rodrigo S. Verdi, and Gwen Yu. (2014) "Information Environment and the Investment Decisions of Multinational Corporations." *The Accounting Review* 89, (2): 759–790.
- Shut, R. (2009). *Investigating the social world*. (6th Ed.). Thousand Oaks, CA: Pine Forge
- Simunic, D. (1980), "The pricing of audit services: Theory and evidence", *Journal of Accounting Research*, (spring), pp 161-190.
- Sloan, R. (2002) Discussion of Who is my peer? A valuation-based approach to the selection of comparable firms. *Journal of Accounting Research*. 40. (2). p. 441-444.
- Smith Guidance. (2003). Audit Committees–Combined Code Guidance. (Online). Available from: http://www.ecgi.org/codes/code.php?code_id=120 (Part of the General Combined Code) (Accessed 28.08.2014).
- Smith, C., & Watts, R. (1992). The investment opportunity set and corporate financing, dividend and compensation policies. *Journal of Financial Economics*, 32, 263–292.
- Sobolewski, M. 2015 "Insurance Expert set for top German watchdog job" Reuters pp. 359–364.
- Sommer, A. A (1992) "AUDITING AUDIT COMMITTEES - AN EDUCATION OPPORTUNITY FOR AUDITORS." *Journal of Accountancy* 173(6): 112-112.
- Song, C. J., et al (2010) "Value Relevance of FAS No. 157 Fair Value Hierarchy Information and the Impact of Corporate Governance Mechanisms." *Accounting Review* 85(4): 1375-1410.
- Spira, L.F. (2003). "Audit Committees: Begging the Question?", *Corporate Governance: An International Review*, 11 (3): 180-187.
- Srinivasan, S (2005) "Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members." *Journal of Accounting Research* 43(2): 291-334.

- Stewart, J., & Munro, L. (2007). The impact of audit committee existence and audit committee meeting frequency on the external audit: Perceptions of Australian auditors. *International Journal of Auditing*, 11, 1, 51–69.
- Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American economic review*, 71(3), 393-410.
- Stuart, S. (2009) U.S. Board Index. Available at:
<http://content.spencerstuart.com/sswebsite/pdf/lib/SSBI2009.pdf>. (Accessed 15.07.2016)
- Subramaniam, N., et al (2013) "Understanding corporate governance in the Australian public sector a social capital approach." *Accounting Auditing & Accountability Journal* 26(6): 946-977
- Sun, F., Wei, X., and Xu, Y. (2012). Audit committee characteristics and loss reserve error. *Managerial Auditing Journal*, 27, pp. 355 – 377.
- Teoh, S. and T. Wong. (1993) Perceived auditor quality and the earnings response coefficient. *The Accounting Review* 68. p. 346-66.
- Temple, J. F (1986) "WHAT SHOULD MY AUDIT COMMITTEE BE CONCERNED ABOUT." *Journal of Accountancy* 162(1): 114-116.
- Tirole, J. (1986) Hierarchies and bureaucracies. *Journal of Law Economics and Organization*. 2. p. 181-214.
- Trevino, L. K. (1986). Ethical decision making in organizations. A person–situation interactionist model. *Academy of Management Review*.
- Trevino, L.K. 1992. Moral Reasoning and Business Ethics: Implications for Research, Education and Management. *Journal of Business Ethics*, 11, 445-459.
- Trevino, L. K., Brown, M. & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations*, 56: 5-37.

- Tsang, E. (2002). Acquiring knowledge by foreign partners from international joint ventures in a transition economy: Learning -by-doing and learning my opia. *Strategic Management Journal*, 23(9), 835–854.
- Turley, S., & Zaman, M. (2007). Audit committee effectiveness: informal processes and behavioural effects. *Accounting, Auditing & Accountability Journal*, 20, 5, 765-788.
- UK Combined Code of Corporate Governance (CCCG), 2006, (Online), Available from: <http://www.frc.org.uk/corporate/combinedcode.cfm>(Accessed 15.07.2016).
- Upneja, A., & Dalbor, M. C. (2001). An examination of capital structure in the restaurant industry. *International Contemporary Hospitality Management*, 13(2), 54 - 59.
- US House of Representatives. 2002. *The Sarbanes-Oxley Act of 2002*. 3763, P.L.-H.R. (Ed.).
- Vafeas, N. (2003). Length of board tenure and outside director independence. *Journal of Business Finance & Accounting* 30 (7/8): 1043–64.
- Vafeas, N (2005) Audit committees, boards and the quality of reported earnings. *Contemporary Accounting Research* 22 (Winter): 1093 - 1122
- Vafeas, N. and Waegelein, J. (2007). The association between audit committees, compensation incentives and corporate audit fees. *The Review of Quantitative Finance and Accounting*, 28, pp. 241-255.
- Van Stavaren. (2007). “Beyond Utilitarianism and Deontology”, *Ethics in Economics, Review of political Economy*, Volume 19, Number 1, 21 – 35.
- Velte, P (2010) "The link between supervisory board reporting and firm performance in Germany and Austria. *European Journal of Law and Economics* 29(3): 295-331.

- Velte, P & Stiglbauer (2011). Financial Experts on Accounting Quality. An Empirical analysis of the German Capital Market, *Problems and Perspectives in Management*, Volume 9, Issue 4.
- Venaik, S., Midgley, D.F., & Devinney, T.M. (2005). Dual paths to performance: The impact of global pressures on MNC subsidiary conduct and performance. *Journal of International Business Studies*, 36(6), 655–675.
- Verriest, A., et al (2013) "The Impact of Corporate Governance on IFRS Adoption Choices." *European Accounting Review* 22(1): 39-77.
- Verschoor, C. C (1993) "BENCHMARKING THE AUDIT COMMITTEE." *Journal of Accountancy* 176(3): 59-&.
- Weber, J. & Wasieleski, D. (2001). Investigating influences on managers' reasoning. *Business and Society*, 40(1): 79-111.
- Weetman, P. (2006). Discovering the 'International' in accounting and Finance. *Br. Account. Rev.*, 38: 351-370.
- Wei, Z., Xie, F., and Zhang, S., (2005). Ownership structure and firm value in China's privatized firms: 1991–2001. *Journal of financial and quantitative analysis*, 40 (1), 87–108.
- Weick, K.E. (1995). *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.
- Weir, C., Laing, D. & McKnight, P. J. (2002). "Internal and external governance mechanisms: their impact on the performance of large UK public companies" *Journal of Business Finance & Accounting* Vol. 29 No. 5&6 PP. 579-611.
- Wernerfelt, B. (1984). A Resource-based View of the Firm. *Strategic Management Journal*, 5, 171-180.

Wysocki, P (2010) "Corporate compensation policies and audit fees." *Journal of Accounting & Economics* 49(1-2): 155-160.

Xie, B., W. N. Davidson, and P. J. DaDalt. (2003). Earnings management and corporate governance: The role of board and the audit committee. *Journal of Corporate Finance* 9 (3): 295–316.

Yang, J. S. and Krishnan, J. (2005). Audit committees and quarterly earnings management. *International Journal of Auditing*, 9, pp. 201–219.

Zeitun, R., & Tian, G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 1, 40-53

Zhang, Y., J. Zhou, and N. Zhou. (2007). Audit committee quality, auditor independence, and internal control weaknesses. *Journal of Accounting and Public Policy* 26 (3): 300– 327.

Zmijewski, M. E. (1984). Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research*, 22, (Supplement), 59–82.

12. Manage (2016), Difference between one Tier and Two tier Board structure (online), Accessed from:
comhttp://www.12manage.com/forum.asp?TB=corporate_governance&S=12
(10.06.2016)

