https://dspace.org/

Effects of executive compensation on firm risk and performance after successful mergers and acquisitions deals

Amewu, Godfred

2018
https://hdl.handle.net/10539/28858

Downloaded from a DSpace repository. https://dspace.org/

Effects of executive compensation on firm risk and performance after successful Mergers and Acquisitions deals

By

Godfred Amewu

Doctoral thesis submitted in fulfilment of the requirement for the award of Doctor of Philosophy

The Graduate School of Business Administration, Wits Business School

University of the Witwatersrand

Supervisor: Professor Paul Alagidede

© Godfred Amewu, July 2018

PUBLICATIONS AND RESEARCH OUTPUT

Prior to submission of this thesis, portions of it and other related studies have either been published in peer reviewed journals, under review or working papers at advanced stage. Details of the research output are outlined as follows;

Peer reviewed journal publications

Amewu, G. (2014). Implication of M&A announcement on stock returns during economic crisis, *Africa Review of Economics and Finance*, 6(1), 102-119.

Amewu, G. and Okyere-Bour P. (2015). Does mergers and acquisitions announcements affect the stock volume trade? *Journal of International Finance Studies*, 15 (1), 71-78.

Amewu, G., Mensah, O.J., Alagidede, P. (2016). Reaction of global stock markets to Brexit, *Journal of African Political Economy and Development*, 1(1), 1-12.

Amewu, G., Alagidede, P. (In press). Do mergers and acquisitions announcements create value for target shareholders in Africa. *International Journal of Finance and Economics:* 2018;1–22. https://doi.org/10.1002/ijfe.1639.

Papers under review

Amewu, G., Alagidede, P. To what extent does different executive compensation packages of bidder firms differ from those of acquirer firms after successful M&A deals for African markets, *Strategic Management Journal.*

Amewu, G., Alagidede, P. Executive compensation and firm performance in Africa (*Journal of Management*).

Amewu, G., Alagidede, P. Post-merger firm risk and executive compensation: The case of Africa (*International Journal of Managerial Finance*).

Amewu, G., Alagidede, P. How different does executive compensation affect systematic and

unsystematic risk (*Journal of Emerging Market Finance*).

Amewu, G., Horne, R. Financial leverage and merger bids in the United Kingdom (*Journal of Behavioral Finance*).

Working Papers

Amewu, G., Alagidede, P. Firm directors and mergers: Evidence from Africa.

Amewu, G., Alagidede, P. Firm distress after merger: Evidence from Africa.

Amewu, G., Alagidede, P. Gender and board diversity on executive compensation in South Africa.

Amewu, G., Alagidede, P. Impact of board characteristic on firm risk after mergers and acquisition.

Amewu, G., Alagidede, P. Mergers and executive compensation packages: Is Africa different?

Conference presentations

August, 2018	Africa Review of Economics and Finance Conference, WITS Business School, Johannesburg, South Africa, 22-23 August, 2018. *To what extent does different executive compensation packages of bidder firms differ from those of acquirer firms after successful M&A deals for African markets.*
March-May, 2018	Erasmus plus exchange programme at Louvain School of Management, Belgium.
May, 2018	ULC School of Management PhD day, Louvain-la-Neurve, Belgium. *Post-merger firm risk and executive compensation in Africa*.
April, 2018	ULC Management CORE Seminar, Louvain-la-Neurve, Belgium

Financial leverage and merger bids in the United Kingdom.

August, 2017 Africa Review of Economics and Finance Conference, GIMPA, Ghana, 24-25 August, 2017.

Do mergers and acquisitions announcements create value for target shareholders in Africa.

August, 2016 Africa Review of Economics and Finance Conference, Kumasi, Ghana, 25-26 August, 2016.

The impact of executive compensation of firm performance.

ABSTRACT

The global financial system has experienced tumoil over the past decade due to the devastating effects of the 2007-2009 financial crisis. While controversies remain concerning the precise cause(s) of the crisis, some identified explanations have been linked to the culture of excessive risk-taking influenced by reward systems (executive compensation). There has been suggestions of closer monitoring and linking executive compensations to performance as the best way to align the interest of executives to that of shareholders. However, available empirical evidence on the relationship between compensation schemes and the performance of firm or risk remains unclear. At the same time, the influence of markets and executive self-induced decisions such as Mergers and Acquisitions (M&A) on incentives and how these incentives subsequently encourage excessive risk-taking, most especially in emerging markets like Africa, is underexplored. Knowledge on this subject is not only essential in addressing the various corporate governance issues relating to executives and firm value creation, but also critical for regulating the financial system. Using company data across 14 different African countries from 2000 to 2016, we extend literature by exploring the significance of deal, firm and corporate governance factors as drivers of pay-performance and risk. This thesis consists of four stand-alone empirical essays, each examining specific gap within the executive compensation, Mergers and Acquisitions (M&A), firm performance and risk context.

The first essay provides evidence of positive abnormal returns earned by shareholders of acquirers upon mergers and acquisitions announcements on African markets. We observed significant cumulative abnormal returns for wider windows up to 25 days before and after M&A announcements. Confidentiality about pending merger announcements are poorly held resulting in significant information leakage occurring up to six trading days. Further, we establish that firm industry, mode of payment and nature of acquisition significantly influence

abnormal returns. We also found strong positive effect of firm-specific factors (firm size and return on equity) on investor's investment decisions following a merger announcement.

The second essay examines the impact of mergers and acquisition deals on various executive pay schemes and factors that drive these pay increase. We find that executives and board of directors of African acquiring firms are rewarded significantly for carrying out successful M&A deals in the year of merger, both for our total sample, South Africa and Other Africa sub-samples. Besides, pay rise is strongly impacted by size of the deal across all the various forms of executive pay. We show that pay increases are high for executives who acquire private targets but no evidence was found to support the impact of domestic acquisitions. South African executives are rewarded more based on market perception of the deal quality. Increase in compensation is not affected by industry classification, diversification and international operations, cross-listing and mode of payment, although there is evidence of the influence of equity mode of payment for the South African market. Further, we distinctively examine the impact of corporate governance factors on pay rise and observe that firms with larger outside board of directors' representation negatively determine executive total pay and there is no evidence that CEO's age and gender influence executive pay. However, the experience of the CEO has a very high positive influence on the level of compensation for South Africa. We conclude that board of director's total reward is also higher in the year of deal completion and is influenced, to a large extent, by size of M&A deal.

The third essay examines the impact of executive compensation on performance measures after successful mergers and acquisitions. We find that executive compensation induced by M&A in Africa negatively affect the performance of listed firms. There is also evidence to support the impact of firm size, deal size, target destination, foreign ownership, diversification, outside board representation and executive ownership on the pay-performance

nexus. Individual pay types, some control variables and market location, tend to affect performance differently.

In the final essay, we examine the impact of various executive compensation types on the post-merger risk-taking by firm's executives. Integrating the influence of deal, firm and corporate governance factors within the Agency Theory framework, we provide a deeper insight on executive pay and how it influences risk appetite. In general, we find that executive pay influences firm risk differently depending on compensation type and risk measure. Specifically, we find that rewarding executives with cash compensation reduces the total post-merger risk of acquirers. However, managers are motivated to increase systematic risk when they are rewarded with stock-based incentives. Besides, based on the argument that managerial compensation portfolio might impact systematic and unsystematic risk differently, our findings show no evidence of the impact of executive pay on unsystematic risk. Finally, by using accounting risk measures, we find no evidence of firms being financially distressed after mergers.

JEL Classification: D81, D82, G10, G14, G21, G32, G34, G35, J33.

Keywords: African stock market; abnormal returns; event study; acquirers; M&A; executive compensation; corporate governance; performance; risk, GMM.

DECLARATION

I, **Godfred Amewu** with student number 1472210, hereby declare that this research report is my own work except as shown in the references and acknowledgements. It is submitted in fulfilment of the requirement for the award of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any degree or examination in this or any other university.

Godfred Amewu

Signed on 15th day of July, 2018

DEDICATION

To my family

ACKNOWLEDGEMENTS

I wish to express my intense gratitude to the Almighty God for His love, care, protection and inspiration throughout this research. This doctoral study is as a result of enormous assistance from many individuals. First, I am highly indebted to my supervisor, Professor Paul Alagidede, for his valuable guidance, inspirations, support and brotherly love. He went beyond academic boundaries to make sure that I had all that was needed to enjoy and finish my research. His quick feedbacks, selfless mentorship, suggestions and time are greatly appreciated. May *Heaven* always respond anytime you call. Second, I also wish to thank Professor Franklyn Achampong Manu (Former Rector, GIMPA) and the GIMPA community for their belief in me and all the support. Third, my profound appreciation goes to the following individuals for their words of motivation and constructive comments: Dr Renee Horne (Director of International Relations, Wits Business School), Dr. Jones Odei Mensah (Wits Business School) and Prof. Franklin Obeng-Odoom (University of Helsinki, Finland).

Besides, I cannot afford to ignore the immense contributions of my "*house-mates and family*"; Nana Kwame Akosah, Maurice Omane-Adjepong, Dr. Gideon Boako, Dr. Emmanuel Ayifah, Dr. Rebecca Nana Yaa Ayifah, Rukudzo Pamacheche, Comfort Dede Tetteh, and Mr and Mrs Senyo Dzokoto. In spite of their heavy work schedules, they made time to read through this work at every stage. I am grateful. I also wish to say a very big *thank-you* to all my PhD colleagues, not forgetting Ouma Nduga Wycliffe, Oluoch Wycliffe, Anna Lyimo, Jacques Totowa, Oro Oro and Euphemia Godspower-Akpormiemie.

In addition, I want to appreciate my family (Doris Assemdi, Delali Amewu, Maami Amewu, Dennis Amewu, John Joshua Amewu, George Amewu, Mum Patricia Dugbatey, Oforiwa Hushie, Frederick Kingsley Kwawu, Monica Kwawu, Prosper Akati and Juliana Sena Akati) for the various roles they played throughout this study. I have also receive

unprecedented supports from some special people which I need to acknowledge. They are Joana Asare, Justine Akushika Alexandria, Regina Minta, and Divassa Louisette.

Finally, I particularly want to thank my lovely wife, Jennifer Akpene Amewu, and my lovely kids, Jannelle Eyaram Amewu, Jaida Enam Amewu and Jeremy Edem Amewu, for their sacrifaces, support and love. I am highly indebted to you.

To all those who have directly or indirectly contributed to this research that I have unintentionally left out of this acknowledgement, I say *merci* and may God bless you

TABLE OF CONTENTS

PUBLICATIONS AND RESEARCH OUTPUT 2

Peer reviewed journal publications 2

Papers under review 2

Working Papers 3

Conference presentations 3

ABSTRACT 5

DECLARATION 8

DEDICATION 9

ACKNOWLEDGEMENTS 10

TABLE OF CONTENTS 12

LIST OF TABLES 16

LIST OF FIGURES 19

LIST OF APPENDICES 20

LIST OF ACRONYMS 22

CHAPTER ONE 25

INTRODUCTION 25

1.1 Background of the study 25

1.2 Problem Statement 29

1.3 Research Questions 31

1.4 Research Objectives 31

1.5 Justification and significance of the study 32

1.6 Structure of the thesis 35

CHAPTER TWO 36

DO MERGERS AND ACQUISITIONS ANNOUNCEMENTS CREATE VALUE FOR ACQUIRER SHAREHOLDERS IN AFRICA? 36
2.1 Introduction 36
2.2 Empirical review 39
2.2.1 Short-term market performance 39
2.3 Data and Methodology 43
2.3.1 Data 43
2.3.2 Methodology 44
2.4 Results and discussion 53
2.4.1. Abnormal returns (ARs) 55
2.4.2. Deal-specific variable analysis 59
2.4.3. Further Analysis 62
2.5 Conclusion 67
CHAPTER THREE 70
MERGERS AND EXECUTIVE COMPENSATIONS IN AFRICA 70
3.1 Introduction 70
3.2 Methodology 78
3.2.1 Data 78
3.2.3 Model specifications and estimation strategy 79
3.3 Results and discussion 83
3.3.1 Descriptive statistics 83
3.3.2 Empirical results 86
3.3.3 Our results within the African context 115
3.3.4 Robustness of results. 120
3.4 Conclusion 121

CHAPTER FOUR....124
MERGERS AND ACQUISITIONS, EXECUTIVE COMPENSATION AND FIRM PERFORMANCE IN AFRICA....124
4.1 Introduction....124
4.2 Literature review....129
4.2.1 Executive compensation and firm performance....131
4.2.2 Corporate governance in Africa....134
4.3 Data and Methodology....139
4.3.1 Data....139
4.3.1 Variables....140
4.3.2 Model Specifications and Estimation Strategy....145
4.4 Results and discussion....148
4.4.1 Descriptive statistics....149
4.4.2 Empirical results....155
4.5 Conclusion....191
CHAPTER FIVE....196
EXECUTIVE COMPENSATION AND FIRM RISK AFTER SUCCESSFUL MERGERS AND ACQUISITIONS IN AFRICA....196
5.1 Introduction....196
5.2 Empirical Review....199
5.3 Data and Methodology....202
5.3.1 Data....202
5.3.2 Variables....203
5.3.3 Model specifications and estimation strategy....205
5.4 Results and discussion....208

5.4.1 Descriptive statistics 208
5.4.2 Empirical results 215
5.0 Conclusion 262
CHAPTER SIX 268
SUMMARY, CONCLUSION AND POLICY RECOMMENDATION 268
6.1 Introduction 268
6.2 Summary and conclusion 268
6.2.1 Do mergers and acquisitions announcements create value for target shareholders 269
6.2.2 Mergers and executive cmpensations in Africa 271
6.2.3 Mergers and acquisition, executive compensation and firm performance in Africa 273
6.2.4 Executive compensation and firm risk 277
6.3. Policy implications and recommendations 281
6.4 Areas for further research effects 283
REFERENCE 285
APPENDICES 326

LIST OF TABLES

Table 2. 1: M&A deal distribution.....54

Table 2. 2: Distribution of deal characteristics for acquirers.....55

Table 2. 3: Acquirers' Abnormal returns for 31-day event window.....56

Table 2. 4: Cumulative abnormal returns (CAR) for all windows 58

Table 2. 5: Results of the influence of deal-specific factors on CARs:.....60

Table 2. 6: Regression results of various market factors (dummies) on CARs.....65

Table 2. 7: Descriptive statistics and correlations of explanatory variables.....66

Table 2. 8: Cross-sectional regression results of acquirers.....67

Table 3. 1: Descriptive statistics.....85

Table 3.2A: Effects of M&A on the executive compensation for African firms 92

Table 3.2B: Effects of M&A on the executive compensation for Other African firms.....93

Table 3.2C: Effects of M&A on the executive compensation for South African firms 95

Table 3.3A: M&A and executive compensation: impact of domestic and private acquisitions 100

Table 3.3B: M&A and executive compensation: impact of domestic and private acquisitions for Other African firms.....102

Table 3.3C: M&A and executive compensation: impact of domestic and private acquisitions for South African firms.....104

Table 3.4: M&A and executive compensation: impact of industry, diversification and international operation and cross-listing ……..…109

Table 3.5A: Post-merger executive compensation of African acquirers 114

Table 3.5B: Post-merger executive compensation of Other African acquirers 114

Table 3.5C: Post-merger executive compensation of South African acquirers.....115

Table 4. 1: Descriptive statistics.....154

Table 4.2 A: Effects of deal-specific factors on total executive compensation and firm performance nexus after merger in Africa ……162
Table 4.2 B: Effects of deal-specific factors on cash executive compensation and firm performance nexus after merger in Africa ……164
Table 4.2 C: Effects of deal-specific factors on equity executive compensation and firm performance nexus after merger in Africa ……166
Table 4. 3A: Effects of firm-specific factors on total executive compensation and firm performance nexus after merger in Africa 170
Table 4. 3B: Effects of firm-specific factors on cash compensation and firm performance nexus after merger in Africa 172
Table 4. 3C: Effects of firm-specific factors on cash compensation and firm performance nexus after merger in Africa 174
Table 4.4A: Effects of corporate governance-specific factors on total executive compensation and firm performance nexus after merger.....177
Table 4.4B: Effects of corporate governance-specific factors on cash executive compensation and firm performance nexus after merger.....179
Table 4.4C: Effects of corporate governance-specific factors on equity executive compensation and firm performance nexus 181
Table 5.1A: Descriptive statistics 212
Table 5.1B: Summary statistics for variable medians and difference in median.....213
Table 5.2A: Impact of cash compensation on total risk for African firms 218
Table 5.2B: Impact of equity compensation on total risk for African firms.....219
Table 5.2C: Impact of total compensation on total risk for African firms 220
Table 5.3A: Impact of cash compensation on BME for African firms.....225
Table 5.3B: Impact of equity compensation on BME for African firms 226

Table 5.3C: Impact of total compensation on BME for African firms.....227
Table 5.4A: Effect of deal-specific factors on cash pay and risk relation for African firms.235
Table 5.4B: Effect of deal-specific factors on equity pay and risk relation for African firms
.....236
Table 5.4C: Effect of deal-specific factors on total pay and risk relation for African firms.237
Table 5.5: Effect of executive compensation on risk for financial firms after merger in
Africa…….....239
Table 5.6: Systematic and Unsystematic risk on compensation types for African firms…...243
Table 5.7A: Cash compensation and risk for South African firms.....250
Table 5.7B: Equity compensation and risk measures for South African firms 252
Table 5.7C: Stock option compensation and Risk for South African firms 254
Table 5.7D: Total compensation and firm risk for South African firms 256
Table 5.8 A: Financial risk and accounting risk nexus post-merger for Africa.....261
Table 5.8 B: Financial risk and accounting risk nexus post-merger for South Africa.....262

LIST OF FIGURES

Appendix 1E: Quarterly trend of global M&A activities 33131

Appendix 1F: Trend of M&A deals in Middle East and

Africa…….33131

Appendix 2A: Abnormal returns for South Africa, other African countries and African

markets.....332

Appendix 2B: Cumulative average abnormal returns (CAR) and abnormal returns (AR) for

51-day event window.....332

Appendix 3 A: Various compensation components before and after merger:.....333

LIST OF APPENDICES

Appendix 1 A: Variable descriptions.....326

Appendix 1 B: List of African stock market for inclusion in analysis 328

Appendix 1 C: Valuing executive's stock option 329

Appendix 1 D: Computing cumulative abnormal returns (CAR).....330

Appendix 1 E: Quarterly trend of global M&A activities 331

Appendix 1 F: Trend of M&A deals in Middle East and Africa 331

Appendix 2 A: Abnormal returns for South Africa, other African countries and African markets.....332

Appendix 2 B: Cumulative average abnormal returns (CAR) and abnormal returns (AR) for 51-day event window.....332

Appendix 3 A: Various compensation components before and after merger:.....333

Appendix 3 B: Probit regression for Heckman correction ……....333

Appendix 3C: Post-merger executive compensation changes for African acquirers ……334

Appendix 3D: Post-merger executive compensation changes for South African acquirers..335

Appendix 3E: Post-merger executive compensation changes for Other African acquirers..336

Appendix 4 A: Executive compensation, deal-specific factors and firm performance after M&A deals for Other African firms 337

Appendix 4 B: Executive compensation, deal-specific factors and firm performance after M&A deals for South African firms 339

Appendix 4 C: Executive compensation, firm-specific factors and firm performance after M&A deals for Other African firms 341

Appendix 4 D: Executive compensation, firm-specific factors and firm performance after M&A deals for South African firms 343
Appendix 4 E: Executive compensation, corporate governance factors and firm performance after M&A deals for Other African firms 345
Appendix 4 F: Executive compensation, firm-specific factors and firm performance after M&A deals for South African firms 347
Appendix 4 G: Summary statistics for variable medians and difference in median.....349
Appendix 5 A: Number of risk lags that are relevant 349
Appendix 5 B: Effect of cash compensation on beta for African firms.....350
Appendix 5 C: Effect of equity compensation on beta for African firms.....351
Appendix 5 D: Effect of total compensation on beta for African firms 352
Appendix 5 E: Effect of cash compensation on degree of combine leverage for African firms 353
Appendix 5 F: Effect of equity compensation on degree of combine leverage for African firms 354
Appendix 5 G: Effect of total compensation on degree of combine leverage for African firms 355

Note: The first number of any appendix indicates the chapter where the appendix can be found except the items in Appendices 1, which are general across all the four empirical chapters.

LIST OF ACRONYMS

Abnormal returns	AR
Adjusted Patell's test	Adj P
Agency Theory	AT
Board share ownership	BoOw
Book value of equity to market value of equity ratio	BME
Capital expenditure	Capex
CEO duality	BoCha
Chief Executive Officer	CEO
Consumer Price Index	CPI
Corporate governance	CG
Cross listed firm	CrossL
Cross-border acquisitions	CrossB
Cross-sectional t test	t
Cumulative average abnormal returns	CAR
Debt-equity ratio	DER
Degree of Combine Leverage	DCL
Different industry acquisitions	Diffind
Diversification and international operations	D&I
Domestic acquisitions	Dom
Estimation coefficients	Coef
Executive compensation	EC
Executive directors share ownership	ExOw

Financial institutions	Fin
Fixed effect	FE
Friendly takeovers	FTov
Gender diversity	BoGen
Gender of CEO	SexC
Generalised Methods of moments	GMM
Generalised Rank test	GR
Generalised sign test	GS
Generally Accepted Accounting Principles	GAAP
Institutional share ownership	InsOw
International Financial Reporting Standards	IRFS
Listed targets	Public
Market Capitalization	MKTC
Market to book ratio	MTB
Merger form	MerF
Mergers and Acquisitions	M&A
Mix of stock and cash deal payment	Mix
Mode of deal payment	MoP
Non- financial institutions	Non-fin
Non-cross listed firms	NonCrossL
Number of observations	N
Ordinary Least Squares	OLS
Other African countries except South Africa	Other
Outside Directors	OutD

Post-acquisition value	Post-Acq
Pre-acquisition value	Pre-Acq
Private acquisition	Priv
Research and development	R&D
Return on assets	ROA
Return on equity	ROE
Sales growth	SalGro
Same industry acquisitions	Sameind
Size of board of directors	BoSize
South Africa	SA
Standard deviation	Std Dev
Stock options	STOP
Stock return volatility	ReV
Systematic risk	Syst
Tobin’s Q	Q
Total board of directors compensation	TbCom
Total executive cash compensation (Cash)	SAB
Total executive compensation	ToCom
Total executive equity compensation	EQT
Total stock return	TSR
United Kingdom	U.K
United States of America	U.S.A
United States of America dollars	USD
Unsystematic risk	Unsyst

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The 2007-2009 global financial crisis that begun in the United States of America (U.S.A) has been the centre stage in global economic discourses over the past decade. Even though the crisis originated from the financial sector, it impacted heavily on various economic activities, inducing the greatest global economic recession since the 1929-1939 great depression. The most surprising aspect was the speed at which the meltdown spread globally and its devastating effects on several economies. It's effect was not restricted to the U.S.A and developed markets but also across all emerging economies[1].

Although controversies remain about the precise cause(s) of the crisis, some identified explanations have been linked to the bursting of the U.S.A housing bubble and structural problems in urban property markets more generally, the culture of excessive risk-taking and complex financial products and reward systems (Borio, 2009; Chudik & Fratzscher, 2010; Obeng-Odoom, 2016). In the aftermath of the crisis, the U.S.A government set up a ten member committee to investigate the true causes. The committee confirmed the above causes and concluded that "widespread failures in financial supervision and regulation" was the major contributor to the problem (Adrian & Shin, 2010; Cheung, Fung & Tsai, 2010; Tirole, 2010). The financial crisis has raised several concerns regarding how corporate governance is carried out in financial firms. In addition, the crisis actually triggered a prolonged discussion of possible spillover effects for both advanced and emerging markets, calling for collaborative efforts among international markets.

[1] According to Atkinson, Luttrell and Rosenblum (2013), the U.S.A alone lost economic output of over 14 trillion in 2007 due to the economic meltdown. Besides, the crisis consumed an enormous sum of financial wealth (for U.S.A household) net of USD 16 trillion from the third quarter of 2007 to the first quarter of 2009. It also wiped human capital. In addition to high inflation rates, drop in house prices, excessive debt taking stock market meltdown, a lot of firms went bankrupt while others were forced to go into M&A deals (Martynova & Renneboog, 2008).

The devastating and unquantifiable effects of the crisis on global financial markets has attracted numerous research on various governance and financial market issues, including mergers and acquisitions (M&A) deals (Alexandridis, Mavrovitis & Travlos, 2012; Andrade, Mitchell & Stafford, 2001; Antoniou, Petmezas & Zhao, 2007; Bodolica, 2005; Bodolica & Spraggon, 2009a; 2015; Martynova & Renneboog, 2008). To prevent future occurrences of similar crisis, there have been calls (from governments, academics and practitioners) for pragmatic steps to address the major causes. From the global discussions, much attention has been paid to the contribution of reward systems (executive compensations) and its potential influence on excessive risk-taking by executives[2]. The domain of much interest is the role of M&A activities on Executive Compensations (EC) and how these compensation packages affect firm performance and risk.

The scale of M&A activity globally over the years has been remarkable (see Appendix 1E). In the year 2007, U.S.A companies were involved in over 12,000 deals totalling nearly USD 3.35 trillion (Brealey, Myers & Allen, 2014). Furthermore, despite the intense global stock market volatility coupled with declining oil prices, unsteady economic conditions in some parts of Europe, and issues of increasing interest rates in most emerging markets, 2014 still saw a USD 3.5 trillion worth of global M&A activity (ClearSight, 2015). Besides, the year 2015 saw a monumental spike in M&A deals both in volume and value. According to a Dealogic (2016) report, over 26,000 deals were recorded in 2015 with over USD 5 trillion estimated value. The year 2016 began with the biggest deal between America's Shire plc and Baxalta, valued at USD 32 billion. The growth of M&A market competition is expected to continue in the years ahead and this will be driven by private equity and strategic acquisitions most especially on emerging markets. Such a gargantuan market with promising future growth should be of interest to investors and researchers.

[2] An executive's risk appetite and the available time horizon considers in making managerial decisions could be influenced by the remuneration package and the conditions under which she earns it (Larcker, Ormazabal, Tayan & Taylor, 2014).

Recent M&A activities on the African continent has become an important medium of investment for most global investors. Most of the world's top ten growing or promising economies are in Africa – developments which are widely discussed as "Africa on the rise" (Obeng-Odoom, 2014). This rise is characterised by numerous growth opportunities in various sectors. As a result, most of the multinational firms are taking advantage of the immense growth opportunities. Industries of interest for the M&A investors is diverse but with leading concentration on mining, energy, utilities and financial sectors. The African continent has seen monumental growth in M&A deals both in deal count and volume (Wilson & Vencatachellum, 2016). For instance, in 2010 the total value of deals amounted to $44 billion, which was a record high. The trend of M&A activities on the African continent has been on the increase despite a drop in 2011, possibly due to political instability at the northern part and the insurgence of religious-motivated terror attacks. In spite of the 2011 drop, the year still recorded a deal of $27 billion in value, according to Jeanne (2016). The subsequent years have seen significant rise in M&A activities across the continent.

The South African market, over the years, has been a leader in intra Africa M&A deals. Most of the South African companies involved concentrate on intra-Africa deals, taking advantage of growth opportunities in neighbouring countries. This is so because, relatively, South Africa has limited growth opportunities and their ability to make useful domestic acquisitions are constrained by competition regulations (Stafford, 2014). The same report posted 57% of total African deals (valued at $12.2 billion) for South Africa followed by $3.1 billion deal for Uganda in 2013. The growth of M&A activities in Africa has been driven by major acquisitions by Chinese firms focusing on energy, mining and utility sectors. For example, in 2013, China's National Petroleum Corporation acquired 28.6% stake in Eni East Africa Spa with a total value of $4.2 billion. As the continent continues to inspire confidence,

M&A activities are expected to kindle the global market and will soon be a hot investment destination for investors.

The decision to acquire or to-be-acquired is a strategic choice that requires critical consideration by top managements of firms since it has several implications on firms' structure, conduct and performance including the compensation of the executives. The issue of EC has received significant attention in various newspapers and magazines towards the middle of the 20th century. It could take the form of base salary, bonuses (short-term), equity and option plans (long-term) or other benefits and perquisites. Most of the discussions and papers on EC have been concerned about the magnitude and nature of CEO incentives and how such incentives match their performances (Henderson, 2003). These discussions have triggered a lot of global market (at least for the developed economies) regulations by various Security and Exchange Commissions or their associates. Notable among these regulatory reforms are United Kingdom (UK)'s Company Acts, Canada's Capital Market Regulation 638, South Africa's King I & II reports and USA's Sarbanes-Oxley and Dodd-Frank Wall Street Reform & Consumer protection Acts. All these reforms target the disclosure of annual executive compensations for all firms most especially those listed on stock exchanges.

There are two schools of thought on the impact of EC on organisations' growth. On the one hand, some writers have established a positive link between EC and organizations growth and justify those incentives as tools to attract the best brain for the job (Baker, Jensen & Murphy, 1988; Brealey et al., 2014). On the other hand, others strongly argue that boards approve these unreasonable compensations to executives making them rather richer at the expense of stockholders (Bebchuk & Fried, 2004; 2005; Lewellen, Loderer & Martin, 1987). Hence, there is no consensus on the effect of EC on organizations' performance and the ambiguity between these two is intensified when firms have gone through M&A.

This thesis focuses principally on the potential effect of executive compensation on acquirers' performance and risk profile after successful M&A deal, with particular attention to African markets (emerging markets). In particular, this thesis considers firms that have gone through a successful M&A deal and listed on stock markets in Africa. Further, the work considers some possible links between M&A deals, stock market performance and EC characteristics. Even though this component is not one of the major objectives of the thesis, the findings could help throw more light and explain better the major findings. Finally, one other area of concern is to investigate whether EC packages of acquiring firms change completely after successful M&A deals on African markets.

1.2 Problem Statement

Global financial markets are composed of complex market phenomena that could play simultaneously to control market movements. Two of such market phenomena are M&A and EC. Quite a number of studies have analysed how M&A (as a single event) could influence market directions (Agarwal, 1981; Bodolica & Spraggon, 2015), while others consider EC and how it affects different positions of firms (Agarwal, 1981; Agrawal & Knoeber, 1996; Alexandridis et al., 2012; Bebchuk, Cohen & Spamann, 2010; Bebchuk & Fried, 2004; Bodolica, 2005; Bodolica & Spraggon, 2015; Deysel & Kruger, 2015; Gaughan, 2015).

There are numerous studies on EC and how it affects firms. Most of these previous studies concentrate on how EC contributes to firm performance, size and risk-taking behaviour of CEOs (Bebchuk, 2009; Bebchuk & Fried, 2005; Coakley & Iliopoulou, 2006; Girma, Thompson & Wright, 2006b; Grinstein & Hribar, 2004; Ryan Jr & Wiggins III, 2002). Besides, other academics and practitioners pay considerable attention to the incentives received by firm executives involved in M&A deals. There are two streams of literature linking M&A and executive compensation. One group looks at the various characteristics of M&A and treats EC

as one of those M&A characteristics (Datta, Iskandar-Datta & Raman, 2001; Eun, Kolodny & Scheraga, 1996; Hayward & Hambrick, 1997), while the second group considers the impact of M&A deals on EC (Bliss & Rosen, 2001; Guest, 2009; Wright, Kroll & Elenkov, 2002). There is scant literature on the latter, hence, little is known on the potential effect of EC composition- after a successful M&A transaction- on the performance and risk position of acquirer firms. It is very important to investigate these potential effects since there are some evidence of changes in EC after a successful deal (Coakley & Iliopoulou, 2006; Hribar, 2004; Kroll, Simmons & Wright, 1990).

More importantly, though there are studies on EC and M&A activities relating to firm risk and performance (Coakley & Iliopoulou, 2006; Lewellen, Loderer & Rosenfeld, 1985; Ryan Jr & Wiggins III, 2002), few have fully explored in the extant literature the possible impact of these major market events on emerging markets. Thus, in spite of the avalanche of research on EC in developed markets there is dearth of research in Africa's emerging markets. To the best of our knowledge we are unaware of studies examining the risk and return profile of acquirers and target firms in Africa. Even more depressing is the paucity of research on firm's profit and performance of bidder and acquirer firms after successful M&A deals for African markets. Moreover, the menu of compensation schemes such as bonuses, equity and options, among others, and how they affects firms' performance and risk remain underexplored. This work thus seeks to contribute and fill in these gaps in the extant literature on this topic. Besides, since our study focuses on firms listed on the capital market, it is equally important to establish if M&A announcements influence stock price direction. Emerging and developing markets contribute significantly to the growth and function of the global financial systems. Hence, understanding how these markets react to EC packages, stock market performance and risk composition triggered by M&A activities could be useful to academics and practitioner research.

1.3 Research Questions

The above discussions lead to the following research questions:

i. Do M&A announcements generate abnormal returns for acquirer firms on Africa's emerging markets?
ii. To what extent does executive compensation packages of bidder firms differ from those of acquirer firms after successful M&A deals for African markets?
iii. What are the potential effects of various EC types (cash, equity and options and total compensation) on a firm's performance and risk?
iv. How different does executive compensation influence firms' systematic and unsystematic risk in Africa?
v. What are the effects of M&A deal, firm and corporate governance specific characteristics on the EC, risk, and performance nexus?

1.4 Research Objectives

Different researchers have examined M&As and how they contribute to changes in executive packages of firms after successful deals. According to Bodolica and Spraggon (2009b), executives demand an upgraded incentives after an acquisition deal due to increase in firm size, complexity and potential growth. The post-merger compensation packages have the potential to distort the performance and risk profile of the firm. The core objective of the thesis is to examine the potential effect of post-merger compensation on firm risk and performance and the role of M&A announcement on stock price dynamics in Africa. Specifically, this thesis seeks to achieve the following objectives:

i. Investigate the effect of M&A announcements on stock returns for acquirers in Africa.

ii. Examine the possible changes in acquirer's EC after a successful M&A deal on African markets.
iii. Analyse the relationship between components of EC and firm performance and risk after a successful M&A deal.
iv. Determine whether EC packages for bidder firms influence systematic and unsystematic risk differently.
v. Explore the effects of M&A deal, firm and corporate governance specific characteristics on the EC, risk, and performance nexus.

1.5 Justification and significance of the study

From the strand of literature on the EC, very few have looked at the combined effect of EC on firm performance and risk within the M&A context (Bodolica, 2005; Bodolica & Spraggon, 2015; Bryan, Hwang & Lilien, 2000; Conyon & Leech, 1994; Guest, 2009; Spraggon & Bodolica, 2011). This work contributes to the extant literature on this topic with reference to African markets where little or no research exist.

Executive compensation has been identified as one of the major causes of the destructive 2007-2009 global economic meltdown. The genesis of the crisis was linked to the U.S.A financial market. Possible future cause of similar crisis could originate from other economies like any of the emerging markets. Hence, the need to consider emerging markets in the global analysis. Unfortunately, majority of such studies are done on U.S.A, U.K and Canadian markets. Research on this subject in emerging markets are non-existent possibly due to market size and influence. However, the current exodus of funds to and from these emerging markets and the role they play in the global financial landscape cannot be overemphasised. Also, it has been argued (Khanna & Palepu, 2000; Porta, Lopez-de-Silanes & Shleifer, 1999) that almost all the key institutional mechanisms, such as effective governance mechanisms,

disclosure requirements and issues of corporate controls, that make developed markets work are virtually absent in emerging markets. But Chang and Hong (2000) and Guillen (2000) strongly disagreed. They posit that conglomerate could help institutions correct the so-called market imperfections that characterize emerging markets. Therefore, the recent trend of M&A deals coupled with EC discrepancies seen on the various emerging markets are not issues to be swept under carpet.

More so, institutional context and cultural differences between developed and emerging markets is the principal motivation for conducting this study. The conceptual frameworks for advanced economies might not work for emerging economies. For instance, recent studies confirm that some units affiliated with conglomerates on emerging markets (Argentina, South Africa, Peru and others) enjoy significant profitability than independent firms, although similar studies on advanced economies suggest that conglomerates destroy value and should be dismantled (Chang & Hong, 2000; Khanna & Rivkin, 2001a; 2001b; Peng, Lee & Wang, 2005). In all, this thesis throws more light on the deep darkness surrounding effects of EC of M&A deals on firm performance and risk on Africa's emerging markets.

In short, the thesis makes three blocks of contribution to knowledge. Firstly, the findings from this thesis as explained under the objectives makes significant empirical contribution to the existing body of knowledge on the subject. Secondly, this thesis contributes methodologically by employing a battery of econometric models to test the various objectives and conduct a host of robustness checks to ensure that results are reliable.

Besides, majority of research on the above subject are done in developed economies such as U.S.A, UK and Canada. Little is known on how EC affect firms on emerging and developing markets. Some academics have established clear and insightful differences between states, countries and continents with regard to institutional context where corporate governance issues are involved (Bishop, 1994; Guillen, 2000). Mostly, developed markets are characterized

by asset liquidation and wide spread of equity ownership. Apart from these markets being considered as efficient in treating information, they are heavily regulated, supervised and very stringent on EC disclosures as stipulated in their various Acts. In contrast, emerging/developing markets exhibit weaker information processing tendencies with narrower dispersion of equity ownership. Applying therefore, frameworks of developed economies, on emerging/developing markets phenomena could be highly misleading. Our findings, therefore, showcase any differences or similarities between advance markets and emerging markets on the subject. Hence, our results can be applicable to other emerging markets, due to markets similarities.

Furthermore, studies on CG and managerial behaviour have been cited to show weak methodological strength (Beiner, Drobetz, Schmid & Zimmermann, 2006) by not properly addressing endogeneity problems associated with the use of Ordinary Least Squares (OLS) regression estimator, producing incorrect inferences. These incorrect inferences could be the main cause of inconsist findings from earlier studies. Our study employ robust methodologies, using intrumental variable techniques, to address the methodological issues raised in the literature.

As a result, we examine the impact of executive compensation triggered by M&A on firm performance in Africa. Our study is motivated by the lack of global consensus in literature and non-existing research on this subject across Africa. Africa provides compelling context for our study because of geographical, cultural, institutional and market differences compared to advanced markets where studies on this matter are dominant. Specifically, our study contributes to the existing literature by providing evidence on the EC after merger and firm performance nexus within the African context.

Finally, this study makes a theoretical contribution using comprehensive and diverging theoretical frameworks. The agency theory is the main theoretical framework for our analysis. However, depending solely on a single theoretical framework, as seen in many studies (Bishop,

1994; Bodolica & Spraggon, 2009b; Borio & Drehmann, 2009; Khanna & Palepu, 2000; Kroll et al., 1990) to define the topological space of a complex corporate governance issue like executive compensation (EC) could be inadequate. We supplement our discussions around the agency theory with other theories (such as efficient market hypothesis, risk theories and others) to explain and link the variables of the research, leading to a more detailed understanding of issues.

1.6 Structure of the thesis

The entire thesis report consists of six (6) chapters, structured as follows: Chapter two provides a detailed literature review on the influence of M&A deal announcements on short-term stock performance. The chapter also presents a fresh empirical evidence on the influence of M&A announcements on firm value in Africa, employing both event study and regression approach. Chapter three reviews the literature on changes in executive compensation within the M&A context while empirically investigating whether executive compensation packages for bidder differ from acquirers.

Even though studies have established that EC for acquiring firm is different from bidder firms, the findings, apart from contributing to the existing body of knowledge, help put into proper perspective the framework and the basis for further investigation. In Chapters four, the study examines the potential effects of the various components of EC (cash, equity, options and total compensation) after M&A deal on firm performance. Chapter 7 further explores the compensation and firm risk nexus for various measures of compensation types and risk. Finally, chapter 6 concludes the study and outlines key managerial and policy implications as well as areas for further future research.

CHAPTER TWO

DO MERGERS AND ACQUISITIONS ANNOUNCEMENTS CREATE VALUE FOR ACQUIRER SHAREHOLDERS IN AFRICA?

2.1 Introduction

The past three decades have seen significant changes in global financial markets. In fact, the discussion on the flow of capital globally across countries is one of the areas that has greatly attracted researchers' attention. In an attempt to throw more light on global flow of capital, Owen and Yawson (2010) observe that there is more capital flow between advanced countries than from advanced countries to developing economies, which they attribute to the influence of institutional structure qualities. In spite of the above observation, advanced markets (such as U.S,A U.K, Canada, Germany and France) have experienced pragmatic stock market reforms, intense technical and financial innovations unleashing huge capital flows to emerging markets, which currently constitute more than 50% of global population and account for a very large proportion of economic output (Alagidede, 2010).

According to the same author, Sub-Sahara Africa's net foreign direct investment tripled from USD13 billion in 2004 to about USD 33 billion in 2007 and portfolio equity flow reached USD 15 billion in 2006, while bonds amounted to USD 7.13 billion in 2007. The 2015 total foreign direct investment to Africa stood at USD 54 billion, just shy of the previous year's USD 58 billion, according to Bloomberg (2016). Although African markets are relatively small, the continent is a hot destination and the best alternatives for potential investors due to benefits of portfolio diversification, strong growth rates and attractive returns that are higher than advanced markets (Harvey, 1995). In addition, the surge of funds into Africa is mostly explained by the growing confidence investors have coupled with political stability in most of the regions. The increasing engagement of global investors and flow of capital into Africa

through channels such as mergers and acquisitions (M&A) has attracted many discussions about the performance of the financial markets and their integration with the global economy.

Recent M&A activities on the African continent have become an important venue of investment, particularly in mining, energy, utility and financial sectors. Africa has seen monumental growth in M&A deals in both deal count and volume. For example, in 2010, the total value of deals amounted to USD 44 billion which was a record high (Jeanne, 2016). He, also, claimed that the trend in M&A activities in Africa has been on the increase despite a drop in 2011, possibly due to the Arab spring and the insurgence of religious-motivated terror attacks. Similarly, in 2015 for instance, the intra Africa (regional acquisitions) deal reached USD 15.3 billion, slightly shy of the 1998 record of USD 16.1 billion (Bloomberg, 2016). The remarkable growth in M&A activities over the years raise concerns about the value creation effect to shareholders, most specially on the equity market. Consequently, the changes in share value in African stock exchanges because of M&A deals has been of interest to researchers.

The M&A literature generally agrees that target firms' shareholders benefit substantially from merger deals because of overvalued market premiums that they receive for holding their shares. This benefit is what influences movement in stock prices in favour of target shareholders upon M&A announcement. However, studies are unsuccessful to provide consensus on the movement of stock prices of acquiring firm upon an M&A announcement. For instance, studies such as Doukas, Holmen and Travlos (2002) and Fee and Thomas (2004) report positive abnormal returns for acquiring firms (acquirers), while others (including Georgen & Renneboog, 2004; Kyriazis, 2010) report negative returns for varying event windows. The lack of unanimity on the short-term wealth effects of M&A announcements on abnormal returns, and the paucity of research on the subject in African countries forms the background of this article.

This study, thus, seeks to investigate the market value creation for acquiring firm's shareholders upon M&A announcement in Africa's emerging markets. The contributions of this paper to the literature is three fold: Firstly, our study is motivated by the lack of literature on this subject in Africa's emerging markets and most importantly role of post-merger stock performance on managerial policies. What is more confusing is whether gains made from M&A announcements are real economic gains or an arsenal of market efficiencies. If indeed M&A creates value, and these gains could be attributed to market response to information, then a clear understanding of the driving factors and market characteristics could be essential to researchers and practitioners.

Secondly, few studies have looked at the major deal-specific factors that drive observed abnormal returns following M&A announcement effects, particularly on emerging markets. This study contributes to the debate by establishing the effect of merger form (domestic or cross-border), diversification, cross industry acquisitions, mode of payment, firm industry and other firm-specific variables on abnormal returns of African's emerging markets.

Thirdly, Datta and Puia (1995) and Weber, Tarba and Bachar (2011) argue strongly that geographical and market differences are injurious to M&A deal performance and are important for intra-market deal to succeed. Thus, understanding the interrelationships and effect of these differences on M&A deals in Africa would help enlarge the literature on this subject. In line with this reasoning, we investigate differences in market responses to M&A announcements between South Africa, as a relatively advanced market, and the whole of Africa.

The rest of the study is organised as follows: Section 2 outlines the relevant literature while section 3 provides details on the event study methodology and data. Section 4 presents the results and analysis while section 5 concludes.

2.2 Empirical review

Earlier researchers studied the relationships between M&A activities and various economic phenomena such as general business cycles, industrial production, stock prices and trading, interest rates, real cost of capital and others. Nelson (1959), for example, analysed the association between US merger deals and business cycles and concludes that the number of merger deals are highly linked to level of stock prices and industrial productivity. In addition, he claims peaks in M&A activities proceeds sparks in business cycles and therefore concludes that the number of mergers is a leading indication of economic activities. The globalization of current economic activities nurtures the ground for more M&A activities, which will see heavy exodus of funds across continents. The current movement and nature of M&A activities places a lot of emphasis on its significance and effect on market performance.

2.2.1 Short-term market performance

One of the thorny empirical questions in the flesh of M&A researchers is whether M&A deals create value for shareholders. From standard merger motive hypothesis, M&A activities should create value for firms through an improved cash flow from major factors such as synergy, economies of scale, scope and diversification. However, this view has been the centre of debate by most M&A academics over the years. Ravenscraft and Scherer (1987), Barber and Lyon (1996) and Ghosh (2008) reason that operating firm performance does not improve after M&A activities. Ghosh (2008) specifically explains that any increase in firm performance might be due to restructuring and other unrelated market factors. He argued that using systematic differences in size across the two firms and basing on findings that most acquiring firms undertake merger deals, following period of superior performance, is most likely to introduce bias conclusions. Conversely, Healy, Palepu and Ruback (1992), Netter, Stegemoller and

Wintoki (2011) and Bayazitova, Kahl and Valkanov (2009) provided a battery of evidence to support their position that corporate performance improves after merger deals.

Healey et al (1992) examined the post-acquisition operation performance of 50 large U.S public industrial firms completed between 1979 and 1984. Using stock return and accounting data, they found out that there is a strong positive relationship between increases in stock abnormal returns and post-merger operating cash flows at merger announcements. They further explain that, the presence of the abnormal returns is an indication of how market expectations explains significant portion of stock revaluation of merging firms.

Also, Fee and Thomas (2004) analysed the acquirer returns of 554 U.S.A M&A deals from 1980 to 1997 and found positive significant abnormal returns. Supporting evidence are found in Sehgal, Banerjee and Deisting (2012) analysis of 214 bidder companies of six BRICKS (Brazil, Russia, India, China, South Korea and South Africa) markets from 2005 to 2009. They concluded that investors on India, China, Russia, and South Korea markets were over-optimistic during the pre-announcement period, generating significant abnormal returns for the two-day event window, which is an indication of information leakage prior to the announcements. They also found out that the South African market experienced a stronger post-event market reaction creating stronger significant abnormal returns to bidder shareholders. The above findings are consistent with Doukas, Holmen and Travlos (2002), and Beitel, Schiereck and Wahrenburg (2004).

On the other hand, earlier studies, such as Asquith (1983), Dodd (1980) and Malatesta (1983) suggest that M&A activities, either in the short or long run, do not enhance or create value for bidding firm's shareholders. Typically, Morck, Shleifer and Vishny (1990) in their analysis submit that bidding firm shareholders post negative abnormal returns for varying windows prior to M&A deal announcements. More recently, Alexandridis, Petmezas and Travlos (2010) also sampled bidder firms from the Canadian, UK and US markets who engaged

in public listed target firm acquisitions and conclude that shareholders gain at best zero abnormal returns and a deeper loss when deals were finance with equity. These results are in line with various studies on different markets and at different periods. For instance, Mitchell and Stafford (2000), Conn, Cosh, Guest and Hughes (2005), Kyriazis (2010) and Siew Peng and Isa (2012) record negative abnormal returns for acquirers.

Perhaps, the disparities in the results, regarding movement of share prices upon M&A announcements for bidding firms, could be due to difference in market operations, acquisition form, industry effects, mode of deal payment and even the use of inappropriate methodologies. Earlier, Travlos (1987) investigated the role of mode of M&A deal payment on stock returns of bidding firms upon deal announcements and found significant variations in the abnormal returns of equity financed and cash offer deals. He further argued that the inconsistencies in earlier studies on takeovers could be due to their failure to control for mode of payments.

Subsequently, Fuller, Netter and Stegemoller (2002) examined the acquirer's returns of 3,135 U.S.A firms that made bids for public, private and subsidiary target firms (listing effect) from 1990 to 2000 using either cash, stock or both. Their results show significant influence of these characteristics on the acquirer's returns. They also found that bidders have significant negative and positive abnormal returns when buying public and private/subsidiary companies respectively. They attribute the different market reactions to bidders receiving better price offer when the target is non-public due to liquidity issues (subsidiaries and private firms cannot be traded as easily as public firms), which makes these kind of investments unattractive and less valuable. In addition, their analysis, based on the target size and mode of payment, shows that the bidder return is greater when the bid is equity-offered and increases, the larger the target.

Faccio, McConnell and Stolin (2006) also examined the effect of M&A announcements on stock returns to acquirers who targeted private and public firms in 17 European countries from 1996 to 2001 and found insignificant abnormal returns for public targets and significant

positive abnormal returns for private targets. They further contend earlier claim, contrarily to Moeller, Schlingemann and Stulz (2004), that the realised abnormal returns depend on target firm size. Evidence of listing effect, mode of payment and target size, across countries, have been documented in other current studies (Harford, Humphery-Jenner & Powell, 2012; Shams, Gunasekarage & Colombage, 2013).

Consistent with Colombage, Gunasekarage and Shams (2014), Nguyen, Rahman and Zhao (2014) analysed domestic and cross-border acquisitions of public targets in Australia and found cross-border acquisitions of public firms to create greater value than domestic public targets. Earlier study by Conn et al. (2005), for UK bidders, posted significant abnormal returns to acquirers for both cross-border and domestic private targets. In contrast, Capron and Shen (2007) reports that cross-border deals in U.S.A are rather characterised by lower abnormal returns. Further, earlier study by Doukas and Travlos (1988) records a gain for acquirers who diversify into different industries but Capron and Shen (2007) and Bae, Chang and Kim (2013) disagreed and claim the abnormal returns are rather insignificant.

The discussion so far reinforces the hypothesis that equity market valuation is heavily influenced by diverse forms of merger characteristics as consistent with Shleifer and Vishny (2003), Harford et al. (2012) and Chang and Tsai (2013). A good number of the M&A literature support the argument that acquirer's return, upon M&A announcements, for private targets, equity-offered and cross-border acquisitions are consistently higher than public, cash or mix mode of deal payment and domestic acquisitions respectively. However, literature on this subject on the African market is scanty. The very few, rather, concentrate on South Africa market (Mitchell & Kodongo, 2016; Smimou, 2015). For instance, a study by Adelegan (2009) on Sub-Sahara Africa focus on the effect of cross-listing announcements on stock returns and found that cross-listing announcements have significant positive abnormal returns for shareholders. Earlier studies by Mushidzhi and Ward (2004) and Smit and Ward (2007)

investigated the South African market response to M&A announcements. They found a positive abnormal returns for target firms and insignificant abnormal returns for acquiring firms. However, effect of cross-sectional volatility, serial dependency correlation changes and induce-event heteroscedasticity has the potential to affect abnormal return analysis (Campbell, Cowan & Salotti, 2010), which these studies did not address directly. A critical analysis of market response using procedures that address methodological flaws, taking into consideration deal and firm specific factors, could provide a clean, reliable and insightful meaning to the findings.

2.3 Data and Methodology

2.3.1 Data

The study uses dataset of M&A announcements involving acquiring firms in Africa between 2000 and 2016 collected from the Bloomberg database. The sample period is partly informed by the availability of data and partly due to the upsurge in M&A activities in Africa post 2000 due to implementation of various structural changes. The dataset comprises of records of M&A deals, acquiring firm's equity prices with dividend payments and the stock market index of fourteen (14) African countries: South Africa, Botswana, Namibia, Mauritius, Zimbabwe, Kenya, Tanzania, Uganda, Nigeria, Ghana, Ivory Coast, Morocco, Tunisia and Egypt. The country selection is basically motivated by availability of data.

Our initial sample was made up of 437 M&A announcements, including completed and unsuccessful announcements. However, inclusion requires firms to do only a single acquisition within a span of at least two years. This is intended to avoid the interlocking effects of multiple merger events at close intervals. This reduces the final sample to 245 announcements for Africa and 135 for South Africa.

In addition, South Africa among the various African markets is an extreme outlier in terms of market regulation and efficiency. It is therefore worth doing a separate analysis on the South African market to identify any similarities with the rest of the markets. The records of M&A deals cover the date of the first published announcement (as a proxy for the event date), the type of merger (domestic or cross-border), cross-listing and international operations, listing (private or public), cross industry acquisition same or different industries), mode of payment (cash, equity or both) and the industry of the acquiring firms. For an acquiring firm to be included in the sample, the firm must be listed on one of the exchanges in the fourteen identified countries and has daily share prices available for a period of at least 225 days prior and 25 days after the event date.

As in Liu, Padgett and Varotto (2017), we include only non-overlapping deals. That is, we exclude acquirers that made multiple acquisitions within a year or consecutive years. In addition, there has to be no other major event relating to the acquiring firm around the event date, such as dividend declaration, the acquiring firm being targeted by another firm or industry regulation policy announcements to avoid overlapping of events. Our final sample contains 245 firms (see Table 2.1). Firm returns are computed as the difference in natural log of stock prices; $R_t = \ln(P_t + D_t) - \ln(P_{t-1})$, where P_t and D_t are the stock price and dividend paid respectively at time t. We adjust the returns for inflation using the individual country inflation rates. This approach helps standardise the returns across all countries and resolves any issue of outliers.

2.3.2 Methodology

The objective of this section is to investigate if M&A announcements on the African markets induces abnormal returns in stock prices influencing the short-term performance of the firm. This study employs the Event Study Approach introduced by Fama, Fisher, Jensen and Roll

(1969) to empirically investigate the effect of merger announcements on stock prices. To have a better and improved parameter prediction and avoiding loss of transaction possibly due to insufficient observations, we chose 200 days as the length of the estimation period for this study. The event window (number of days before and after an M&A announcement) is selected to capture the short-term wealth effect of the event. Data from the event window is used in combination with the parameter estimates (alpha and beta from the estimation period) to determine whether there was event announcement leakage or how long it takes the market to absorb information.

Finally, capital markets absorb information differently. Moreover, we are not sure how long it takes a typical African market to process and reflect M&A announcements. We therefore include a post event window to investigate a possible after-event stock performance following the announcements. Our analysis considers different event windows: 3-day (-1, 1), 5-day (-2, 2), 11-day (-5, 5), 21-day (-10, 10), 31-day (-15, 15) and 51-day (-25, 25) and other windows. These event windows help to critically examine how the African market responds to corporate information at different time spans. In order to address the issue of confounding effects, our sample excludes all firms that experience similar market events within three years before and after the M&A announcement.

For event studies of this kind, different return generating models (benchmark models) are employed. The three main forms of the return generating models seen in literature are the mean-adjusted, market-adjusted and market models. We adopt the single-factor market model because it is the most widely used model for return generation and it posits a linear relationship between the returns of stock and the returns on the stock market index. This model also properly captures the market risk and the associated mean returns, which is crucial in asset pricing. We adopt the equally-weighted stock market index instead of value-weighted because it is more likely to spot an abnormal return due to the greater degree of correlation with stock returns

(Peterson, 1989). To illustrate the abnormal return generation and test statistics, we use the 31-day event window. For every stock *i* at time *t*, the normal return is estimated as:

$$R_{it} = \propto_i + \beta_i R_{mt} + \varepsilon_{it} \qquad i = 1, \dots, N, \quad t = -215, \dots, -16 \tag{2.1}$$

Where R_{it} is the rate of returns of stock *i* at time *t*, R_{mt} is the market rate of return for day t, β_i is the systematic risk of stock *i*, $\propto_i$ is the stock-specific intercept and ε_{it} is the model prediction error term for stock *i* at day *t*. The unsystematic component ε_{it} is assumed to be independent of R_{mt} and seen to be an abnormal return with the $E(\varepsilon_{it}) = 0$. The process involves collecting stock returns, generally daily, of N stocks which experience similar market event (say M&A announcement), possibly at different calendar times.

Next, the *ordinary least square* (OLS) parameter estimation technique is used to estimate $\widehat{\propto}_i$ and $\widehat{\beta}_t$ from the estimation period. The estimated market model is then use to forecast the expected returns around the event window (say –15 to 15) using the future market index. Thirdly, the difference between the actual and the forecasted returns produces the daily abnormal returns (AR) for the *i*th stock.

$$AR_{it} = R_{it} - \left(\widehat{\propto}_i + \hat{\beta}_i R_{mt} \right) \quad i = 1, \dots, N \quad t = -15, \dots, 15 \tag{2.2}$$

For each day t, we compute the cross-sectional average abnormal returns of all the N firms as:

$$\overline{AR}_t = \frac{1}{N} \sum_{i=1}^{N} AR_{it} \tag{2.3}$$

Besides, one common problem with event study has to do with the uncertainty about the event date (Fama et al., 1969). The data for our study has been collected from Bloomberg database and thoroughly crosschecked with other reliable databases like DataStream. We are quite confident our study will not suffer from any event date ambiguity issues. Even though these dates are known exactly, it is not clear when the content of the announcements are made available to the market coupled with the possibility of even clustering and information linkage. To address this challenge, we accumulate the average abnormal returns (CAR) over the event

window for each stock *i* using equation (2.3). The CAR also helps to ascertain the magnitude of the abnormal returns across the event window.

$$\overline{CAR}_t = \sum_{-15}^{15} AR_t \tag{2.4}$$

Any significant difference obtained is an indication of abnormal return. In addition, any significant abnormal return is a violation of the market efficiency which posits that stock prices adjust quickly to reflect any new market information.

The event date is the pivot of the event study methodology. Stock returns are collected around the event date for various firms at different times (non-synchronous trading). According to Scholes and Williams (1977), in the presence of non-synchronous trading most especially for daily stock returns, the OLS estimate of the market model is biased and inconsistent. However, Brown and Warner (1985) also establish that other alternative procedures for estimating the market model other than the OLS in the presence of non-synchronous trading does not deliver any clear-cut benefit to identify abnormal returns. Besides, according to the same authors, failure to capture non-synchronous trading in the parameter estimation, even if biasness in beta exist, does not lead to misspecification of the event methodology.

2.3.2.1 Event-study test statistics

There are a lot of statistical test to determine the significance of the abnormal returns. In this study, we employ four different test statistics for the purpose of comparison. Two parametric (the cross-sectional t-test and the adjusted-Petell test) and two non-parametric (generalized sign test and generalised rank test) methods are applied.

To determine the significance of the abnormal returns over the event window assuming a cross-sectional dependence, we first consider the cross-sectional t-test (henceforth, referred to as t-test) that test the null hypothesis that the mean event day abnormal return or the

cumulative average abnormal returns, for a chosen window, is equal to zero. The cross-sectional t-test is prefer because it is not prone to cross-sectional volatility and correlation changes even though it could be affected by event-induced volatility (Brown & Warner, 1985). The abnormal return's t-statistics is computed by standardizing the abnormal returns as;

$$t_{AR} = \frac{1}{\sqrt{N}} \sum_{i=1}^{N} S(AR_{it}) \tag{2.5}$$

where

$$S(AR_{it}) = \frac{AR_{it}}{\sigma(AR_{it})} \tag{2.6}$$

and $\sigma(AR_{it}) = \sqrt{\frac{\sum_{i=1}^{N}(AR_{it} - \overline{A_i})^2}{N}}$, the standard deviation across firms. (2.7)

Besides, the t-test statistic for the cumulative abnormal returns is given by:

$$t_{CAR} = \frac{1}{\sqrt{N}} \frac{\sum_{i=1}^{N} CAR_i}{\sigma(CAR)} \tag{2.8}$$

where $\sigma(CAR)$ is the standard deviation of the of the CAR across all the firms.

For large sample firms, in the absence of abnormal performance, the t statistics is distributed unit normal if the standardised abnormal returns are independent and identically distributed with finite variance (Brown and Warner, 1985). The t-test, according to Jain (1986), is well specified and has empirical and theoretical power under the normality assumption. However, by the central-limit theorem assumptions, the power of the t-test depends heavily on the mean and variance of the stock returns' distribution of normality and a violation of underlying assumption could affect the accuracy of the test. Even though we present the results of the t-test, we also consider an alternative robust parametric test (the adjusted Patell test)

The adjusted Patell (1976) Z statistics (also referred to as standardised cross-sectional test), used for testing the significance of the abnormal returns, is also based on the assumption

that the individual AR across securities events are independent and identically distributed. These assumptions were criticised by some researchers as unrealistic (Bernard, 1987; Fama, 1976; Froot, 1989). They contend that the market model's prediction error for different firms on the market do not have identical variance and might not be independent across all firms. A substantial departure from these assumptions can lead to misspecification, hence, the potential to give a bias test result. To address these problems, we standardise the abnormal returns S(AR) by dividing the AR by its respective standard deviation, following Boehmer, Masumeci and Poulsen (1991), which also eliminates any induce-event heteroskedasticity[3].

$$S(AR_{it}) = \frac{AR_{it}}{\sigma_{it}} \qquad t = -215, \dots, -16 \tag{2.9}$$

$$\text{where} \quad \sigma_{it} = \sqrt{\left[\left(\frac{1}{P_i - 2}\sum_{j=-215}^{-16} AR_{ij}^2\right)\left(1 + \frac{1}{P_i} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{j=-215}^{-16}(R_{mj} - R_m)^2}\right)\right]} \tag{2.10}$$

P_i is the number of non-missing returns for stock i, j is the length of the event window and $\bar{R}_m$ is the average daily national equally weighted market index computed over the estimation period. The standardised cross-sectional test statistics for event day t is computed as:

$$Z_t = \frac{\frac{1}{\sqrt{N}}\sum_{I=1}^{N}(SAR_{it})}{\sqrt{\frac{1}{N-1}\sum_{I=1}^{N}(AR_{it} - \overline{AR_t})^2}} \tag{2.11}$$

The above test introduced by Boehmer et al. (1991) does not incorporate the potential effect of serial dependency correlation that could exist in consecutive prediction errors based on the same parameter estimates (Campbell et al., 2010). Mikkelson and Partch (1988) effected the serial dependency correlation correction based on Patell's test by dividing each cumulative abnormal return within the event window by the standard deviation (SDCAR) as shown below.

$$SDCAR_i = \sqrt{\left[\left(\frac{1}{P_i - 2}\sum_{j=-215}^{-16} AR_{ij}^2\right)[Q_i + \frac{{Q_i}^2}{P_i} + \frac{Q_i(\sum_{t=-15}^{15} R_{mt} - Q_i\bar{R}_m)^2}{\sum_{j=-215}^{-16}(R_{mj} - R_m)^2}\right]} \tag{2.12}$$

[3] Due to the violation of the identical and independent residual assumption, Boehmer et al. (1991) subsequently introduced a variance change correction to Patell (1976)'s test referred to as the standardised cross-sectional test statistics.

where Q_i is the number of non-missing returns for stock i, in the event window.

We compute the standardised cumulative abnormal return (SCAR) as:

$$SCAR_i = \frac{CAR_i}{SDCAR_i} \tag{2.13}$$

Subsequently, the cross-sectional Z test statistic is computed for the event window as

$$Z_t = \frac{\sum_i^N SCAR_i}{\sqrt{N * DSCAR}} \tag{2.14}$$

where

$$\text{DSCAR} = \sqrt{\left[\frac{1}{N-1}\sum_{i=1}^{N}(SCAR_i - \frac{1}{N}\sum_{i=1}^{N} SCAR_i)^2\right]} \tag{2.15}$$

It is clear from literature that stock returns are not normally distributed but rather fat-tailed (Fama, 1976). However, Brown and Warner (1985) ague that since event methodologies emphasis on the cross-sectional sample mean of stocks abnormal returns (residuals generated using the market model), its distribution converges to normality as the number of stock increases. The known distributions of these residuals make the use of parametric tests powerful and widely used by most researchers. Nonetheless, Bartholdy, Olson and Peare (2007) established that no specific parametric or non-parametric test is superior to the other for diverse markets, trading frequencies and data form. More so, the African stock market is characterised by stocks that are thinly traded producing high frequency of zero returns which has the potential to alter the distribution of the residuals. Cowan (1992) contend that non-parametric tests (such as generalized sign test), for analysing event studies involving daily returns, are well specified and powerful. We therefore include the results of the generalised sign test, as introduced by Cowan (1992), for comparison, robustness check and increase the validity of our conclusion.

The generalised sign test, tests the null hypothesis that the fraction of event day abnormal returns having a particular sign (positive or negative) is equal to the fraction expected in the absence of abnormal returns. The generalised sign test statistics, according to Cowan (1992) is asymptotically normally N(0,1) distributed under the null hypothesis and is given as:

$$Z = \frac{\omega - N\hat{p}}{\sqrt{N\hat{p}(1-\hat{p})}} \quad (2.16)$$

where ω is the number of stocks in the event window for which the cumulative abnormal return is positive and N the total number of firms. Further, $\hat{p}$, the fraction of AR expected to have a given sign using the number of days within estimation period is computed as:

$$\hat{p} = \frac{1}{N}\sum_{i=1}^{N}\frac{1}{P_i}\sum_{t=-215}^{-16} S_{it} \quad (2.17)$$

and $S_{it} = \begin{cases} 1 & if\ AR_{it} > 0 \\ 0 & otherwise. \end{cases}$ (2.18)

The second nonparametric test we consider in our analysis is the generalised rank (GR) test introduced by Kolari and Pynnonen (2011). Rank tests for testing the abnormal returns in event studies (Corrado, 1989) have some pitfalls. These tests are usually designed for testing single-day event cumulative abnormal returns and any attempt to use them for multiple-day event windows reduces the number of the estimation periods, which weakens the reliability of the CAR test. In addition, as indicated by Brown and Warner (1985), CARs are essential to detect abnormal returns when the exact event day is unknown and also for spotting possible information leakage.

However, CARs test based on cumulated ranks may not be strong enough to detect abnormal returns, most especially for large event windows (Kolari & Pynnonen, 2011)). To address these pitfalls, the same authors developed a more robust and powerful non-parametric test (the GR) that is useful for both single and multiply event windows. The test combines the returns of the estimation and event period in the ranking making the test much less sensitive to the length of the event period. We present the test procedure for the 31-day window (-15, 15).

Just like most statistical test, the GR test assumes that for all stock returns, r_{it}, are weak white noise continuous random variables with:

$$E(r_{it}) = \mu_i\ ,\ \text{var}(r_{it}) = \sigma_i^2 \text{ and } \text{cov}(r_{it}, r_{ij}) \text{ for all t and } t \neq j \quad (2.19)$$

where i is ith stock and t and j are time indexes.

The GR starts by computing the generalized standardized abnormal returns (GSAR) computed as:

$$GSAR_{it} = \begin{cases} SCAR_i^*, \ for -15 \le t \le 15 \\ SAR_{it}, for -215 \le t \le -16 \end{cases} \quad (2.20)$$

where $SCAR_I^* = \dfrac{SCAR_{iq}}{\sqrt{\dfrac{1}{N-1}\sum_{i=1}^{N}\left(SCAR_{iq} - \dfrac{1}{N}\sum_{i=1}^{N} SCAR_{iq}\right)^2}}$ (2.21)

$SCAR_{iq}$ and SAR_{it} are computed just as in equation (2.8) and (2.14) respectively and q=the 31-day event window.

The next step is to compute the mean standardized abnormal ranks of the GSAR as:

$$U_{it} = \frac{Rank(GSAR_{it})}{(T+1)} - 0.5 \quad \text{where T= -215, -199, …, 0)} \quad (2.22)$$

Finally, under the null hypothesis of no mean event effects, the generalized rank t test statistic is defined as:

$$t_{GRANK} = Z\sqrt{(\frac{T-2}{T-1-Z^2}} \quad (2.23)$$

where $Z = \dfrac{\overline{U}_0}{S_{\overline{U}}}$ (2.24)

with $S_{\overline{U}} = \sqrt{\dfrac{1}{T}\sum_{t\in T}\dfrac{N_t}{N}(\overline{U}_t^2)}$ and $\overline{U}_t = \dfrac{1}{N_t}\sum_{t=1}^{N_t} U_{it}$ (2.25)

N_t represents the valid $GSAR_{it}$ available from the period -215 to 0, T=200+1(length of estimation period plus one event observation) and $\overline{U}_0$ is the mean $\overline{U}_t$ at event day, t=0

The GR test, according to the authors, is robust to event-induced volatility, return serial correlation and cross-sectional correlation of stock returns caused by event day clustering.

Previous literature examined M&A announcement effects on abnormal returns of firms but few have looked at the major factors that drive those observed abnormal returns. In this

paper, we further investigate the influence of deal and firm-specific characteristics on the direction of abnormal returns. For instance, we want to know whether firms involved in cross-border deals have higher abnormal returns than domestic deals. Based on the identified factors in literature, we proposed the general model:

$$CAR_i = f(firm-specific\,variables)_i + \varepsilon_i \quad (2.26)$$

The firm specific variables that are considered for our analysis are firm size (market capitalization, return on equity (ROE) and debt-equity ratio (DER). We also control for some deal specific dummy variables such as merger type, mode of payment, industry, diversification and cross industry acquisitions (see Appendix 1A for description of all variables).

Jain (1982), again, argued that the OLS coefficient estimates of the firm specific variables in cross-sectional models like equation (2.26) are likely to be bias. This is because the OLS estimates are often not distributed with zero mean and the abnormal returns are not cross-sectionally independent. There is also the possibility of the variance of firm's residuals to be different (heteroscedastic). To address these concerns, we standardise the cumulative abnormal returns as seen in equation (2.9). Besides, event dates for most firms in our sample are different in calendar time and therefore the independence of the abnormal returns across firms holds. With this cross-sectional dependency condition satisfied, the slope coefficients are expected to be distributed around the mean of zero eliminating any biasness.

2.4 Results and discussion

Our total sample include M&A announcement between 2002 to 2015 by acquiring firms from 14 African countries spread across the four geographical locations (Southern, East, West and North Africa) drawn from the Bloomberg database. Certain sample selection requirements (see discussion under methodology) have been considered to ascertain the impact of M&A announcement on stock movement. These requirements are needed to ensure that no other

event or trading characteristics affects the accuracy of our results. From Table 2.1, the final sample for our analysis is 245 announcements with average deal value of USD 352.93 billion and has 64.9% of the acquirers cross-listing or operating in foreign nations. Concerning the targets firms, about 73.1% were domestic acquisitions, over 97% of friendly takeovers, 66.1% were private firms while 49.8%, 18.0% and 10.2% of the deals were purchased with cash, equity or mix of cash and equity respectively. South Africa has a greater number of deals (135 deals, controlling 55.1% of the total sample).

Because the M&A literature documents significant difference in abnormal returns for industry categories, we group the sample into financial and non-financial industries categories (see Table 2.2). The sample is highly skewed to non-financial industry targets (80%) with the largest deals occurring in mining, manufacturing and services (details not reported). Financial institutions are heavily regulated and we expect investors to respond slower to deals involving financial firms. It can be seen from the table that our sample shows a lot of cross industry acquisition. For example, out of 19 financial acquirers in North Africa, only 8 were financial targets.

Table 2. 1: M&A deal distribution

Country	**Acquirers**		**Targets**						
	N (%)	**CrossL**	**Dom**	**FTov**	**Priv**	**Mode of payment**			**Av. Dval(mil)**
						Cash	**Equity**	**Mix**	
South Africa	135(55.1)	89	98	131	94	68	30	16	252.93
Botswana	4(1.6)	2	2	4	3	2	2	0	6.48
Namibia	9(3.7)	8	7	8	9	3	0	1	24.17
Mauritius	11(4.5)	4	10	12	6	2	6	0	58.34
Zimbabwe	8(3.3)	2	7	7	6	6	0	1	44.13
Kenya	13(5.3)	10	11	13	10	7	1	0	63.39
Tanzania	1(0.4)	1	1	1	1	1	0	0	60.4
Uganda	1(0.4)	1	1	1	1	0	0	0	-
Nigeria	22(9.0)	15	14	21	11	10	5	3	217.79
Ghana	4(1.6)	4	1	4	2	0	2	2	978.62
Ivory Coast	2(0.8)	2	1	2	2	0	0	1	-
Egypt	26(10.6)	15	20	26	13	19	1	1	1581.95
Morocco	6(2.5)	4	4	6	3	2	2	0	62.74
Tunisia	3(1.2)	2	2	3	1	2	0	0	45.92
Total	**245(100)**	**159**	**179**	**238**	**162**	**122**	**44**	**25**	**352.93**

Note: *N* represents the total count of deals and % denotes the percentage of deal count for each country. CrossL indicates the number of acquirers that are cross listed. Targets deal are classified as to whether they are domestic (Dom), a friendly takeover (FTov) and private acquisition (priv). *Cash, Equity and Mix* are the different modes of payments as reported by Bloomberg from 2002 to 2015. The average deal value (Av. Dval in millions of USD) is the average of the total announced deal values for each country. For the purpose of determining industry effects, we have grouped all firms into two industry groups.

Table 2. 2: Distribution of deal characteristics for acquirers

Africa Blocks	N (%)	Acquirer Industry		Target Industry		Deal Value (mil)	
		Fin	Non-Fin	Fin	Non-Fin	Low	High
Southern	167(68.2)	23	144	31	136	0.04	3,711.88
East	15(6.1)	2	13	4	11	2.00	224.33
West	28(11.4)	9	19	7	21	3.37	1,652.24
North	35(14.3)	19	16	8	27	11.778	14,998.08
Total	245(100)	53	192	50	195		

Note: *N* represents the total count of deals and *%* denotes the percentage of deal count for each country. Our sample is classified under two industries: financial (*fin*) and non-financial (*non-fin*) for both target and acquirer firms. *Deal value* (in millions USD) capture the lowest (*Low*) and the highest (*High*) deal values of our sample of the four regional blocks. These variables gives us an idea of cross-industry acquisitions and the spread of deal value.

2.4.1. Abnormal returns (ARs)

Table 2.3 presents the outcome of the short-term effect of M&A announcements on acquirer's stock movement (wealth effect) for a 31-day event window. Because of market efficiency differences between South Africa and the rest of African markets, we present a separate analysis on South Africa for the purpose of comparison. The significance of the ARs is determined using two parametric tests (cross-sectional t and adjusted Patel tests) and two non-parametric tests (generalised sign and the generalised rank tests).

From Table 2.3 and Appendix 2A, the trend of the abnormal returns fluctuates indicating a lot of uncertainty in the investors trading behaviour. The results indicate that African stock markets respond positively to M&A announcements, consistent with Doukas et al. (2002), Fee and Thomas (2004) and Bayazitova et al. (2009). African firms, for instance, record an increase in ARs from 0.004% on day -6 to the highest of 0.01% on day 1. We observe significant abnormal returns (at least at the 5% significance level) several days prior to the announcement date which is an indication of information leakage. While the information leakage for African firms can be traced to 13 days before the announcement that of South African firms was significant two days before the event. The significant drop in ARs on day -14 and day -11 might be attributed to insider trading uncertainty surrounding the information leakage. The variance in the degree of information leakage between South Africa and African markets can be explained by the proper regulation of the South African market and the observed information leakage may be attributed to the effects of insider trading. Besides, a critical look

at Appendix 2A shows that other African countries, excluding South Africa, picked signals of M&A deals at least 15 days before the announcements and the effect dies down even before the announcements are made.

Table 2. 3: Acquirers' Abnormal returns for 31-day event window

	Africa						South Africa					
Day	AR	Pos:Neg	Parametric		Non-		AR	Pos:Neg	Parametric tests		Non-parametric	
			t	Adj P	GS	GR			*t*	Adj P	GS	GR
15	0.003	124: 121	1.33	1.42	0.68	1.23	0.003	67: 68	0.83	1.54	0.74	0.88
14	-0.002	113: 132	-1.05	-0.61	-0.74	1.68	-0.002	62: 73	-0.74	-1.01	-0.55	-1.89
13	0.002	124: 121	0.58	1.07	1.41	-1.35	0.001	70: 65	0.19	0.94	1.59	1.44
12	0.001	120: 125	0.38	0.65	1.52	1.68	0.001	71: 64	0.28	1.17	1.06	1.32
11	0.004	125: 118	1.17	1.90	0.60	1.98*	0.007	69: 66	1.18	1.12	0.66	0.33
10	0.000	116: 128	0.19	0.49	0.04	1.02	0.001	64: 71	0.43	1.09	0.28	0.46
9	0.003	135: 110	2.20*	1.52	1.09	1.89	0.005	80: 55	2.74**	1.97*	2.31*	1.98*
8	0.005	124: 120	1.41	1.90	1.17	1.33	0.007	75: 60	1.15	4.87**	3.58**	3.22**
7	0.003	127: 117	1.47	1.44	0.08	1.94	0.002	68: 67	1.13	1.01	0.46	0.44
6	0.002	132: 113	1.25	1.36	0.87	1.48	0.002	76: 59	0.98	1.71	0.28	-1.65
5	0.003	134: 110	1.41	1.99*	2.68**	2.66**	0.004	77: 58	1.78	1.72	2.50	2.22*
4	0.002	119: 125	0.74	1.23	-1.05	1.11	0.003	66: 69	0.82	0.67	-0.97	0.34
3	0.001	134: 110	0.30	0.38	0.08	0.67	0.003	67: 68	0.32	0.46	0.67	-1.34
2	0.003	131: 113	0.86	2.01*	2.00*	2.33*	0.005	72: 63	0.85	2.37*	1.98*	2.08*
1	0.010	127: 115	2.65**	2.78**	5.10**	3.23**	0.017	71: 64	2.67**	3.72**	5.52**	3.25**
0	0.009	132: 112	2.51*	2.76**	3.37**	2.98**	0.007	68: 66	1.97*	3.10**	2.04*	2.33*
-1	0.007	143: 100	2.93**	2.93**	2.74**	3.50**	0.005	77: 58	2.73**	2.66**	3.23**	2.77**
-2	0.006	124: 120	2.24*	9.72**	2.95**	4.66**	0.005	77: 58	1.25	2.18*	2.97**	3.55**
-3	0.004	138: 105	1.75	3.74**	2.75**	9.40**	0.004	72: 63	0.75	1.76	0.56	1.91
-4	0.005	131: 113	2.16*	3.94**	1.95	2.33*	0.004	71: 64	1.01	1.72	0.48	1.24
-5	0.004	128: 115	2.67**	2.07*	2.20*	1.97*	0.004	68: 67	1.81	1.44	1.88	1.09
-6	0.004	122: 122	1.26	1.82	2.03*	2.66**	0.004	72: 63	0.94	1.39	-0.12	-1.55
-7	0.001	134: 110	0.57	0.45	1.73	1.10	-0.001	74: 61	-0.15	-0.41	0.84	0.99
-8	0.003	126: 117	0.78	0.97	-0.91	-1.89	0.002	63: 72	0.35	0.57	-1.25	-0.56
-9	0.000	113: 131	0.28	0.16	0.13	1.02	-0.002	63: 72	-0.84	-1.56	-0.53	-0.34
-10	0.004	122: 123	1.14	1.45	0.33	1.66	0.002	66: 69	0.73	1.85	-0.18	1.50
-11	-0.001	110: 135	-0.41	-1.74	-0.55	0.28	-0.001	61: 74	-1.20	-1.00	-2.00*	-1.98*
-12	0.004	135: 110	1.19	1.55	1.39	1.10	0.003	79: 56	1.50	1.45	0.90	1.95
-13	-0.002	117: 127	-0.33	-0.98	-0.07	1.33	-0.002	67: 68	-0.32	-1.58	0.84	1.65
-14	-0.001	104: 140	-0.32	-0.35	-2.18*	-2.26*	0.000	61: 74	-0.14	-1.87	-1.76	-0.33
-15	0.000	111: 134	-0.08	-1.72	-0.57	-0.61	0.001	66: 69	0.21	0.61	-0.87	1.08

Note: This table summarises the significant tests for the abnormal returns (ARs) of our total firm sample (whole of Africa including South Africa) and that of only South Africa for 15 days event window. The number of positive and negative ARs are captured under *pos: neg* while *t, adj P, GS* and *GR* are the t-test, adjusted Patell test, generalised sign test and the generalised rank test respectively. * and ** represents significance at 1% and 5% respectively.

As discussed under methodology, we adopted four different tests (two parametric and non-parametric test each) to check for consistency and robustness of our results. The test statistics, in general are consistent in detecting abnormal returns. However, contrary to

Bartholdy et al. (2007), the non-parametric tests perform slightly better than the parametric tests for African firms. This observation confirms our arguments that trading on African markets are generally inactive and are likely to record some zero returns over a long period which could affect the normality assumption of the return distributions for parametric tests. For the parametric tests results for both African and South African firms, the adjusted Patell test is more consistent and performs better than the normal t-test.

To ascertain the true wealth value (magnitude) of the overall returns, we cumulate the average abnormal returns (CAR) over the various event windows. In order to clearly understand market differences, we separately analyse the CARs of Africa (all African firms including South Africa), Other African (all African firms except South Africa) and South African firms for the purpose of comparison. The graphs in Appendix 2B shows the trends in CAR and AR for respective samples while Table 2.4 presents the empirical results.

For African firms, the *t* and Adjusted Patell tests of the CAR (9.4%) over the 51-day event window are significantly positive at 5% level which has been confirmed by the non-parametric tests as well. For example, the generalised sign test (GS) confirms that the 134 positive returns, out of 245, is significantly higher than that of the estimation period. This result indicates that an investor who buys a stock 25 days before an M&A announcement (with AR of 0%) and holds it 25 days after the deal announcement (with AR of 0.3%) will make a substantial cumulative gain of 9.4%. With the exception of the 21-day event window, the CARs for all other windows are significantly positive. The above results are similar to that of South Africa and other African firms. Our findings contradict studies done in developed economies (Alexandridis et al., 2010; Kyriazis, 2010; Siew Peng & Isa, 2012) that conclude that the overall short-term wealth effect for acquiring firms is either zero or negative. Institutional differences between Africa and developed markets can well explain the contradictions. Claessens, Djankov and Lang (2000) and Carney and Child (2013) suggest that

these institutional differences are partly influenced by a more concentrated ownership structures in less developed markets, resulting in a less severe agency problems. Invoking agency theory, therefore, one can observe explicitly that market phenomena such as M&A activities in Africa might not be suitable.

What is more striking is the increase in the CARs as the event windows widen. Studies done in emerging markets (Ma, Pagan & Chu, 2009; Rani, Yadav & Jain, 2015) show that the positive significant CARs experienced by acquiring firm's investors do not usually persist for wider windows. Perhaps, in African markets firms involved in M&A deals (usually multinational firms) might have spotted positive strategic value creation investment opportunity (ies) such as synergy, debt leverage, economies of scale and scope. Besides, block institutional ownership coupled with the illiquid nature of African equity markets encourage investors to hold-on their shares, creating the impression that the price might further move up.

Table 2. 4: Cumulative abnormal returns (CAR) for all windows

Event Window	CAR	Pos:Neg	Parametric test		Non-parametric test	
			t	Adj. P	GS	GR
African firms						
(-25, 25)	0.0940	133 : 110	4.087**	2.076*	2.8023**	1.969*
(-15, 15)	0.0885	139 : 104	4.322**	2.117*	5.4766	7.5328
(-10, 10)	0.0003	153 : 090	2.260*	2.180*	11.1160	9.0522
(-5, 5)	0.0662	148 : 095	4.010**	2.572	18.4997	12.0822
(-1, 1)	0.0265	127 : 115	3.591**	2.082*	3.3718	2.5913
South Africa firms						
(-25, 25)	0.0101	75 : 60	3.240**	1.983*	2.44*	2.069*
(-15, 15)	0.0914	83 : 52	3.231**	3.054**	4.055**	3.798**
(-10, 10)	0.0009	86 : 49	3.026**.	2.271*	3.572**	3.227**
(-5, 5)	0.0601	87 : 48	3.043**	2.066*	3.978**	3.325**
(-1, 1)	0.0289	78 : 57	3.759**	3.684**	2.637*	5.508**
Others African firms						
(-25, 25)	0.0950	58 : 50	0.3989	1.609	1.373	1.003
(-15, 15)	0.0881	56 : 52	2.1491*	0.922	0.390	0.164
(-10, 10)	0.0005	67 : 41	1.0014	1.990*	1.345	1.29
(-5, 5)	0.0316	61 : 47	2.031*	2.382*	2.574*	1.974*
(-1, 1)	0.0004	49 : 58	-0.162	-1.979*	-2.373*	-2.464*

Note: *t, adj P, GS,* and *GR* are the t-test, adjusted Patell test, generalised sign test and the generalised rank test respectively. *, and ** denote statistical significance at 5% and 1%

2.4.2. Deal-specific variable analysis

Furthermore, based on the realised significant CARs, we investigate the effects of industry differences, listing, mode of payment and form of deal on the results (see Table 2.5). We present results for only African (Africa including South Africa) and South African firms because the results between "other African firms" and all African firms are similar. First, we classified the sample into two main categories: financial and non-financial firms for acquirer firms industry.

We observe that the CARs of acquirers in the financial industry are significantly positive for shorter event windows (thus 3 and 10-day windows) for the South African market while the adjusted Patell and generalised sign tests capture significant CAR for 51-day window for non-financial industry. This contradicts Ma et al. (2009) who argues that because firms in the financial industry are highly regulated with unique accounting data structure, investors may expect regulators to intervene to correct any anomaly before, during and after deal, hence, the market reaction to M&A announcements should be less pronounced.

However, no industry effect is seen in the results for African firms. Second, all our results unanimously confirm that firms doing acquisitions in the same industry respond significantly positive to M&A announcements while cross industry acquisition has no short-term value-creation for shareholders. This investor behaviour could be motivated by ease of skills transfer and competition. Most African firms are monotonic and experts in particular fields. A cross-industry acquisition might require new skills which might impede the short-term performance of the firm. Hence, investors will prefer acquisitions that ease the transferability of skills.

Moreover, in recent years, there has been heavy influx of multinational firms on the African market creating tight competition. Increasing firm size and market share through same industry acquisitions could be the approach to survive competition effects. On the other hand,

the 5% significant CAR for the 11-day window could suggest some other deal factors influencing the CAR within the cross-industry acquisitions.

Table 2. 5: Results of the influence of deal-specific factors on CARs:

Factors	Windows	Africa						South Africa				
		CAR	Parametric tests		Non-parametric tests			CAR	Parametric tests		Non-parametric tests	
			t	Adj P	GS	GR			*t*	Adj P	GS	GR
Acquirer Industry effect	**Financial industry (fin)**											
	(-25, 25)	0.0770	0.32	-0.52	2.11	-1.44		0.0961	2.22	2.76	3.85	2.59
	(-15, 15)	0.0890	2.49	2.83	-2.61	2.11		0.0190	1.63	1.29	1.85	2.29
	(-10, 10)	0.0003	1.98	2.59	3.30	-3.16		0.0155	1.97*	1.22	1.52	1.75
	(-5, 5)	0.0759	0.90	0.86	0.82	-0.44		0.0810	2.62*	2.56*	2.52*	2.77**
	(-1, 1)	0.0310	0.71	-0.64	-1.81	-1.80		0.0425	2.39*	4.38*	1.98*	2.07*
	Non-financial industry (non-fin)											
	(-25, 25)	0.0971	0.66	1.27	1.90	1.68		0.0274	1.18	2.16*	2.30*	1.92
	(-15, 15)	0.0721	0.44	-1.93	1.12	-0.44		0.0905	1.13	1.35	1.38	1.56
	(-10, 10)	0.0002	0.45	-0.97	0.26	-0.69		0.0002	-0.02	-0.28	-0.43	0.03
	(-5, 5)	0.0542	0.06	-0.16	0.26	-0.47		0.0070	1.04	2.47	0.78	0.40
	(-1, 1)	0.0089	0.02	-0.11	-0.20	-0.35		0.0130	1.04	1.37	0.38	-0.58
Cross Industry	**Same industry (sameind)**											
	(-25, 25)	0.1261	2.31*	2.38*	6.35**	7.48**		0.0161	1.90	2.42*	2.24*	2.01*
	(-15, 15)	0.1038	2.25*	2.57*	3.68**	7.21**		0.1141	3.13**	2.13*	3.01**	5.38**
	(-10, 10)	0.0097	1.08	1.97*	2.47*	2.07*		0.0086	1.33	2.39*	3.24**	2.40*
	(-5, 5)	0.0732	2.08*	3.35**	4.80**	2.69**		0.0976	5.54**	4.22**	2.91**	3.33**
	(-1, 1)	0.0331	2.25*	2.73*	3.18*	3.81**		0.0356	3.41**	2.21*	2.24*	2.71**
	Different industries (diffind)											
	(-25, 25)	0.0472	1.75	1.86	1.76	1.37		0.0085	1.11	2.03*	1.21	1.23
	(-15, 15)	0.0115	0.55	1.51	0.55	0.99		0.0530	2.05*	1.49	1.17	1.00
	(-10, 10)	-0.0011	-0.72	-1.03	-0.35	-1.32		0.0005	0.22	0.57	0.69	0.11
	(-5, 5)	0.0398	1.32	1.96*	2.35*	2.03*		0.0183	1.55	2.00*	2.43*	2.06*
	(-1, 1)	0.0148	0.73	1.48	1.36	1.77		0.0031	0.40	0.49	0.09	0.78
Domestic verse Cross border	**Domestic (Dom)**											
	(-25, 25)	0.0610	1.76	1.60	1.55	1.57		0.001	-0.04	-0.98	-0.93	-0.09
	(-15, 15)	0.0671	1.84	1.82	1.26	1.47		0.003	0.13	-0.61	0.03	0.11
	(-10, 10)	-0.0022	0.49	0.49	0.61	0.89		-0.001	-0.14	-0.69	-0.74	-0.70
	(-5, 5)	0.0471	-0.22	-0.22	0.18	1.17		0.002	0.38	0.24	0.23	0.70
	(-1, 1)	0.0402	-0.07	0.04	-0.85	-0.66		0.001	-0.07	-0.47	-0.35	-0.99
	Cross border (CrossB)											
	(-25, 25)	0.1032	2.11*	2.60*	3.28**	2.67**		0.099	2.05*	2.26*	2.33*	2.14*
	(-15, 15)	0.0920	2.04*	2.88**	2.01*	1.26		0.123	4.42**	2.58*	2.33*	3.87**
	(-10, 10)	0.0071	0.16	-0.02	0.78	0.30		0.008	1.12	1.09	2.06*	2.59*
	(-5, 5)	0.0873	1.98*	2.04*	2.05*	1.98*		0.069	0.69	1.23	0.44	1.29
	(-1, 1)	0.0382	-0.09	0.88	-0.81	-1.04		0.030	0.25	0.18	-0.44	-0.39

Note*: t, adj P, GS* and *GR* are the t-test, adjusted Patell test, generalised sign test and the generalised rank test respectively.
*, and ** denote statistical significance at 5% and 1%

Table 2.5 continued

Dummies		Africa						South Africa				
	Windows	CAAR	Parametric tests		Non-parametric tests			CAAR	Parametric tests		Non-parametric tests	
			t	Adj P	GS	R			*t*	Adj P	GS	R
Target ownership effect	**Private (Priv)**											
	(-25, 25)	0.0840	1.08	1.82	1.34	1.29		0.035	2.44*	2.51*	2.33*	2.06*
	(-15, 15)	0.0960	2.15*	1.92	1.84	1.78		0.085	3.16**	2.94**	2.08*	2.39*
	(-10, 10)	0.0010	-0.02	-1.18	0.44	-0.78		0.009	0.39	1.16	1.15	0.93
	(-5, 5)	0.0840	2.09*	1.39	1.76	1.9		0.072	2.97**	2.87**	2.33*	2.77**
	(-1, 1)	0.0310	0.1	0.13	-0.34	0.01		0.028	1.92	2.03*	2.88**	3.50**
	Listed (public)											
	(-25, 25)	0.0222	0.96	0.95	0.59	0.32		0.002	-0.06	-0.63	-1.28	-0.17
	(-15, 15)	0.0251	1.37	0.47	-1.04	-0.14		0.006	0.27	-0.18	-0.33	-0.01
	(-10, 10)	0.0001	-0.09	-0.72	-1.48	-2.31*		0.012	0.61	0.43	0.62	0.62
	(-5, 5)	0.0131	1.23	0.74	0.07	0.16		0.02	1.54	1.53	1.25	1.49
	(-1, 1)	0.0081	-0.05	-0.72	-1.48	-1.31		0.022	0.22	-0.39	-0.65	-1.21
Mode of payment	**Cash only (cash)**											
	(-25, 25)	0.0730	0.57	1.85	1.37	1.22		0.008	1.03	0.98	0.88	0.36
	(-15, 15)	0.0550	0.25	0.86	1.92	0.21		0.001	0.05	-0.55	0.19	0.14
	(-10, 10)	0.0110	0.77	0.48	0.11	0.57		-0.002	-0.38	-0.71	-0.46	-0.68
	(-5, 5)	0.0060	0.55	0.16	0.26	-0.40		0.041	1.44	1.04	1.90	1.47
	(-1, 1)	0.0050	0.91	0.37	0.08	-0.05		0.021	0.14	-0.28	0.03	-0.82
	Stock only (stock)											
	(-25, 25)	0.0820	1.7	1.03	1.24	1.16		0.102	2.43*	1.99*	2.46*	2.27*
	(-15, 15)	0.0600	1.66	1.18	1.10	1.04		0.083	2.12	2.49*	3.02*	2.14*
	(-10, 10)	0.0020	0.54	-0.16	-0.05	-0.09		0.001	0.24	0.42	0.88	1.35
	(-5, 5)	0.0100	0.37	0.12	-0.33	0.09		0.064	0.89	1.16	1.88	1.6
	(-1, 1)	0.0640	1.09	1.52	1.77	0.98		0.068	1.01	1.77	1.94	1.78
	Cash and Stock (mix)											
	(-25, 25)	0.0640	0.05	0.65	0.86	0.43		0.005	0.9	0.56	-0.16	0.16
	(-15, 15)	0.0330	0.16	0.07	-0.45	0.04		0.066	1.68	1.01	0.84	0.45
	(-10, 10)	-0.0020	-0.14	-0.19	-0.78	-0.13		0.003	0.17	0.67	0.34	0.03
	(-5, 5)	0.0290	0.23	1.05	1.19	0.07		0.05	2.14	1.48	1.35	0.68
	(-1, 1)	0.0120	0.18	0.46	0.45	0.71		0.039	1.54	0.51	0.34	-0.27
	Undisclosed											
	(-25, 25)	0.0360	0.36	0.75	1.01	0.41		0.003	0.03	-0.98	-0.88	-0.36
	(-15, 15)	0.0040	-0.1	0.74	1.87	-0.26		0.023	1.32	1.49	1.82	1.64
	(-10, 10)	-0.0160	-0.57	-0.07	-1.87	-0.46		-0.004	-0.24	-0.42	-0.88	-0.35
	(-5, 5)	0.0220	1.09	0.52	0.73	0.87		0.004	0.09	-0.16	-0.88	0.2
	(-1, 1)	0.0080	0.07	0.01	-0.42	-0.94		0.018	0.79	1.05	1.24	1.08
Diversification and cross listing	**Diversified and cross listed firms (CrossL)**											
	(-25, 25)	0.012	0.5	1.71	0.92	1.20		0.019	0.54	1.57	0.92	0.54
	(-15, 15)	0.0080	0.45	1.33	1.55	1.01		0.012	0.44	1.35	0.71	0.06
	(-10, 10)	0.0090	0.57	1.50	0.60	1.47		0.017	0.75	1.93	1.34	0.79
	(-5, 5)	0.0070	0.64	0.97	0.45	1.52		0.012	0.72	1.20	0.29	0.90
	(-1, 1)	0.0080	1.39	1.54	1.71	1.86		0.011	1.26	1.65	0.92	1.55
	Not diversified and single listed (Non-crossL)											
	(-25, 25)	-0.0070	-0.08	-1.04	0.21	0.38		0.034	0.90	0.33	-0.39	0.53
	(-15, 15)	0.0510	0.78	0.79	1.75	1.04		0.039	1.35	0.68	0.80	0.60
	(-10, 10)	0.0410	0.76	0.94	2.40	1.11		0.025	1.05	0.89	0.80	0.46
	(-5, 5)	0.0230	0.58	1.41	1.75	1.25		0.018	1.00	1.32	1.10	1.13
	(-1, 1)	0.0130	0.63	1.24	0.43	0.56		0.019	2.08	0.98	1.10	0.38

Note: *t, adj P, GS* and *GR* are the t-test, adjusted Patell test, generalised sign test and the generalised rank test respectively.
*, and ** denote statistical significance at 5% and 1%

Thirdly, the findings from Table 2.5 conclude that cross-border deals as well as deals that target private firms (at least for South African firms) generate short-term significant positive CARs, while the influence of domestic and public firm acquisition deals on CARs are positive but insignificant. Finally, it is only stock as a mode of payment that has a 5% significant influence on CAR for South African market for wider windows (31 and 51-day windows). Cross-listing and diversification effects are not significant in influencing CARs for acquirer firms. This finding is consistent with Onyuma, Mugo and Karuiya (2012) who did not find any short-term value-creation effects for firms cross listing on East and Central African exchanges. This however contrasts with Adelegan (2009) who recorded marginal significant abnormal returns for Sub-Sahara African firms.

2.4.3. Further Analysis

To ensure the robustness of our individual tests relating the effects of the above dummy variables on the abnormal return generation, we run a multi-variate regression of the dummies and the 51-day CAR as our dependent variable. Apart from checking the consistency of the event study results, it also assists us to address any possible overlay between the dummies. Table 2.6 shows the regression results. Model 1 gives the results of regressing Fin, Sameind, Private, CrossB, CrossL, Cash, Stock and Mix (variables which take a value of 1 if firm belongs to any of these categories, and zero otherwise) on CAR. Separately but similarly, model 2 assesses the effects of Non-fin, Diffind, Public, Dom, NonCrossL and undisclosed (variables which take a value of 1 if firm belongs to any of these categories, and zero otherwise) on observed CARs. The regression model is:

$$\begin{aligned} CAR(-25:25)_i = {} & \alpha_0 + \alpha_1(FIN) + \alpha_2 SAMEIND + \alpha_3 PRIV + \alpha_4 CROSSB + \alpha_5 CROSSL \\ & + \alpha_6 CASH + \alpha_7 STOCK + \alpha_8 MIX + \beta_9 NONFIN + \alpha_{10} PUBLIC + \alpha_{11} DOM \\ & + \alpha_{12} NONCROSSL + \alpha_{13} DIFFIND + \alpha_{14} UNDISCLOSED + \delta_i \end{aligned} \tag{2.27}$$

Prior to estimating the above equation, we perform correlation analysis (results not reported for the sake of brevity) to be sure that our analysis does not suffer from serial correlation.

One potential problem with estimating equation (2.27) is sample selection bias. The decision to make an acquisition is not random, hence, a posibility of omitted variable bias issues. To address this issue, we employ the Heckman (1979) two-stage correction procedure, which models the probability that a firm will be an acquirer using probit regression. To perform the first stage of the analysis, we include extra firms that did not do any acquisition over the past seven years to the existing merger samples. The explanatory variables included in probit regression are pre-merger firm size (sales), MTB, ROA, Board size, Outside board representation, Age of CEO, Institutional ownership, a dummy to show whether a firm undertook M&A over the previous two years, industry and year dummies. The coefficient of all the explanatory variables in the OLS probit estimation are insignificant suggesting that our analysis does not suffer from any selection bias problem. Hence, Heckman correction variable was not exclude in our estimation.

The coefficients of *Fin*, S*ameind*, *Private*, *CrossB* and *Stock* are positive, at least at the 5% significant level for South African market but its only Sameind and CrossB that are significant (at only 5%) for all African firms (see model 1). The positive coefficients of these factors for both African and South African market supports our earlier results of Table 2.5, which indicate that these markets perceive those factors as wealth-maximising for M&A deals. The results are in line with prior studies. For example, Aintablian and Roberts (2005) found that shareholders of Canadian financial institution acquirers experience significant positive abnormal returns during M&A announcement period. Risk reduction, economies of scale and revenue efficiencies which come from cross-selling of financial products to retail clients are more likely to be the drive behind the abnormal gains by acquirers (Cybo-Ottone & Murgia, 2000).

Contrary to our findings, the same authors provided evidence against cross-border M&A deals for European banks and concluded that financial firm's shareholders rather gain from domestic merger announcements. Studies in favour of positive abnormal returns for cross-border and diversifying M&A deals (expanding into different geographical markets, new product line cross-industry acquisitions) argue that such deals have the potential to improve risk reduction and performance (DeYoung, Evanoff & Molyneux, 2009). Even though the effect of diversification and cross listing on abnormal returns is positive but insignificant (see Table 2.6 of our analysis), this result is not surprising. The best explanation could be attributed to the argument that due to weak regulation, institutional policies and frameworks in Africa, CEOs could engage in unrelated and unprofitable cross-industry acquisitions for their personal interest (Hadlock, Houston & Ryngaert, 1999; Hagendorff, Collins & Keasey, 2007; Rosen, 2005). We can also observe, as seen in Bae et al. (2013), Faccio et al. (2006) and Shams et al. (2013), that deals from the same industry and private firm acquisitions significantly enhances firm value upon M&A announcement. Also, the positive significant coefficient of *Private* is not surprising because it has been argued that private firms, which are usually smaller in size to acquirers, are undervalued due to liquidity issues and less analyst and media coverage, causing higher abnormal returns (Firth, Leung & Rui, 2010; Jain & Sunderman, 2014).

To a large extent, the mode of payment (using cash or mix of cash and stock) of mergers does not have any significant influence on abnormal returns for both African (including stock) and South African firms, suggesting target firms with reasonable free cash as well as cash flow and risk-sharing is irrelevant. However, the South African market responded positively and significantly to deals purchased with stock.

More so, the insignificance of others dummies, such as listing, domestic, cash acquisition, non-financial industries, suggest that cumulative abnormal returns cannot be explained by these factors. These observations are in divergence to findings from Beitel et al.

(2004) and Capron and Shen (2007). Our results, in general, show notable difference in what is reported on advanced markets. We attribute the differences to different regulatory, ownership and market structure compositions.

Our results and discussions underscore the presence of other factors that can influence investors to be attracted to some form or nature of deal (say private, cross border, same industry and others). To address these alternative explanations that influence abnormal returns, we apply a multivariate regression analysis using the CARs for the 51-day event window as our dependent variable and some relevant major firm-specific factors proposed in literature: market capitalization (in logarithm), return on equity (ROE) and long-term debt-to-equity ratio of firms a year prior to the announcement as the independent variables. A review of correlation matrix of our variables in Table 2.7 reveals that our models are free of multicollinearity issues.

Table 2. 6: Regression results of various market factors (dummies) on CARs

	Model 1		**Model 2**	
Factors (Dummies)	**Africa Coef.**	**South Africa Coef.**	**Africa Coef.**	**South Africa Coef.**
Fin	0.053[1.39]	9.799[3.74]**		
SameInd	0.076[2.04]*	8.119[3.19]**		
Private	0.034[0.85]	6.981[2.43]**		
CrossB	0.096[2.46]*	10.898[3.77]**		
CrossL	0.029[0.76]	2.275[0.85]		
Cash	0.086[1.91]	5.275[1.54]		
Stock	0.084[1.53]	9.123[2.34]*		
Mix	0.009[0.12]	6.755[1.46]		
Non-Fin			0.038[0.94]	-2.965[-0.88]
Public			-0.024[-0.61]	-3.777[-1.01]
Domestic			0.019[0.44]	-0.261[-0.07]
Non-CrossL			-0.023[-0.60]	-1.442[-0.46]
DiffInd			-0.060[-1.65]	-4.444[-1.54]
Undisclosed			-0.073[-1.60]	-7.475[-1.86]
Intercept	-0.089[-1.53]	-14.759[-3.52]**	0.122[2.24]*	15.916[3.24]**
Model Diagnostics				
Adj. R-Squared	0.056	0.364	0.028	0.061
F-Statistic	2.807**	9.013**	1.144	1.388
N	245	135	245	135

Note: *, and ** denote statistical significance at 5% and 1%

Table 2. 7: Descriptive statistics and correlations of explanatory variables

	Africa (N=245)			South Africa (N=135)		
	CAR	**MKTC**	**ROE**	**CAR**	**MKTC**	**ROE**
MKTC	0.024[0.37]	-		0.317[3.85]**	-	
ROE	0.032[0.50]	0.039[0.62]	-	0.359[4.44]**	0.027[0.31]	-
DER	-0.042[-0.66]	-0.028[-0.43]	0.072[1.12]	-0.082[-0.98]	-0.048[-0.55]	0.090[1.04]

Note: ** denote statistical significance at 5% and 1%

We also employ the identified significant dummies that take value of one for their respective category and zero, otherwise, as controls. We estimate the regression models based on equation (2.28)

$$CAR(-25:25)_i = \beta_0 + \beta_1 MKTC + \beta_2 ROE + \beta_3 DER + \beta_4 FIN + \beta_5 SAMEIND + \beta_6 PRIVATE + \beta_7 CROSSB + \beta_8 STOCK + \varepsilon_i \quad (2.28)$$

Table 2.8 presents the results of our estimation using two different models. Model 1 estimates the effect of firm-specific variables (market capitalization, return on equity and debt-to-equity ratio) on abnormal return generation while model 2 includes deal-specific variables as controls. Standard errors are adjusted for heteroscedasicity using White's (1980) procedure. We find that 51-day CAR for South Africa market is influenced by the size of the firm (market capitalization) and the return on equity (ROE), while debt-to-equity ratio has no significant control. This is consistent with Hagendorff, Hernando, Nieto and Wall (2012). Even after controlling for deal-specific effects, we still find significant evidence that firm size and return on equity (at 5% and 1% respectively) have effects on CAR.

Cumulative abnormal returns of African firms, on the other hand, are influenced by only firm size (significant at 5%). It is quite astounding to realise that the ROE, which is a measure of profitability, rather do not influence Africa investors' decision upon an M&A announcement. This, hereby, suggests that firms trading on African capital markets in general record marginal profits to shareholders and therefore does not principally influence their trading behaviour when it concerns merger announcements.

Table 2. 8: Cross-sectional regression results of acquirers

Dummy	Model 1		Model 2	
	Africa	**South Africa**	**Africa**	**South Africa**
	Coef.	**Coef.**	**Coef,**	**Coef.**
MKTC	0.015[2.08]*	1.904[3.24]**	0.012[1.97]*	0.071[2.68]**
ROE	0.0007[0.46]	0.388[4.67]**	0.0001[0.09]	0.282[3.83]**
DER	-0.0002[-0.65]	-0.0002[-1.39]	-0.0001[-0.39]	-0.0001[-0.68]
Fin				9.856[4.13]**
SameInd			0.076[2.05]*	5.545[2.33]*
Private				5.259[1.98]*
CrossB			0.092[2.35]*	10.225[3.80]**
Stock				3.262[1.15]
Intercept	-0.008[-0.15]	-11.618[-2.40]*	-0.061[-1.01]	-10.785[-3.65]**
Model Diagnostics				
Adj. R-Squared	0.080	0.188	0.044	0.408
F-Statistic	2.456*	11.318**	3.239**	12.535**
Durbin-Watson statistic	2.071	1.900	1.99	1.982
N	245	135	245	135

Note: *, and ** denote statistical significance at 5% and 1%

2.5 Conclusion

In this study, we examined how selected African capital markets react to M&A announcements employing event study and regression methodologies. The results are in two categories; African markets (all African firms including South Africa) and South Africa. We employed four different statistical tests (cross-sectional t-test, adjusted Patell test, generalised sign test and generalised rank test) to capture the presence of abnormal returns using sample size of 135 and 245 M&A announcements for South Africa and African markets respectively.

The results show that the African capital markets react positively to public M&A announcements. The market reaction occurs several days prior to the first public announcements are made, which signals a wide spread of information leakage. The South African market experiences significant abnormal returns two days before and after merger announcements. For African markets, traces of increasing abnormal returns are realised about thirteen days (13) prior to the event but these returns are statistically significant from six (6)

days before and lasting untill two (2) days after announcement. Increasing abnormal returns cumulated over all windows are positive and significant. The positively significant cumulative abnormal returns last up to 25 days before and 25 days after an announcement.

To execute a more thorough analysis, we further investigated the effect of deal-specific factors such as acquirer industry, diversification, mode of deal payment, types and forms of merger deal on abnormal returns. Our results reveal that firms from financial industry, same industry acquisition, cross-border, private and stock acquisitions strongly influence abnormal return generation in South Africa, whereas in the case of Africa, abnormal returns are only affected by cross-border and same industry acquisitions. We fail to find evidence in support of the effect of diversification and cross listing, domestic, public firms, cash only and mix of cash and stock acquisition as reported by some advanced and emerging markets studies. We demonstrate that our results are consistent and robust to alternate test statistics and model specifications.

Furthermore, apart from deal-specific, we try to understand the role of some firm-specific factors in creating abnormal returns. We document that South African investors are influenced by firm size, measured by market capitalization, and return on equity when M&A acquisition announcements are made. Surprisingly, cumulative abnormal returns for African firms are only significantly influenced by firm size. The debt composition of acquirers, measured by the debt-to-equity ratio, affects CARs negatively though insignificant, indicating that firms with high debt-to-equity ratios reduce the value-creation process induced by M&A announcements.

Finally, we employ sets of parametric and non-parametric test to detect abnormal returns. We realised that both tests are consistent and equally detect abnormal returns. However, the non-parametric tests were more powerful, especially for African data. This could be driven by the skewed distribution of the returns due to slim and non-trading effects.

Our findings on market reaction to M&A deals in Africa have important managerial and policy implication to the investor community. Firstly, our findings can be extended to other emerging markets that are similar in nature and composition. Secondly, the results are relevant for regulation and policy development regarding the severity of information leakage possibly influenced by insider trading. Lastly, managers can take advantage of the signal of market movement upon M&A announcement to make strategic acquisitions, considering all the influencing factors that add value to shareholder equity.

Data collected for the analysis span 2000 to 2016 which includes the 2007-2009 Global Fianacial Crisis. The crisis has the potential to alter market behavour induced by M&A. This was not directly examined in this thesis. Isolating announcments during the crisis and conducting separate analysis could provide clearer insight on the subject in Africa.

CHAPTER THREE

MERGERS AND EXECUTIVE COMPENSATIONS IN AFRICA

3.1 Introduction

Corporate governance studies on executive compensation schemes have received considerable amount of attention over the years. Majority of these studies concentrate on the determinants of pay incentives and how to align these incentives to firm performance, with little emphasis on the influence of major markets activities. Mergers and Acquisitions (M&A) are one of those major market activities that provides the platform to study executive pay since it alters firm size and structure and has the potential to immensely affect performance.

Not only that, but M&A activity can completely change the compensation levels of managers, irrespective of whether the deal is in the interest of shareholders (Bliss and Rosen, 2001). A very good example is the awarding of bonuses and other incentives packages to executives whose firms acquired other firms. For example, in 2002, the chairman of Chase Manhattan Corporation, William Harrisson, signed a deal to buy J.P. Morgan & Company for USD 30.9 billion and, as a reward for overseeing the deal, the board paid Harrison a bonus of USD 20 million (half in restricted stocks) to be spread over two years (Sorkin, 2002). According to the same author, Harrison's three lieutenants also received special bonuses of USD 10 million each, in addition to their regular salaries and bonuses. Similarly, in a seminal article, Andre, Kooli and L'her (2004) analysed executive compensation packages before and after a successful merger between two Canadian firms, Abitibi and Donohue. They realized that, the real value creation for this deal laid heavily in the hands of the executives. The merger deal triggered a massive change in the execution packages of the acquiring firm (Abitibi), in spite of its indebtedness, making the executives richer.

Generally, the extant literature on the M&A activities and executive pay nexus agrees that acquirer's executives are awarded higher compensation. For instance, Lambert and Larcker

(1988) analysed the EC of 35 samples of U.S.A firms involved in large M&A deals from 1976 to 1980. The data comprised of short-term incentives (salary + bonuses) and long-term (equity ownership) of CEOs and top three managers of the firms. They specifically looked at the effects of M&A deals on EC types. Using a two-year window (2 years before and two years after M&A deals), they estimated changes in the short term EC and found that good M&A deals significantly increase both the cash value and total wealth of CEOs and top managers Their result is consistent with recent studies such as Girma, Thompson and Wright (2006) and Guest (2009).

However, what is not clear is whether the pay increases are due to compensation for extra work owing to increase in firm size, internal growth generated by merger synergy or lack of proper governance controls. The very few studies on the subject report contradictory results. Some studies argue that changes in executive compensation after M&A are positively related to synergy gains from the merger and managerial productivity (Harford and Li, 2007; Anderson et al. 2004). While others contend that acquirers' executives rather pursue merger deals to increase firms size, which subsequently comes with an increase in compensation (Murphy, 1999; Bodolica, & Spraggon, 2015). Competition for managers with top talents by firms has resulted in a more competitive pay practices for the top executives, creating a greater gap in the compensation of the executives and the average employee. That, however, does not preclude that the CEO does not influence the process. If these compensation increases are not due to internal growth but rather through managerial desire to increase firm size, then this is a clear violation of the principal-agent theory which posits that executive remuneration must be structured in a way to align managerial and shareholders interest. The contention in literature on this matter and most especially the drivers of higher compensation warrants a deeper investigation into managerial pay after successful M&A deals. Interestingly, almost all the studies on the subject are done in advanced markets and little is known on how executive

packages for top managers, in emerging markets like Africa, behaves after successful M&A deals.

Mergers and acquisition activities were once a US market medium for firms seeking to diversify their operation, increase firm efficiency and market control. However, currently, M&A activities have become a global phenomenon, attracting huge capital flow across continents. Besides, what is most interesting about the current global M&A boom is the degree of involvements of emerging markets. According to Bodolica and Spraggon (2015), the significant increase of M&A deals in emerging markets is possibly due to massive wave of privatization of state own business, starting from 1990, giving firms the freedom from government controls and ease to engage in M&A deals. The speedy involvement of emerging market firms in the global M&A landscape is a clear signal of possible shift of concentration, in the area of research, from developed markets and that is precisely what this study seeks to lead. Africa, over a decade, has become an important medium of investment for most global investors.

Being an emerging continent, there are numerous growth opportunities in various sectors. As a result, corporate international investors will take advantage of the immense opportunities and growth. Industries of interest for the M&A investors is diverse but with leading concentration on mining, energy, utilities and financial sectors. The African continent has seen monumental growth in M&A deals both in deal count and volume (Wilson & Vencatachellum, 2016). For instance, in 2010 the total value of deals amounted to USD 44 billion which was a record high, according to the same author. The trend of M&A activities on the African continent has been on the increase despite a drop in 2011, possibly due to the political instability at the northern part and the insurgence of religious-motivated terror attacks. In spite of the 2011 drop, the year still recorded a deal of USD 27 billion in value, according to (Jeanne, 2016). The subsequent years have seen a significant rise in M&A activities. In 2015

for instance, the intra Africa (regional acquisitions) deal reached USD 15.3 billion slightly shy of the 1998 record of USD 16.1 billion (Bloomberg, 2016). Our study is highly motivated as well by the increasing trend in M&A activities in Africa and the quantum of opportunities to both academics and investors.

This study also contributes to recent literature by examining or controlling for the various potential factors that could influence the post-merger compensation packages of top managers. Undoubtedly, firms that undergo successful M&A deals are likely to experience a transformation in their corporate structure in line with EC determinants. Our baseline hypothesis is the established agency theory argument that, a change in the job structure of an agent should usually call for a revision of incentive package to properly align the interest of the agent to that of the new shareholders. Barkema and Gomez-Mejia (1998) suggest three blocks of EC determinants, namely: (i) criteria which includes peer compensation package, firm size, performance, market and individual characteristics; (ii) contingencies made up of firm's strategy, industry concentration, R&D level, national culture and tax system; (iii) corporate governance which entails ownership structure, shareholders right and power of board of directors. The above determinants are documented across literature to contribute to compensation package design. Some could be measured numerically while others are virtually difficult to measure. For the purpose of this study, we employ measurable compensation (cash, equity, option and total) in our analysis.

Existing literature on EC suggest a very strong positive statistical relationship between firm size and EC. Thus, holding all other things equal, when a firm undertake M&A it experiences an increase in size with a resultant increase in EC. Consistent with Bebchuk and Grinstein (2005), Erel, Liao and Weisbach (2012) observe that increase in firm size results in parallel increase in EC whereas the reverse is not always the case. Thus, managers are incentivised to do everything possible to increase firm size even if it is not in the interest of

shareholders. Furthermore, in line with agent-principal theory, firm performance is one of the main determinants of executives remuneration designed to motivate managers to pursue shareholder value maximization. Some studies, however, suggest that in practice, there exist rather a weak relationship between firm performance and EC; contrary to theory, suggesting that executives might take advantage of weak internal corporate governance mechanism to influence the pay schemes in their own interest independent of shareholder's value creation (Girma, Thompson and Wright, 2006a). The dominance of firm size in determining EC, as shown in some studies, provides enough motivation to further explore the performance and EC nexus, especially within emerging market environment.

Deal-specific factors have the potential to influence the compensation structure of management owing to the influence it has on firm size and structure. Focusing on deal size, the size of deal (or the value of the target) will eventually determine the size of the acquired firm after the merger. Guest (2009) provide proof in support of positive effect of deal size on the level of executive pay. Hence, if the size- to compensation proposition holds, then we expect executives to be paid higher for acquiring bigger firms. Secondly, cross-border acquisitions could attract different compensation, compared to domestic acquisitions, mainly due to extra managerial effort and skills needed to complete the deal and managing it. According to Duru and Reeb (2002), cross-border deals result in more complex firm structure due to factors such as cultural, national, geographical and currency differences.

Guest (2009) argued that cross-border and public acquisitions have impact that is more positive on executive pay owing to the level of target. He explains further that when target firm's management pay level is higher than that of the home firm, there is a higher tendency to raise the home firm's pay to ease the integration of the two firms. Thirdly, the market reacts to deal announcements base on the perception of the quality of the deal. The market perception is usually capture by the movement of stock price upon announcement. Thus, a good deal will

result in a positive cumulative abnormal returns (CAR) while bad acquisitions reflect negative CAR. A positive CAR is, therefore, an indication of good managerial effort which could subsequently impact pay as well. When an M&A deal is financed with equity, it has the possibility to alter the share ownership and thus reducing or reinforcing the influence of some major individual or institutional shareholders in decision making.

Furthermore, in emerging markets, many M&A deals occur in order to strengthen the ownership and power of controlling shareholders. This gives management a broader room to have more control over the board (usually constituted by management and controlling shareholders) resulting in taking investments decisions that might not increase firm value but rather favour management interest.. Empirically, a study conducted by Dutta, Saadi and Zhu (2013) involving Canadian acquirers shows that M&A deals financed with equity exhibit good short-term performance due to positive stock price movement (positive CAR). It implies, therefore, that the mode of payment of a deal (either by cash, equity or mix) could have sequential link to management pay movement.

Even though, M&A deals are expected to create value for shareholders (Berry, 2000; Dorata, Williams, Michael & Rao, 2008; Dutta & Jog, 2009; Gregory & McCorriston, 2005; Lambert & Larcker, 1988), the extent of management's influences and issues of corporate controls rather influences executives taking investment decisions to satisfy their personal interest. Some writers have argued that, the best way to tackle these issues of imbalances in executives' incentives, most especially during M&A deals, is to improve board monitoring and constituting independent boards consisting of more outside directors, who are not managers of the firm, and increase equity ownership by directors (Herman, 1981; Patton & Baker, 1987). The underlying logic in this argument rest in the assumption that the disparities seen in most executive compensation packages is as a result of improper monitoring and the unwillingness of boards to pin compensations to performance. In fact, the assumption that outside directors

are independent, cannot be influenced by firm executive and can represent the interest of shareholders might not be totally accurate (Kren & Kerr, 1997). This raises concern about strength of corporate governance issues and how these variables influence the award of executive remuneration.

Most often, behavioural and personality factors (such as CEO age, race and gender, board and management ownership, board diversity and others) also play a principal role in compensation inequalities. For instance, Rosen (1981) and Larcker and Tayan (2015) identify the bargaining power of the two parties, board quality and monitoring, private latent benefits of key stockholders and majority ownership influence are some of the major political factors that come to play in determining EC. Similarly, Chalmers, Koh and Stapledon (2006) explains that the duality of CEOs as board chairs gives them too much of managerial power that they use in their favour to demand ridiculous pay. Besides, according to Jensen (1993), large boards are more subject to managerial influence, less effective in communication and are highly prone to *free-riding problems*.

Distinguishable from prior studies, Aharony, Liu and Yawson (2012) examine the impact of lawsuits on board composition independence, employing samples of all lawsuits against U.S.A Standard and Poor's 1,500 firms from 2000 to 2007. Their results show that filling of corporate lawsuits significantly increases the proportion of independence directors on a company's board and negatively influence change in board size. They conclude that public firms are motivated by legitimacy concerns to initiate changes in board composition as a signal to the public on improved board independence and integrity. These findings signals the potential influence of board characteristics on firm position and subsequently on compensation packages.

Typically, African firms in general exhibit weak corporate governance mechanisms (such as CEO's board chairmanship position, board quality and diversity) and as such,

managers are likely to use their influence to request unrealistic incentive packages after going through a successful M&A deal (Ntim, 2015; Ntim, Lindop, Osei & Thomas, 2015; Ntim, Opong & Danbolt, 2015).

Finally, company-specific characteristics such as diversity of firm, financial leverage, growth opportunities, industry classification and peer competitors incentive package also play essential role in approving EC packages for acquirer's executives (Bebchuk & Fried, 2005; Bloom & Michel, 2002). Specifically, this study seek to investigate the effect of M&A deals on the remuneration packages of acquirer's managers in Africa. We, further, examine the link between executive compensation and three blocks of factors that have the potential to alter executive pay after merger. First, we test the impact of firm size, previous pay, firm profitability and sales growth on compensation, as suggested by literature. Establish the link between these variables and executive pay is important because, as stated earlier, most of the studies on this subject were conducted on advanced markets and the same results might not apply to the African context due to institutional, cultural and market difference.

Secondly, we consider deal-specific variables such as size of deal, merger type, mode of payment and target's listing effect. Our next set of variables considers the effect of firm-specific factors (firm foreign ownership, diversification and international operation of acquirers and industry classification) and the role they play in determining pay variation.

Finally, we investigate the influence of strength of corporate governance mechanism and CEO personality (executive and board ownership, outside directors, board size, board diversity, CEO age, sex and race) in awarding managerial pay. For example, Yim (2013) documents that bonus pay decreases two years after merger while salary and equity-based incentives were persistent, suggesting that younger CEOs are more likely to engage in M&A deals with the intention to reap long-term incentive gain. Our findings contribute to the global pool of literature on the subject and serve as a corporate governance manual in developing

compensation policies in Africa. In addition, the findings provides clear insights into the agency theory and executive interest within the African context. A strength of this study is that, we consider changes in various forms of executive compensations to understand the dynamics of the association that exist between various variables of interest.

The rest of the study is as follows: Section two present data and methodology while Section three provides the empirical results and Section four concludes.

3.2 Methodology

3.2.1 Data

Data is sampled from four different regional blocks (North, West, East and Southern Africa).[4] These data groupings assist us to test for regional differences. The data needed for our analysis are drawn from Bloomberg database and manually extracted from annual reports of the selected firms. Samples on M&A deals starts with firms that are listed on selected African exchanges from 2002 to 2016 and should have traded on the exchange for at least seven years with available data on EC disclosed in their financial statements.[5] In addition, inclusion also required availability of data on M&A completion date and acquisition form for at least three years before and after the completion of the acquisition deal. We set these requirements in order to meet the basic conditions for balanced panel data without the loss of generalizability. Panel data analysis is best for our work because of the advantages of more degrees of freedom, lesser collinearity among the variables and having both cross-sectional and time-series observations (Gujurati, 2003). The seven-year time series balanced panel data is adequate to analyse any cross-

[4] The grouping is motivated by the market and cultural similarities. At least three countries have been selected from each block based on data availability (Egypt, Morocco, Tunisia, Nigeria, Ghana, Ivory Coast, Kenya, Tanzania, Uganda, Botswana, Namibia, Zimbabwe, Mauritius and South Africa).

[5] We start our sample selection from 2002 because firms in South Africa firms were required to start disclosing compensations for their executives in 2002 and results can only be available at the end of the year (IoD, 2002). So we use that as a starting point for all countries and firms.

sectional link between our variable (Core, Guay & Larcker, 2003; Core, Holthausen & Larcker, 1999).

Data on ECs for top three managers (although we still keep firms in our sample if at least two executives meet the criteria) is classified into four different types: salaries/bonuses, equity, stock options and total compensation. The total value of equity compensation is computed as the product of accumulated number of outstanding shares, awarded in a given year, multiplied by the market value of the stock at the end of the year. Similarly, the stock option compensation is the product of number of awarded options and the option value calculated using the popular Black-Sholes option valuation model (see Appendix 1C). Further, the managers must be in office at least three years before and three years after the acquisition.

The above selection criteria yield a total sample of 164 firms. Finally, monetary figures captured over time cannot be analysed without considering the time value of money effect. Therefore, all monetary data collected for analysis will be deflated to 2002 USA Consumer Price Index (CPI) since 2002 is the first year for which information could be available (that is three years before the earliest acquisition year of 2005). In addition, all currencies are standardized to a base currency, which is the USA dollar. It is appreciable, therefore, to use the USA CPI to adjust for inflation across all countries in our sample. Variables used in the analysis are explained in Appendix 1A.

3.2.3 Model specifications and estimation strategy

This study employs a seven-year panel data (three years before and after mergers including the year of merger) involving M&A carried out from 2002 to 2016 and is *balanced.*[6] Panel data has the benefits of more information, more variability, less collinearity among variables, more efficiency, greater degree of freedom, accounts for individual heterogeneity and ideal in the

[6] The data is balanced because all panel units have the same number of observations. For example firm A might be observed from 2002 to 2007, while firm B is observed from 2005 to 2010 but they all have the same number of observations.

dynamics (changes that follow the same individual units through time). First, our main aim in this analysis is to investigate possible changes in magnitude of the various EC components before and after a successful takeover. In other words, we examine how the EC would have been without the impact of M&A deals. To establish this relationship and control for factors that determine executive incentives, as outlined in literature (Agarwal, 1981; Bloom & Michel, 2002; Hartzell & Starks, 2003; Larcker & Tayan, 2015), we build our basic model as follows;

$$\ln EC_{it} = \alpha_0 + \alpha_1 \ln EC_{it-1} + \alpha_2 \ln Sales_{it} + \alpha_3 ROA_{it} + \alpha_4 MTB_{it} + \\ + \alpha_5 Acquisition_{it} \sum_{j=6}^{m} \alpha_j Controls_{it} + \gamma_i + \lambda_t + \varepsilon_{it} \quad (3.1)$$

where EC_{it} is the compensation type of top three managers of firm i at time t. EC_{it-1} is lagged variable of the compensation type and α_1 specifically captures the degree of compensation changes. Details on the measurement of EC types and other variables are presented in Appendix 1A. From literature, some major factors have been identified to influence executive incentives and therefore needs to be controlled for. Moreover, from the agency theory perspective, EC will be positive related to firm performance factors. Thus, we introduce$Sales_{it}$, ROE_{it}, and MTB_{it} which represent sales, accounting return on equity and market to book value of equity respectively (see Appendix 1A). $Acquisitions_{it}$ is a group of dummies for the year of merger and post-merger years. We also introduce other control variables ($Controls$) to address specific objectives and m-2 is the number of controls. Finally, we include firm-specific fixed effects (γ_i) and time-specific effects (λ_t) to capture unobservable variations in compensations across firms and economic-wide shocks over time respectively, ε_{it} is the error term.

For all the control variables, we include dummies for the merger year and each of the three years after acquisition. For instance, merger year, year 1, year 2 and year 3 under "Merger effect" means the impact of the M&A on the dependent variable in the year of the merger, one-year, second year and third year after merger. This analysis runs through all estimations.

Executive compensation and how it relates CG variables has endogeneity issues which leads to bias and inconsistent variable estimation if not properly dealt with (Roberts & Whited, 2011). Nickel (1981) and Anderson and Hsiao (1982), noted that the introduction of lagged dependent variable as explanatory variables in panel data models (dynamic panel) creates bias results when the Ordinary Least Squared (OLS) and the fixed-effects estimators are used and the direction of the biasness is opposite to the dynamic relation. Besides, economically, how to compensate executives affect how firm perform; the reverse will also be true. In this case, EC and firm related performance variables (say ROA) are co-determined. One possible approach in dealing with this issue is to use system of equations where in one equation performance and other control variables depend on EC while in the other equation EC and the same control variables depend on performance. However, solving such system of equations requires the use of strict exogenous instruments: that can be in only one equation but not both, which is difficult to find.

We recognise, therefore, that the dynamic nature of EC and the compensation-performance relationship, as outlined in equation (1) presents some concerns. To address these concerns, we use the Generalised Method of Moment (GMM) estimator, introduced by (Arellano & Bond, 1991), which eliminates these endogeneity issues (Wintoki, Linck & Netter, 2012).

As suggested by Anderson and Hsiao (1982), we use the first difference approach to modify our model (equation 1) to purge out any firm-specific fixed effects.

$$\begin{aligned}\Delta \ln EC_{it} = {} & \alpha_0 + \alpha_1 \Delta \ln EC_{it-1} + \alpha_2 \Delta \ln Sales_{it} + \alpha_3 \Delta ROA_{it} \\ & + \alpha_4 \Delta MTB_{it} + \alpha_5 Acquisition_{it} + \sum_{j=6}^{m} \alpha_j Controls_{it} + \gamma_i + \lambda_t + \varepsilon_{it}\end{aligned} \tag{3.2}$$

where Δ is a difference operator (e.g. $\Delta EC = EC_t - EC_{t-1}$). It is worth mentioning that the GMM does not solve completely all endogeneity issues as an instrumental variable technique. From equation (2) for instance, the use of first difference approach will induce a correlation

between the lagged executive compensation variable and the error term. The traditional approach, as used in natural experiment studies, is choose strict exogenous instruments, which are extremely difficult if not impossible to find in corporate governance research. As a standard approach in GMM estimations, we employ past realisations (lags of variables in levels dated t-2) of our independent variables as instruments and year dummies. According to Guest (2009), valid instruments for dynamic panel models such as that represented in equation (2) are those dated t-2 and earlier. This approach has also been used by corporate governance studies on executive pay such as Girma, et al. (2006). To test for the validity of the instruments and correct functional form, we adopt the Sagan test. We also report the second-order serial correlation test since the dynamic panel GMM estimator requires the absence of second-order serial correlation.

One potential problem with our estimation, as outlined in equation (3.2) is sample selection bias. The firms included in the total sample are not randomly selected. According to Grinstein and Hribar (2004), if the omitted variables that can potentially influence M&A are correlated with variables that determine EC, a simple regression analysis might produce specification error. To address this issue, we employ the Heckman (1979) two-stage correction procedure, which models the probability that a firm will be an acquirer using probit regression. To perform the first stage of the analysis, we include extra firms that did not do any acquisition over the past seven years to the existing merger samples. The explanatory variables included in probit regression are pre-merger firm size (sales), MTB, ROA, Board size, Outside board representation, Age of CEO, Institutional ownership, a dummy to show whether a firm undertook M&A over the previous two years, industry and year dummies. The result for the probit estimation, using OLS, is presented in Appendix 3B. The coefficient of all the explanatory variables in the estimation are insignificant. Hence, we exclude the Heckman correction variable from our estimation.

3.3 Results and discussion

3.3.1 Descriptive statistics

A summary of our data is provided in Table 3.1. The total sample is made up of 164 firms listed on various African stock exchanges. We also present statistics for only South African and *Other African* firms, which has been categorised under executive compensation types, financial variables, deal characteristics and corporate governance variables[7]. A quick comparison of the executive compensation types for all samples before and after merger reveals a substantial difference in mean compensations. For instance, out of the 164 total deals, mean Cash (salary and bonus) increased from USD3.11 million to USD 5.56 million, while South Africa samples increased from USD 2.62 million to USD 3.38 million and Other African firms saw an increase from USD 3.54 to USD 7.48 million, with wide range of standard deviations. Similar trends are observed for equity, stock option (Stop), total compensation (Total) and board total compensation (TbCom).

On the other hand total sales increased by 5.0% with a 3% increase in standard deviation for the total sample; that for South African firms also increased by 5% with 2.8% in standard deviation while the rest of Other African firms' total mean sales increased by 24% with a respective increase of 36% standard deviation. Similar results are seen for market to book value (MTB) across all samples. While our total sample and Other African firms show a reduction in mean and standard deviation for ROE and ROA, South African firms recorded an increase in both mean and standard deviation for ROE and ROA; highlighting the inconsistency in movement of executive pay with regards to increase in firm profitability during acquisitions for Other African firms. It is clear to observe that an increase of 68% in total board compensation (ToCom) resulted only in 5% change in sales and 9% increase in profitability

[7] Our total sample is sub-divided into South Africa and other African firms (hereafter referred to as Other African sample). The word "*Other*" is used as a noun. So Other African firms refers to all firms in Africa except South African firms.

(ROE) while a 91% rise in Other African firms' ToCom translated into 24% increase in sales and a drop of 24% in profitability (ROE) after acquisition.

Concerning deal characteristics, the total sample has a mean deal value of USD 796.06 million while the cumulative average abnormal returns around the deal announcement dates is 9.82%. Of the 164 firms, about 65% acquisitions came from the same industry, 71.34% of target firms were domestic, 20.12% were acquired using stock as mode of payment, 64.63% are diversified in their operations and have international operations while 28.66% of the targets were listed on a foreign exchange. The last panel of Table 3.1 reveals the corporate governance factors of our sample that relate to compensation schemes. The average size of board of governors is about 10 of which female representation is less than 4% (i.e 3.98%) and 46% of the board size is made up of independent members. Relatively, South African firms have higher independent and outside board and female representation than the Other African firms. This is expected because, as noted by Ntim (2015), African firms exhibit weak corporate governance structures and porous female executive board representation. Besides, a little above 11% of the South African firms have black CEOs and about 47.78% institutional ownership compare to 48.28% and 27.87% respectively for Other African firms.

To get some idea about the trend of compensation change over time, we plot the various pay components awarded to executives from three years before acquisition (t-3) to three years after acquisition (t3) in our samples, as shown in Appendix 3A. The purpose of Appendix 3A is not to show the level of compensation amounts but rather to give an idea of the trend. The outlook of the compensation plots are not different from the statistical information shown in Table 3.1. For instance, from Panel A and Panel B, the compensations shot up drastically in the year of acquisition but decline following acquisition. The only difference in Panel C is that it shows a trend towards higher compensation (except for stock options) increase that persisted into year-one after merger before declining in the second and third years.

Table 3.1: Descriptive statistics

		Total Sample (164)		South Africa (77)		Others (87)	
		Mean	**Std Dev**	**Mean**	**Std Dev**	**Mean**	**Std Dev**
Executive compensation types							
Cash (mil USD)	Post-Acq	5.56	18.38	3.38	5.32	7.48	24.65
	Pre-Acq	3.11	10.44	2.62	6.09	3.54	13.16
Equity (mil USD)	Post-Acq	3.43	28.38	1.15	1.41	5.51	38.93
	Pre-Acq	1.47	10.30	0.76	0.98	2.99	15.64
STOP (mil USD)	Post-Acq	-	-	1.36	2.67	-	-
	Pre-Acq	-	-	0.70	1.66	-	-
ToCom (mil USD)	Post-Acq	12.40	50.56	6.31	9.60	17.08	68.56
	Pre-Acq	6.96	23.78	3.75	6.39	8.93	32.03
BoCom (mil USD)	Post-Acq	0.53	0.80	0.90	0.86	0.21	0.58
	Pre-Acq	0.43	0.65	0.73	0.70	0.15	0.45
Financial variables							
Sales (mil USD)	Post-Acq	2303.16	7765.34	4825.31	10821.57	70.91	254.37
	Pre-Acq	2188.62	7542.22	4596.72	10530.38	57.32	186.83
ROA (%)	Post-Acq	8.04	13.88	8.70	17.65	7.33	9.46
	Pre-Acq	8.73	9.56	8.30	9.26	9.12	9.86
ROE (%)	Post-Acq	18.09	28.43	20.48	35.26	15.75	20.65
	Pre-Acq	19.83	24.00	18.86	29.43	20.70	18.02
MTB	Post-Acq	1.89	5.28	1.21	1.64	1.60	7.08
	Pre-Acq	0.90	1.72	1.09	1.11	0.99	1.37
Deal characteristic variables							
Deal value(mil USD)		796.06	3077.66	502.14	955.71	1056.92	4127.58
CAR(-25, 25), %		9.82	17.85	11.36	18.12	8.46	17.60
Same (%)		65.24	47.77	62.34	48.77	67.82	46.99
Dom (%)		71.34	45.36	74.03	44.14	68.97	46.53
MoP (Stock), %		30.12	40.21	33.38	42.60	27.24	37.99
D&I (%)		64.63	47.96	64.94	48.03	64.37	48.17
Public (%)		28.66	45.36	31.17	46.62	26.44	44.36
Corporate governance variables							
BoSize		10.81	3.31	10.71	3.11	10.82	3.46
OutD (%)		46.0	20.0	54.60	14.94	38.54	20.45
BoGen (%)		3.98	8.67	6.78	10.89	8.79	10.49
Age (years)		49.95	6.47	49.62	6.78	50.25	6.21
RaceC (%)		31.10	46.43	11.69	32.34	48.28	50.26
InsO (%)		38.18	25.22	47.87	21.84	27.87	25.38

Note: All monetary values are in millions (USD) and adjusted by US 2002 CPI. The definition of all variables are explained in Appendix 1A. Std Dev is the standard deviation, Pre-Acq is a three-year average of the variable before acquisition and Post-Acq is a three-year average of the variable after acquisition. Deal, firm and corporate governance variables including D&I, industry classification and foreign ownership are firm averages for the year of merger. We deliberately omit mean and standard deviation values for STOP under total African sample because these figures are the same as what is captured for South Africa.. South Africa is the only country with an active derivative market in Africa.

It could also be observed that, compensation levels after the year of merger never return to the same levels as seen prior to merger. This gives an indication, even though not conclusive, that executives are compensated for increase in firm size and complexity in firm structure years following acquisition. The above observation does not discount the fact that, the decline in various compensation levels after merger year could be attributed to spreading the compensation awarded over some few years after merger. Collectively, the information

exhibited in Table 3.1 and Appendix 3A indicates that executives are extremely rewarded for carrying out successful M&A deals in Africa.

3.3.2 Empirical results

The results of the study extend previous studies by providing an extensive panel analysis of various factors and their impact on EC post-acquisition. Most importantly, the simultaneous presentation of South African and Other African results provides a better platform to critically discuss the major differences between these two subgroups, motivated by market differences. The discussion of our results are presented within scope of the agency theory framework and guided by political and corporate governance mechanism as it pertains to Africa and other emerging markets.

Tables 3.2, 3.3 and 3.4, present the various estimation results of equation (2) for various executive compensation components, namely Cash (Salary & bonuses), Equity and Total compensation (ToCom). We also extend our analysis to cover total board compensation (TbCom). This extension is equally essential because little is known about board composition schematics even though we know they play the principal role in managerial decision-making. As far as we know, no study has explored trends and determinant of total board compensation following a merger deal, especially in any merging market. The results will spice up and motivate other researchers to investigate further the various dynamics of board compensation for firms involved in M&A deals. The Sargan and second-order serial correlation p-values for the estimations reported are statistically insignificant at all levels clearing our analysis of instrument invalidity and serial correlation issues. Our results are robust and consistent throughout the study.

First, we examine the effect of M&A deals on compensation for our total African sample. Model 1 of Table 3.2A looks at the influence of M&A activities on various components of executive pay after controlling for the effect of acquirer's size (sales), return on

equity (ROE) and market to book values (MTB). Our results show significant positive coefficient of our lagged dependent variable for all pay components, which is an indication of persistence in EC growth.

Consistent with existing literature, the positive and significant coefficients of firm size and market to book value (at 5% and 1% level respectively), for all compensation components, confirm a positive relationship of these variables with changes in EC packages. Market to book value is used to proxy for firm growth potential. The positive statistical significance of variations in various EC components and MTB value suggest that cash, equity and total EC of acquirers' executives after M&A considers managerial effort to increase firm growth. Unlike total pay, Cash and equity compensations are not affected by firm size.

There is, also, no evidence of significant relationship between changes in EC and ROE. The finding suggests that profitability, as measured by return on equity does not play any significant role in determining the compensation level of executives in Africa. It is worrisome if the compensation of management can be increased significantly without considering whether their actions increase shareholders' value. This observation is a violation of the agency theory that aligns executive compensation to performance. Possibly, the only performance measure considered by the board of directors before awarding those colossal incentives is the successful completion of the M&A deal irrespective of the short-term value creation.

Concerning the impact of M&A deals on compensation around the year of merger, we observe significant increase in total pay at the end of the acquisition year for executives of acquirers' experience. The years following acquisition have experienced drops in compensation. The decline persisted further into second and third year after merger deals. Usually, the compensation packages approved for directors are not paid upfront at the end of acquisition year (as reported in USA and UK studies) but rather spread over period of years. In this study, it is observed that greater portion or lump sum of approved compensations are rather

paid at the end of acquisition year. The significant drop in pay level in year two and three is as a result of pulling-out effect of pay for executing the deal. Perhaps, rise in pay levels years after merger compare to payments prior to merger, as shown in Appendix 3A, can be attributed to increase in firm size and structural complexity.

Next, we investigate the influence of deal size and market response on the executive pay rise. First, we believe the size of the merger deal and the way and manner the market responds to the merger announcement could influence the award of compensation packages. To achieve this objective, we standardised the deal size by dividing the deal value by acquirer's book value to get the deal ratio. We then introduce a dummy that takes 1 if the deal ratio is greater than 10%, else 0. Year dummies are also created to capture the yearly effect after merger. Secondly, we introduce a dummy that takes 1 if a firm has a positive cumulative abnormal returns, else 0 and with dummies to capture year effects. We then estimate the effect of these two factors on our sample as reported in model 2 and 3 of Table 3.2A. Model (2) estimates deal size effect while model (3) estimates effect of market response after controlling for deal size. The persistence in pay rise and the year merger effect remain unchanged after controlling for these factors.

The coefficient of merger year for deal size are positive and significant (at least 10% significant level) indicating a positive relationship between deal size and executive pay. The result offers some support for the empire-building motive for M&A. It's so because, if firm size greatly affects pay level, then bigger deals, which increases firm size, should translate into higher pay rise irrespective of whether the deal is value-enhancing or not. Similar argument within the agency theory framework suggest that, bigger deal obviously increase firm size, resulting in firm complexity, which requires lot of energy to manage. Hence, managerial effect must be compensated through corresponding pay rise.

Furthermore, after controlling for deal size we notice a weak significant effect of market response on executive pay (significant at 10% level). It should be noted from Table 3.1, that the CAR(-25,25) is positively high (9.82%), implying that deals are generally value-enhancing, reflecting the approval of the market. Even though the significance of the market response is weak, it however suggest that compensation committees do consider, to some extent, the perception of investors about the deal quality. In other words, investors agree that the decision to acquire another firm is a good one and the executives are applauded for their action. The effects of both deal size and market response dies down in subsequent years.

We now consider the results for the two sub-groups (Other and South African samples). The findings (see Table 3.2B and 3.2C) for both Other and South African firms are similar to those of the total sample in terms of the persistence in pay increase (Lagged EC), significance of the market-to-book value, deal size and the effect of M&A deals on pay increase. However, there are some variations in the results, which need commentary, as we compare Other African firms to that of South African firms. First, whereas the coefficient of firm size (sales) is significant for cash, STOP and ToCom for South Africa, it is only significant for total compensation for Other African firms. As far as the South African board of directors are concern, the level of acquirer's sales in the year of acquisition plays a significant role in approving managerial cash, equity option and total compensation. In this case, management are likely to devote considerable amount of time to the technicalities and success of a deal in order to improve performance measures such as total sales. So, within the South African context, executive's pays will be affected badly if the firms fail to take advantage of the merger to increase sales.

According to the M&A literature, greater portion of executive pay increases after merger are through bonuses (Grinstein and Hribar, 2004). Besides, increase in sales improves the cash position of firms. Therefore, it is expected that an improved cash position through

sales should strongly influence post-merger cash pay. Contrary, this line of arquement does not hold for Other African firms. However, total pay is the only incentive scheme that is effected by sales growth (for Other African firms). It goes to suggest that other peripheral incentive rewards (except salary, bonus and equity pay) are strongly tied to acquirer's sales. This finding is quite interesting because literature, generally, has been quite on the effects of these peripheral incentives (such as insurance, allowances, and others) but it is a potential avenue to hide managerial rent demands to avoid unnecessary external attention. We conclude that executives of Other African firms take advantage of weak monitoring and supervisory structures to hide significant amount of their remunerations in peripheral rewards.

Second, sales positively impacts total pay for both sub-samples, consistent with other studies (Girma et al, 2006; Baker, Jensen, & Murphy, 1988), while there was no impact on equity pay. If compensation schemes such as equity pay are tied to performance indicators, how could it not be affected by changes in sales? The reason is that, there has been calls to use equity pay as means to align managerial interest to that of shareholders (Jensen and Murphy, 1990) and as such, the equity pay awarded to managers after M&A gives them ownership in the new firm. Usually, this compensation will be granted to executives irrespective of whether there has been an increase in sales or not. What matters, in this case, is the completion of the M&A deal which might not have direct link with growth in sales.

Third, we see from Table 3.2C also that MTB values have positive relation with equity and stock option pay rise but not cash. In fact, the coefficients of MTB values for cash pay are rather negative (even though not significant) when we control for deal size and market response. The possible justification for such an observation could be that firms with relatively higher growth prospects after going through M&A prefer to award their management with higher equity-related compensations but not cash, in line with our earlier conclusion of the use of equity compensations to align managerial and shareholders' interest. This is so because,

according to Liu, Padgett and Varotto (2017), stock options are most often included in managers' long-term compensation packages since its best in capturing the upside potential of fast growing firm.

Furthermore, it is not startling to observe (see Table 3.2C) that coefficient of ROE (significant 1% level) positively affects equity compensation. Following the above argument, when executives' interest is align through the use of equity compensation, management are force to work strategically to boost the performance of shares which increases the total value of equity allocation. This reasoning, hover, does not apply to the Other African firms, partly due to the "inactivity" on the Other African capital markets. Hence, executive's unwillingness to welcome equity (ownership) compensation but rather cash incentives no matter the effect on shareholder's value. These disparities in the results of the two sub-sample groups buttresses the claim that more developed markets, such as South Africa, have better corporate governance mechanism to monitor and supervise both executives and directors when it comes compensation packaging.

Besides, from Table 3.2C - unlike the Other African sample- the positive year effect of M&A on pay rise extends to a year after merger before declining for South African acquirers. This observation is in line with results in US and UK studies where executives receive greater portion of their compensation (for carrying our successful merger) in year one and two post-merger. Perhaps, European and American majority share ownership in South African firms could be influencing the nature of incentive disbursement dynamics.

Table 3.2A: Effects of M&A on the executive compensation for African firms

AFRICA												
	Cash			Equity			Total			TBCOM		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.1621	0.1634	0.1683	0.4062	0.4435	0.4745	0.1273	0.1493	0.1274	0.4325	0.4344	0.4314
	[1.72]*	[1.84]*	[1.67]*	[1.99]**	[2.04]**	[2.25]**	[2.12]**	[1.99]**	[2.12]**	[6.64]***	[8.33]***	[7.49]***
Sales	0.0505	0.0492	0.0432	0.0964	0.2364	0.2698	0.0544	0.1174	0.0534	0.0805	0.0688	0.0791
	[0.72]	[0.69]	[0.57]	[0.31]	[0.49]	[0.79]	[2.12]**	[1.74]*	[3.42]***	[0.98]	[0.82]	[0.93]
ROE	0.0001	0.0001	0.0001	-0.0034	-0.0032	-0.0034	0.0004	-0.0027	0.0003	0.0017	0.0015	0.0015
	[0.15]	[0.11]	[0.14]	[-0.97]	[-0.87]	[-0.96]	[0.70]	[1.11]	[0.59]	[1.34]	[1.17]	[1.18]
MTB	0.0014	0.0014	0.0015	0.0146	0.0144	0.0135	0.0025	0.0035	0.0019	0.0014	0.0014	0.0015
	[8.45]***	[8.38]***	[8.11]***	[5.55]***	5.93]***	[6.04]***	[17.08]***	[12.16]***	[15.33]***	[3.87]***	[4.07]***	[4.82]***
Merger effect												
Merger year	0.3607	0.3125	0.3294	0.4008	0.6571	1.7065	0.4069	0.3125	0.4311	0.2334	0.3332	0.1966
	[6.45]***	[3.94]***	[3.11]***	[1.72]*	[1.70]*	[1.98]**	[6.67]***	[3.36]***	[3.33]***	[3.36]***	[2.80]***	[1.71]*
Year 1	-0.1230	-0.1510	-0.0274	-0.5721	-0.9732	-1.3547	-0.1713	-0.0688	0.0197	-0.0777	0.0624	-0.0244
	[-1.64]	[-1.39]	[-0.21]	[-1.48]	[-1.50]	[-1.62]	[-1.06]	[-0.76]	[0.14]	[-1.01]	[0.73]	[-0.21]
Year 2	-0.1901	-0.2117	-0.1391	-2.1104	-2.1295	-2.3329	-0.3317	-0.5443	-0.1144	-0.3664	-0.3696	-0.2581
	[-3.82]***	[-3.11]***	[-1.65]*	[-3.82]***	[-3.17]***	[-2.40]**	[-4.72]***	[-2.57]**	[-0.67]	[-5.42]***	[-4.11]***	[-2.09]**
Year 3	-0.2635	-0.2688	-0.2724	-1.9513	-2.6644	-2.7655	-0.3158	-0.4822	-0.2721	-0.1428	-0.2234	-0.0788
	[-4.83]***	[-4.06]***	[-3.10]***	[-2.48]**	[-2.56]**	[-2.60]**	[-4.31]***	[-2.28]**	[-2.00]**	[-2.30]**	[-3.18]***	[-1.64]*
Deal size												
Merger year		0.0908	0.0944		2.0091	1.9993		0.1807	0.1782		0.1865	0.2082
		[2.40]**	[1.87]*		[2.14]**	[2.15]**		[2.36]**	[1.97]**		[1.79]*	[1.09]
Year 1		0.0532	0.0652		0.8898	0.9195		-0.1839	0.0197		0.2464	0.2738
		[0.62]	[0.60]		[1.01]	1.062189		[-1.41]	[0.14]		[1.87]*	[2.09]**
Year 2		0.0444	0.0496		0.1829	0.1956		0.2137	-0.1144		0.0302	0.0103
		[0.66]	[0.49]		[0.25]	0.271988		[0.97]	[-0.67]		[0.20]	[0.07]
Year 3		0.0075	0.0032		1.3741	1.4594		0.1737	-0.2724		0.1367	0.1495
		[0.93]	[0.03]		[1.10]	[1.09]		[0.83]	[-1.00]		[1.00]	[1.01]
Market response												

Merger year			0.0246			1.4001			0.1606			0.2085
			[1.72]*			[1.73]*			[1.81]*			[1.02]
Year 1			-0.1767			0.5122			-0.1038			0.1152
			[0.13]			[0.79]			[-0.81]			[0.84]
Year 2			-0.1036			0.1676			-0.3221			-0.1719
			[-0.98]			[0.21]			[-1.02]			[-1.31]
Year 3			0.0071			-0.0641			-0.0926			-0.2391
			[0.07]			[-0.09]			[-0.69]			[-1.23]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.5544	0.4523	0.5782	0.5524	0.4571	0.4769	0.8132	0.7841	0.7902	0.2065	0.2097	0.3131
Serial corr (p-value)	0.3815	0.1445	0.3608	0.9416	0.8712	0.7674	0.4901	0.6059	0.4959	0.5211	0.4998	0.5255
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.2B: Effects of M&A on the executive compensation for Other African firms

OTHER AFRICAN COUNTRIES												
	Cash			**Equity**			**Total**			**TBCOM**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.1361	0.1322	0.1348	0.0803	0.0833	0.0812	0.2912	0.2512	0.2417	0.472	0.4712	0.4673
	[1.94]*	[1.89]*	[1.91]*	[2.38]**	[2.41]**	[2.17]**	[3.85]***	[3.44]***	[3.21]***	[21.38]***	[25.048]**	[23.67]***
Sales	0.0597	0.0635	0.0523	0.2971	0.2367	0.3939	0.0456	0.0437	0.0227	0.2298	0.2339	0.3011
	[0.68]	[0.78]	[0.61]	[1.04]	[0.92]	[1.37]	[2.03]**	[1.65]*	[1.74]*	[1.00]	[0.91]	[1.15]
ROE	0.0017	0.0017	0.0017	0.0001	0.0044	0.0037	0.0012	0.0008	0.0004	0.0038	0.0048	0.0043
	[0.51]	[0.54]	[0.54]	[0.01]	[0.34]	[0.30]	[0.60]	[0.39]	[0.19]	[0.85]	[1.09]	[1.04]
MTB	0.0009	0.0009	0.0009	0.0166	0.0170	0.0169	0.0018	0.0017	0.0017	0.0006	0.0008	0.0007
	[13.51]***	[10.79]***	[10.06]***	[19.91]***	[26.04]***	[26.26]***	[20.78]***	[18.66]***	[16.77]***	[2.26]**	[2.28]**	[2.62]**
Merger effect												
Merger year	0.3166	0.1286	0.2197	0.5075	0.5393	0.7489	0.4129	0.1647	0.3662	0.4646	0.4877	0.7216
	[5.11]***	[1.68]*	[1.71]*	[1.83]*	[1.74]*	[1.92]*	[5.03]***	[2.38]**	[2.05]**	[3.92]**	[2.20]**	[2.45]**

Year 1	-0.1431	-0.1954	-0.1803	-0.5181	-0.2969	-0.4090	-0.0582	-0.0701	-0.1387	0.0106	0.1583	0.001
	[-2.22]**	[-2.20]**	[-1.76]	[-2.48]**	[-0.73]	[-0.94]	[-0.66]	[-0.51]	[-0.69]	[0.07]	[0.97]	[0.01]
Year 2	-0.1572	-0.2401	-0.2255	-1.0298	-0.8935	-0.1834	-0.3599	-0.4560	-0.26775	-0.4302	-0.6062	-0.6005
	[-2.54]**	[-3.15]***	[-1.99]**	[-2.82]**	[-1.61]	[-0.26]	[-4.07]***	-3.01]***	[-2.15]	[-3.46]***	[-4.34]***	[-2.86]***
Year 3	-0.3204	-0.3607	-0.3473	-1.2575	-1.4090	-0.6487	-0.4025	-0.4304	-0.4776	-0.2028	-0.4907	-0.327
	[-4.60]***	[-4.05]***	[-3.23]***	[-3.37]***	[-1.88]*	[-1.73]*	[-5.23]***	-3.37]***	[-2.47]**	[-1.72]*	[-4.44]***	[-1.73]*
Deal Size												
Merger year		0.3880	0.3920		0.0013	0.1652		0.4207	0.4329		0.0269	0.0397
		[2.47]**	[2.97]**		[1.90]*	[2.01]**		[2.35]**	[2.39]**		[1.88]*	[1.11]
Year 1		0.0987	0.1002		-0.3159	-0.2052		0.0049	-0.0094		-0.16	-0.2747
		[0.73]	[0.73]		[-0.60]	[-0.36]		[0.02]	[-0.05]		[-0.68]	[-1.17]
Year 2		0.1578	0.1581		-0.0573	0.0190		0.2118	0.2317		0.4378	0.3362
		[1.06]	[1.05]		[-0.09]	[0.02]		[1.09]	[1.22]		[1.09]	[1.05]
Year 3		0.0842	0.0821		0.6362	0.7234		0.0816	0.0660		0.4487	0.436
		[0.85]	[0.81]		[0.67]	[0.77]		[0.57]	[0.49]		[1.04]	[1.09]
Market response												
Merger year			-0.1232			-0.4631			-0.2878			-0.3134
			[-0.75]			[-0.47]			[-1.56]			[-0.83]
Year 1			-0.0270			-0.0615			0.0884			0.1734
			[-0.23]			[-0.14]			[0.50]			[0.65]
Year 2			-0.0233			-1.2419			-0.2958			-0.0401
			[-0.17]			[-1.30]			[-1.38]			[-0.18]
Year 3			-0.0203			-1.1651			0.0596			-0.2553
			[-0.15]			[-0.02]			[0.43]			[-0.70]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.4475	0.4699	0.45981	0.1275	0.1137	0.1218	0.1816	0.1727	0.1658	0.1546	0.3212	0.1845
Serial corr (p-value)	0.9322	0.9549	0.9655	0.7849	0.7742	0.7766	0.9560	0.9251	0.9543	0.3254	0.5412	0.2110
Observations	289	289	289	289	289	289	289	289	289	289	289	289

Note: Estimation results of our Other African sample (87) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.2C: Effects of M&A on the executive compensation for South African firms

SOUTH AFRICA															
	Cash			**Equity**			**Stop**			**Total**			**TBCOM**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.0702	0.0644	0.0707	0.0310	0.0100	0.0204	0.1703	0.2913	0.2479	0.0600	0.0103	0.1010	0.1968	0.1956	0.2008
	[1.80]*	2.71]**	[1.75]*	[2.68]***	[2.19]**	[2.38]**	[1.69]*	[2.58]**	[2.18]**	[1.80]*	[2.63]**	[1.98]**	[4.18]**	[4.12]***	[4.09]***
Sales	0.1172	0.1350	0.1394	0.0082	0.0640	0.0742	0.8064	0.4282	0.5998	0.0620	0.0125	0.1040	0.0242	0.0280	0.0283
	[2.91]***	[3.17]***	[3.28]***	[0.04]	[0.26]	[0.29]	[2.22]**	[1.88]*	[1.77]*	[2.40]**	[2.39]**	[2.30]**	[0.53]	[0.55]	[0.55]
ROE	0.0008	0.0009	0.0009	0.0067	0.0072	0.0079	0.0022	0.0036	0.0059	0.0005	0.0000	0.0001	0.0019	0.0020	0.0020
	[1.27]	[1.53]	[1.42]	[3.17]***	[2.80]***	[2.72]***	[0.26]	[0.46]	[0.80]	[0.79]	[0.02]	[0.07]	[1.68]*	[1.67]*	[1.70]*
MTB	0.0003	0.0008	0.0009	0.0294	0.0245	0.0228	0.0167	0.0146	0.0133	0.022	0.0560	0.0054	0.0029	0.0028	0.0028
	[0.11]	[-0.33]	-0.32]	[2.04]**	[2.21]**	[2.42]**	[1.41]	[1.23]	[1.27]	[1.92]*	[2.54]**	[1.84]*	[2.25]**	[1.94]*	[1.82]*
Merger effect															
Merger year	0.2890	0.3941	0.3761	1.2784	0.5615	-0.4197	0.6082	0.0082	1.3310	0.3256	0.4040	0.4084	0.0901	0.1571	0.1650
	[4.18]***	[3.19]***	[2.67]***	[2.32]**	[2.09]**	[2.54]**	[1.65]*	[1.71]*	[1.91]*	[3.20]***	[3.36]***	[2.33]**	[1.99]**	[1.65]*	[1.82]*
Year 1	0.2126	0.2842	0.1388	0.0744	0.2704	0.3061	0.0550	0.0927	2.1064	0.2219	0.1439	0.0320	0.0839	0.0492	-0.0838
	[3.08]***	[2.30]**	[1.79]*	[1.24]	[1.86]*	[1.79]*	[0.05]	[0.06]	[1.07]	[2.66]**	[2.26]*	[1.81]*	[1.93]	[0.66]	[-0.87]
Year 2	-0.1490	-0.2173	0.1599	-0.7273	-0.9380	-0.8519	-1.2214	-0.8752	-0.4582	-0.2355	-0.2308	-0.1186	-0.1900	-0.1302	-0.0835
	[-2.23]**	[-2.53]**	[-1.28]	[-2.12]**	[-2.04]**	[-1.88]*	[-1.54]	[-0.76]	[-0.26]	[-1.82]*	[-1.83]*	[-0.57]	[-2.46]**	[-1.44]	[-0.70]
Year 3	-0.2722	-0.2590	-0.2382	-0.3641	-1.0882	-0.5906	-2.2409	-3.6884	-1.4196	-0.1583	-0.3661	-0.3578	-0.0656	-0.0516	-0.0416
	[-1.99]**	[-2.05]**	[-1.89]*	[-1.27]	[-2.13]**	[-1.50]	[-2.36]**	[-2.39]**	[-0.86]	[-1.20]	-2.89]**	[-2.06]**	[-1.32]	[-0.79]	[-0.45]
Deal Size															
Merger year		0.2026	0.2030		1.6077	1.5847		0.5269	0.0723		0.0317	0.0026		0.1381	0.1475
		[2.41]**	[1.93]*		[1.73]*	[1.82]*		[1.83]*	[1.64]		[2.19]**	[2.01]**		[1.81]*	[1.86]*
Year 1		0.1486	0.1622		0.4821	0.5262		-0.0900	-0.6076		-0.1469	-0.1323		-0.0707	-0.0767
		[1.01]	[1.15]		[0.95]	[1.14]		[-0.04]	[-0.32]		[-1.17]	[-1.10]		[-0.66]	[-0.68]
Year 2		0.1232	0.1314		0.3908	0.4346		-1.0090	-1.0484		0.0474	0.0611		-0.1197	-0.1161
		[0.89]	[0.95]		[0.68]	[0.79]		[-0.62]	[-0.62]		[0.26]	[0.37]		[-1.07]	[-1.02]
Year 3		-0.0430	-0.0482		1.3196	1.2867		2.0314	2.1456		0.2870	0.2794		-0.0320	-0.0331
		[-0.30]	[-0.36]		[2.04]**	[1.96]*		[1.08]	[1.17]		[1.66]*	[1.65]*		[-0.39]	[-0.39]

Market response															
Merger year			0.0253			1.5313			-1.3199			0.0306			-0.0022
			[1.69]*			[2.14]**			[-0.68]			[2.01]**			[-0.02]
Year 1			-0.2121			0.0616			2.9369			-0.1698			0.0640
			[-1.23]			[0.13]			[1.39]			[-1.06]			[0.65]
Year 2			-0.0813			-0.1071			-0.1728			-0.1603			-0.0644
			[-0.51]			[-0.20]			[-0.09]			[-0.81]			[-0.53]
Year 3			-0.0261			-0.6975			-2.6758			0.0010			-0.0136
			[-0.19]			[-1.61]			[-1.39]			[0.01]			[-0.13]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.8986	0.8881	0.8749	0.4784	0.6703	0.6049	0.2472	0.1892	0.3014	0.1275	0.1127	0.1033	0.1155	0.1194	0.3330
Serial corr (p-value)	0.2209	0.1899	0.2000	0.2724	0.2266	0.2393	0.9403	0.3855	0.6181	0.4502	0.8129	0.7882	0.6930	0.6810	0.6770
Observations	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308

Note: Estimation results of our total African sample (77) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Finally, the influence of market response on EC as discussed under the total African sample rather emanates from the response from the South African market but not Other markets. Relatively, the South African capital market is more actively traded and considered to be efficient; hence, it is able to process and transmit information to reflect market reaction. Consequently, we conclude that market response has positive impact on South African, not Other African executives' pay growth in the year of merger.

Regarding target characteristics, we investigate whether target's nationality (domestic versus cross-border) and listing (private versus public) influence executive compensations after merger? Again, we examine these factors by including dummies to capture the effect of private (takes 1 if the target is private, else 0) and domestic acquisitions (takes 1 if the target is in the same country as acquirer, else 0). The results for our total Africa sample are presented in Table 3.3A. We control for deal size and market response due to the impact of these factors on executive in our previous analysis, even though the impact of market response is weak. Models 1, 2 and 3 present the results for domestic, private and both private and domestic acquisitions respectively. Again, pay persistence and yearly merger effect remain unchanged after controlling for these variables.

Contrary to Conn, Cosh, Guest and Hughes, (2005), the coefficient of the domestic acquisition dummies around acquisition are not significant for all pay types, suggesting that domestic acquisition does not differently influence pay rise after merger compared to cross-border acquisitions. It follows that executives of firms who acquire domestic targets are not paid higher than their cross-border acquisition counterparts. Concerning private or public acquisition, our results (see model 2 of Table 3.3A) show significant positive coefficient of private acquisition variable, in the year of merger, for cash (at 10% level), equity (at 5% level) and total compensations (at 10% level). In model 3 of the same table, we include both domestic and private acquisition variables but this does not make any difference to the results. The only obvious

observation is that private target acquisitions have a stronger impact on equity compensation. Such an observation could suggest that acquirers who target private firms reward their executive more with equity. Could it be the case that acquirers who finance deals with equity are likely to be rewarding executives with the same equity or otherwise?

Table 3.3B and 3.3C present the results for Other and South African sub-groups respectively, regarding the effects of domestic (model 1) and private (model 2) target acquisitions. In model (3), we tested the combine effect of domestic and private acquisitions. Yet, this makes no significant difference in our outcomes concerning the impact of domestic against cross-border or private against public acquisitions on executive pay growth. Specifically, we observe, from Table 3.3B (Other African firms), that both domestic and private target acquisition do not cause any significant impact on variation in executive pay even after controlling for deal size and market perception. It is worth to note, for instance, that the coefficients for private target acquisition in merger year for cash pay (1.59) is higher than that of equity (1.21), even though they are both insignificant. It turns to suggest that there could be a propensity to reward executives with cash compensation more than equity, in line with our earlier argument that managers deliberately avoid equity compensations due to inactivity on Africa capital market.

For South African market, domestic acquisitions do not influence pay variation immediately after the merger. The effect (positive) is rather felt in the second and third year after acquisition. The result implies that executives of South African acquirers that target domestic firms experience a significant pay increase in and after two years after acquisition. One reason could be that, the pay increase in later years could be because of performance related compensations, since acquirers in general do not perform well immediately after merger. In this case, acquirers who target domestic acquisitions recover faster from poor performance due to same market dynamics, labour and culture conditions relative to cross-border mergers.

This result, for South Africa runs contrary to Guest (2009) who rather find a significant decline in executive pay in second year after merger for UK cross-border targets in the face of firm complexity, currency and cultural differences effects, pertaing to cross-border deals, as projected in literature (Duru and Reeb, 2002). Hence, with respect to compensation changes after merger, we do find difference between the influence of domestic and cross-border acquisitions. However, not immediately after deal completions but after two years. Similarly, we observe a significant impact of private acquisition on executive pay but the strength of the impact is weak for cash and total pay. The relationship for equity compensation is stronger (at 5%) which declines significantly in all the three years post-merger. This diffuses the argument that the significant increase in executive pay immediately after merger is purely from cash bonus payments but not salary and equity pay. We conclude that, there is significant difference in the impact of private target acquisitions on only equity pay changes than public targets.

Turning to stock options, acquirer's executive stock option compensation is insensitive to variations in neither private, domestic nor market response (see Table 3.3C). Farther, the weak significant relation with deal size disappears after controlling for market response (Table 3.2C). In spite of the strong relationship between stock price movement and stock option values, it is astonishing to observe that stock option compensation has no significant link with market response, induced by M&A announcements, while equity compensation does. Could this observation suggest that using of stock options is not a widely used executive compensation type for South African executives when they engage in M&As? The dissimilarity in our results to those of previous studies could be due to geographical, cultural and market differences as argued by Duru and Reeb (2002).

Table 3.3A: M&A and executive compensation: impact of domestic and private acquisitions

AFRICA												
	Cash			Equity			Total			TBCOM		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.0002	0.1619	0.1710	0.3954	0.4561	0.4625	0.1476	0.1165	0.1193	0.4359	0.4324	0.4346
	[2.01]**	[2.30]**	[1.83]*	[1.98]*	[2.04]**	[2.36]**	[2.70]***	[1.93]*	[1.98]**	[16.90]***	[16.94]***	[19.70]***
Sales	0.1601	0.0558	0.0560	0.0752	0.0928	0.2383	0.0765	0.0924	0.0941	0.0669	0.1130	0.1099
	[1.28]	[0.78]	[0.76]	[0.23]	[0.28]	[0.64]	[2.01]**	[1.98]**	[1.92]*	[0.85]	[1.33]	[1.26]
ROE	0.0354	0.0001	0.0001	0.0029	-0.00243	-0.0025	0.0017	0.0020	-0.0020	0.0014	0.0017	0.0015
	[0.46]	[0.12]	[0.12]	[0.88]	[-0.67]	[-0.75]	[1.21]	[1.36]	[1.34]	[1.25]	[1.15]	[1.10]
MTB	0.0003	0.0010	0.0010	0.0136	0.0128	0.0132	0.0027	0.0028	0.0026	0.0006	0.0006	0.0006
	[1.44]	[6.95]***	[6.99]***	[5.77]***	[4.97]***	[6.05]***	[13.78]***	[10.92]***	[10.01]***	[5.57]***	[3.11]***	[4.26]***
Merger effect												
Merger year	0.0712	0.2758	0.2113	0.7026	2.9953	0.6390	0.4160	0.5431	0.4992	0.3796	0.2360	0.3336
	[1.77]*	[2.89]***	[1.68]*	[1.91]*	[2.06]**	[2.61]**	[3.89]***	[4.17]***	[2.85]***	[2.31]**	[1.40]	[1.46]
Year 1	-0.3229	-0.1205	-0.0393	-1.1431	1.1057	-0.9947	-0.2156	-0.0403	0.0993	0.0992	0.1905	0.3122
	[-3.14]	[-0.89]	[-0.22]	[-2.05]	[-0.75]	[-1.36]	[-2.4]	[-0.29]	[0.51]	[0.70]	[1.48]	[1.73]
Year 2	-0.2661	-0.2816	-0.2157	-2.4066	-0.7476	-1.6326	-0.37652	-0.20489	-0.1206	-0.3638	-0.3580	-0.1718
	[-2.95]	[-2.78]	[-1.57]	[-2.84]	[-1.60]	[-1.84]	[-3.82]	[-1.55]	[-0.66]	[-3.81]	[-3.23]	[-1.03]
Year 3	0.0009	-0.3127	-0.3147	-1.6352	-0.0052	-1.2044	-0.2444	-0.2629	-0.1954	-0.2288	-0.1908	-0.1644
	[6.67]	[-2.89]	[-2.40]	[-1.75]	[-0.01]	[-1.25]	[-2.52]	[-2.28]	[-1.10]	[-3.09]	[-2.63]	[-1.41]
Deal Size												
Merger year			0.0977			1.9367			0.1921			0.1995
			[1.89]*			[2.11]**			[1.84]*			[1.69]*
Year 1			0.0663			0.9581			-0.1974			0.2928
			[0.60]			[1.16]			[-1.60]			[2.21]**
Year 2			0.0450			0.4390			0.0453			-0.0148
			[0.43]			[0.62]			[0.34]			[-0.11]
Year 3			0.0083			1.6291			0.0417			0.1371
			[0.09]			[2.00]			[0.33]			[0.92]
Market response												
Merger year			0.3870			1.4500			0.1151			0.1538
			[1.74]*			[1.71]*			[1.86]*			[0.75]

Year 1			-0.1669			0.6492			-0.0796			0.1287
			[-1.38]			[1.03]			[-0.65]			[0.94]
Year 2			-0.1223			0.1019			-0.2850			-0.2031
			[-1.16]			[0.13]			[-1.84]			[-1.56]
Year 3			0.0000			0.0263			-0.0912			-0.1871
			[0.00]			[0.04]			[-0.70]			[-0.96]
Domestic acquisition effect												
Merger year	0.1267		0.1504	-0.3674		0.7087	0.0456		0.0553	-0.2303		-0.2274
	[1.16]		[1.23]	[-0.46]		[0.70]	[0.89]		[0.36]	[-1.13]		[-1.07]
Year 1	-0.0635		0.0063	0.7993		1.6458	0.0147		0.0746	-0.2347		-0.1115
	[-0.57]		[0.05]	[1.17]		[1.14]	[0.12]		[0.54]	[-1.40]		[-0.63]
Year 2	0.2034		0.1300	0.4628		1.3409	0.0597		0.1873	-0.0075		-0.0974
	[1.64]		[1.01]	[0.59]		[[1.43]	[0.44]		[1.09]	[-0.06]		[-0.66]
Year 3	0.0055		0.0602	-0.4265		0.7969	-0.1152		-0.0339	0.0867		0.0623
	[0.05]		[0.48]	[-0.52]		[0.85]	[-0.97]		[-0.23]	[0.80]		[0.58]
Private firm acquisition effect												
Merger year		0.1216	0.1504		1.7445	2.1472		0.1892	0.2052		0.0052	0.0856
		[2.07]**	[1.83]*		[2.55]**	[2.36]**		[1.82]*	[1.73]*		[0.023]	[0.36]
Year 1		-0.0058	0.0063		1.6789	1.3619		-0.1963	-0.2234		-0.3933	-0.3656
		[-0.05]	[0.05]		[1.19]	[1.28]		[-1.29]	[-1.41]		[-1.44]	[-0.44]
Year 2		0.1253	0.1300		-2.0221	-2.4073		-0.15027	-0.1894		-0.0198	0.0234
		[0.99]	[1.01]		[-0.79]	[-0.59]		[-0.97]	[-1.05]		[-0.14]	[0.15]
Year 3		0.0664	0.0602		-2.0828	-1.1232		-0.0627	-0.0563		0.0568	-0.0029
		[0.59]	[0.48]		[-0.79]	[-0.55]		[-0.50]	[-0.38]		[0.47]	[-0.02]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.8950	0.5939	0.6184	0.5537	0.4262	0.4096	0.7875	0.8404	0.8482	0.1027	0.2087	0.2733
Serial corr (p-value)	0.3321	0.5612	0.6001	0.9909	0.3554	0.8322	0.6584	0.8854	0.4552	0.5216	0.6312	0.5642
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation . ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.3B: M&A and executive compensation: impact of domestic and private acquisitions for Other African firms

OTHER AFRICAN COUNTRIES												
	Cash			Equity			Total			TBCOM		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.5949	0.4620	0.6263	0.6841	0.5039	0.6466	0.2878	0.3138	0.2366	0.0695	0.1156	0.1360
	[3.88]***	[3.70]***	[4.11]***	[8.53]***	[5.73]***	[6.32]***	[3.6]***	[4.80]***	[2.75]***	[0.53]	[1.27]	[0.96]
Sales	0.0201	0.3019	0.0210	-0.5669	-0.5095	-0.5985	0.0715	0.0700	0.1318	0.1218	0.2180	0.1737
	[0.19]	[1.65]	[0.17]	[1.31]	[1.06]	[1.12]	[1.67]*	[1.75]*	[1.87]*	[0.75]	[1.28]	[0.88]
ROE	0.0041	0.0050	0.0055	0.0003	0.0129	0.0075	0.0021	0.0013	0.0011	0.0006	0.0037	0.0011
	[1.33]	[1.46]	[1.59]	[0.03]	[1.53]	[0.59]	[-0.66]	[-0.40]	[0.31]	[0.07]	[0.77]	[0.17]
MTB	0.0014	0.0012	0.0014	0.0111	0.0127	0.0113	0.0025	0.0025	0.0025	0.0013	0.0007	0.0006
	[6.94]***	[7.54]***	[6.98]***	[10.98]***	[15.05]***	[9.15]***	[16.45]***	[16.14]***	[14.26]***	[3.32]***	[3.49]***	[1.93]*
Merger effect												
Merger year	0.1884	0.4588	0.0375	0.2082	0.9735	1.5670	0.4111	0.6507	0.8207	0.3883	0.5508	0.8576
	[2.37]**	[2.40]**	[2.15]**	[0.18]	[2.73]	[0.96]	[2.85]***	[3.44]***	[2.89]***	[2.32]**	[1.95]*	[1.83]*
Year 1	0.3379	-0.0722	-0.2131	-1.8803	0.7694	-1.2913	-0.0245	0.0781	0.0023	-0.6349	0.0970	0.2712
	[1.92]	[-0.34]	[-0.63]	[-1.99]	[1.51]	[-1.00]	[-0.21]	[0.42]	[0.01]	[-0.75]	[0.37]	[0.54]
Year 2	0.0634	-0.3025	-0.2690	-2.6447	-0.4037	-0.8683	-0.3808	-0.3601	-0.0656	-0.2779	-0.7770	-0.5686
	[0.32]	[-2.36]	[-1.41]	[-1.16]	[-1.25]	[-0.59]	[-1.54]	[-1.28]	[-0.26]	[-0.47]	[-1.47]	[-1.48]
Year 3	-0.0321	-0.2501	-0.1373	-2.5936	-0.4137	0.0840	-0.2731	-0.4039	-0.1577	-0.2799	-0.1849	-0.1831
	[-0.20]	[-1.03]	[-0.73]	[-1.59]	[-1.36]	[0.06]	[-1.37]	[-1.83]	[-0.65]	[-0.55]	[-1.34]	[-0.56]
Deal size												
Merger year			0.5049			2.1123			0.5265			0.5667
			[2.95]***			[2.16]**			[2.65]***			[1.94]*
Year 1			0.3233			1.0722			0.0250			-0.0702
			[1.62]			[1.11]			[0.14]			[-0.16]
Year 2			0.0612			1.6306			0.1948			0.5200
			[0.44]			[1.69]			[1.03]			[1.48]
Year 3			0.0830			2.2267			0.0609			0.4286
			[0.59]			[1.98]			[0.41]			[0.93]
Market response												
Merger year			0.0046			-1.3210			-0.4346			-0.0656
			[0.02]			[-0.96]			[-2.02]			[-0.13]

Year 1			-0.0259			0.8346			0.0235			0.3814
			[-0.15]			[0.79]			[0.15]			[1.10]
Year 2			-0.0206			-0.9740			-0.3177			-0.1011
			[-0.13]			[-0.75]			[-1.61]			[-0.37]
Year 3			-0.0005			-1.7354			-0.0317			0.0555
			[-0.00]			[-1.37]			[-0.23]			[0.16]
Domestic acquisition												
Merger year	-0.3379		-0.3939	-0.4853		-0.9068	-0.0381		-0.0938	-0.0026		-0.0656
	[-1.02]		[-1.32]	[-0.37]		[-0.65]	[-0.22]		[-0.49]	[-0.00]		[-0.13]
Year 1	0.0634		0.1024	0.9563		1.1342	-0.0831		-0.0226	0.4537		0.3814
	[0.32]		[0.52]	[0.83]		[1.07]	[-0.47]		[-0.12]	[0.59]		[1.10]
Year 2	-0.0321		-0.0681	0.7073		0.6526	0.0111		-0.0881	-0.1987		-0.1011
	[-0.20]		[-0.39]	[0.57]		[0.52]	[0.06]		[-0.45]	[-0.33]		[-0.37]
Year 3	-0.1765		-0.2061	-0.1530		-0.2272	-0.2206		-0.2269	-0.0631		0.0555
	[-1.26]		-1.3369	[-0.14]		[-0.21]	[-1.76]		[-1.57]	[-0.13]		[0.15]
Private target acquisition												
Merger year		0.7540	0.2150		1.3256	1.6204		0.3064	0.4445		0.2072	0.4767
		[1.59]	[1.08]		**[1.21]**	[1.47]		[1.56]	[1.60]		[0.51]	]0.66]
Year 1		0.1103	0.0227		-0.4502	-0.5820		-0.1826	-0.1670		-0.3039	-0.3472
		[0.47]	[0.09]		[-1.51]	[-0.07]		[-1.01]	[-0.75]		[-0.83]	[-0.70]
Year 2		0.2354	0.1693		-1.3045	-0.6120		-0.0172	-0.1483		0.5439	0.5182
		[1.49]	[0.93]		[-0.95]	[-0.08]		[-0.09]	[-0.62]		[1.92]	[1.43]
Year 3		0.0940	-0.0533		-1.5843	-1.5527		-0.0214	0.1598		-0.0732	0.0377
		[0.61]	[-0.29]		[-1.05]	[-1.07]		[-0.13]	[-0.75]		[-0.35]	[0.09]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.1477	0.7860	0.1824	0.1290	0.1486	0.2750	0.1203	0.1673	0.1214	0.3120	0.5687	0.2888
Serial corr (p-value)	0.2590	0.3365	0.5370	0.1444	0.5545	0.167	0.8838	0.2340	0.9607	0.1487	0.3321	0.7542
Observations	287	287	287	287	287	287	287	287	287	287	287	287

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.3C: M&A and executive compensation: impact of domestic and private acquisitions for South African firms

SOUTH AFRICA															
	Cash			**Equity**			**Stop**			**Total**			**TBCOM**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Lagged EC	0.0818	0.0203	0.0826	0.1427	0.3249	0.1316	0.5105	0.3669	0.5365	0.1457	0.0827	0.1150	0.2738	0.2111	0.3612
	[1.96]**	[2.22]**	[1.88]*	[1.93]*	[2.10]**	[1.78]*	[7.43]***	[4.12]***	[7.43]***	[2.48]**	[2.32]**	[1.77]*	[3.14]***	2.46]**	4.08]***
Sales	0.1295	0.1164	0.1515	0.0121	0.0877	0.1466	0.1609	0.0052	0.2682	0.0374	0.0078	0.0323	0.0536	0.0657	0.0651
	[3.01]***	[3.08]***	[3.41]***	[0.03]	[0.66]	[0.43]	[0.35]	[0.02]	[0.74]	[1.90]*	[1.72]*	[1.83]*	[1.10]	[1.30]	[1.13]
ROE	0.0008	0.0007	0.0010	0.0056	0.0056	0.0053	0.0005	0.0009	0.0012	0.0005	0.0002	0.0004	0.0018	0.0021	0.0017
	[1.08]	[0.90]	[1.37]	[2.21]**	[2.34]**	[1.82]*	[0.11]	[0.14]	[0.21]	[0.47]	[0.17]	[0.35]	[1.54]	[1.70]	[1.48]
MTB	0.0001	0.0002	0.0008	0.0244	0.0252	0.0279	0.0123	0.0093	0.0058	0.0063	0.0062	0.0060	0.0021	0.0027	0.0014
	[0.04]	[0.05]	[0.26]	[2.5]***	[3.91]***	[3.95]***	[0.76]	[0.60]	[0.31]	[3.30]***	[3.22]***	[3.56]***	[1.50]	[1.99]**	[1.00]
Merger effect															
Merger year	0.1439	0.1779	0.1775	0.0182	0.9504	0.2410	0.2098	0.3679	1.1432	0.4266	0.4937	0.5382	0.2254	0.0187	0.3346
	[1.85]*	[3.00]***	[2.13]**	[2.04]**	[1.87]*	[2.28]**	[1.71]	[1.74]*	[1.55]*	[2.58]***	[3.64]***	[2.02]**	[1.29]	[0.15]	[1.57]
Year 1	0.2321	0.1190	-0.1863	1.1184	0.3690	-0.4612	-0.7527	-2.1861	0.0763	-0.3228	-0.1092	-0.0585	-0.0289	-0.0525	0.0169
	[1.88]*	[2.10]**	[-0.83]	[1.70]*	[0.75]	[-0.64]	[-0.60]	[-0.76]	[0.03]	[-0.60]	[-0.82]	[-0.27]	[-0.20]	[-0.56]	[0.11]
Year 2	-0.3998	-0.0902	-0.3859	-1.6926	-0.5193	-1.5734	-3.3278	-2.4589	-2.2513	-0.4864	-0.1139	-0.3332	-0.2668	-0.0820	-0.1943
	[-3.62]***	[-0.77]	[-2.22]**	[-2.58]**	[-0.94]	[-2.60]**	[-2.87]***	[-2.07]**	[-1.01]	[-4.22]***	[-0.73]	[-1.57]	[-2.70]***	[-0.84]	[-1.19]
Year 3	-0.5032	-0.5017	-0.5481	-1.8649	-0.4995	-1.4378	-2.4973	-1.4248	-3.8054	-0.4164	-0.2064	-0.3048	-0.1352	-0.0295	-0.1250
	[-3.73]***	[-3.71]***	[-3.09]***	[-2.08]***	[-0.84]	[-1.76]*	[-1.89]*	[-1.51]	[-1.64]	[-2.65]**	[-1.63]	[-1.75]*	[-1.46]	[-0.43]]	[-1.09]
Deal Size															
Merger year			0.1598			0.2610			0.2089			0.0808			0.3014
			[2.03]**			[2.29]**			[0.10]			[2.40]**			[1.74]*
Year 1			0.1811			0.4576			-1.5214			-0.1214			-0.0992
			[1.23]			[0.62]			[-0.69]			[-0.86]			[-0.88]
Year 2			0.1749			1.0536			-0.6571			0.1143			0.0456
			[1.28]			[1.79]			[-0.4]			[0.65]			[0.33]
Year 3			0.2215			1.5358			3.6545			0.1588			0.0347
			[0.35]			[1.43]			[2.05]			[0.25]			[0.30]
Market response															

Merger year			0.0167			1.6792			1.2433			0.0465			0.3014
			[2.11]**			[2.28]**			[0.61]			[2.26]**			[1.07]
Year 1			-0.2315			-0.2329			2.5170			-0.1368			-0.0992
			[-1.31]			[-0.21]			[0.94]			[-0.90]			[-0.88]
Year 2			-0.1598			-0.1693			1.2334			-0.1573			0.0456
			[-1.01]			[-0.24]			[0.62]			[-0.84]			[0.33]
Year 3			-0.1271			-1.0096			-0.8727			0.0233			0.0347
			[-0.88]			[-1.16]			[-0.45]			[0.14]			[0.30]
Domestic acquisition effect															
Merger year	0.1958		0.0613	1.2352		1.7055	0.2614		0.3758	-0.1112		-0.0491	-0.2784		-0.2869
	[1.48]		[0.35]	[1.25]		[1.03]	[0.16]		[0.19]	[-0.56]		[-0.20]	[-1.44]		[-1.51]
Year 1	-0.0029		0.2867	0.8670		1.4429	0.2698		-1.7247	0.1388		0.2651	-0.1477		-0.1429
	[-0.02]		[1.14]	[1.03]		[1.34]	[0.16]		[-0.89]	[0.88]		[1.43]	[-0.95]		[-0.84]
Year 2	0.3179		0.4386	1.7343		1.6468	1.8430		0.8413	0.3398		0.5569	0.0608		0.1881
	[2.30]**		[2.31]**	[1.87]*		[2.31]**	[2.32]**		[0.48]	[2.10]**		[2.67]**	[0.51]		[1.34]
Year 3	0.2966		0.3068	1.7689		2.0448	0.3134		3.3933	0.2069		0.1774	0.0050		0.1513
	[1.97]**		[1.81]*	[1.98]**		[2.19]**	[0.18]		[1.88]	[1.14]		[0.65]	[0.05]		[1.29]
Private firm acquisition effect															
Merger year		0.1880	0.2461		0.8132	1.9342		-0.1502	-3.0549		0.2068	0.2025		0.0082	0.0453
		[1.86]*	[1.72]*		[2.34]**	[2.44]**		[-0.11]	[-1.49]		[1.92]*	[1.92]*		[0.05]	[0.29]
Year 1		-0.2898	-0.2700		-1.4755	-1.7765		1.3195	-0.9022		-0.1831	-0.2908		-0.1008	-0.0690
		[-1.02]	[-1.24]		[-2.27]**	[-1.54]		[0.82]	[-0.50]		[-1.17]	[-1.48]		[-0.88]	[-0.51]
Year 2		-0.0531	-0.1354		-1.1330	-1.6506		0.8199	-1.3179		-0.1268	-0.3332		-0.1734	-0.2274
		[-0.36]	[-0.79]		[-1.78]*	[-1.72]*		[0.56]	[-0.80]		[-0.68]	[-1.23]		[-1.50]	[-1.45]
Year 3		0.3163	0.1601		-1.5481	-1.9130		-0.4175	-3.3668		-0.0070	-0.1265		-0.1452	-0.2253
		[1.20]	[0.88]		[-2.02]**	[-1.45]		[-0.29]	[-1.60]		[-0.04]	[-0.56]		[-1.54]	[-1.81]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.9611	0.8336	0.9541	0.3902	0.6815	0.3123	0.1999	0.0865	0.1085	0.1303	0.1466	0.2659	0.1125	0.3046	0.2756
Serial corr (p-value)	0.2072	0.3554	0.2513	0.4793	0.2015	0.2215	0.045	0.6532	0.1441	0.9358	0.8246	0.8512	0.0709	0.8542	0.3244
Observations	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308

Note: Estimation results of our total African sample (77) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

We next investigate whether compensation variations around merger years are due to the impact of some potential firm-specific factors. If M&A activities provide information for executive remuneration determination, then acquirer's firm-specific variables could have a probable contributing effect as well. We employ four acquirer firm-specific dummies: industry effect (takes 1 if acquirer is a financial firm, else 0), diversification and international operations (takes 1 if acquirer is diversified and has international presence, else 0) and cross-listing effects (takes 1 if acquirer is listed on a foreign exchange, else 0). More so, we want to have insight into the possible effect of mode of payment (cash, equity or mix) on pay variations. We consider deals that are paid purely with equity. Equity as mode of payment is chosen because of its potential to align managers and shareholders' interest as evident in literature and in line with the principal-agent argument. We include a dummy that takes 1 if the deal is paid with equity, else 0. Again as in the earlier analysis, we use year dummies to track the yearly variations for each of these variables.

The results are presented in Table 3.4[8]. Generally, it is observed that the inclusion of the firm-specific variables in our estimation do not alter the inference drawn from earlier analysis. We find no evidence of the impact of acquirer's industry and diversification with international operations on changes in various compensation components.

A closer look at the total Africa sample shows a positive significant relation between equity mode of payment and equity compensation in merger-year and one year after merger with a significant decline in the second year. It could also be seen that both private target acquisitions and stock mode of deal payment significantly influence changes in equity compensation. It follows that firms that acquire private targets with equity award their management with significant equity incentives.

[8] For each compensation component, we estimate the coefficients of the factors (firm-specific factors, mode of deal payment effects) individually, with control variables and fixing all in one single estimation. For brevity, we present the results for only the latter because, there are no significant difference in the individual results and those presented in Table 3.4.

We provide two main explanations to the above observation. First, these acquirers might be suffering from liquidity problems (low or insufficient cash position). Hence, they will not have enough cash to settle cash compensations. Their liquidity problem could push them to pursue other firms with excess liquidity. Secondly, a section of the M&A literature contends that private target acquisitions improve stock market value upon M&A announcement (Bae, Chang, and Kim, 2013; Shams, Gunasekarage and Colombage, 2013). Knowing that private target acquisition adds value to equity, managers will be willing to accept more equity compensation, thus, the significant link between private target acquisition and executive equity compensation.

Furthermore, Sapp (2008) studied a sample of Canadian M&A deals and found that cross-listed firms pay their executives higher than the non-listed. Our result for equity compensation, as reported in Table 3.4, is consistent with this study and others (Ntim, et al, 2015; Livne, Markarian, and Mironov, 2013). The cross-listing effect is significant for year one after acquisition. Usually, firms that cross-list do so on advanced markets with the advantage of raising capital with low cost, increase firm liquidity, firm visibility for global recognition and many more.

Besides, the increasing significance of cross-listed firms on equity pay variation is, once again, explained by the use of equity to converge the interest of shareholder and managerial. In fact, cross-listed firms, in principle, are obliged to follow strictly the lay down corporate governance laws, most especially on information disclosure. Compliance with these international requirements builds a stronger corporate governance mechanism of the acquirers leading to closer monitoring and incentive distribution. In addition, the increase in firm size and operational complexity that comes with cross-listing calls for attractive pay scheme to motivate executives to perform (Sapp, 2008).

For the Other African and South African samples, the main variable that distinctively separates the two is the influence of mode of payment. While mode of payment negatively relates cash pay for South African firms, the reverse holds for Other African firms, even though the

relation is weak. Mode of equity payment has a positive influence on equity compensation up to one year after merger for South African sub-sample. Once again, the dissimilarity in the two sub-samples is explained by our earlier argument regarding difference in strength of corporate governance practices and market liquidity.

Our discussion by far is centred on firm executives. Board of directors, on the other hand, are the final decision makers of a firm and their remuneration package might not necessarily be tagged to any specific performance indicators even though they could be paid more if the firm performs extraordinary. Usually, the level of their total compensation rather depends on the total number of meetings within the year. Thus, events such as M&A deal approval by board of directors increases board meeting times, resulting in possible compensation increase. It sound obvious, however, there is no or limited studies that explore the variations in total board compensation under M&A completion. Our study reveals that board of directors are also rewarded heavily for monitoring M&As activities (See last three columns of Table 3.2A, 3.2B, 3.2C and last column of each compensation type in Table 3.4). Similar to executives, we find evidence (at 10% level) for board of director's enumeration increase after successful M&A pegged against market-to-book ratio and deal size for all samples. Furthermore, the reward of South African board is influenced by firm profitability, as measured by ROE. Generally, apart from deal size and return on equity, the selected deal and firm-specific factors do not affect acquirers board compensation changes after merger. Since previous studies on executive pay growth fail to examine the impact of M&A deals on board remuneration, our findings throw light on internal and external executive pay interconnections in Africa.

Table 3.4: M&A and executive compensation: impact of industry, diversification and international operation and cross-listing

	AFRICA (164)				SOUTH AFRICA (77)					OTHER AFRICA (87)			
Components	**Cash**	**Equity**	**Total**	**TBCOM**	**Cash**	**Equity**	**Stop**	**Total**	**TBCOM**	**Cash**	**Equity**	**Total**	**TBCOM**
Lagged EC	0.1171	0.6433	0.1207	0.4371	0.0918	0.0040	0.5327	0.1030	0.3074	0.6066	0.2023	0.2866	0.1661
	[2.16]**	[3.09]***	[1.85]*	[21.54]***	[1.97]**	[2.02]**	[2.36]**	[2.51]**	[3.58]***	[4.62]***	[2.39]**	[3.33]***	[2.16]**
Sales	0.0048	0.0176	0.0771	0.0610	0.0449	0.1631	0.5468	0.0539	0.0088	0.1292	0.2338	0.0048	0.0156
	[0.06]	[0.11]	[1.98]*	[0.86]	[2.02]**	[1.14]	[1.63]	[2.65]***	[0.23]	[0.79]	[0.46]	[2.03]**	[0.08]
ROE	0.0008	-0.0004	0.0019	0.0015	0.0007	0.0019	0.0006	0.0006	0.0006	0.0066	0.0021	0.0035	0.0045
	[0.75]	[-0.23]	[1.34]	[1.18]	[1.04]	[1.85]*	[0.09]	[0.93]	[0.95]	[1.52]	[0.18]	[-0.82]	[-0.55]
MTB	0.0008	0.0090	0.0026	0.0005	-0.0001	0.0137	0.0053	0.0260	0.0020	0.0012	0.3333	0.0023	0.0009
	[6.09]***	[4.68]***	[9.28]***	[4.05]***	[-0.07]	[1.87]*	[0.30]	[1.84]*	[1.78]*	[1.31]	[1.88]*	[7.66]***	[2.08]**
Merger effect													
Merger year	0.0186	0.3587	0.3097	0.0847	0.0634	1.8248	2.8990	0.5658	0.2429	0.0445	1.1523	0.3943	0.4299
	[2.04]**	[2.27]**	[1.83]*	[2.30]**	[2.30]**	[2.14]**	[1.90]*	[1.85]*	[1.70]*	[2.12]**	[2.00]**	[1.75]*	[1.69]*
Year 1	0.1379	0.2318	-0.0108	0.2544	0.1126	-1.1765	-4.1470	-0.1221	0.0336	-0.3650	1.2850	0.0912	-0.0040
	[0.65]	[0.20]	[-0.05]	[1.24]	[0.49]	[-0.96]	[-1.12]	[-0.53]	[0.15]	[-0.79]	[0.97]	[0.25]	[-0.01]
Year 2	-0.0324	-1.8828	-0.1030	-0.2566	-0.3083	0.0572	-6.6077	-0.3995	-0.0400	-0.0907	1.3214	0.3868	-0.2341
	[-0.17]	[-1.38]	[-0.42]	[-1.19]	[-1.47]	[0.05]	[-2.02]**	[-1.53]	[-0.16]	[-0.40]	[1.27]	[1.01]	[-0.53]
Year 3	-0.2515	-1.3388	-0.3007	-0.1633	-0.5868	0.9185	-7.0538	-0.5380	0.0631	-0.2646	0.7204	-0.1077	-0.1521
	[-1.11]	[-0.94]	[-1.23]	[-0.71]	[-2.33]**	[0.73]	[-1.90]*	[-1.63]	[0.35]	[-0.93]	[0.64]	[-0.26]	[-0.26]
Deal Size													
Merger year	0.2285	1.9896	0.1527	0.2540	0.1339	0.6248	0.7117	0.0850	0.1997	0.6509	0.3128	0.4399	0.0990
	[1.74]*	[2.12]**	[2.10]**	[2.47]**	[1.87]*	[1.92]*	[0.32]	[2.46]**	[1.91]*	[3.33]***	[2.45]**	[2.00]**	[2.17]**
Year 1	0.1004	1.3120	-0.2382	-0.3162	0.1418	-0.0693	-1.5131	-0.0838	-0.0806	0.3770	-0.6631	-0.0677	-0.1391
	[0.89]	[1.44]	[-1.83]*	[-2.31]**	[0.94]	[-0.08]	[-0.58]	[-0.60]	[-0.71]	[1.76]	[-0.92]	[-0.32]	[-0.31]
Year 2	0.1867	0.8610	0.0337	-0.0050	0.1223	0.7853	-0.0628	0.1339	0.0505	0.1977	0.0346	0.2082	0.3490
	[1.51]	[1.12]	[0.25]	[-0.04]	[0.89]	[1.43]	[-0.04]	[0.80]	[0.36]	[1.34]	[0.05]	[1.03]	[1.04]
Year 3	0.0425	2.5651	0.0249	-0.0078	-0.0193	1.3522	1.2970	0.3133	0.0203	0.1056	0.2254	-0.0862	0.1223
	[0.34]	[2.79]	[0.19]	[-0.05]	[-0.14]	[1.21]	[1.06]	[1.09]	[0.19]	[0.64]	[0.30]	[-0.47]	[0.30]

Market response													
Merger year	0.0756	1.3806	0.1234	0.1833	0.0381	2.5742	1.0979	0.1333	0.1111	-0.0857	-0.4185	-0.2467	-0.1425
	[0.65]	[2.43]**	[1.90]*	[0.93]	[1.65]*	[2.93]***	[0.76]	[1.69]*	[0.63]	[-0.40]	[-0.42]	[-1.20]	[-0.28]
Year 1	-0.1591	0.8775	-0.0957	0.1379	-0.1974	-0.7454	3.1306	-0.1343	0.0649	0.0337	-0.3431	-0.0603	0.3690
	[-1.35]	[1.02]	[-0.79]	[1.02]	[-1.13]	[-0.62]	[1.11]	[-0.82]	[0.48]	[0.19]	[-0.53]	[-0.36]	[1.07]
Year 2	-0.1040	0.5929	-0.3066	-0.2201	-0.1337	0.7057	1.4494	-0.0256	-0.0753	0.0528	-1.2267	-0.3726	-0.2434
	[-0.94]	[0.71]	[-1.92]	[-1.63]	[-0.86]	[0.76]	[0.75]	[-0.13]	[-0.54]	[0.32]	[-1.06]	[-1.55]	[-1.10]
Year 3	-0.0576	-0.5253	-0.0906	-0.0111	-0.1406	-0.9325	-1.1550	0.0104	0.0263	0.0567	-0.8217	-0.0739	0.1702
	[-0.60]	[-0.63]	[-0.69]	[-0.06]	[-1.05]	[-0.93]	[-0.62]	[0.06]	[0.22]	[0.41]	[-0.97]	[-0.51]	[0.47]
Private firm acquisition effect													
Merger year	0.1357	2.6278	0.1937	-0.0249	0.1445	3.3970	0.6859	2.3102	0.1005	0.2705	1.4807	0.3262	0.1272
	[1.84]*	[2.43]**	[1.98]**	[0.10]	[1.88]*	[2.22]**	[1.21]	[1.72]*	[0.39]	[1.34]	[2.13]**	[2.13]**	[0.24]
Year 1	-0.0416	-3.8225	-0.2427	0.3102	0.3941	0.3503	3.6859	0.3507	0.0678	-0.0377	-2.3778	-0.1600	-0.3903
	[-0.28]	[-3.64]**	[-1.39]	[-1.93]	[2.07]**	[1.91]*	[1.21]	[1.72]*	[0.36]	[-0.14]	[-1.93]*	[-0.59]	[-1.04]
Year 2	0.0606	-3.5001	-0.1620	0.0961	-0.0661	-1.8727	1.5302	-0.2801	-0.2137	0.1726	-1.3233	-0.1909	-0.1155
	[0.42]	[-2.39]**	[-0.871]	[0.56]	[-0.36]	[-1.78]*	[0.51]	[-1.02]	[-1.16]	[0.85]	[-1.68]*	['-0.69]	[-0.37]
Year 3	0.0142	-4.0058	-0.0733	-0.0113	0.1330	-1.4594	-2.5110	-0.0098	-0.3166	-0.1899	-2.1773	-0.1726	-0.2148
	[0.09]	[-3.89]***	[-0.46]	[-0.09]	[0.62]	[-0.91]	[-1.09]	[-0.05]	[-2.11]**	[-0.87]	[-2.17]**	[-0.72]	[-0.63]
Industry effect													
Merger year	-0.0128	-0.4115	0.0774	0.1036	0.1443	-0.8782	-1.7071	0.0656	0.1233	0.0727	0.1603	0.0632	-0.1056
	[-0.08]	[-0.42]	[0.47]	[0.55]	[0.98]	[-0.92]	[-0.99]	[0.31]	[0.52]	[0.40]	[0.16]	[0.30]	[-0.14]
Year 1	-0.1412	-0.9907	0.0471	0.2649	-0.1320	0.9440	[1.0740]	0.0251	0.1083	0.1193	-0.9700	-0.0694	0.1482
	[-1.06]	[-1.23]	[0.31]	[1.89]	[-0.79]	[0.80]	[0.59]	[0.15]	[0.65]	[0.47]	[-1.30]	[-0.34]	[0.23]
Year 2	-0.2011	0.5554	0.0114	-0.0117	0.0921	-0.1722	0.1086	0.2060	0.0519	-0.1066	-0.7253	-0.4862	-0.8832
	[-1.42]	[0.59]	[0.07]	[-0.08]	[0.63]	[-0.22]	[0.07]	[1.07]	[0.41]	[-0.52]	[-0.77]	[-1.95]	[-2.12]
Year 3	-0.0497	-0.0153	-0.0076	0.1004	0.1238	-0.8817	-1.6439	0.0517	0.0485	-0.0481	-1.6801	-0.3469	-0.1368
	[-0.31]	[-0.02]	[-0.05]	[0.68]	[0.73]	[-0.89]	[-0.86]	[0.24]	[0.34]	[-0.26]	[-2.15]	[-1.76]	[-0.31]
Diversification and international operation effect													
Merger year	0.0576	0.7620	0.0314	0.1926	0.0893	0.1893	0.2254	0.1810	0.0211	-0.0439	-1.4217	-0.0782	0.6179
	[0.48]	[1.04]	[0.21]	[1.13]	[0.68]	[0.27]	[0.11]	[0.96]	[0.11]	[-0.16]	[-1.39]	[-0.31]	[1.43]
Year 1	-0.1154	-0.8828	-0.2035	-0.2128	-0.2155	0.7990	1.7259	-0.0652	-0.0380	0.1292	-1.1996	-0.2970	-0.3116

	[-1.06]	[-1.28]	[-1.38]	[-1.38]	[-1.51]	[1.20]	[0.65]	[-0.36]	[-0.30]	[0.56]	[-1.28]	[-1.38]	[-0.98]
Year 2	-0.1849	-1.8169	-0.1049	-0.3473	-0.3736	-1.3895	2.7963	-0.3429	-0.1304	0.0060	-1.6404	-0.3658	-0.4758
	[-1.46]	[-1.49]	[-0.60]	[-1.42]	[-2.62]	[-2.26]	[1.25]	[-1.80]	[-1.34]	[0.03]	[-1.15]	[-1.32]	[-1.17]
Year 3	-0.0156	-2.4648	0.1433	-0.2246	-0.0372	-0.8617	1.9965	-0.0426	-0.1942	0.3090	-1.1677	0.1755	0.0530
	[-0.13]	[-1.55]	[1.11]	[-1.17]	[-0.25]	[-1.13]	[1.05]	[-0.23]	[-1.00]	[1.44]	[-1.47]	[1.01]	[0.14]
Cross listing effect													
Merger year	0.2139	1.1156	0.0929	-0.1733	0.0785	1.7407	-0.0703	0.0579	-0.3234	0.3524	0.7586	0.0639	-0.2971
	[2.00]**	[1.04]	[0.61]	[-0.82]	[0.44]	[1.83]*	[-0.04]	[0.22]	[-1.56]	[1.11]	[0.63]	[0.37]	[-0.26]
Year 1	-0.0662	1.9024	0.1289	-0.0710	0.3439	0.9377	-2.8258	0.3402	-0.0959	0.1230	1.2232	-0.0103	0.1461
	[-0.58]	[2.04]**	[0.94]	[-0.43]	[1.36]	[0.79]	[-1.46]	[1.57]	[-0.53]	[0.62]	[1.37]	[-0.06]	[0.17]
Year 2	0.1413	2.6280	0.2075	-0.0333	0.4715	1.1850	0.3006	0.6629	0.2069	-0.1288	0.6662	-0.0512	-0.0322
	[1.22]	[2.55]**	[1.20]	[-0.21]	[1.58]	[0.93]	[0.20]	[1.15]	[1.48]	[-0.66]	[0.65]	[-0.22]	[-0.06]
Year 3	-0.0257	2.3870	-0.0317	0.0165	0.3806	1.2339	2.7100	0.3033	0.1898	-0.1764	1.3353	-0.2661	-0.1823
	[-0.24]	[2.11]**	[-0.21]	[0.15]	[1.36]	[0.68]	[0.51]	[1.19]	[1.62]	[-1.04]	[1.61]	[-2.19]	[-0.37]
Mode of payment effect													
Merger year	0.2041	2.3664	0.1055	0.0041	-0.2586	3.0175	-1.3088	0.3776	0.1051	0.9340	0.0644	0.4447	-0.3242
	[1.21]	[2.04]**	[0.50]	[0.02]	[-1.77]*	[2.24]**	[-0.58]	[1.70]*	[0.30]	[1.90]*	[0.07]	[1.22]	[-0.48]
Year 1	-0.0785	1.8306	0.0420	-0.0666	-0.2939	0.3965	4.0509	-0.2283	-0.0289	0.5482	-0.0699	0.0623	0.0258
	[-0.69]	[1.67]*	[0.26]	[-0.38]	[-1.72]*	[0.28]	[1.25]	[-1.06]	[-0.13]	[1.72]*	[-0.08]	[0.24]	[0.06]
Year 2	0.1006	-1.6645	0.1076	0.1867	-0.0052	-1.2190	2.8841	-0.2752	-0.0895	0.1606	0.5725	0.1140	0.2246
	[0.87]	[-1.86]*	[0.53]	[1.27]	[-0.04]	[-1.17]	[1.09]	[-1.13]	[-0.49]	[0.94]	[0.64]	[0.37]	[0.83]
Year 3	-0.0085	-1.3669	0.0745	-0.0452	-0.1109	0.1540	1.6742	0.0857	-0.2044	-0.0009	-0.4635	-0.1754	-0.1124
	[-0.07]	[-1.30]	[0.51]	[-0.41]	[-0.65]	[0.13]	[0.70]	[0.44]	[-1.42]	[-0.00]	[0.62]	[-1.01]	[-0.44]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.4153	0.6688	0.6810	0.2800	0.8497	0.2407	0.2458	0.1891	0.2481	0.2692	0.1345	0.2341	0.4901
Serial corr. (p-value)	0.6146	0.2929	0.4316	0.6065	0.8471	0.3808	0.3168	0.8321	0.1534	0.3413	0.2434	0.8414	0.8383
Observations	596	596	596	596	308	308	308	308	308	287	287	287	287

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Further, as discussed earlier, African institutions exhibit weak corporate governance characteristics which executives can use, to a large extent, to influence compensation package design. Our task is to determine the extent to which corporate governance can dictate the level of EC. In general, we observe from the previous analysis that almost all the variables that influence pay rise are only significant in the merger year. Therefore, in subsequent estimations, we do not track the yearly effects on the control variables. We, therefore, estimate equation (2), controlling for firm specific (firm size-sales-, ROE and MTB) and CG factors. The CG factors included in the estimation are board size (number of board members, *BoSize*), board gender diversity (the number of female on the board, *BoGen*), independent directors (number of outside board of directors, *OutD*), age, gender and race of the CEO. We performed individual specifications for all the variable classifications and the results were not different when all the variables are combined in a single estimation. Therefore, we present only the results of the combined estimation.

The total African sample results are presented in Tables 3.5A while those of South African and Other African firms are in Tables 3.5B and 3.5C respectively. From these tables, we still observe persistence in EC and significant effect in the year dummies, just as in earlier analysis, after controling for firm and CG variables. We restrict the discussion to effects of the CG variables and the merger effect in the years after merger. The total African sample results show that board size, board gender diversity, age, gender and race of the CEO has little impact on all ECs. However, we find significant impact of board independent (percentage of outside boards of directors, OutD) on equity compensation changes. This result suggest that firms with large number of board of directors align managerial interest to that of shareholders using more equity pay than cash. Besides, the coefficient of OutD is found to be significantly (negative at 5% level) for total executive compensation. Thus, the results support the view that firms with larger outside board of directors' representation negatively determine executive total pay since

these directors are less likely to be influenced by powerful CEOs. The persistent in compensation changes is highly influenced by board size and board independence. For board of directors, the major CG factor that influence board compensation is the size of the board. Large boards pay themselves less.

Table 3.5B shows the results for Other African firms. Similar to the results in Table 3.5A, Table 3.5B reveals that in general, the coefficients of managerial skills and effort and CEO personality as well as board characteristics are insignificant. This implies that post-merger executive pay determination of Other African firms are unaffected by CEO personality, managerial skills and effort for successful M&A deals. Nonetheless, there exist a weak evidence to support positive relationship between female CEO and total board compensation.

The findings for South African firms in Table 3.5C are similar to the results in Tables 3.5A. However, the experience of the CEO (age) leading the managerial team has a very high positive influence on the level of compensation. The South African market is one of the well-developed and highly regulated markets will require highly experienced managerial team to take investment decision that brings value to shareholders. It is therefore not surprising that the CEO's experience determines pay levels. Conflicting with other studies, our results show little evidence in support of the claim that board size in South African drives the level of executive pay as shown by positive but insignificant coefficient of Board size. South Africa has a very strong regulation and monitoring of executive remuneration, yet CEOs still influence their pay (in line with the managerial power hypothesis) by pushing boards to pay them excessively for carrying out a merger deal. In addition, similar to results of total sample, persistence in executive pay for acquirers in South Africa is stronger for equity compensations compared to other forms of compensation. Could this result also suggest that firms who finance merger deal with equity might be struggling with working capital and will want to reserve more cash to manage increasing short-term expenses of the merged firm?

Table 3.5A: Post-merger executive compensation of African acquirers

Variables	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	-0.0757	[-1.59]	0.1290	[2.30]**	-0.1483	[-2.74]***	-0.4234	[-15.67]***
Sales	0.1163	[2.28]**	-0.2366	[-1.48]	0.0531	[2.55]**	-0.0320	[-0.92]
Return on equity	-0.0002	[-0.32]	-0.0017	[-0.68]	0.0004	[0.51]	0.0002	[0.19]
Market-to-book	0.0002	[3.03]***	0.0119	[16.57]***	0.0019	15.60]***	0.0011	[7.93]***
Age of CEO	0.4773	[1.03]	-0.0471	[-0.02]	0.2040	[0.97]	0.4689	[0.85]*
CEO gender	-8.1437	[-1.06]	3.5163	[0.12]	-3.2328	[-0.90]	-8.6879	[-1.01]
CEO's race	-16.2113	[-1.10]	6.8120	[0.14]	-3.8242	[-0.62]	-17.6911	[-1.45]
Board gender	-0.0023	[-0.37]	0.0435	[0.67]	0.0062	[0.59]	0.0120	[1.25]
Board size	-0.0427	[-1.02]	0.1258	[0.83]	-0.0202	[-0.77]	-0.1050	[-2.77]***
OutD	-0.1616	[-1.04]	1.1268	[1.97]**	-0.2218	[-2.26]**	0.1703	[1.19]
				Merger effect				
Merger year	0.1196	[2.27]**	0.9670	[2.62]**	0.2102	[2.05]**	0.1172	[2.21]*
@ Year 1	1.0847	[2.22]**	0.2135	[0.06]	-0.5118	[-1.22]	-0.9838	[-0.89]
@ Year 2	-1.5940	[-1.17]	-1.0343	[-0.22]	-0.9572	[-1.55]	-1.7959	[-1.09]
@ Year 3	-2.0848	[-1.15]	-0.5805	[-0.09]	-1.1199	[-1.36]	-2.0802	[-0.96]
Year dummies	Yes		Yes		Yes		Yes	
Sargan test (p-vale)	0.8984		0.7953		0.4951		0.5183	
Serial corr. (p-value)	0.9496		0.8426		0.7893		0.6361	
Observation	656		656		656		656	

Note: Estimation results of our total African sample (164) with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. Board gender is the board gender diversity, OutD is the fraction of independent board members, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.5B: Post-merger executive compensation of Other African acquirers

Variables	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	0.1170	[2.11]**	0.1268	[4.13]***	0.2588	[3.80]***	-0.2588	[-3.80]***
Sales	0.1413	[1.93]*	-0.0378	[-0.26]	0.0407	[1.17]	0.0407	[1.17]
Return on equity	-0.0031	[-1.69]*	-0.0058	[-1.44]	0.0004	[0.19]	0.0004	[0.19]
Market-to-book	0.0001	[1.87*]	0.0118	47.35]***	0.0018	[17.76]***	0.0018	[17.76]***
Age of CEO	-0.0139	[-0.06]	0.3607	[0.66]	-0.0676	[-0.57]	-0.0676	[-0.57]
CEO gender	0.2669	[0.07]	-7.7886	[-0.82]	1.3331	[0.64]	1.3331	[1.68]*
CEO's race	-1.0589	[-0.16]	-2.8570	[-0.18]	1.2981	[0.34]	1.2981	[0.34]
Board gender	-0.0012	[-0.08]	0.1197	[0.76]	0.0120	[0.80]	0.0120	[0.80]
Board size	0.0127	[0.32]	-0.0168	[-0.20]	0.0018	[0.05]	0.0018	[0.05]
OutD	-0.0461	[-0.24]	0.0343	[0.09]	0.3434	[1.38]	0.3434	[1.38]
				Merger effect				
Merger year	0.2824	[2.44]]**	-0.0457	[2.07]**	0.3965	[3.43]***	0.3965	[3.43]***
@ Year 1	-0.1239	[-0.31]	-1.1221	[-1.01]	0.1055	[0.46]	0.1055	[0.46]
@ Year 2	-0.2776	[-0.47]	-2.3120	[-1.36]	-0.2360	[-0.68]	-0.2360	[-0.68]
@ Year 3	-0.2145	[-0.28]	-2.8337	[-1.22]	-0.2042	[-0.45]	-0.2042	[-0.45]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vale)	0.3426		0.0723		0.2644		0.264401	
Serial corr. (p-value)	0.8054		0.6461		0.3248		0.3248	
Observation	348		348		348		348	

Note: Estimation results of our Other African sample (87) with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. . Board gender is the board gender diversity, OutD is the fraction of independent board members, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 3.5C: Post-merger executive compensation of South African acquirers

Variables	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	0.0986	[1.83]*	0.4625	[2.77]***	0.0269	[2.30]**	0.2194	[3.99]***
Sales	0.1237	[0.54]	-0.2363	[-0.12]	0.0719	[1.51]	-0.0047	[-0.18]
Return on equity	-0.0002	[-0.05]	-0.0930	[-2.44]**	-0.0002	[-0.13]	0.0007	[0.97]
Market-to-book	0.0052	[0.51]	0.3112	[1.12]	0.0006	[0.09]	0.0020	[2.59]**
Age of CEO	0.2399	[2.30]**	0.9900	[2.29]**	0.0371	[1.86]*	-0.0833	[-1.26]
CEO gender	2.7419	[0.76]	124.4237	[1.61]	1.1487	[0.46]	-0.0265	[-0.16]
CEO's race	-4.3691	[-0.39]	-74.1611	[-0.93]	-1.0555	[-0.45]	-0.0789	[-0.48]
Board gender	-0.0231	[-0.32]	0.2313	[0.48]	-0.0094	[-0.47]	0.0021	[0.35]
Board size	0.0145	[0.08]	1.9086	[0.95]	-0.0266	[-0.54]	-0.0172	[-0.80]
OutD	0.2661	[0.55]	19.4317	[2.74]***	0.4166	[0.96]	0.0773	[0.71]
			Merger effect					
Merger year	1.7452	[2.30]**	2.9275	[2.07]***	0.4281	[2.37]**	0.2689	[2.33]**
@ Year 1	0.2802	[0.19]	2.1737	[2.33]**	0.3287	[3.37]***	0.0682	[0.49]
@ Year 2	0.5743	[0.26]	-4.1748	[-0.42]	-0.2814	[-2.26]**	0.0295	[0.15]
@ Year 3	0.7954	[0.27]	-6.4018	[-0.48]	-0.3070	[-1.79]*	0.2498	[0.96]
Year dummies	Yes		Yes		Yes		Yes	
Sargan test (p-vale)	0.3780		0.9841		0.2173		0.61223	
Serial corr. (p-value)	0.5940		0.6342		0.4433		0.4690	
Observation	308		308		308		308	

Note: Estimation results of our South African sample (77) with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. . Board gender is the board gender diversity, OutD is the fraction of independent board members, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Finally, we run a single regression that controlled for all the firm, deal and corporate governance variables that appear to influence EC changes. The results are presented in Appendices 3C, 3D and 3E. The conclusions of the results from the tables are not different from our earlier observations.

3.3.3 Our results within the African context

We discuss our results as it pertains to the African context. Once again, one of the motivation for this study is the lack of research on this subject in Africa. It is so important due to cultural, market and political differences between Africa and advanced markets where an arsenal of research exist. The discussion in literature on EC post-M&A is somehow inconsistent even though most studies report significant pay increase. Our analysis on this relation shows a very strong connection between EC and M&A activities across all samples. Although this

observation is generally a global trend, the phenomena is exacerbated by different factors within the Africa context.

First, supervision, regulation, rule enforcement and corporate governance practices are serious challenges. Businesses cannot survive and be sustainable if political leaders lack the interest to create the needed serene market environment, which is the case of Africa. In general, most of the African markets do not have comprehensive legal mechanisms that protect investor's interest and managerial behaviour. Even the very few, like South Africa that has a detailed Kings Reports, are criticised for weak implementation and monitoring (Ntim, Opong & Danbolt, 2012). In fact, all countries in Africa have some form of rules implementation, market supervision and legal systems (Okeahalam, 2004), yet the supervision and the reinforcement of these systems is a big problem, which we attribute to unwarranted political interference and lack of governmental will.

Indeed, the role of effective and functioning legal system in developing solid governance systems cannot be over-emphasised. For example, lawsuits against a firm can adverse effect on the current and future profitability of a firm owing to legal cost or firm reputational issues. This development, according to Aharony, Liu and Yawson (2015), provides incentives for board of directors to engage in internal changes as a way of improving the monitoring effectiveness of the board to avoid reoccurrence of similar incidents.

Besides, we think compensation payments disclosed by Africa acquirers, as reported in our study, could be possible higher in reality due to weak payment disclosure issues. According to Okeahalam (2004)'s review on corporate governance issues in Africa, he reports that there is a widespread of undisclosed payment across the continent, motivated by political influences. Indeed, the porous market regulatory systems couple with weak or non-existent corporate governance systems give executives more power to pursue their self-interest resulting in higher agency cost.

Further, among our control variables, market-to-book value is significantly impacts changes in EC after merger across all compensation types. Market-to-book value control for the growth prospects after going through M&A. The Africa market is still green with numerous prospects in various industry sectors. Even though executives have that power to influence their pay, compensation committees consider the growth prospect after merger to award compensations. It is therefore not of much surprise to see MTB values being strongly significant, contrary to most advanced market studies (Coakley & Iliopoulou, 2006; Guest, 2009). To a larger extent, approving of EC by boards is not only a hand-twisting practice but also guided by result-driven determinants that are intended to align managers interest to shareholders. This is supported by the positive significance of performance measures such as changes in sales and ROE, most especially for the South African firms.

Furthermore, studies that control for the approval of the M&A deals by the market, captured by the abnormal returns (CAR) generated through the deal announcements; usually include CAR using a three-day window. The literature on market reaction to M&A deal announcements is mix but what is consistent is the presence of significant abnormal returns immediately around the announcement dates (Coakley & Iliopoulou, 2006; Guest, 2009). In our case, we used CAR(-25, 25) because the Africa market is relatively inefficient and illiquid (Magnusson & Wydick, 2002) and might not be sensitive to short-window CARs, in line with Amewu and Alagidede (in press) who report significant CAR for wider event windows for Africa markets. and also supported by an earlier studies by Sehgal et al. (2012) on some emerging markets. The average CAR (-25, 25) for our total sample, for instance, is positive (that is 9.82%) and far higher than what is reported for advanced markets (Beitel et al., 2004; Doukas et al., 2002; Fee & Thomas, 2004), implying a general endorsement of the M&A deals by the market. Truly, short-event window CARs have no influence on pay changes (statistics not reported but available upon request), meanwhile, we find evidence of wider windows,

CAR(-25,25), to positively impact pay variations. Consistent with earlier studies on Africa market efficiency, we show that the African market takes longer time to respond positively to M&A announcement and remuneration committees in drafting executive pay consider the positive CARs.

Also, we find that board size, in general, is insignificant which contradicts other studies that post a positive relationship between board size and pay variations (Bodolica & Spraggon, 2009b; Bugeja, da Silva Rosa, Duong & Izan, 2012; Dalton, Daily, Johnson & Ellstrand, 1999). For instance, while Bugeja et al. (2012) and others contend in favour of bigger board size regarding effectiveness in board monitoring, Bodolica and Spraggon (2009b) disagrees and argue that smaller boards rather have greater ability to align EC to long-term performance. None of these claims applies in our case. In fact, the difference with these results could be due to regulatory requirement and market size. In Australia, as reported by Bodolica and Spraggon (2009b), board sizes are relatively smaller with very clear board role whereas US firms have larger board size (Maniam, Subramaniam & Johnson, 2006). African board size is between the two groups (averagely 10). The board of directors are mainly representatives of majority shareholders (institutional, family or block holders) or suggested by executives, who are there to serve diverse interest. Thus, the interest direction by these board compositions cancels out effects of divergent positions, depending on the managerial power. This results in weak board monitoring of executives, which calls for strong and tighter external control mechanisms to regulate effectively the behaviour of executives in Africa.

In addition, contrary to studies that post a very strong link between firm size and pay variations (Bodolica & Spraggon, 2009b; Magnan, St-Onge & Thorne, 1995), we find that, generally firm size does not strongly determine pay changes but rather consistent with studies that associate deal size to pay rise after merger (Guest, 2009a) . The Africa market is dominated by multinationals operating in all sectors. Moreover, firms that undergo M&A become bigger

and complex which requires extra skills to manage. Hence, management will push for pay rise that match their multinational counterparts. We confirm that deal size is the most important acquisition feature that significantly impacts pay rise post-merger in Africa, without discounting the extra effect of market response to equity compensation.

More so, studies on these subject that tried to tract the yearly effect of M&A on pay rise report significant positive relationship within the first two years, most significant in the second year after merger, implying compensations are persistent few years after merger (Girma et al., 2006a; Guest, 2009). However, we find that pay persistence is only strongly significant at the end of merger year (especially for cash compensations) with drastic drop in subsequent years. This suggest that in Africa, managerial compensation emanating from M&A deals are predominantly cash-based with the greater portion of these payments received immediately at the end of merger year. Such an observation is consistent with our view that the inactiveness of Africa capital market and unstable macroeconomic indicators force executives to mount pressure on boards to approve and pay their benefits immediately, preferably in cash dominated.

Our findings have many managerial implications for both practitioners and researcher alike. First, implementing rules that enforce payment disclosure is highly essential. Disclosing payments help to bring transparency and can expose secrete demand by dubious politicians and other state regulators. The victims of such unhealthy practice are the local enterprises who do not have the financial muscles, like the foreign multinational counterparts, to satisfy the back-door demand of these public officials, which will have untold consequences on economic development. Secondly, because of ineffectiveness of boards to monitor and discipline management, it is also essential to develop regulatory frameworks that will provide an alternative external monitoring and supervision of managers and possibly board operations in Africa.

Thirdly, apart from building strong and effective judicial systems to deal with firms or individual who misbehave, there is the need to develop detailed and enforceable regulatory structures with special emphasis on sound corporate governance practices. Four, Africa as a market is too small to fragment into country-based markets with unnecessary barriers that hinder market integration. Apart from South Africa, the African markets are similar in their operations and characteristics. Developing, therefore, a single regulatory and corporate governance practices across all markets to enhance uniformity in cross-border operation is surmountable. Finally, from the review of the literature on managerial pay and M&A, there is an abysmal lack of studies, most especially, on corporate governance practices in Africa. There is, therefore, the need to build comprehensive corporate governance databases to set the pace for more research into this area in Africa.

3.3.4 Robustness of results.

We conducted several tests, with different combination of control and other variables, to check for the robustness of our findings. For instance, different measures of firm profitability (ROA), firm size (using market capitalization) and deal restrictions (using cumulative average returns-CAR, to tell whether the deal is value enhancing or not), deal size (large or small deals) were employed in our analysis. There were no differences with the results when we used these alternative variables and the reported findings. So the results were not presented for the sake of brevity (available from authors upon request). More so, and throughout the various analysis, the tests for second-order serial correlation and Sagan's tests (for panel analysis using GMM) do not show any problem with our results.

3.4 Conclusion

This paper contributes to the debate surrounding the effects of completed M&A deals on various EC components (cash, equity, stock options and total compensation) of top three managers. We also include analysis of total board pay in order to understand the management and board members dynamics in terms of compensation determination. Our total sample is made up of 164 completed deals between 2002 and 2016. Due to the uniqueness of the South African market, we further sub-divided our sample into South African (77) and Other African (87) firms to help explore any possible differences in the results. Specifically, this study investigates whether there is a significant change in compensation packages of acquirer's executives in Africa after successful M&A deal. The paper also concluded by exploring the possible determinants of these compensation packages after the merger deals.

First, concerning M&A effect on compensation, shareholders wealth maximization and managerial interest propositions are the two main motives why executives are engaged in M&A deals. While shareholders value maximization hypothesis result in share price and profitability measure increases, that of managerial interest concentrates on increase in firm size, irrespective of the effect it has on firm value reduction. In spite of managerial interest driven acquisitions, management still keep an open eye on the performance (profitability) of the firm in order to avoid being acquired by another acquirer, due to poor performance, and also winning the confidence of the shareholders to escape being fired. Our results show that executives of acquirers in Africa are rewarded heavily in the year of acquisition for completion of successful deals. The change in executive reward after merger is seen in all compensation components (cash payments-salary+bonus, equity and total compensation. including the total compensation of board of directors. These findings, therefore, support managerial interest hypothesis, (through increase in firm size) as the main motive for deal acquisitions in Africa, even though firm profitability (ROE) affects equity payment for the South Africa market. We also noticed

drastic incline in the compensation packages years after acquisition, lasting even into the third year indicating a significant one-off payments in the year of acquisition. However, we find no evidence of higher stock options compensations for South African firms.

In line with the classical view of agency theory and results of Bugeja et al (2012), our findings suggest that executives are awarded higher compensations for exerting effort and skill to execute bigger M&A deals.

Particularly, our empirical analyses show a very strong relation between deal size and level of cash, equity and total pay movements. In the same way, Girma et al (2006a) argue that the act of M&A deals provides information for compensation determination and as such, the way stock market perceive a deal may serve as a signal about M&A and pay variation nexus. We provide a detail analysis on this phenomenon. With the exception of Other African sub-group (possibly due to market inactiveness), we find that market perception of an M&A deal quality can explain level of executive pay rise in the year of acquisition.

Furthermore, one of the inconclusive contemplation in extant literature is whether executives are stirred to prefer domestic against cross-border and private against public target acquisitions. We find significant increase in executive pay after two years of acquisition for South African firms that target domestic deals compared to their counterparts who do cross-border acquisitions. Similarly, we do find that private acquisitions influence pay rise in the first year of acquisition, even though the relationship is weak for Other African firms. We concluded our panel analysis by exploring the possible impact of some firm-specific variables on executive pay movement. We discover that industry categorization, diversification and international operations mode of payment and cross-listing effects, in general, do not drive executive pay determination upon deal completion, even though there is evidence of the influence of mode of payment (stock) effect for South African firms.

Now turning to the effect of corporate governance factors, the results support the view that firms with larger outside board of directors' representation negatively determine executive total pay and there is no evidence that CEO's age and gender influence executive pay. However, the experience of the CEO leading the managerial team has a very high positive influence on the level of compensation for South Africa sub-sample. Consistent with other studies on managerial power proposition, we found that CEO duality plays positively significant role in determining cash and total executive pay. Also, similar to results of total sample and Other African firms, executives of acquirers in South Africa involved in merger deals are paid higher (equity and total compensations) compared to other form of deal financing.

More so, we provide the first exposition on board of directors total pay exposition in relation to the effect of M&A activities. We conclude that board of directors' total reward is higher in the year of deal completion and is influenced, to a large extent, by size of M&A deal. The general results of this study consequently emphasis that dissimilarities in market structure, culture, and firm's specific structure across various geographical locations (countries) have diverse repercussions for executive pay structuring influenced by M&A.

CHAPTER FOUR

MERGERS AND ACQUISITIONS, EXECUTIVE COMPENSATION AND FIRM PERFORMANCE IN AFRICA

4.1 Introduction

Market activities such as Mergers and Acquisitions (M&A) have been the centre of heated debates globally after the 2007-2009 financial crises. What is even more interesting is the overwhelming growth in M&A activities over the past decade. According to Zephyr (2008), the global merger deals reached a record high of USD 5.58 trillion in 2007 even though the market experienced some decline in deal value thereafter. In spite of the intense global stock markets volatility coupled with declining oil prices, unsteady economic conditions in some parts of Europe, and increasing interest rates in most emerging markets, during and immediately after the crisis, 2014 still saw a USD 4.7 trillion worth of global M&A activity (ClearSight, 2015, Zephyr, 2014). The year 2016 began with the biggest deal between America's Shire plc and Baxalta, valued at USD 32 billion. The growth of M&A market competition is expected to continue in the years ahead and this will be driven by private equity and strategic acquisitions most especially on emerging markets. This raises questions on the motive behind these deals and whether these activities create wealth for shareholders.

Researchers over the years have showcased various motives why firms undertake M&A. Notable among them are economies of scale and scope, monopoly power, financial and operational synergies, diversification and many more (Hayn, 1989). All these motives are supposed to be geared towards wealth maximization for shareholders. Rationally, managers will not make any acquisitions if they believe the transaction will not enhance stock prices. This argument is consistent with some studies, done in the USA, which reported stock market gains for acquiring firms and is an indication that M&A deals are value-enhancing to shareholders (Boyson, Gantchev & Shivdasani, 2017; Shick & Jen, 1974). Additionally,

Dutordoir, Roosenboom and Vasconcelos (2014) show that the disclosure of forecasted synergy values in M&A activities is value-enhancing for acquiring firms based on the claim that they experience higher stock returns.

However, there is a contrary argument in literature that *value enhancing* might not be the principal motive for M&A deals, but rather managers engage in these deals for personal interest. Firth (1991) points out earlier that M&A deals are carried out by senior managers whose self-interest could influence the nature and the direction of deals. The same author also explains that this self-interest drive is rooted in managers' fight for safety of job tenure, prestige, power and remuneration packages which are executed through maximising firm size.

This line of argument is supported by the inconsistencies in numerous researches that seek to establish a link between M&A and firm values. Intuitively, deals surrounded by personal interest could obviously affect firm value or performance. It is, therefore, no surprise that Tuch and O'Sullivan (2007) found no evidence that M&A transactions improve firm value but rather have negative impact in both short and long run. More so, Asimakopoulos and Athanasoglou (2013) examined 170 acquiring firms in the European banking industry from 1990 to 2004 and found that shareholders earn negative abnormal returns, although statistically insignificant. Some researchers blame the dismal post-merger performance on over-exaggerated premium paid to target firms and the use of equity-based source of deal financing (Uddin & Boateng, 2009).

Executive incentives awarded to management of large non-performing financial firms in the US have attracted criticism due to the role it played leading to the 2007-2009 global economic crises. Executive Compensation (hereafter referred to as EC) in an M&A context is one of those corporate governance issues that have received a lot of attention by researchers. In the face of information asymmetry and the possibility of executives taking excessive cost, when not properly monitored, literature suggests that compensations should be completely

linked to performance (Eisenhardt, 1985). However, market activities such as M&A attract extra remuneration packages. What is not clear from literature is whether the extra rent requested by managers post-merger is linked to firm performance.

Linking EC to firm performance appears to be a rational way to motivate management to perform and improve professional growth (Roberts & Milgrom, 1992). While this argument, from the viewpoint of economic theory, makes a lot of sense, some difficulties might be met in practicality. Strategic corporate decisions either have future implications for firms in short or long term. For instance, of what use is it for a manager to take investment decisions today that will influence greatly on firm profitability in over ten years when he might not be in office to benefit from it? This will tempt managers to concentrate on short-term performance of the firm to increase their compensation. Obviously, the phenomenon possesses many long-term sustainability issues for companies. Camuffo (2009) studies compensation packages of 40 firms (FTSE/MIB Index) and finds that long-term managerial incentive constitute about 30% of entire executive compensation package. Disproportionate composition of short and long-term incentive packages for executives could encourage them to falsify and manipulate financial figures about their performance in favour of their short-term benefits (Harris, 2009; Harris & Bromiley, 2007).

The literature that examine EC and performance post mixed results. In some instances, the results showed no or weak relationship between EC and performance. Gigliotti (2013) analysed the relationship between EC and performance of Italian firms listed on the Milan Stock Exchange from 2004 to 2009. His finding does not demonstrate any link between EC and firm performance. Kubo (2005), Tosi, Werner, Katz and Gomez-Mejia (2000) and Camuffo (2009) also confirmed similar results. Gigliotti (2013)'s work is one of the few with such finding. A possible explanation could be the nature of the Italian financial market. Australia, even though still considered as an advanced emerging market, could respond to

certain market occurrences differently. In fact, Izan, Sidhu and Taylor (1998) investigated the relationship between CEO salary and firm performance on some listed Australian companies and found no relationship. However, a study by Merhebi, Pattenden, Swan and Zhou (2006) and Rankin (2007) on the same market established a strong connection between those variables.

Murphy (1986) was one of the early writers on EC and performance. He analysed publicly listed companies in the United States of America (USA) and established a positive relationship between the two variables. Subsequently, Jensen and Murphy (1990), Barber, Ghiselli and Deale (2007) and Eichholtz, Kok and Otten (2008) conducted similar studies on advanced markets (US, UK, Canada and Australia) and also found a positive relationship between EC and performance. Of most relevance and particular interest are the very few studies conducted on the South African market (Deysel & Kruger, 2015; Ntim et al., 2015a; Scholtz & Smit, 2012). They analysed and expand the empirical evidence on EC and firm performance. Their results on the relationship between EC and performance were mixed.

A number of explanations can be advanced to put in perspective the incongruities in these results. First, studies suggest that the poor post-merger acquirers performance are influenced by firm and deal-specific characteristics such as deal size, form of deal (domestic or cross-border), deal type (conglomerate or others) and target ownership private or public (Capron & Shen, 2007; Duchin & Schmidt, 2013).

Second, deal and firm-specific factors may not be the only cause of the variations in these results but rather geographical and institutional practices (Kapopoulos & Lazaretou, 2007). Unfortunately, most of the studies on this matter are predominantly centred on very few advanced economies, which exhibit similar market and institutional characteristics. Hence, applying the same research framework to emerging markets in Africa (with different institutional context and corporate governance practices} could produce misleading results (Ntim et al., 2012).

Third, even within the same African markets, there could be variation due to strength of governance practices. For instance, South Africa has better, well-outlined corporate governance systems, implemented through the King Reports, on executive pay and director's ownership. Although the South African market has been criticised for poor record of implementing and monitoring corporate governance laws (Ntim et al., 2012), these structures are non-existent in other parts of Africa, which arguably has the potential to influence corporate governance standard and firm performance.

Finally, earlier studies have been cited to show weak methodological strength (Beiner, Drobetz, Schmid & Zimmermann, 2006) by not properly addressing endogeneity problems associated with the use of Ordinary Least Squares (OLS) regression estimator, producing incorrect inferences. In short, we see that the literature on EC and performance is inconsistent and also over dominated by Western and advanced markets.

As a result, we examine the impact of executive compensation triggered by M&A on firm performance in Africa. Our study is motivated by the lack of global consensus in literature and non-existing research on this subject across Africa. Africa provides compelling context for our study because of geographical, cultural, institutional and market differences compared to advanced markets where studies on this matter are dominant. Specifically, our study contributes to the existing literature by providing evidence on the EC after merger and firm performance nexus within the African context.

Secondly, the South African market is relatively well regulated and is considered more efficient than other African markets. Therefore, we split our sample into South Africa and other African (hereafter referred to as *Other Africa*) firms to provide detailed insight into possible variation in our findings due to market differences between these two samples. The few studies that examine the same subject in Africa only concentrate on the relationship between EC and performance in South Africa (Deysel & Kruger, 2015; Ntim et al., 2015; Scholtz & Smit, 2012),

most importantly, none factored in the effect of major market phenomena like M&A. As far as we know, this is a maiden research that attempt to address the above problem within Africa in general.

Thirdly, distinctive to this study, we employ various deals, firm-specific and corporate governance variables to properly provide clear insight into the influence of these factors on the EC and firm performance post-merger. Besides, we examine all the major EC components (cash, equity, options and total compensation), which is uncommon in a single study, to track similarities in the results and provide explanations to any variation. In addition, we use four different measures of firm performance (two market measures- Tobin's Q and total stock returns, two accounting returns –return on asset and return on equity) to provide a robustness check on our findings. Finally, we engaged a more robust econometric methodology – the dynamic panel data generalised method of moment - that properly deals with endogeneity associated with panel data.

The remaining of the study is structured as follows: Section two provides a brief review of literature on EC, firm performance and corporate governance in Africa while Section three outlines the data and methodology. Section four shows the empirical results and discussion and Section five concludes.

4.2 Literature review

The *Agency Theory (AT)* is one of the most widely used corporate governance theory in behavioural finance research. The theory according to Arnold and De Lange (2004) provides a foundation to understand human organization arrangement including executive compensation, auditing and bonding arrangement. It is a theory that shows the relational dynamics between two parties. The relation as defined by Jensen and Meckling (1976) as "*a contract under which one or more persons (the principal) engage another person (the agent) to perform some service*

on their behalf which involves delegating some decision making". The AT describes the scenario where the principal, in this case, the firm's stockholders, are not physically managing the firm they own. They subsequently hire an agent, in our case the executives or managers, to manage the firm on their behalf, which involves delegating decision-making authority to the agents. The AT assumes that principals are risk averse, material remuneration are necessary to motivate agents to work (in the interest of principal), higher monetary incentives causes better managerial effort and the effort of the agents is difficult to observe (Long & Walkling, 1984; Shapiro, 2005).

Primarily, executive compensations are given to control "the conflict of interest" between management and shareholders. Managers are not the sole owners of a firm and cannot assume full responsibility for the repercussions of decisions they make on behalf of the company's owners. They are hired to serve the interest of the shareholders by taking managerial decisions that will create value for equity. It, therefore, sounds right to develop various contractual mechanisms, like compensations, to motivate and monitor the managers to align their interest with that of shareholders. Nonetheless, executives sometimes take decisions that are not aligned to that of shareholders creating conflict referred to as *Agency Problem* (Tosi et al., 2000). The cost of resolving this conflict of interest is what proponents of AT call the *Agency Cost* (Weston, Chung & Siu, 1998).

In designing compensation packages to link executives and shareholders interest, the package should be sufficient and comprehensive enough to reduce agency problem and cost, which should result in maximizing shareholders value (Bloom & Milkovich, 1998; Fama, 1980; Jensen & Meckling, 1976). In practice, the AT is concerned about organizational and market mechanisms that reduce the conflict of interest between principals and agents. In addition, to deal with the agency problem, some advocates of the AT suggested two blocks of remedy. First, providing compensation packages tied to performance matrices and adopting

efficient control measures to protect shareholder's wealth (Fama, 1980; Fama & Jensen, 1983a; 1983b; Gaughan, 2015; Gomez-Mejia & Wiseman, 1997; Tosi et al., 2000). Second, Agrawal and Knoeber (1996) identified market for corporate control, use of outside board directors, debt financing and shareholding positions (by large block shareholders, institutions and the firms executives) as the best mechanism to control agency problems. Earlier works by Jensen and Meckling (1976), Jensen and Murphy (1990) and Gomez-Mejia and Balkin (1992) suggest that managerial compensations should be linked to performance and must be split into long and short terms. Wiseman and Gomez-Mejia (1998), Zajac and Westphal (1995) and El Akremi, Roussel and Trépo (2001) also contributed to the discussion by arguing for using long-term incentives to align shareholders interest to that of executives.

4.2.1 Executive compensation and firm performance

Executive Compensation in an M&A context is one of those corporate governance issues that have received a lot of attention by researchers. It is, therefore, not a surprise for the groundbreaking scholarly work on contract theory by two-U.S.A-based academics (Oliver Hart and Bengt Holmstrong) won them the prestigious Nobel Prize in Economics for 2016. Compensations to firm executives are usually linked to pay and performance schemes. However, there are instances where executives are awarded gratuitous bonuses that are not required by existing contracts. In a seminal article, Andre et al. (2004), analysed executive compensation packages before and after a successful merger between two Canadian firms, Abitibi and Donohue. They realized that the real value creation for this deal lay heavily in the hands of the executives. The merger deal triggered a massive change in the executives' compensation packages of the acquiring firm (Abitibi), in spite of its indebtedness, making the executives richer.

Also, Lambert and Larcker (1988) analysed the EC of 35 samples of USA firms involved in large M&A deals from 1976 to 1980. The data comprised of short-term cash (salary + bonuses) and long-term (equity ownership) incentives of CEOs and top three managers of the firms. They first separated the data into two blocks by looking at how the market (firms) react to the various M&A deal announcements using event study methodology. They realised that 21 of the firms showed negative stock price reaction (bad deals) while the remaining 14 reacted positively (good deals) to the announcements. They then went ahead to analyse the effects of the M&A deals on EC types considering the two classes of firms (negative and positive stock price changes). To control for other factors unrelated to M&A, they developed a benchmark using industry characteristic such as firm size, sales growth and industry types. Within a two year window (2 years before and after the M&A deals), they estimated changes in the short term EC before and after deals compare to the benchmark. They found that good M&A deals significantly increase both the cash value and total wealth of CEOs and top managers while bad deals do not. Their result is consistent with Khorana and Zenner (1998), Bliss and Rosen (2001) and Grinstein and Hribar (2004).

Firth (1991) investigated the association between changes in EC of 254 UK acquirers over the period 1974-1980 and two major acquisition motives (shareholders return maximization and managerial interest). Their empirical evidence reveals that senior management compensation packages increase substantially after an acquisition regardless of whether it was a bad or successful deal. He subsequently concluded that takeover deals are motivated by managerial interest to maximise their own welfare. Once again, this finding is consistent with studies carried out by Coakley and Iliopoulou (2006) and Guest (2009). Further, in recent years studies have emerged from other countries that investigate the effect of M&A deals on changes in executive compensation. Bugeja et al. (2012) sampled M&A deals of 177 ASX-listed firms in Australia between 2000 and 2007 to investigate the determinants

of CEO pay following merger deals. They also conclude that acquiring firms reward their CEO significantly after a successful completion of M&A, which does not reflect the firm performance post-merger. Bodolica (2005) and Bodolica and Spraggon (2009b) also posted similar findings from the Canadian market.

Most of the existing corporate governance literature on the subject tries to establish relationship between EC and firm performance with divergent outcomes. Travlos and Waegelein (1992) sampled 266 completed M&A deals (acquiring firms) of the USA firms listed on the NYSE from 1979-1986. Their work provides evidence that the USA firms that announced their acquisition prior to 1980 and offered their executives long-term compensation, high percentage of equity ownership and pay acquisitions in cash experienced abnormal returns post-merger. Conversely, Core et al. (1999) examined the association between CEO compensation, board structure and firm performance using two measure of performance -return on asset (ROA) and total stock returns (TSR). They found a negative relationship between CEO ownership, board structure and firm performance.

Moreover, apart from lack of consensus on the relationship between these two broad corporate finance variables, the African market falls short of adequate literature in this regard. The main scholarly works on the above subject currently found in academic journals post similar results on the relationship between executive pay and performance. Scholtz and Smit (2012), for instance, examined the relationship between short-term EC and performance of 58 firms listed on Alternative Exchanges in South Africa from 2003 to 2010. They use descriptive analysis and conclude that there is a strong positive relationship between the two variables. They attributed their findings strongly to the elaborate standard of corporate governance mechanism outlined in IoD (2002) and IoD (2009). According to the authors, an increase in firm performance over long-term is probable if the King policies insist on tying EC to firm

performance. Nevertheless, none of these African studies considers the possible effect of M&A on EC and its subsequent effect on firm performance.

4.2.2 Corporate governance in Africa

As explained earlier, African firms exhibit weak corporte governance practices (CG) and this has the potential to greatly influence the EC and performance nexus. It is very important to understand CG terrain within Africa. This session, therefore, presents a brief exposure on CG in Africa.

Corporate governance issues have become so much important in recent years due to the devastating role it played leading to the various financial crisis. The recent global financial crisis is a typical illustration of CG failures, which started in U.S.A and spread wildly across the globe, Africa, just like any other emerging region had its share of the impact of the crisis. Investment opportunities, increase in capital mobility and economic growth in Africa, over the past decade, places the continent as the best alternative destination for firms which seek to diversify their operations. In fact, Africa in the near future stands to be the hub for global business if it continues in pursuant of sound economic policies, structural reforms and political stability. As firms increase in size (usually through M&A) and financial intermediary functions of firms broaden, it calls for reinforcement of sound and solid corporate governance practices.

Indeed, Abor, Graham and Yawson (2011) examine the extent to which sound corporate governance practices impact firm restricting following successful acquisitions using 649 U.S.A firm samples from 1991 to 2009. Their results suggest that corporate governance greatly influences restructuring choices such as layoffs and further acquisitions. They further contend that there is no significant difference in post-acquisition performance of acquirers who did further acquisitions and those that did not. In other words, multiple acquisitions do not necessarily alter post-initial firm performance. They attribute their findings to possible

managerial hubris for further acquisitions. The scholarly results the above authors reiterated the role of corporate governance characteristic in firm-related studies.

Corporate governance systems can be classified under two broad classes (even though there are variants), viz. institutional-based or bank-based and market-based. The bank-based system (as seen in Germany and Japan) focuses on stakeholders and these stakeholders, including government, are fairly represented on company boards. While the market-based system (U.S.A and U.K.) is concerned about shareholders who have the mandate to elect their board members. In Africa, there is no specific CG structure but rather what is practised in any individual country is a legacy of its colonial masters. Nevertheless, the market-based system is predominantly practised in Africa, probably due to British colonialism and America economic influence. The market-based system rest mainly on equity financing and widely held share ownership within a highly liquid and efficient markets (Rwegasira, 2000). This in fact, is the main problem of market-based CG systems because in Africa the capital markets are relatively small and illiquid with closely held institutional ownership. These deficiencies is a clear indication of the need for Africa to device a unique CG structure that fits the need, culture and nature of economic development.

The form and nature of corporate governance varies by share ownership structures across countries. If the equity ownership of a firm is diffused, shareholders control rights may have little influence on the managerial team, giving them so much power to manage the assets of the firm in line with their self-maximization. In the same way, closely held firms (largely owned by individuals, families or institutions) are controlled by their majority shareholders who influence management to follow specific investment route in lure of their interest. Emerging markets, in general, suffer from the latter. According to Claessens and Yurtoglu (2013), large and listed firms on emerging markets have larger shareholder dominance, averaging 40% direct ownership for East Asia, over 50% for Latin America and Africa. Foley

and Greenwood (2009) also observe that level of ownership concentration are extremely high following an initial public offers (IPOs) but drops within ten years. Secondly, a vast majority of firms in Africa are informal and the very few formal ones are closely held, especially by families and governments. This poses serious complications to sound CG practices.

In Addition, irrespective of the form of CG system, there is the need for a legal and regulatory environment that provide platform for fair play and discipline the actions or inactions of executives and even shareholders. As mentioned earlier, the trace of CG practices across Africa are rooted in the legacy of individual colonial masters which in fact does not consider company laws peculiar to these individual countries culture and socio-economic characteristics. The weak legal structures coupled with the lack of will of governments to provide sound legislative backing to CG practices could deter potential investors. The protection of shareholders and shareholder's interest is critical to farther the patterns of CG practices within Africa. On the other hand, the interest of other stakeholders such as employees, other institutions, local communities and even governments are equally essential. It will not be surprising to know that most of the firms that blatantly violate basic CG practices in Africa are the multinational firms who take undue advantage of non-existent effective legal and monitoring systems. For example in 2002, a subsidiary of a Nigeria U.S.A-based oil services company- Halliburton paid a bribe of USD 2.4 million to an official in return for favourable tax treatment (Okeahalam, 2004).

Besides, there is no comprehensive CG information disclosure systems in Africa, except South Africa. The few countries who have codes of best practices and guidelines on disclosure of CG information barely enforce them. Moreover, firms deliberately disregard these rules with impunity. Government institutions empowered to enforce compliance are also in bed with the perpetrators because they also benefit. In fact, the few international firms that seek to do the right thing by disclosing the required information such as payments (internal and

external) are rather antagonised by government officials. Lack of transparency on such disclosures give large firms the edge to use the financial muscles to pay their ways through, killing fair competitions and putting untold pressure on start-up businesses. If multinational firms operating in Africa can sacrifice their parochial interest and unanimously forge for adoption of full transparency policy, it will go a long way to discourage corruption and expose individual and government hyenas.

South Africa has one of the well-regulated and highly monitored CG practices in the world through the King Commission reports supported by the solid legal laws on company operating within the financial system. Notwithstanding the above, there is still the need to improve and build a more robust CG structures. For instance, according to Armstrong (2003) the Financial Services Board, which has mandate to regulate financial services operations lacks independence of market participants since the operations of the board are purely financed by levies from these financial institutions. This has the potential to create grave compliance and enforcement consequences within a legal framework (Ntim, 2015).

The fact is that South Africa cannot operate in isolation, in the face of calls for a total integration of the African economy and the drive by South African firms to diversify their operations through M&As across the continent. Solid CG practices in South Africa could be meaningless unless it leads to total liberation of the CG landscape in Africa. One way to do this is to regulate and monitor sound CG practice for all South Africa multinationals operating in Africa irrespective of some country challenges like corruption. In addition, South Africa can take the advantage of the strong institutions and structures to spearhead the development of mechanisms and strategies, taking into consideration the peculiar needs and challenges of Africa, targeting issues of corruption, financial intermediation among many more. This, when well done could set the pace for a total CG transformation, no matter how long it takes, across the continent which has the potential to improve economic development.

The board of corporate directorship is one of the vital CG mechanism that are used to enhance corporate practices and harmonise the interest of managers and shareholders. The board of directors are, usually elected by shareholders and have the power to hire and fire top executives, set management compensations, decide on investments decisions and strategies. The problem with constituting a board (as seen in Africa) is that its management who parade their friends or associates to be elected by shareholders, jeopardising the independence of the board operations, even though they are accountable to shareholders. The board comprise of members with distinctive skills and experiences.

A couple of African related studies have documented a positive link between board diversity-in terms of gender, race and outside directors representation and firm performance (Okeahalam, 2004; Wachudi & Mboya, 2012) while others provide mix-conclusion of the effect of board size and CEO duality (Ntim, et al, 2015b). Board composition and size varies across the continent with South African boards having the least size ranging from four, according to Okeahalam, (2004). What is rather disturbing, according to the same author is that board members in Africa, apart from lack of the needed skills, have limited understanding of their roles, subjecting them to manipulation by management and major shareholders.

Board of directors, through their enumeration committees, are responsible for setting and approving compensation packages for their firm's top management. Management virtually set and approve their own pay packages that are usually not in the interest of shareholders if the board is weak. What exacerbates the situation within the African context is lack of clear and enforceable enumeration disclosure policies at firm and national levels. In spite of numerous challenges, individual countries are taking the right steps to improve CG practices on the continent. Yes, individual efforts can work but holistic and collaborative efforts across all countries can work faster and better.

4.3 Data and Methodology

4.3.1 Data

The sample on M&A deals starts with firms that are listed on the selected African exchanges (South Africa, Botswana, Namibia, Mauritius, Zimbabwe, Kenya, Tanzania, Uganda, Nigeria, Ghana, Ivory Coast, Morocco, Tunisia and Egypt), have made acquisitions from 2005 to 2013, and have available data from 2002 to 2016. Specifically, the firm should have traded on the exchange for at least seven years with available data on EC disclosed in their financial statements.[9] The country selection is motivated by availability of data. The data for our study is from two different sources: Bloomberg database and manual extraction from company annual reports. In addition, inclusion also required availability of data on M&A completion date, acquisition form (domestic or cross-border), target listing (private or public), diversification and international operations, industry classification (financial or non-financial), mode of payment (cash, equity or mix), ownership controls and other corporate governance factors.

Distinct from previous studies that concentrate on only CEO pay, we collect EC (cash, equity, stock options and total compensation) data on top three executives who have been in office for at least three years before and after merger. Firms that disclose compensations for only top two managers are also included in our sample provided there are available data for those two executives over our period of study. We set these requirements in order to meet the basic conditions for balanced panel data without the loss of generalisability. Panel data analysis is best for our work because of the advantages of more degrees of freedom, lesser collinearity among the variables, having both cross-sectional and time-series observations, accounts for individual heterogeneity and ideal in dynamics modelling (Gujurati, 2003). The seven-year

[9] We start our sample selection from 2002 because firms in South Africa were required to start disclosing compensations for their executives in 2002 and results can only be available at the end of the year (IoD, 2002). Therefore, we use that as a starting point for all countries and firms. In addition, we will need three-year firm data for post-merger analysis, which could be available up to 2016.

time series balanced panel data should be adequate to analyse any cross-sectional link between our variable (Core et al., 2003; Core et al., 1999). Variables are classified as compensation components, performance measure, deal-specific, firm-specific and corporate governance factors.

Finally, because our study involves multiple countries, all currencies are standardised to a base currency, which is the U.S.A dollar. The monetary figures are converted to U.S.A dollar using the exchange rate that prevailed at each point in time when the domestic monetary values were recorded. Besides, these monetary figures cannot be analysed without considering the time value of money effect. Therefore, all monetary data collected for analysis are deflated to 2002 U.S.A Consumer Price Index (CPI) since 2002 is the first year for which information could be available (that is three years before the earliest acquisition year of 2005).

4.3.1 Variables

4.3.1.1 Performance variables

Our dependent variable is firm performance, classified as market or accounting-based measures. From the empirical review on EC and firm performance, different variables have been used to measure performance. The accounting-based approach uses accounting ratios to determine the performance of a firm. The commonly used ones are return on asset (ROA), return on equity (ROE), net profit and others. The data from these accounting statements are deemed to be credible and fit for use because of the stringent regulation and conformity to international standards (Eriksson & Lausten, 2000). Despite the dominance of the accounting approach, it has come under severe criticisms. Murphy (1999) and Wernerfelt and Montgomery (1988) contend that the accounting figures are historical in nature and might not explain the future performance of a firm. Besides, regulatory requirements induce fortification of figures. In spite of the shortcomings, accounting ratios are popular and widely used.

On the other hand, market-based measures (for example, Tobin's Q, total shareholder return, abnormal stock returns and stock market benchmarking) consider how the shares of a firm on an exchange perform. Three different approaches are seen in literature. Firstly, a trend analysis approach is used to determine how a firm's shares performed over a period. Secondly, share performance on an exchange is benchmarked to the general performance of a market index (the index of the exchange on which the firm is listed). Finally, a peer group approach that compares the firm's performance to a similar industry firm is also used (Farmer, Archbold & Alexandrou, 2013; Tyson & Bournois, 2005). This study employ the ***Tobin's Q*** (market-based) and ***return on equity*** (accounting based) as our dependent variables for measuring performance. We also introduce other alternative performance measures, ROA (accounting based) and total shareholder return (market-based), for robustness check.

4.3.1.2 Compensation variables

Executive compensation is the pay package provided to senior executives, which is different from what is offered to typical employees. It often includes base-salaries, bonuses and incentives based on the company's earnings such as stocks, stock options and others. These packages are typically negotiated individually and spelt out in the employment contract. The EC packages are developed and structured by the compensation committee, usually formed by the company's board of directors. The committee is usually composed of independent directors charged to design comprehensive remunerations for various executives which impact significantly on the firm's value creation, decision-making and operational strategies.

Executive compensations can be classified as tangible ***(***typically comprise of pay package designs: salaries, short-term -annual bonus, long-term incentives, perquisites and other benefits) and non-tangibles (those that cannot be valued monetarily, but counts a lot to the

personality of the executives) rewards. Because the non-tangibles cannot be easily valued and there is no available data, this study considers only the tangible rewards as discussed below.

Base salaries are fixed unconditional monetary value that companies pay their managers annually, although it is usually paid monthly. In most compensation packages, the base salary is the foundation and cornerstone for other incentives (Murphy, 1998). According to the same author, base salaries for CEOs are determined through competitive benchmarking based on general industry surveys and augmented by in-depth analysis of industry market peers. In recent times, firms limit base salaries to tax-deductible levels and rather increase annual bonuses and long-term enumerations tied to the company's performance targets ((Lavelle, Jespersen, Ante & Kerstetter, 2003; Milkovich & Newman, 2002; Murphy, 1998). Short-term incentives are rewards received by executives for achieving some layout short-term goals within the year under consideration.

According to Ferris, Rosen and Barnum (1995), short-term compensations could be goal-driven incentive (awarded for achieving specific financial standard), discretionary bonuses (awarded to executives discretionally based on a perceived achievement of global organizational results) or formula-driven incentives (granted to executives for achieving some multiple objectives). Annual bonuses, which are based on goal-driven and formula-driven incentives, are the most common short-term incentives. They are meant to motivate managers to achieve extraordinary results, and most often expressed as a multiple of base salary. Henderson (2006) reports that most large firms that had a good year (increase in stock return or improvement on return on equity), pay short-term bonuses ranging from 50% to ten times the base salary.

It has been established that long-term investments generate higher returns than short-term investments. It suggests, therefore, that if managers are adequately remunerated for taking decisions that will enhance short-term growth, the future sustainability of the firm will be

jeopardised. And at such, executive incentives are strategically developed to capture the long-term-return motivation for managers.

Long-term incentives are given to top managers for fusing into their managerial decisions long-term prosperity plans such as increase in value of market equity. Restricted stock awards, stock appreciation rights, stock purchase, stock options and phantom stock plans are some typical examples of long-term incentives. According to Milkovich and Newman (2002), phantom stocks are cash or stock incentives that are determined by the change (increase) in share price at a fixed future date. The same authors analysed the trend of the use of long-term compensations and observed that most American firms are concentrating more on long-term than short-term incentives. The shift to emphasise more on the use of long-term remunerations for top managers are also observed on some other markets such as Canada, Australia, UK and some merging markets. Smith and Watts (1982) and Travlos and Waegelein (1992) show that short-term incentives give managers the room to turn down positive net present value project and rather select invaluable projects that impose heavy expenses after the managers' retire. The long-term incentives will force managers to focus considerably on future firm growth and encourage the managers to stay with the company for a long time. This current development could possibly imply that the total executive compensation plan might have long-term rather than short-term performance of firms.

Perquisites and some indirect financial payments (benefits) are also awarded to executives as part of their compensation packages. Perquisites are special privileges, usually non-financial, that executives enjoy. According to Milkovich and Newman (2002), perquisites comprise of personal perks (such as children's education, use of company properties, free home repairs, tax assistance and legal services) and internal and external perks (luxury apartments, offices, payment of hotel bill and plane tickets, fuel allowances, club membership subscriptions and special parking space). When it comes to M&A operations, one important perquisites that

are included in executive packages are golden parachutes (Subramaniam, 2001).[10] Apart from perquisites, executives also receive benefits for the role they play. Most often, the cost of these benefits are lumped in with the firm's total annual expenses (Gray, 2004). Similarly, benefits that are commonly identified in literature are *insurance* and *supplementary executive retirement plans.* The supplementary retirement plans are specially designed as top-ups to the regular employee deductions for retirements and are usually an unfunded liabilities to the firm (Bodolica, 2005). Benefits and perquisites are essential executive incentives, not without interest for this study, due to their cumulative value and the agency problem it creates in corporate governance.

Following previous studies (Coakley & Iliopoulou, 2006; Ntim et al., 2015a), we classified the various forms of executive compensation into cash (base-salary, bonus and other short-term cash payments), equity (long-term payments using stock), Options (all long-term derivative option granted) and total (includes all compensations received by executives) compensations.

4.3.1.3 Control variables

The corporate finance literature attempts to establish a link between firm performance and EC, which is usually netted by the use of various variables. In line with literature, we group our control variables under deal-specific (DS), firm-specific, and corporate governance (CG) factors. This is intended to capture the various classification impacts on the pay-performance nexus.

The deal-specific factors include deal size, merger form (domestic or cross-border), mode of payment (equity or others), listing effect (private or public target) and same industry

[10] Golden-parachutes are provisions in the EC contract that guaranteed remuneration to executives when the firm experiences a change of control. Subramaniam (2001) specifically defines golden- parachute as "*a contract between a firm and its manager that provides for compensation to be paid to the manager following any 'change in control' event, such as an acquisition, and payable in the event that the manager leaves the employ of the surviving entity for any reason, be it voluntary or involuntary*".

acquisitions. The firm-specific variables are also sub-divided into two categories: first, we consider variables that are reported in literature to correlate for company performance, called main controls (MC) and secondly, other firm-specific variables that has the potential to impact performance; called other firm-specific variables (OFS). The suggested MC variables are capital expenditure (capex), firm size (size), sales growth and stock return volatility (ReV) while that of OFS are foreign ownership, diversification and international operation (D&I), industry classification (financial or non-financial).

Finally, as suggested in literature, we employ various corporate governance variables that capture the influence of board composition, executive power, ownership, gender diversity and CEO personality. These CG variables include board size (BoSize), percentage of outside directors (OutD), institutional ownership (InsOwn), board ownership (BoOwn), executive ownership (ExOwn), CEO's age (AgeC), race of the CEO (RaceC) and gender of CEO (SexC). We also include year dummies to control possible year effects. Unique to this study, we introduce specific year dummies for deal and firm-specific variables to track the impact of these variables on performance post-merger (that is, first three years after merger). Definitions and other characteristics of all variables in our study are presented in Appendices 1A.

4.3.2 Model Specifications and Estimation Strategy

To test the performance compensation relationship, we build a basic model using the variables discussed above as follows:

$$Perf_{it} = \beta_0 + \beta_1 \ln EC_{it} + \beta_2 \ln EC_{it-1} + \sum_{j}^{n} \beta_j MC_{it} + \sum_{k}^{m} \beta_k OFS_{it} + \sum_{q}^{p} \beta_q DS_{it} + \sum_{s}^{w} \beta_s CG_{it} + \beta_{w+1} Acq_{it} + \gamma_i + \lambda_t + \varepsilon_{it} \quad (4.1)$$

where $Perf_{it}$ is the performance measures of firm, EC_{it} is the executive compensation component, Acq_{it} is a set of dummies for each of the first three years after merger, γ_i is company

specific fixed effects (capture unobserved time-invariant factors), λ_t are year dummies (to account for economic wide-shocks) and ε_{it} is the error term. Also, n, m, p and w are the number of variables for main control, other firm-specific, deal-specific and corporate governance variables respectively. We did not include any Heckman (1979) correction factor in the estimation because the explanatory variables of the probit regression that model the probability of a firm undertaking a large M&A are all non-significant.

Again, all the variables in our estimation are measured at the end of every fiscal year and the idea is to measure the effect of EC on performance following mergers. In this case, merger is treated as the event and performance and EC are calculated around the successful mergers.

Estimation of equation (4.1) with the Ordinary Least Square (OLS) gives biased estimates because of endogeneity, heterogeneity and simultaneity issues. First, considering the variables chosen for our analysis, there could be other unobservable factors that correlate with firm performance and EC (for example sales growth has been cited in literature to impact both profitability and level of executive pay- heterogeneity). Secondly, we suspect a reverse causality between our performance measures and the EC component. Majority of studies on this subject establish a significant impact of performance on EC as predicted by agency theory. The feedback effect (reverse causality), as in our case, introduces serious consequences of reverse causality (simultaneity). Besides, empirical and theoretical argument submits that previous EC influences the current performance of a firm. These kinds of endogeneity issues which are properly taken care of, according to Ferreira, Massa and Matos (2009), are the main source of contradicting relationships in literature between EC and performance. Researchers try to resolve the problem of invariant heterogeneity at various firm level by estimating regression models using fixed effects (Roberts & Whited, 2013). Likewise, the use of fixed

effects still results in biased estimate since it does not deal completely with reverse causality and dynamic endogeneity, as argued by (Bennouri, Chtioui, Nagati & Nekhili, 2018).

To avoid all the endogeneity issues outlined above, we employ the Generalised Method of Moment (GMM) estimation technique, as proposed by Arellano and Bover (1995), following Guest (2009) and García-Meca, García-Sánchez and Martínez-Ferrero (2015). GMM does not require knowledge of the data distribution and estimation provides straightforward way to test the specification of the proposed model because of possibility of more moment conditions than the model parameters. Furthermore, according to García-Meca et al. (2015), estimating equation (4.1) using the GMM estimator also takes care of heterogeneous endogeneity and includes the dynamic structure of the nexus between performance and EC using the first difference equation.

Following from the above discussion, we adopt the first difference of equation (4.1) to deal with any firm-specific fixed effects in our estimation.[11]

$$\Delta Perf_{it} = \beta_0 + \beta_1 \Delta \ln EC_{it} + \beta_2 \Delta \ln EC_{it-1} + \Delta \sum_{j}^{n} \beta_j MC_{it} + \Delta \sum_{k}^{m} \beta_k OFS_{it} + \Delta \sum_{q}^{p} \beta_q DS_{it} + \Delta \sum_{s}^{w} \beta_s CG_{it} + \beta_{w+1} Acq_{it} + \gamma_i + \lambda_t + \varepsilon_{it} \quad (4.2)$$

We employ internal instrumental variable technique by using the lags of the independent variables as instruments. This is because it is virtually impossible to get instruments that are orthogonal to firm performance and EC (Pathan & Faff, 2013). In other words, it is difficult to find another variable (i.e external instrument) that correlates with EC but not with the error term. The use of these internal instrumental variables poses a risk of weak instrumentation as the number of independent variables increase. We use the Sargan test to check for the validity and over-identification of our instruments. Secondly, we employ

[11] Firm size, which is proxy for acquirer total asset, is also logged before applying the difference transformation. In addition, the first difference transformation does not apply to dummies in equation (4.2).

Arellano and Bond (1991) test for second-order serial correlation of all the dependent and independent variables.

4.4 Results and discussion

We use the data discussed above to provide an insight on our objectives by addressing the following issues: (a) what is the relationship between firm performance and total EC after merger? (b) is the pay-performance relation different for various pay components? (c) is there any variation between pay-performance relation when using market or accounting measure of firm performance? (d) what is the strength of the relationship for various performance measures and pay components? (e) does the strength and direction of the relationship change with variations in firm size, sales growth, capital expenditure and firm risk?.

Besides, our data also provides extra information on deal, firm and corporate governance-specific factors to determine the influence of these factors on the pay-performance relation by finding out if: (f) the size of the M&A deal, mode of deal payment and industry of the target affect the relation, (g) the target's nationality (domestic or cross-border) and listing (private or public) matter, (h) acquirer's foreign ownership, industry classification, diversification with international operations alter the pay-performance relationship. Considering the nature of corporate governance issues in Africa, it is equally important to provide an insight into how board composition, executive power, gender diversity and CEO personality impacts the pay-performance nexus. Finally, in order to purge our results from the influence of market differences, we provide a comparative analysis by splitting our total data into South Africa and Other African firms in order to distinguish differences in the results of the sub-groups.

4.4.1 Descriptive statistics

Before we discuss the results, we wish to caution readers about some limitations regarding our sample and generalisability. Our total African sample is made up of 164 firms listed on various exchanges in Africa which is made up of South Africa (77) and Other African firms (87). A total sample of 164 might not be representative enough considering the number of listed firms in Africa. The sample represents firms that made single M&A from 2005 to 2013 and have met other selection criteria as discussed previously under *Data*. Besides, South Africa alone accounts for about 47% of our total African sample and has the tendency to skew the results toward South Africa's market characteristic. To minimise this effect we provide separate analysis for South Africa and Other African firms to reflect market complexities and corporate governance regulation. Hence, generalisations and international comparisons should be done with caution.

Table 4.1 provides the descriptive summary of the main variables used in the analysis comprising five panels based on variable classification for all the sample categories. Panel A shows the statistics for various compensation types before and after merger. The general trend before and after acquisition is the consistent across all the compensation types for all sample categories. For instance, we see from the total African sample that executives received average cash compensation of USD 3.11 million prior to acquisition which increases to USD 5.56 million post-merger with a standard deviation of 10.44 and 18.38 respectively. Equity and total compensation (ToCom) increase averagely from USD 1.47 million to UDS 3.43 million and USD 6.96 million to USD 12.40 million respectively. Stock options (STOP) compensation for South African firms also increased from USD 0.7 million with 1.66 standard deviation before merger to USD1.36 million (2.67 deviation) after merger. The increase in pay after merger is probably due to (1) persistence in pay and (2) excess compensations to managers for executing the merger deal. A closer look at the two sub-samples shows two main differences.

First, we see that executives of Other Africa firms are paid averagely higher than their South African counterparts. This observation is quite surprising because we think executives in South Africa should rather be paid more because of market complexity. However, these three reasons could best explain the pay difference between the two samples. Our samples shows that most of the firms involved in acquisitions across other African countries are multinational who have their top management as expatriates. For accepting to work in other parts of Africa, which are generally considered as risky and politically unstable, their compensations could be upward adjusted. In other words, these executives enjoy extra compensations to work for their multinational firms in other parts of Africa. Next, these executives are paid in dollars or dollar equivalent which is a very stable currency compare to the Rand in South Africa. In addition to the above, Other African executives could be taking undue advantage of the weak corporate governance systems in these countries to extract higher pay.

Second, standard deviations for Other African pay types (for both before and after M&A) are higher compared to South Africa. For example, the standard deviation for Other Africa post-acquisition total compensation is 68.56 compared to 9.6 for South Africa. The wider variation in Other Africa pay structure is best explained by the nature and size of these firms. The indigenous firms which are relatively smaller in size and less complex are likely to pay their executives lesser compared to the bigger and complex country-specific multinationals.

Surprisingly, the trend in the statistics of Panel B of the same Table 4.1 is generally in reverse. In this case, the average pre-merger performance measures are relatively high than the post-merger. On average, Tobin's Q decrease from 1.50 to 1.48 while ROA dropped from 8.73 to 8.04 for the total sample. The trend for the two alternative performance measures, included for robustness check, falls in line with the main measures. The reverse movement in pay and performance measures could be suggesting an opposite relation between these variables.

However, comparing the mean of the performance measure for the sub-groups shows a different pattern. While, the market measures (Tobin's Q and TSR) capture a downward trend for South Africa and an upward movement for Other African sub-sample, the accounting measures, however, show an increase for South Africa and a drop for Other African firms. South African firms use one standard accounting standard (that is International Financial Reporting Standards, IRFS) while Other African countries use a mix of either IFRS or Generally Accepted Accounting Principles (GAAP). Lack of uniformity with accounting standards may explain the above variations, in line with Wernerfelt and Montgomery (1988), who contends that variables, as defined by different accounting standards, are likely to provide misleading results when used for the same analysis.

Next, in line with basic expectations, the averages of all the financial variables in Panel C are as expected if we compare pre and post-merger values. After merger, it is expected that firm size (total assets) and capital expenditure will increase. There is, however, a slower growth rate in average sales post-merger. Firms involved in M&A in general tend to stabilise and take full advantage of any synergy emanating from the merger. This has the potential to affect the post-merger sales growth rate. More so, as evident in literature, increase profitability of firms through sales might not be the priority of executives but rather an increase in their compensation position (see Panel A).

Furthermore, mean volatility of all the samples have improved after merger. It should be noted that firms that undergo merger become more diversified and also take advantage of synergy benefits to reduce their risk position. It is therefore in place to see a reduction in stock return volatility, measured as the standard deviation of the stock returns, post-merger. That is, the firm risk for total, South African and Other African companies dropped from 44.91 to 40.70, 43.64 to 40.63 and 46.03 to 42.49 respectively.

In addition, from the same Panel C, 64.64% of firms in the African sample are diversified and have international operations while 37.54% are in the financial industry with 64.45% foreign ownership. Average foreign ownership for all samples is more than 60%. It could be inferred that firms that predominantly involved with M&A activities across the African continent have foreign majority shareholding. However, it is not clear whether the drive for M&A is motivated by the foreign shareholders to diversify their operations.

Panel D starts with deal value distribution for the samples. The mean deal for the total sample is about USD796.06 million with a wide deviation of 3077.66 possibly due to huge acquisitions by from South Africa in the mining industry. 65.24% of the deals were acquisitions from the same industry and as many as 71.34% were domestic. South Africa has been reported to engage in cross-border acquisition across the continent for the past decade. From our sample, we see that South Africa made 74.03% against 68.97% domestic acquisitions by other Africa countries. This goes to suggest that many cross-border acquisitions are made even much more in other African countries. Such an observation is a good signal for Africa to pursue integration and creating sound platform for doing business through continental acquisitions. Africa, in general, is bank or cash-driven economy due to the inactive capital market.

More so, cross-border investors seek to expand their operations in other African countries and as result, they are tempted to transact these deals using cash because they need full control in order to implement their own strategy with least restrictions. It is therefore not surprising to observe that the average equity mode of payment is about 30%. A similar pattern is observed for public (listed) firm acquisitions as well. For example, only about 29% of the total sample acquisitions target public. Acquirers might possibly be avoiding the bureaucratic nature of doing business with public firms across the continent and stringent disclosure requirements but rather targeting private firm acquisition which require less requirement and monitoring.

Finally, Panel E presents the mean and standard deviation for corporate governance factors. First, we look at the board size composition. The mean board size (BoSize), across all samples, revolves around 10 which is contrary to Okeahalam (2004) who contends that South African firms, relative to other African countries, have lower board size. Perhaps, the nature and complexity of the South African firms involved in M&A requires them to have relatively larger board size. Average independent outside board representation is higher for South African firms (55.6%) against 38.54% for Other African companies. Once again, this is due to the stronger institutional corporate governance structures outlined in the King Reports in South Africa. Female board representation (BoGen) is generally low with South Africa having the lowest. We observe similar trend for CEO gender and board ownership. Similarly, mean institutional ownership for total sample is 58.30% (about 69% for South Africa and 49% for other African companies), indicating a highly held block ownership.

Interestingly, board ownership is rather far lower than expected (about 10% on average). According to Claessens and Yurtoglu (2013), large firms and listed firms on emerging markets have larger shareholder dominance (held by individuals, families and institutions), averaging 40% direct ownership for East Asia, over 50% for Latin America and Africa and the boards are dominated by majority share representations. The low share ownership by current board members shows that other persons represent the majority of individuals and family ownership.

Further, only 11.69% observations in our South African sub-samples have black CEOs while that of Other African firms is 48.28%, confirming the dominance of the merger market by foreign companies with high concentration of expatriates in managerial positions. Chief Executive Officer's duality has been argued in literature to greatly influence EC and firm performance (Duru, Iyengar & Zampelli, 2016) and there have been calls by researchers and

policymakers to isolate the CEO and chairmanship position (Finkelstein, Hambrick & Cannella, 2009).

Table 4.1: Descriptive statistics

		Total (164)		South Africa (77)		Others (87)	
Statistics		**Mean**	**Std Dev**	**Mean**	**Std Dev**	**Mean**	**Std Dev**
Panel A: Executive compensation types							
Cash	Post-Acq	5.56	18.38	3.38	5.32	7.48	24.65
	Pre-Acq	3.11	10.44	2.62	6.09	3.54	13.16
Equity	Post-Acq	3.43	28.38	1.15	1.41	5.51	38.93
	Pre-Acq	1.47	10.30	0.76	0.98	2.99	15.64
Stock Options (STOP)	Post-Acq	-	-	1.36	2.67	-	-
	Pre-Acq	-	-	0.70	1.66	-	-
Total compensation	Post-Acq	12.40	50.56	6.31	9.60	17.08	68.56
	Pre-Acq	6.96	23.78	3.75	6.39	8.93	32.03
Panel B: Performance variables							
Tobin's Q	Post-Acq	1.48	0.90	1.44	0.755	1.48	0.93
	Pre-Acq	1.50	0.92	1.54	1.06	1.46	0.77
TSR	Post-Acq	0.26	0.86	0.33	0.99	0.25	0.87
	Pre-Acq	1.87	37.68	3.77	54.98	0.18	0.61
ROA	Post-Acq	8.04	13.88	8.70	17.65	7.33	9.46
	Pre-Acq	8.73	9.56	8.30	9.26	9.12	9.86
ROE	Post-Acq	18.09	28.43	20.48	35.26	15.75	20.65
	Pre-Acq	19.83	24.00	18.86	29.43	20.70	18.02
Panel C: Financial variables							
Firm Size (total asset)	Post-Acq	143.44	212.22	407.25	242.33	11.53	36.21
	Pre-Acq	94.48	79.11	200.61	144.66	5.43	19.11
Capital Expenditure	Post-Acq	4.76	15.50	2.71	6.91	5.34	17.69
	Pre-Acq	2.68	7.96	2.42	6.44	2.91	9.10
Sales growth	Post-Acq	16.25	69.25	11.59	36.31	18.67	79.00
	Pre-Acq	37.23	21.11	34.45	20.14	41.23	2.20
Annual stock volatility (ReV)	Post-Acq	40.70	44.62	40.63	23.65	42.49	51.31
	Pre-Acq	44.91	41.64	43.64	28.32	46.03	50.62
D&I (%)		64.63	47.96	64.94	48.03	64.37	48.17
Financial industry (%)		37.54	48.14	37.66	48.77	35.63	48.17
Foreign ownership (%)		64.45	48.12	63.45	48.15	68.97	46.53
Panel D: Deal and firm-specific variables							
Deal value		796.06	3077.66	502.14	955.71	1056.92	4127.58
Same industry (%)		65.24	47.77	62.34	48.77	67.82	46.99
Domestic (%)		71.34	45.36	74.03	44.14	68.97	46.53
MoP (Stock), %		30.12	40.21	33.38	42.60	27.24	37.99
Public (%)		28.66	45.36	31.17	46.62	26.44	44.36
Panel E: Corporate governance variables							
Board Size		10.81	3.31	10.71	3.11	10.82	3.46
Outside directors (%)		46.0	20.0	54.60	14.94	38.54	20.45
Board gender diversity (%)		6.98	8.67	6.78	10.89	8.79	10.49
Institutional Ownership (%)		58.30	25.99	69.04	22.38	48.79	25.36
Board ownership (%)		9.83	17.10	6.57	12.75	12.71	19.81
Executive ownership (%)		6.70	12.48	6.74	12.41	6.69	12.28
Age of CEO(years)		49.95	6.47	49.62	6.78	50.25	6.21
Race of CEO (%)		31.10	46.43	11.69	32.34	48.28	50.26
Gender of CEO (%)		6.48	24.21	3.12	16.15	9.01	29.24
CEO duality		0.98	0.54	0.68	0.11	1.89	18.22

Note: All monetary values are adjusted in millions (USD) and adjusted by U.S.A 2002 CPI. The definition of all variables are explained in Appendices 1A. Firm size is a proxy for the log of acquirer's total assets. Std Dev is the standard deviation, Pre-Acq is a three-year average of the variable before acquisition and Post-Acq is a three-year average of the variable after acquisition. Deal and corporate governance variables including D&I, industry classification and foreign ownership are firm averages for the year of merger. We deliberately omit mean and standard deviation values for STOP under total African sample because these figures are the same as what is captured for South Africa.. South Africa is the only country with an active derivative market in Africa.

It is therefore, appropriate to show if CEO compensation and firm performance is influenced by CEO duality in Africa. However, this is not applicable to our study because less than 1% of our total sample exhibit CEO duality and its influence on our performance measure will not make any significant difference on our conclusion.

4.4.2 Empirical results

Table 4.2A, 4.2B and 4.2C report the estimation results of various compensation types for all the four performance variables controlling for deal-specific factors. Apart from the firm variables that have been suggested to influence the pay-performance relation (size, Capex, sales growth and risk), we include yearly fixed effect dummies (which we call "year effect") to capture the persistence of the relationship into year 1, 2 and 3 after merger. Throughout our analysis, for every variable introduced, we also include dummy variables for each of the three years after merger. We include lagged value of compensation measure as explanatory variables because we suspect the previous year's pay could have an impact on the management performance effort. The models outline the estimations with specific variables. For each performance measure, we report three similar models.

Model 1 shows the results for estimating our main variables whereas model 2 includes the effect of deal size and model 3 includes other deal-specific variables. The effects of these variables (model 3) were tested individually but we report the results for only the combined estimation for the sake of brevity, as shown in Tables 4.2. The results are consistent throughout all these estimations. Each estimation is repeated for all the compensation types. The Sargan test and second-order serial correlation p-values show the validity of the instrument set and our results are free of any second-order serial correlation issues. The reporting strategy, as presented in Table 4.2A, are repeated for cash and equity compensations as well. Similar but separate estimation are done for South Africa and Other African sub-samples (Appendices 4).

First, we consider the analysis for total executive pay. The direction of the total compensation and its lag coefficients are the same for both market and accounting measure of performance, even after controlling for deal-specific effects. However, the significance of the coefficients are stronger for accounting measures. The lag of total pay weakly relates Q compares to TSR. Overall, we see a reverse relation between current and previous total executive pay with firm performance.

Further, capital expenditure (Capex) positively influences financial performance but not accounting performance. Our suspicion is that the variation in the above observation could be caused by the inability of the accounting measures to properly capture and incorporate all relevant information such as the perception of M&A deal quality by investors which has the potential to change stock price direction. Besides, the use of different reporting accounting standard, as seen in various countries in Africa, regarding what constitute capital expenditure and how it should be reported could cause distortion in any possible trend. By this finding, we infer that firms that invest more in capital projects experience higher market-based returns. The African market has many investment opportunities and investors who seek to explore such opportunities will do so through huge capital investments such as M&A.

In addition, competition is not keen in Africa as might be seen in advanced markets. Investing in capital-intensive projects through M&A to control greater percentage of market share are perceived as good decisions. Hence, the announcement of these investments push other uninformed investors to pursue ownership into these firms resulting in subsequent upward movement in stock performance.

From the same Table 4.2A, model 1, we observe that growth in sales has a negative and insignificant relationship with all performance measures. This finding is quite surprising because growth in sales is considered as one of the major determinants of accounting profitability (Firth, Fung & Rui, 2006). Two reasons best explains the irrelevance of sales on

performance. First, by rational reasoning, firms that are involved in major capital-intensive investments, such as M&A, finance these investments by borrowing other forms of debt related options. As a result, it increases their debt outstanding. Even though sales might increase after merger and subsequently an increase in revenue (all things equal), servicing the high debt and other merger-related costs affects the net profitability of the firm. Second, as argued in literature, increasing profitability through sales might not be the main motive for managers to pursue M&A but rather a means to increase their pay. Thirdly, increase in sales will suffer, in short-run, since executives will be involved in developing and implementing effective strategies that are crucial in managing the merged firms and also dealing with post-merger related issues.

Moreover, the direction of the coefficients of stock return volatility is expected, although not significant. When firms merge, it makes them more diversified (operational diversification) which reduces the risk position of the firm. In line with our expectation, we see that risk (measured by stock return volatility, ReV) are negative but insignificantly related to performance. Finally, the results also show that firm size, as measured by total firm assets, has no significant impact on both market and accounting-based level of performance. This supports the argument that large firms after merger become bigger and complicated to manage. Hence, it requires time to understand the new firm dynamics and how to properly integrate the "adopted-new-executives" into the acquirer's strategic policies.

We next investigate the role of size of deal in influencing the total pay and performance level. To do this, we first estimate the median deal value for our total sample (which is USD563.55 million) and employ dummy variables that takes 1 if the acquisition value is more than the median, 0 if less than the median. These variables are included for each of the first three years after merger to track the year specific impact of deal size post-merger. The results are presented in model 2 of Table 4.2A. The coefficients for all the performance measures

across the three years after merger are insignificantly negative. Therefore, M&A above a certain deal size have no significant influence on firm performance consistently three years after acquisition. However, there appears to be a negative impact on performance suggesting that firms with relatively high deal size are likely to experience lower performance levels.

Furthermore, just as in the case of deal size, we introduced other deal-specific factors to determine the impact of cross-border against domestic, equity mode of payment against others, public against private acquisition and financial against non-financial firms. In contrast to existing studies (Coakley & Iliopoulou, 2006; Guest, 2009; Magnusson & Wydick, 2002), we see that all these factors have no significant impact on the total pay and firm performance relation. Besides, the year fixed-effect dummies show a persistent decline in performance lasting into the third year after merger. The year dummies became insignificant after controlling for all the deal-specific factors.

We now examine if cash and equity compensations impacts performance differently. We estimate the models using the same variables as in the case of total compensation. The results are outlined in Table 4.2B and 4.2C. Similar to total pay, cash and equity compensation relates negatively with all performance measures. However, the lagged values of cash and equity do not have any significant influence on performance (see model 1 of Table 4.2B and 4.2C). This suggests that rewarding executives with cash or equity compensations does not translate into better firm position, contrary to the agency theory argument. Like total pay, the level of capital expenditure strongly influences equity pay and market-based performance. Since high capital expenditure can affect the liquidity position of firms, especially if financed with cash, managerial cash incentive could be affected as well. Therefore, a weak impact of capital expenditure on the link between cash compensation and performance is probable. If executive pay relates negatively to performance and firm size positively impacts pay (John, Mehran & Qian, 2010; Lin, Chou & Wang, 2012), then we expect firm size to negatively

influence performance. This is evidenced in the negative and significant coefficients of firm size for cash compensation. Accounting performance measures fail to capture such impact for equity, possibly due to the inability of accounting measures to effectively capture current stock performance (Gentry & Shen, 2010).

The coefficient of deal size for cash compensation was negative and significant at 5% (see model 1 for Q) which became weaker after controlling for other deal related factors. Total stock returns (TSR) and accounting performance measures show insignificant impact of deal size. Therefore, we have little evidence to conclude that size of merger deal determines the degree of EC and performance level. Our finding is consistent with Grinstein and Hribar (2004) who contend that firms involved in larger deals end up overcompensating their managerial team which does not translate into better performance. We also observe that cross-border acquisitions influence is only significant for accounting performance measures lasting into third-year post-merger for cash compensations. Evidence of cross-border effect is only weakly significant in the third year for equity compensations suggesting a possible long-term positive relation.

Mode of payment (Table 4.2B) negatively and weakly (at 10% level) impact accounting performance. It should be noted that firms that finance the merger deals with only equity are likely to compensate their management with more equity incentives than cash. Moreover, in line with agency argument, when managers are compensated more with equity, it forced them to align their interest with shareholders. Hence, the managers are obligated to work in pushing the market value of the firm's stock prices. It is therefore not surprising to observe a significantly weak positive impact of mode of payment for market-based performance measures (Table 4.2C). The same line of argument might not hold for cash compensation especially if the payment is upfront and not tied to any long-term performance conditions.

Generally, acquiring publicly listed target requires stringent monitoring, documentation and disclosure requirements. These requirements, in one way or the other, are intended to make sure management and board of directors do the right thing to protect the interest of investors. Private firm acquisition, on the other hand, do not require strict adherence to some of these regulatory requirements, especially regarding valuation procedures. Besides, in line with the managerial power view, powerful executives establish interpersonal relations with weak (Essen, Engelen & Carney, 2013).

Notwithstanding that, some managers go beyond etiquette limit to connive with private target management to overvalue deals in their personal interest, which aggravates the principal-agency problems. In lieu to weaker corporate governance practices in Africa, we expect private target acquisitions to have a negative effect on the pay-performance sensitivity. From Table 4.2B and 4.2C, we generally observe negative coefficient for private acquisitions but surprisingly significant for only accounting performance (cash pay).

Further, diversification through acquisitions across industries should reduce the operational risk of the merged firm and a subsequent positive impact on performance. Conversely, same industry mergers should have a reverse or possibly a lesser impact on performance. The results in Table 4.2B find no such evidence for cash compensation and a weak short-to-medium term significant evidence for equity compensations.

Unique to this study, we include time-specific dummies to explore the short-term trend in performance three consecutive years after merger. The accounting performance variables consistently report significant drop in firm performance lasting into the third year after deal completion. For the general results about total executive pay, the accounting performance measures were consistent and more sensitive to detecting significant impact of any of the variable. Hence, factors that depend on market reaction might not be fast to capture market perturbation. Also, insider trading laws are either non-existent or poorly enforced across Africa,

leading to information leakage weeks or possibly months before formal announcements are made. This behaviour triggers movements in market variables, such as stock returns, prior to the real event which dilute the accuracy and power of market measurement tools. Accounting variables do not suffer such deficiencies and are likely to better capture pay-preformation sensitivity in Africa, in spite of the numerous weaknesses as projected in literature (Wernerfelt & Montgomery, 1988).

Understanding firm performance and the role of firm-specific factors in explaining pay-performance dynamics is crucial. In this study, we investigate the impact of other firm-specific factors on our variables of concern. The factors to be considered are foreign ownership composition, diversification with international operation and industry classification. Researchers have tried to study the relationship between diversification and firm performance with mixed results (Doukas & Lang, 2003; Hoskisson & Hitt, 1990). According to Stimpert and Duhaime (1997), diversification influences firm performance indirectly through other channels such as administrative complexity and bureaucratic expenses. Indeed, the African business terrain is characterised by complex bureaucratic process and we expect diversification to influence negatively the pay-performance connection. Besides, firm ownership structures define shareholder's (blockholders, institutions and governments) power and the ability to control management towards their interest. African firms have sizable percentage of foreign ownership (as exhibited by our sample) who are inclined to long-term investment relationships despite general political risk. We expect the high foreign ownership power to persuade management to perform. Finally, Ma et al. (2009) argue that financial firms are closely monitored and heavily regulated due to the risk they bear and that investors expect regulators to intervene to deal with any moral hazard. If this argument holds, then we expect financial firms to perform relatively better than non-financial firms.

Table 4.2A: Effects of deal-specific factors on total executive compensation and firm performance nexus after merger in Africa

Total executive compensation (deal-specific influence)												
Performance (Perf)	**Tobin's Q**			**TSR**			**ROA**			**ROE**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Total compensation	-0,0059	-0,0198	-0,0277	-0,6422	-0,6116	-0,6412	-3,5699	-3,555	-3,7401	-11,0541	-10,8062	-11,2768
	[-2.09]**	[-2.34]**	[-0.46]	[-3.40]***	[-3.84]***	[-3.99]***	[-2.63]**	[-2.83]***	[-2.94]***	[-3.20]***	[-3.38]***	[-3.49]***
Total compensation (-1)	-0,0014	-0,0056	-0,0057	-0,5009	-0,4731	-0,4732	-1,9711	-1,8857	-1,9109	-6,3604	-6,0714	-6,2358
	[-1.73]*	[-1.71]*	[-0.14]	[-1.953]*	[-1.95]*	[-1.29]	[-1.93]*	[-1.18]	[-1.19]	[-1.45]	[-1.77]*	[-1.82]*
Capital expenditure	0,0890	0,0399	0,0418	0,3304	0,0342	0,0152	0,1589	-0,6373	-0,6688	0,2052	-0,8266	-0,9618
	[2.71]***	[2.35]**	[2.41]**	[3.44]***	[1.74]**	[1.83]*	[0.23]	[-1.56]	[-1.18]	[0.12]	[-0.90]	[-1.03]
Firm Size	0,0846	-0,0165	-0,0149	0,4556	-0,0821	-0,1034	-1,2804	-0,5858	-0,3846	-2,796	-0,1134	-0,5303
	[1.35]	[-0.56]	[-0.49]	[1.50]	[-1.02]	[-1.26]	[-0.98)	[-0.93)	[-0.59]	[-0.84]	[-0.07]	[-0.32]
Sales growth	1.4E-5	1.1E-6	1.8E-6	1.3E-5	2.4E-5	2.9E-5	0,0001	0,0001	0,0001	0,0003	0,0002	0,0001
	[0.44]	[0.07]	[0.04	[0.32]	[1.08]	[1.09]	[0.57)	[0.99)	[0.80]	[0.62]	[0.64]	[0.44]
Annual stock volatility	-0,0002	-0,0002	-0,0002	-0,0024	-0,0011	-0,0013	-0,0042	-0,0087	-0,0100	-0,0125	-0,011	-0,0143
	[-0.32]	[-0.59]	[-0.63]	[-1.24]	[-1.44]	[-1.59]	[-0.31)	[-1.40)	[-1.57]	[-0.36]	[-0.69]	[-0.89]
Deal size												
Year 1		-0,1011	-0,0928		-0,2603	-0,2886		-1,1634	-0,9891		-4,9981	-4,6199
		[-1.32]	[-1.18]		[-1.25]	[-1.36]		[-0.71)	[-0.59]		[-1.20]	[-1.09]
Year 2		-0,0721	-0,054		-0,1459	-0,0528		-0,4038	-0,0245		-2,8793	-1,9076
		[-0.68]	[-0.50]		[-0.51]	[-0.18]		[-0.18)	[-0.01]		[-0.50]	[-0.33]
Year 3		-0,0949	-0,0708		-0,0249	0,0358		-1,2737	-1,0892		-5,3534	-4,3603
		[-0.74]	[-0.54]		[-0.07]	[-0.10]		[-0.46)	[-0.39]		[-0.77]	[-0.61]
Cross border												
Year 1			0,0146			0,1848			0,1358			0,3249
			[0.16]			[0.77]			[0.07]			[0.07]
Year 2			-0,0531			0,3061			2,4559			6,8176
			[-0.43]			[-0.91]			[-0.92]			[-1.01]
Year 3			-0,0206			-0,2969			-2,9851			-7,4375
			[-0.14]			[-0.72]			[-0.92]			[-0.90]
Mode of payment												
Year 1			0,0181			0,094			0,1247			0,4827

			[0.18]			[0.35]			[0.06]			[0.09]
Year 2			0,0852			0,1718			0,7869			4,1166
			[0.62]			[0.47]			[0.27]			[0.56]
Year 3			0,0115			0,0536			0,393			0,353
			[0.07]			[0.12]			[0.11]			[0.04]
Listing (Private)												
Year 1			-0,0193			-0,2933			-2,0388			-7,6921
			[-0.21]			[-1.16]			[-1.02]			[-1.52]
Year 2			-0,0432			-0,0716			-0,8466			-6,7538
			[-0.33]			[-0.20]			[-0.30]			[-0.96]
Year 3			0,0699			-0,0641			0,1746			-4,1325
			[-0.44]			[-0.15]			[-0.05]			[-0.48]
Same industry												
Year 1			-0,0954			0,3942			-1,1734			-1,1589
			[-1.16]			[1.78]			[-0.6]			[-0.26]
Year 2			-0,2558			0,4191			-2,0138			-4,323
			[-2.25]			[1.37]			[-0.83]			[-0.70]
Year 3			0,2726			0,1913			-2,8872			-9,7102
			[1.59]			[1.57]			[-0.97]			[-1.29]
Year effect												
@ 1 years	-0,0059	-0,0500	-0,1124	-0,0302	-0,0535	-0,1197	-3,2166	-2,949	-0,8991	-7,8926	-5,7323	-0,1892
	[-0.12]	[-0.88]	[-1.04]	[-0.22]	[-0.35]	[-0.41]	[-3.25]***	[-2.42]**	[-0.39]	[-3.13]***	[-1.85]*	[-0.03]
@ 2 years	-0,0368	-0,0107	0,2246	-0,2581	-0,3356	-0,3499	-4,6174	-4,7991	-4,892	-12,536	-11,5347	-9,0584
	[-0.49]	[-0.11]	[1.41]	[-1.17]	[-1.33]	[-0.81]	[-2.92]***	[-2.42]**	[-1.44]	[-3.11]***	[-2.28]**	[-1.05]
@ 3 years	-0,0326	0,0079	0,1318	-0,2985	0,4899	0,6102	-5,5828	-5,3706	-1,8705	-16,8144	-14,6588	-1,3015
	[-0.41]	[0.07]	[0.68]	[-1.3]	[1.62]	[1.16]	[-3.38]***	[-2.26]**	[-0.45]	[-4.00]***	[-2.42]**	[-0.12]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,9133	0,7236	0,8214	0,4189	0,9311	0,9318	0,3785	0,9289	0,6566	0,6532	0,9324	0,6842
Serial corr (p-value)	0,5850	0,6580	0,6801	0,6345	0,8221	0,7281	0,2318	0,3120	0,3496	0,2526	0,2733	0,3310
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [ ] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Table 4.2B: Effects of deal-specific factors on cash executive compensation and firm performance nexus after merger in Africa

Cash compensation (deal-specific influence)												
	Q			TSR			ROA			ROE		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Cash	-0,1223	0,3852	-0,1676	-0,2546	-0,9789	-1,0044	-6,2301	0,0293	-6,3582	-11,9169	-0,0529	-12,5925
	[-1.92]*	[12.97]***	[-1.69]*	[-3.00]***	[-1.82]*	[-2.63]**	[-2.91]***	[0.29]	[-2.72]***	[-3.17]***	[-0.64]	[-3.08]***
Cash(-1)	-0,0036	-0,0381	-0,0137	-0,1712	-1,1410	-0,2250	0,1568	-1,3829	-0,0227	2,0897	-4,4915	2,3427
	[-0.11]	[-0.67]	[-0.40]	[-1.84]*	[-1.95]*	[-1.99]**	[0.15]	[-1.39]	[-0.02]	[0.83]	[-1.47]	[0.95]
Capital expenditure	0,0591	0,0063	0,0986	0,1988	0,3168	0,2103	-0,0716	0,4338	0,6530	1,5758	1,5117	2,6607
	[1.40]	[0.26]	[1.40]	[1.16]	[1.18]	[1.18]	[-0.09]	[0.71]	[0.55]	[0.73]	[0.76]	[0.98]
Firm Size	-0,4288	-0,0584	-0,4893	-2,3225	-3,3615	-2,2589	-14,9730	-1,7009	-16,0062	-14,9809	-3,8822	-21,2374
	[-1.97]*	[-1.65]*	[-1.83]*	[-3.64]***	[-2.82]***	[-2.92]***	[-2.90]***	[-1.73]*	[-3.04]***	[-1.66]*	[-1.65]*	[-2.30]**
Sales growth	1.4E-5	0,0272	4.2E-5	5.2E-5	0,0001	6.1E-5	3.6E-5	0,5044	-0,0001	-0,0004	10,1189	-0,0003
	[1.52]	[0.17]	[0.51]	[4.75]***	[2.49]**	[1.71]*	[-0.43]	[1.09]	[-0.81]	[-1.40]	[1.30]	[-1.18]
Annual stock volatility	-0,0012	-5.6E-5	-0,0012	-0,0037	-0,0074	-0,0033	-0,0296	-0,0001	-0,0490	-0,0468	-0,0004	-0,0642
	[-0.88]	[-2.19]**	[-0.89]	[-0.76]	[-0.91]	[-0.80]	[-0.93]	[-3.49]***	[-1.50]	[-0.71]	[-3.80]***	[-1.03]
Deal size												
Year 1		-0,1305	-0,1833		-0,1472	-0,4225		0,5192	6,4901		2,8055	5,0157
		[-2.45]**	[-1.65]*		[-0.18]	[-1.05]		[0.37]	[1.56]		[0.81]	[0.86]
Year 2		0,0357	0,1990		2,0327	0,2271		1,6002	6,5950		1,9281	6,1999
		[0.47]	[1.63]		[1.34]	[0.53]		[0.93]	[1.58]		[0.43]	[1.00]
Year 3		0,0676	0,1452		0,1146	0,1787		1,8066	4,8945		3,0821	-0,1157
		[0.95]	[1.29]		[0.14]	[0.43]		[1.25]	[1.33]		[0.69]	[-0.02]
Cross-border												
Year 1			0,1684			0,2529			9,0922			12,9179
			[0.96]			[0.49]			[1.91]*			[1.67]*
Year 2			0,1077			0,4436			12,6110			18,9533
			[0.60]			[0.73]			[2.70]***			[2.43]**
Year 3			0,2382			0,8059			10,7049			11,0168
			[1.30]			[1.34]			[2.27]**			[1.44]
Mode of payment												
Year 1			-0,1325			-0,4945			-7,8674			-11,4053
			[-0.67]			[-0.88]			[-1.73]*			[-1.65]*
Year 2			-0,1333			-0,1875			-7,9822			-12,5016

			[-0.74]			[-0.28]			[-1.82]*			[-1.79]*
Year 3			-0,0596			-0,3634			-8,2318			-12,7365
			[-0.31]			[-0.54]			[-1.80]*			[-1.71]*
Listing (Private)												
Year 1			-0,2609			-0,0882			-11,0063			-11,2054
			[-1.61]			[-0.18]			[-2.24]**			[-1.99]*
Year 2			-0,2404			0,0681			-9,4379			-8,9345
			[-1.46]			[0.12]			[-1.98]**			[-1.72]*
Year 3			-0,1923			-0,0912			-9,5821			-10,0447
			[-1.16]			[-0.16]			[-2.01]**			[-1.69]*
Same industry												
Year 1			0,0681			0,3527			2,4372			-3,1160
			[0.59]			[1.06]			[0.74]			[-0.46]
Year 2			-0,0198			0,0725			2,7731			-2,8555
			[-0.15]			[0.21]			[0.85]			[-0.41]
Year 3			0,1114			0,2992			3,2335			-3,1005
			[0.85]			[0.77]			[0.98]			[-0.48]
Year effect												
@ 1 years	-0,1164	-0,0524	-0,1896	-0,0938	-0,5273	-0,4366	-4,0784	-1,7035	-8,1592	-6,2732	-5,3369	-8,9706
	[-1.35]	[-0.76]	[-1.12]	[-0.31]	[-0.66]	[-0.92]	[-2.60]**	[-1.12]	[-1.79]*	[-1.66]*	[-1.34]	[-1.07]
@ 2 years	-0,1970	-0,0287	-0,2055	-0,3099	-1,9333	-0,6869	-5,3428	-4,7834	-13,9827	-7,4974	-10,5163	-17,9000
	[-1.48]	[-0.30]	[-0.90]	[-1.02]	[-1.57]	[-1.23]	[-2.72]***	[-2.52]**	[-2.73]***	[-1.69]*	[-2.03]**	[-2.00]**
@ 3 years	-0,1864	-0,0710	-0,4043	-0,4651	-1,1236	-1,0751	-7,1980	-4,7595	-13,5068	-12,4040	-12,0091	-11,5675
	[-1.58]	[-0.71]	[-1.56]	[-1.30]	[-1.25]	[-1.57]	[-3.41]***	[-2.51]**	[-2.61]**	[-2.72]***	[-2.29]**	[-1.33]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0.5668	0.4116	0,9810	0.8845	0.5886	0,5809	0.5884	0.8998	0,8422	0.8499	0.9885	0,6528
Serial corr (p-value)	0.5662	0.1998	0,9690	0.5884	0.5556	0,2356	0.7884	0.8854	0.5669	0.7445	0.4886	0,9046
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 4.2C: Effects of deal-specific factors on equity executive compensation and firm performance nexus after merger in Africa

Equity compensation (deal-specific influence)												
	Q			**TSR**			**ROA**			**ROE**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Equity	-0.0731	-0.2820	-0.1400	-0.5835	-0.5791	-0.6188	-2.8246	-2.7202	-2.6472	-9.8505	-9.5986	-9.1293
	[-2.47]**	[-2.42]**	[-2.59]**	[-3.19]***	[-3.18]***	[-3.39]***	[-2.11]**	[-2.04]**	[-1.97]**	[-2.93]***	[-2.87]***	[-2.73]***
Equity(-1)	-0.0493	-0.0446	-0.0596	-0.0429	-0.0423	-0.0458	-1.9175	-1.8506	-1.5800	-5.6410	-5.4556	-4.6065
	[-0.9]	[-0.84]	[-1.11]	[-0.96]	[-0.90]	[-0.16]	[-1.80]*	[-1.74]*	[-1.48]	[-2.11]**	[-2.04]**	[-1.73]*
Capital expenditure	0.0878	0.0916	0.0928	0.2771	0.2831	0.2488	-0.0912	-0.0600	-0.0698	-0.6261	-0.5201	-0.6169
	[2.68]***	[2.76]***	[2.74]***	[3.08]***	[3.10]***	[2.70]***	[-0.14]	[-0.09]	[-0.10]	[-0.38]	[-0.31]	[-0.37]
Firm Size	-0.0958	-0.0953	-0.1060	-0.2016	-0.4027	-0.3836	0.9577	0.9289	0.5760	1.8361	1.7805	0.7212
	[-1.65]*	[-1.65]*	[-1.65]*	[-2.38]**	[-2.38]**	[-2.20]**	[0.77]	[0.75]	[0.45]	[0.59]	[0.57]	[0.23]
Sales growth	4.5E-06	4.7E-06	6.4E-06	-7.6E-06	-6.9E-06	-9.1E-06	-0.0001	-9.7E-5	-1.2E-5	-0.0003	-0.0003	-0.0001
	[0.47]	[0.53]	[0.68]	[-0.31]	[-0.28]	[-0.37]	[-0.58]	[-0.54]	[-0.20]	[-0.63]	[-0.59]	[-0.19]
Annual stock volatility	0.0001	0.0001	0.0002	-0.0017	-0.0017	-0.0017	-0.0004	-0.0005	-0.0036	0.0011	0.0012	-0.0065
	[0.23]	[0.22]	[0.24]	[-0.95]	[-0.94	[-0.94]	[-0.03]	[-0.04]	[-0.28]	[0.03]	[0.04]	[-0.20]
Deal size												
Year 1		-0.1002	-0.0840		-0.2175	-0.1781		-0.3288	-0.0578		-2.3284	-1.7433
		[-1.28]	[-1.06]		[-1.01]	[-0.83]		[-0.21]	[-0.04]		[-0.59]	[-0.44]
Year 2		-0.0666	-0.0438		-0.2400	-0.1256		-0.4748	-0.1146		-3.1634	-2.1749
		[-0.86]	[-0.56]		[-1.12]	[-0.59]		[-0.30]	[-0.07]		[-0.81]	[-0.56]
Year 3		-0.1052	-0.0819		-0.3469	-0.2828		-2.1922	-2.0611		-7.8510	-7.0432
		[-1.32]	[-1.01]		[-1.58]	[-1.28]		[-1.37]	[-1.28]		[-1.49]	[-1.57]
Cross-border												
Year 1			0.0168			0.2228			-0.3896			-0.8104
			[0.18]			[0.87]			[-0.21]			[-0.17]
Year 2			0.0465			0.1682			1.7404			4.9672
			[0.51]			[0.68]			[0.95]			[1.09]
Year 3			0.0173			0.2560			3.4972			9.0670
			[0.19]			[1.02]			[1.90]*			[1.98]**
Mode of payment												
Year 1			0.0184			-0.0595			0.6205			0.0331
			[0.18]			[-0.21]			[0.30]			[0.01]
Year 2			0.0890			0.2822			-0.6337			-4.0665
			[1.88]*			[2.03]**			[-0.32]			[-0.81]
Year 3			0.0152			0.0296			0.2913			0.2125

			[0.15]			[0.11]			[0.15]			[0.04]
Listing (Private)												
Year 1			-0.0293			-0.0127			-0.8321			-4.6708
			[-0.30]			[-0.05]			[-0.43]			[-0.96]
Year 2			-0.0888			0.2756			-0.0544			-4.1502
			[-0.88]			[1.02]			[-0.03]			[-0.84]
Year 3			0.0480			0.1379			0.7216			-2.7048
			[0.50]			[0.52]			[0.38]			[-0.56]
Same industry												
Year 1			-0.1086			-0.0977			-2.8694			-5.9789
			[-1.25]			[-0.42]			[-1.66]*			[-1.39]
Year 2			-0.2697			-0.7778			-2.7414			-6.5299
			[-3.09]***			[-3.29]***			[-1.85]*			[-1.51]
Year 3			-0.2724			-0.3456			-2.8819			-9.2206
			[-3.20]***			[-1.49]			[-1.70]*			[-2.18]**
Year effect												
@ 1 years	0.0056	0.0610	0.1263	0.0142	0.1334	0.0145	-2.8464	-2.6263	-0.2481	-7.5637	-6.2037	1.1271
	[0.12]	[0.96]	[1.13]	[0.11]	[0.77]	[0.05]	[-3.01]***	[-2.06]**	[-0.11]	[-3.20]***	[-1.95]**	[0.20]
@ 2 years	-0.0651	-0.0247	0.0242	-0.0772	0.0583	0.0839	-3.4075	-3.0706	-2.5936	-9.2880	-7.3713	-3.1650
	[-1.01]	[-0.33]	[0.10]	[-0.44]	[0.29]	[0.27]	[-2.63]**	[-2.06]**	[-1.13]	[-2.87]***	[-1.97]**	[-0.55]
@ 3 years	-0.0629	-0.0013	0.1329	-0.0959	0.0980	-0.0499	-4.4019	-3.1399	0.6189	-13.6318	-9.1883	5.0495
	[-0.95]	[-0.02]	[1.10]	[-0.53]	[0.46]	[-0.15]	[-3.29]***	[-2.04]**	[0.26]	[-4.07]***	[-2.38]**	[0.84]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0.5139	0.3228	0.7426	0.2629	0.3228	2.125	0.1929	0.4.428	0.4986	0.228	0.1571	0.5646
Serial corr (p-value)	0.4914	0.4846	0.4820	0.8976	0.9245	0.9273	0.1540	0.1563	0.1531	0.1855	0.1896	0.1079
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Once again, we include year fixed effects and year dummies for each of these variables to capture yearly persistence. From Table 4.3A (total compensation), we observe that foreign ownership positively relate short-term (first two years after merger) performance. The market measures are weakly significant only in the second year while the accounting measures are strongly significant in both first and second years after merger. In addition, industry (financial firms) classification negatively influence all the dependent variables, although the relationship is generally weak. This result is similar to Short, McKelvie, Ketchen and Chandler (2009), who examine the extent to which industry classification explains firm's sales growth among Swedish firms and conclude that industrial classification matters little for sales growth. We find no evidence of the impact of diversification with international operation on performance.

Contrary to what we saw in Table 4.3A, all our firm-specific control variables do not have any significant impact on performance and do not alter our earlier findings (see Table 4.3B). It should be noted that cash compensations are ad hoc and usually determined by level of bonuses. Foreign investors, for instance, target long-term performance and share ownership in promising economies like Africa and as a result will rather encourage equity compensations that align managerial interest to theirs, if they have the right to contribute to executive pay. Hence, we expect firm-specific and other controlling variables to weakly impact the pay-performance relation. In line with this argument, we find a positive and significant impact of foreign ownership that pick in year two for Tobin's Q and significant in year one and two for accounting performance measures. In addition, we find some evidence that suggest positive impact of financial industry classification on performance for equity compensations.

Finally, the agency theory predicts a positive association between corporate governance and firm performance since good CG practices improve efficient managerial decision making, monitoring and reduce resources wastage (Renders, Gaeremynck & Sercu, 2010). Indeed, CG within the African corporate world is critical due to issues of weak CG practices, corruption

and political interferences. We provide a detailed exposition on various CG factors and how they influence executive pay and firm performance.

We classified our CG variables under board composition (board size, outside board representation and gender diversity), ownership controls (executive, board and institutional ownership) and CEO personality (CEO's age, sex and race). The results are presented in Table 4.4A, 4.4B and 4.4C. Model 1 analysis the influence of board and ownership composition while model 2 looks at CEO personality and model 3 estimates all the CG factors, after controlling for other variables.[12] Unlike previous estimations, we do not include year dummies for the individual CG factors because the inclusion does not alter the results in any way. However, we maintained the firm fixed effect year dummies to purge the estimation of any unobserved firm time-invariant factors.

We primarily look at role of board size. Surprising, we do not see any evidence to support the impact of board characteristics (size, outside directorship and gender diversity) on performance for total, cash and equity compensations across all measures. This finding suggests that these factors do not matter when it comes to firm performance in Africa, contrary to agency theory and studies that predict negative impact for size and positive impact for outside representation and female gender diversity. For instance, according to the agency argument, firms with large board of directors experience poor communication, lesser managerial monitoring and prolong decision taking (Guest, 2009b; Jensen, 1993) while outside directors are hard to be controlled by management. The African context is different because of three possible reasons.

[12] Once again, estimations were done individually for the various factors and groups of factors. We however do not report the individual results (available upon request) and the findings from those estimations do not change the overall conclusion of our studies.

Table 4. 3A: Effects of firm-specific factors on total executive compensation and firm performance nexus after merger in Africa

Total executive compensation (firm-specific influence)												
	Q			TSR			ROA			ROE		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Tocom	-0,0728	0,0001	-0,0033	-0,4560	-0,659	-0,655	-0,4863	-3,500	-3,41	-1,0538	-10,7000	-10,4637
	[-2.14]**	[0.13]	[-0.05]	[-2.09]**	[-3.41]***	[-3.41]***	[-1.65]*	[-2.55]**	[-2.49]**	[-1.74]*	[-3.08]***	[-3.01]***
Tocom(-1)	-0,0398	0,0021	0,0038	-0,017	-0,5101	-0,5141	-0,3841	-1,94	-1,87	-0,7995	-6,24	-6,1001
	[-1.81]	[-0.04]	[-0.08]	[-0.07]	[-3.51]****	[-3.56]***	[-1.43]	[-1.88]*	[-1.81]*	[-1.20]	[-2.39]**	[-2.33]**
Capital expenditure	0,1426	0,0873	0,0825	0,3172	0,3288	0,3254	-0,1582	0,01	-0,0961	-0,6704	-0,217	-0,4823
	[-2.18]**	[-2.65]***	[-2.48]**	[-1.69]*	[-3.40]***	[-3.37]***	[-0.23]	[-0.01]	[-0.14]	[-0.40]	[-0.12]	[-0.28]
Firm Size	-0,1075	-0,0824	-0,0882	1,0594	0,4500	0,4247	1,7767	1,3400	1,3400	4,1696	2,99	2,8581
	[-2.05]**	[-1.73]**	[-1.74]*	[-0.23]	[-2.43]**	[-2.32]**	[-1.37]	[-1.02]	[-1.03]	[-1.29]	[-0.90]	[-0.86]
Sales growth	-1.7E-5	-8.1E-6	-2.8E-5	-1.8E-5	-1.4E-5	-1.9E-5	-0,0001	-0,0001	-0,0001	-0,0004	-0,0003	-0,0003
	[-0.15]	[-0.43]	[-0.58]	[-0.26]	[-0.28]	[-0.09]	[-0.69]	[-0.62]	[-0.58]	[-0.79]	(-0.69]	[-0.58]
Annual stock volatility	-0,0002	-0,0002	-0,0003	-0,0035	-0,0024	-0,0024	-0,0036	-0,0053	-0,0036	-0,0083	-0,0154	-0,0117
	[-0.05]	[-0.35]	[-0.43]	(-0.71]	[-1.22]	[-1.25]	[-0.27]	[-0.39]	[-0.27]	[-0.25]	[-0.44]	[-0.34]
Foreign ownership												
Year 1	0,0897	0,0727	0,0741	0,0114	0,0408	0,0376	3,3831	3,2500	3,2600	8,3652	8,1800	8,2095
	[0.44]	[0.90]	[0.92]	[0.05]	[0.17]	[0.16]	[2.05]**	[1.93]*	[1.94]*	[2.04]**	[1.92]*	[1.93]*
Year 2	0,1955	0,1546	0,1582	0,6561	0,3513	0,3436	4,4202	2,9300	2,9600	11,8151	7,6800	7,7855
	[1.96]*	[1.84]**	[1.88]*	[2.30]**	[1.83]*	[1.91]*	[2.38]**	[1.68]*	[1.70]*	[2.87]***	[1.73]*	[1.76]*
Year 3	0,0001	0,1048	0,1079	0,1222	0,3096	0,3130	2,4038	1,5900	1,6100	3,8092	1,4100	1,4415
	[0.01]	[1.27]	[1.30]	[0.17]	[1.27]	[1.29]	[1.48]	[0.92]	[0.94]	[0.94]	[0.32]	[0.33]
D&I												
Year 1		-0,0456	-0,0344		-0,0462	-0,1123		-2,1700	-1,1200		-7,6400	-5,4237
		[-0.51]	[-0.36]		[-0.17]	[-0.41]		[-1.15]	[-0.57]		[-1.60]	[-1.09]
Year 2		-0,1182	-0,1477		0,1098	-0,0914		-0,0221	1,1000		-3,9100	-2,1472
		[-1.31]	[-1.58]		[0.42]	[-0.34]		[-0.01]	[-0.57]		[-0.82]	[-0.44]
Year 3		0,0006	-0,0297		0,1296	0,0591		-1,1600	-0,2170		-7,5300	-5,0646
		[0.01]	[-0.33]		[0.51]	[-0.22]		[-0.65]	[-0.12]		[-1.65]	[-1.07]
Financial												

Year 1			0,0336			-0,209			-3,3000			-7,0520
			[0.39]			[-0.84]			[-1.85]*			[-1.66]*
Year 2			-0,1012			-0,6537			-3,6100			-5,6993
			[-1.81]*			[-2.63]**			[-2.04]**			[-1.72]*
Year 3			-0,0995			-0,2329			-3,1000			-8,2089
			[-1.20]			[-0.96]			[-1.80]*			[-1.88]*
Year effect												
@After 1 years	0,076	-0,0044	-0,025	0,2718	0,0819	0,2058	-4,1854	-3,7600	-5,700	-9,4571	-7,6200	-11,7223
	[-0.28]	[-0.05]	[-0.25]	[-0.92]	[-0.32]	[-0.70]	[-3.16]***	[-2.06]**	[-2.11]**	[-2.87]***	[-1.65]*	[-2.20]**
@After 2 years	-0,1033	-0,0462	0,0106	0,4250	-0,1288	0,2468	-5,2974	-6,4600	-6,5400	-12,1819	-14,5000	-17,7316
	[-0.18]	[-0.49]	[-0.10]	[-0.70]	[-0.46]	[-0.78]	[-3.37]***	[-3.25]***	[-2.37]**	[-3.11]***	[-2.87]***	[-3.09]***
@After 3 years	0,0714	-0,0945	-0,039	0,4887	-0,2108	-0,0759	-5,1532	-5,7600	-5,5200	-11,6091	-12,2000	-16,8442
	[-0.21]	[-0.95]	[-0.35]	[-1.36]	[-0.72]	[-0.24]	[-3.21]***	[-2.79]***	[-2.08]**	[-2.90]***	[-2.33]***	[-2.90]***
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,8854	0,9133	0,8202	0,8552	0,3918	0,9133	0,8199	0,7512	0,9155	0,8445	0,4404	0,9135
Serial corr (p-value)	0,2484	0,6148	0,5701	0,3991	0,6207	0,7743	0,8679	0,2200	0,2095	0,5713	0,2270	0,2508
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 4. 3B: Effects of firm-specific factors on cash compensation and firm performance nexus after merger in Africa

Cash compensation (firm-specific influence)												
	Q			TSR			ROA			ROE		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Cash	-0,2698	-0,3112	-0,3648	-0,8148	-0,77864	-0,8236	2,02361	2,11243	1,9073	4,81667	5,26303	5,5366
	[-0.54]	[-0.60]	[-0.66]	[-1.06]	[-1.02]	[-1.03]	[0.36]	[0.38]	[0.33]	[0.26]	[0.29]	[0.30]
Cash(-1)	-0,0466	-0,0526	-0,0628	-0,1015	-0,0957	-0,1137	0,5627	0,6376	0,6673	1,8323	2,0639	2,2762
	[-0.58]	[-0.62]	[-0.67]	[-0.64]	[-0.61]	[-0.70]	[0.65]	[0.74]	[0.77]	[0.61]	[0.70]	[0.76]
Capital expenditure	0,2528	0,2709	0,2798	0,2679	0,2628	0,3249	-1,1444	-1,3392	-1,6222	0,6574	-0,1795	-0,7026
	[1.76]*	[1.83]*	[1.73]*	[1.72]*	[1.71]*	[1.77]*	[-0.61]	[-0.73]	[-0.87]	[0.10]	[-0.03]	[-0.11]
Firm Size	0,9161	1,0112	1,2002	1,3653	1,3225	1,4573	-14,7433	-14,3654	-13,0594	-53,7313	-53,5601	-51,4227
	[0.59]	[0.62]	[0.70]	[1.02]	[1.00]	[1.07]	[-0.701]	[-0.69]	[-0.64]	[-0.86]	[-0.85]	[-0.82]
Sales growth	2.4E-5	3.5E-5	2.1E-5	3.1E-5	2.1E-5	8.2E-5	-0,0002	-0,0003	-0,0002	-0,0008	-0,0008	-0,0008
	[1.67]*	[1.65]*	[1.91]*	[3.22]***	[3.10]***	[2.30]**	[-1.84]*	[-1.93]*	[-1.15]	[-2.07]**	[-2.18]**	[-1.49]
Annual stock volatility	-0,0015	-0,0016	-0,0022	-0,0044	-0,0046	-0,0055	-0,0026	-0,0053	-0,0005	0,0896	0,0851	0,1037
	[-0.57]	[-0.55]	[-0.62]]	[-0.73]	[-0.75]	[-0.81]	[-0.06]	[-0.13]	[-0.01]	[0.75]	[0.72]	[0.81]
Foreign ownership												
Year 1	-0,0066	0,0144	0,0009	-0,1243	-0,1320	-0,1772	3,9899	3,7343	3,5807	11,0857	9,9917	9,7479
	[-0.03]	[0.06]	[0.00]	[-0.27]	[-0.30]	[-0.39]	[0.96]	[0.98]	[0.98]	[0.82]	[0.79]	[0.77]
Year 2	0,0732	0,0918	0,0845	-0,2340	-0,2568	-0,2659	4,5717	4,3139	4,1802	12,9126	12,0677	12,2426
	[0.31]	[0.37]	[0.30]	[-0.60]	[-0.68]	-[0.64]	[1.10]	[1.10]	[1.11]	[0.94]	[0.92]	[0.93]
Year 3	-0,0479	-0,0437	-0,0818	-0,2937	-0,3101	-0,3770	4,2089	3,9945	3,6101	11,1869	10,5362	10,0982
	[-0.15]	[-0.13]	[-0.21]	[-0.61]	[-0.67]	[-0.75]	[0.71]	[0.71]	[0.64]	[0.56]	[0.55]	[0.51]
D&I												
Year 1		-0,3173	-0,3635		0,0737	0,0580		1,2929	2,5736		9,1057	12,6436
		[-1.19]	[-0.95]		[0.19]	[0.12]		[0.31]	[0.50]		[0.66]	[0.73]
Year 2		-0,3009	-0,4272		0,2635	0,0631		1,5444	3,4472		6,8827	12,0555
		[-1.36]	[-1.25]		[0.81]	[0.15]		[0.46]	[0.77]		[0.62]	[0.80]
Year 3		-0,2028	-0,3041		0,2174	0,1240		0,2834	1,6597		3,1018	7,6403

		[-0.87]	[-0.90]		[0.57]	[0.26]		[0.08]	[0.37]		[0.24]	[0.49]
Financial												
Year 1			-0,0481			0,4310			-1,5719			-4,8480
			[-0.15]			[0.92]			[-0.42]			[-0.37]
Year 2			-0,0770			0,1086			-1,4018			-7,6789
			[-0.23]			[0.22]			[-0.35]			[-0.55]
Year 3			0,0427			0,4570			-0,0170			-3,3757
			[0.09]			[0.82]			[-0.00]			[-0.16]
Year effect												
@ 1 years	-0,2776	-0,0807	-0,0195	-0,0034	-0,0584	-0,3951	-0,8572	-1,7686	-3,5223	2,5387	-3,3325	-7,8818
	[-1.38]	[-0.41]	[-0.07]	[-0.01]	[-0.19]	[-1.00]	[-0.24]	[-0.65]	[-1.10]	[0.24]	[-0.34]	[-0.68]
@ 2 years	-0,4721	-0,2961	-0,0614	-0,0140	-0,1893	0,0435	0,4056	-0,7014	-3,6586	6,9532	2,5544	-2,8655
	[-1.41]	[-0.80]	[-0.20]	[-0.03]	[-0.46]	[0.10]	[0.07]	[-0.14]	[-0.95]	[0.45]	[0.18]	[-0.25]
@ 3 years	-0,4265	-0,3160	-0,2126	-0,1139	-0,2569	-0,4622	0,1151	-0,1284	-2,9866	5,6630	3,8380	-3,2369
	[-1.30]	[-0.90]	[-0.52]	[-0.30]	[-0.66]	[-0.94]	[0.02]	[-0.03]	[-0.61]	[0.38]	[0.27]	[-0.21]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,5440	0,4291	0,4781	0,1451	0,1034	0,4444	0,1854	0,4624	0,4792	0,1635	0,2054	0,7892
Serial corr (p-value)	0,6823	0,8141	0,9812	0,3351	0,3442	0,3553	0,2616	0,2608	0,2305	0,2391	0,2189	0,2284
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Table 4. 3C: Effects of firm-specific factors on cash compensation and firm performance nexus after merger in Africa

Equity compensation (firm-specific influence)												
	Q			**TSR**			**ROA**			**ROE**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Equity	-0.0258	-0.0257	-0.0259	0.0123	0.0130	0.0193	-0.4863	-0.4809	-0.4830	-1.0538	-1.0324	-0.9885
	[-1.82]*	[-1.81]*	[-1.81]*	[0.31]	[0.33]	[0.49]	[-1.64]	[-1.64]	[-1.64]	[-1.44]	[-1.41]	[-1.35]
Equity(-1)	-0.0204	-0.0204	-0.0202	0.0033	0.0055	0.0107	-0.3841	-0.3706	-0.3668	-0.7995	-0.7476	-0.7015
	[-1.58]	[-1.57]	[-1.55]	[0.09]	[0.15]	[0.29]	[-1.43]	[-1.38]	[-1.36]	[-1.20]	[-1.12]	[-1.05]
Capital expenditure	0.0791	0.0797	0.0738	0.3042	0.3142	0.3090	-0.1582	-0.1231	-0.2679	-0.6704	-0.5026	-0.8693
	[2.44]**	[2.4]**	[2.23]**	[3.32]***	[3.39]***	[3.36]***	[-0.24]	[-0.18]	[-0.39]	[-0.40]	[-0.30]	[-0.52]
Firm Size	-0.0791	-0.0791	-0.0848	0.5090	0.5107	0.4753	1.7767	1.8319	1.7670	4.1696	4.3407	4.0052
	[-1.27]	[-1.26]	[-1.35]	2.89]***	[2.89]***	2.73]	[1.37]	[1.42]	[1.37]	[1.30]	[1.35]	[1.25]
Sales growth	3.8E-6	3.6E-6	4.5E-6	-1.0E-5	-1.5E-5	-7.8E-6	-0.0001	-0.0001	-0.0001	-0.0004	-0.0004	-0.0003
	[0.44]	[0.41]	[0.51]	[-0.42]	[-0.54]	[-0.32]	[-0.69]	[-0.72]	[-0.65]	[-0.79]	[-0.88]	[-0.74]
Annual stock volatility	0.0003	0.0003	0.0003	-0.0015	-0.0012	-0.0013	0.0036	0.0031	0.0046	0.0083	0.0088	0.0115
	[0.42]	[0.45]	[0.53]	[-0.83]	[-0.66]	[-0.73]	[0.27]	[0.23]	[0.34]	[0.25]	[0.26]	[0.34]
Foreign ownership												
Year 1	0.0937	0.0936	0.0961	0.0260	0.0338	0.0366	3.3831	3.6098	3.6895	8.3652	8.9879	9.1664
	[1.18]	[1.17]	[1.20]	[0.12]	[0.15]	[0.16]	[2.05]**	[2.18]**	2.23]**	[2.04]**	[2.18]**	[2.24]**
Year 2	0.1679	0.1725	0.1739	0.8790	0.6500	0.7660	4.4202	4.6892	4.7597	11.8151	12.8248	12.9376
	[2.11]**	[2.14]**	[2.16]**	[2.39]**	[2.29]**	[2.34]**	[2.66]***	[2.82]***	[2.87]***	[2.87]***	[3.10]***	[3.15]***
Year 3	0.1227	0.1302	0.1310	0.0576	0.0628	0.0709	2.4038	2.4140	2.4687	3.8092	3.9905	4.1309
	[1.57]	[1.56]	[1.64]	[0.26]	[0.28]	[0.32]	[1.48]	[1.48]	[1.52]	[0.94]	[0.99]	[1.02]
D&I												
After 1 years		0.0020	0.0096		0.0834	0.0575		-1.9822	-1.6642		-5.3452	-4.6814
		[0.024]	[0.11]		[0.35]	[0.25]		[-1.14]	[-0.96]		[-1.24]	[-1.09]
After 2 years		-0.0398	-0.0388		-0.1951	-0.2597		-2.3550	-2.0152		-8.7933	-8.1869
		[-0.49]	[-0.48]		[-0.85]	[-1.15]		[-1.70]*	[-1.67]*		[-2.11]**	[-1.97]**

After 3 years		-0.0632	-0.0659		0.0485	0.0312		-0.0770	0.2373		-1.3987	-0.4686
		[-0.75]	[-0.78]		[0.20]	[0.13]		[-0.04]	[0.14]		[-0.32]	[-0.11]
Financial												
After 1 years			0.0894			0.1779			3.6555			8.4749
			[1.09]			[0.78]			[2.17]**			[2.03]**
After 2 years			0.6450			0.7398			3.6240			6.2083
			[2.07]**			[3.15]***			[2.08]**			[1.66]*
After 3 years			-0.0214			-0.2763			3.6896			10.4374
			[-0.27]			[-1.23]			[2.22]**			[2.54]**
Year effect												
@ 1 years	-0.0524	-0.0534	-0.0938	0.2618	0.2148	0.2974	-4.1854	-3.0388	-4.6463	-9.4571	-6.3531	-10.0187
	[-0.82]	[-0.67]	[-1.06]	[1.45]	[0.95]	[1.21]	[-3.16]***	[-1.83]*	[-2.56]**	[-2.87]***	[-1.54]	[-2.22]**
@ 2 years	-0.1981	-0.1747	-0.1812	0.4784	0.5978	0.9240	-5.2974	-3.9021	-5.5304	-12.1819	-6.9564	-9.6996
	[-2.61]**	[-2.01]**	[-1.82]*	[2.23]**	[2.44]**	[3.34]***	[-3.37]***	[-2.17]**	[-2.70]**	[-3.11]***	[-1.56]	[-1.91]*
@ 3 years	-0.1723	-0.1355	-0.1299	0.4582	0.4400	0.5686	-5.1532	-5.0569	-6.6965	-11.6091	-10.6012	-15.1257
	[-2.22]**	[-1.60]	[-1.38]	[2.08]**	[1.84]*	[2.18]**	[-3.21]***	[-2.89]***	[-3.46]***	[-2.90]***	[-2.44]**	[-3.15]***
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0.1356	0.1036	0.5270	0.1927	0.1126	0.4356	0.1326	0.5726	0.2776	0.1326	0.7396	0.7446
Serial corr (p-value)	0.2484	0.2486	0.2358	0.3991	0.4258	0.2809	0.2660	0.2135	0.2258	0.7282	0.8250	0.8125
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

First, the institutional, culture, CG structures and market behaviour are different in Africa compared to advanced markets. Second, because of the weak nature of Africa's CG systems, board size could target providing special services and skill support instead of the traditional function of advising, monitoring and acting as managerial police. Lastly, it should be noted that, as in the case of most emerging markets, management technically appoints board of directors (except for appointments by institutional or block shareholders). As such, management are most likely to present their favourite candidates to be voted by shareholders.

Similarly, the coefficients of institutional and board ownership are mixed in direction and statistically insignificant for all compensation types and performance measures. Conversely, we observe a significant (at 5% level for Tobin's Q) influence of executive ownership for cash compensation and a positive significant (at 5% for Tobin's Q and 10% for TSR) impact for equity pay. Such an observation is expected. From classical reasoning and in support of the agency theory, when executives have higher ownership (equity pay), they work to protect the value of their stock in the firm. However, awarding management high cash (as in the case of M&As) rather, in our view, could encourage managers to indulge more in the source of those cash payments; in this case merger activities. Lastly, the inclusion of CEO characteristics to the estimation do not make any difference in our results. These findings are interesting against the background that, at least, CEO's experience counts in improving the performance especially in managing large and complex firms after merger.

The above results supports the argument that CG findings cannot be generalised but rather peculiar to the firm's environment (Roe, 2003). It should also be noted that this section of our analysis considers multi-country analysis. Even though most African countries exhibit similar market characteristics, the slight market and regional differences could smudge the exact strength of our variables. It is therefore essential to further examine the results along market composition and efficiency (South Africa and Other African firms).

Table 4.4A: Effects of corporate governance-specific factors on total executive compensation and firm performance nexus after merger

Total executive compensation (corporate governance-specific influence)												
	Q			TSR			ROA			ROE		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Total compensation	-0,0180	-0,0195	-0,0061	-0,6319	-0,5415	-0,5276	-3,4934	-2,5783	-2,4509	-10,767	-9,0891	-8,7504
	[-1.67]*	[-0.33]	[-0.1]	-3.28]***	-3.15]***	-3.01]***	[-2.51]**	-2.09]**	-1.96]**	-3.03]***	-2.89]***	-2.47]**
Total compensation(-1)	-0,0107	-0,0092	-0,0053	-0,486	-0,4320	-0,4288	-1,9074	-1,2905	-1,3213	-6,0739	-5,0182	-4,9459
	[-1.65]*	[-0.20]	[-0.11]	-3.44]***	-3.31]***	-3.22]***	[-1.75]*	-1.83]*	[-1.93]*	[-2.34]**	[-2.10]**	-2.04]**
Capital expenditure	0,1095	0,0935	0,1012	0,2926	0,3252	0,3315	-0,0941	0,1215	0,293	-0,0957	0,128	0,6211
	3.00]***	[2.86]***	[2.96]***	[2.86]***	[3.46]***	[3.39]***	[-0.13]	[0.18]	[0.42]	[-0.05]	[0.07]	[0.35]
Firm Size	-0,0989	-0,0724	-0,0954	0,4344	0,4448	0,4433	0,7075	1,1302	0,7814	1,6571	2,6136	1,8831
	[-1.51]	[-1.16]	[-1.5]	[2.37]**	[2.48]**	[2.43]**	[0.54]	[0.88]	[0.60]	[0.49]	[0.80]	[0.57]
Sales growth	1.2E-5	1.1E-5	1.8E-	-1.3E-5	-1.4E-5	-1.39E-5	-0,0001	-0,0001	-0,0001	-0,0002	-0,0003	-0,0002
	[0.38]	[0.37]	[0.54]	[-0.31]	[-0.30]	[-0.28]	[-0.42]	[-0.54]	[-0.40]	[-0.51]	[-0.61]	[-0.51]
Annual stock volatility	0,0003	0,0002	0,0002	-0,0024	-0,0023	-0,0023	-0,0027	-0,0033	-0,0019	-0,009	-0,0108	-0,0074
	[0.53]	[0.23]	[0.31]	[-1.25]	[-1.22]	[-1.21]	[-0.20]	[-0.24]	[-0.14]	[-0.26]	[-0.32]	[-0.22]
Board size	-0,0009		-0,0194	0,0032		-0,009	0,0296		-0,4003	0,0565		-0,4616
	[-0.37]		[-1.27]	[1.39]		[-0.21]	[1.80]		[-1.28]	[1.35]		[-0.58]
Outside directors	-0,0072		0,0034	-0,0003		-0,0302	-0,38		0,0983	-0,4052		0,2561
	[-1.06]		[0.19]	[-0.01]		[-0.59]	[-1.27]		[0.27]	[-0.53]		[0.27]
Institutional Ownership	0,0048		-0,0006	-0,028		-0,002	0,1133		0,0244	0,2984		0,0978
	[0.02]		[-0.39]	[-0.54]		[-0.48]	[0.30]		[0.82]	[0.31]		[1.29]
Board Ownership	-0,0006		0,0063	-0,0017		-0,0116	0,0281		0,0521	0,1059		0,0931
	[0.01]		[1.16]	[-0.41]		[-0.75]	[0.93]		[0.47]	[1.37]		[0.33]
Executive Ownership	0,0055		-0,0158	-0,0113		-0,8500	0,0592		-0,8175	0,1071		-0,4767
	[0.01]		[-2.13**]	[-0.72]		[-2.40]**	[0.52]		[-1.73]*	[0.37]		[-1.63]
Board gender diversity	-0,0186		0,0056	-0,0057		0,0055	-0,1547		0,2839	-0,4266		0,5111
	[0.01]		[0.62]	[-0.26]		[0.21]	[-1.00]		[1.53]	[-1.08]		[1.08]
Age of CEO		-0,0452	-0,0443		0,0385	0,0376		-0,3132	-0,3187		-1,0889	-1,0154
		[-1.48]	[-1.44]		[0.44]	[0.43]		[-0.50]	[-0.50]		[-0.68]	[-0.63]
Race of CEO		-0,3233	-0,372		-1,7266	-1,6793		9,6793	7,6312		13,0637	11,7291
		[-0.48]	[-0.54]		[-0.89]	[-0.84]		[0.69]	[0.54]		[0.37]	[0.32]
Gender of CEO		0,096	0,0293		-0,8977	-0,8757		3,334	2,0242		11,9804	9,846

		[0.21]	[0.06]		[-0.69]	[-0.66]		[0.36]	[0.21]		[0.50]	[0.41]
Year effect												
@ 1 years	0,0082	0,0484	0,0369	0,0044	0,0248	0,0403	-3,8822	-2,5889	-2,8577	-9,3914	-6,1715	-7,0052
	[0.16]	[[0.87]	[0.64]	[0.03]	[0.16]	[0.24]	-3.63]***	-2.25]**	-2.43]**	-3.44]***	[-2.10]**	-2.34]**
@ 2 years	-0,021	0,0428	0,0452	-0,2775	-0,239	-0,2414	-5,0529	-3,0562	-3,3181	-13,5796	-8,4943	-9,4141
	[-0.26]	[0.45]	[0.46]	[-1.21]	[-0.87]	[-0.86]	-3.06]***	[-1.55]	[-1.66]*	-3.22]***	[-1.69]*	[-1.85]*
@ 3 years	-0,0196	0,0676	0,0673	-0,3489	-0,3203	-0,353	-6,1403	-3,7241	-4,1552	-18,1695	-11,9043	-13,242
	[-0.23]	[0.59]	[0.57]	[-1.44]	[-0.98]	[-1.05]	-3.53]***	[-1.58]	[-1.73]*	-4.09]***	[-1.98]**	-2.17]**
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,9332	0,3225	0,8452	0,7235	0,1448	0,4556	0,6253	0,5436	0,5889	0,6332	0,4824	0,8768
Serial corr (p-value)	0,4929	0,7404	0,2604	0,5589	0,9218	0,1606	0,5078	0,1842	0,6810	0,4124	0,1751	0,1718
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Table 4.4B: Effects of corporate governance-specific factors on cash executive compensation and firm performance nexus after merger

Cash compensation (corporate governance-specific influence)												
	Q			TSR			ROA			ROE		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Cash	-0.0276	-0.0308	-0.0260	-0.5483	-0.5905	-0.5805	-2.5413	-2.8126	-2.7453	-9.2048	-9.7719	-9.4317
	[-0.41]	[-0.47]	[-0.39]	[-3.07]***	[-3.23]***	[-3.14]***	[-1.94]*	[-2.10]**	-2.04]**	[-2.80]***	[-2.91]***	[-2.80]***
Cash(-1)	-0.0471	-0.0493	-0.0503	-0.4153	-0.4353	-0.4304	-1.8936	-1.9033	-1.9559	-5.4422	-5.5879	-5.5095
	[-0.87]	[-0.94]	[-0.94]	[-2.86]***	[-2.98]***	[-2.91]***	[-1.78]*	[-1.78]*	[-1.81]*	[-2.04]**	[-2.09]**	[-2.04]**
Capital expenditure	0.1058	0.0914	0.1000	0.2549	0.2782	0.2823	-0.1897	-0.0674	0.0806	-0.4756	-0.5743	-0.1192
	[2.95]***	[2.80]***	[2.93]***	[2.65]***	[3.07]***	[2.98]***	[-0.27]	[-0.10]	[0.12]	[-0.27]	[-0.35]	[-0.07]
Firm Size	-0.1124	-0,0877	-0.1124	0.3885	0.4044	0.4024	0.4712	0.9512	0.5998	0.9540	1.9326	1.2041
	[-1.76]**	[-1.43]	[-1.79]*	[2.26]**	[2.37]**	[2.32]**	[0.38]	[0.76]	[0.47]	[0.30]	[0.62]	[0.38]
Sales growth	5.2E-06	3.7E-6	5.37E-06	-7.9E-06	-7.8E-06	-7.8E-06	-0.0001	-0.0001	-0.0001	-0.0002	-0.0003	-0.0002
	[0.57]	[0.43]	[0.60]	[-0.32]	[-0.32]	[-0.31]	[-0.43]	[-0.58]	[-0.44]	[-0.534]	[-0.64]	[-0.55]
Annual stock volatility	0.0002	0.0001	0.0001	-0.0018	-0.0017	-0.0018	0.0006	-0.0006	0.0004	0.0034	0.0006	0.0031
	[0.26]	[0.17]	[0.22]	[-0.98]	[-0.96]	[-0.97]	[0.04]	[-0.04]	[0.03]	[0.11]	[0.02]	[0.09]
Board size	-0.0083		-0.0200	0.0087		-0.0025	-0.3809		-0.4280	-0.3890		-0.4967
	[-0.56]		[-1.31]	[0.22]		[-0.06]	[-1.32]		[-1.40]	[-0.54]		[-0.65]
Outside directors	0.0052		0.0035	-0.0250		-0.0256	0.1054		0.1050	0.3126		0.2969
	[0.28]		[0.20]	[-0.51]		[-0.52]	[0.29]		[0.29]	[0.35]		[0.33]
Institutional Ownership	-0.0005		-0.0005	-0.0031		-0.0029	0.0177		0.0182	0.0779		0.0777
	[-0.34]		[-0.37]	[-0.79]		[-0.74]	[0.61]		[0.63]	[1.07]		[1.07]
Board Ownership	0.0060		0.0068	-0.0060		-0.0056	0.0699		0.0681	0.1463		0.1450
	[1.08]		[1.25]	[-0.40]		[-0.37]	[0.64]		[0.62]	[0.53]		[0.53]
Executive Ownership	0.0180		0.0158	-0.0107		-0.0108	-0.1871		-0.1925	-0.5155		-0.5075
	[-2.39]**		[-2.14]**	[-0.53]		[-0.52]	[-1.26]		[-1.29]	[-1.38]		[-1.36]
Board gender diversity	0.0052		0.0071	0.0057		0.0067	0.3272		0.3302	0.6051		0.6240
	[0.57]		[0.78]	[0.23]		[0.27]	[1.18]		[1.21]	[1.36]		[1.37]
Age of CEO		-0.0459	-0.0452		0.0375	0.0364		-0.3093	-0.3267		-1.1187	-1.0744
		[-1.51]	[-1.47]		[0.44]	[0.43]		[-0.50]	[-0.53]		[-0.72]	[-0.69]
Race of CEO		-0.2990	-0.3538		-1.7282	-1.6318		9.3861	7.1182		13.4412	11.9889
		[-0.44]	[-0.51]		[-0.92]	[-0.85]		[0.68]	[0.51]		[0.39]	[0.34]
Gender of CEO		0.1002	0.0339		-0.9678	-0.9130		2.8688	1.6368		10.8929	9.1323

		[0.22]	[0.07]		[-0.77]	[-0.72]		[0.31]	[0.18]		[0.47]	[0.39]
Year effect												
@ 1 years	-0.0054	0.0528	0.0362	0.0127	-0.0247	-0.0156	-3.2782	-2.5355	-2.8543	-8.5176	-6.4128	-7.2864
	[-0.11]	[0.95]	[0.64]	[0.10]	[-0.16]	[-0.10]	[-3.35]***	[-2.24]**	[-2.48]**	[-3.47]***	[-2.27]**	[-2.53]**
@ 2 years	-0.0698	0.0291	0.0216	-0.0708	-0.1564	-0.1555	-3.6780	-2.7766	-3.0723	-9.9858	-6.9758	-7.8486
	[-1.05]	[0.33]	[0.24]	[-0.40]	[-0.64]	[-0.63]	[-2.82]***	[-1.55]	[-1.70]*	[-3.05]***	[-1.55]	[-1.74]*
@ 3 years	-0.0691	0.0531	0.0442	-0.1133	-0.2204	-0.2380	-4.7928	-3.5176	-3.9445	-14.6277	-10.5155	-11.7179
	[-0.99]	[050]	[0.41]	[-0.60]	[-0.74]	[-0.79]	[-3.49]***	[-1.61]	[-1.79]*	[-4.25]***	[-1.92]*	[-2.13]**
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0.5245	0.5423	0.3548	0.6350	0.5542	0.2354	0.6658	0.8521	0.4456	0.3364	0.6654	0.1987
Serial corr (p-value)	0.5293	0.5979	0.6943	0.9881	0.9335	0.9640	0,2616	0.1385	0.1800	0.1303	0.7107	0.7802
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Table 4.4C: Effects of corporate governance-specific factors on equity executive compensation and firm performance nexus

Equity compensation (corporate governance-specific influence)												
	Q			**TSR**			**ROA**			**ROE**		
Models	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Equity	-0.025	-0.023	-0.024	0.010	0.012	0.009	-0.435	-0.409	-0.405	-0.908	-0.845	-0.880
	[-1.70]	[-1.61]	[-1.68]*	[0.23]	[0.31]	[0.23]	[-1.45]	[-1.39]	[-1.39]	[-1.21]	[-1.15]	[-1.21]
Equity(-1)	-0.020	-0.019	-0.020	0.001	0.003	0.000	-0.330	-0.326	-0.321	-0.662	-0.642	-0.655
	[-1.51]	[-1.48]	[-1.54]	[0.02]	[0.07]	[0.01]	[-1.23]	[-1.22]	[-1.21]	[-0.99]	[-0.96]	[-0.99]
Capital expenditure	0.095	0.086	0.094	0.310	0.305	0.290	-0.206	-0.024	0.051	-0.250	-0.332	-0.116
	[2.62]**	[2.66]***	2.79]***	[3.07]***	[3.32]***	[3.10]***	[-0.28]	[-0.04]	[0.07]	[-0.14	[-0.20]	[-0.07]
Firm Size	-0.102	-0.076	-0.106	0.512	0.515	0.405	1.061	1.576	0.770	2.726	3.745	1.629
	[-1.61]	[-1.23]	[-1.71]*	[2.88]***	[2.92]***	[2.35]**	[0.82]	[1.22]	[0.60]	[0.84]	[1.16]	[0.51]
Sales growth	5.2E-6	3.8E-6	5.7E-6	-1.1E-5	-1.1E-5	-4.1E-6	-9.1E-0	-0.0012	-6.4E-5	-0.0029	-0.0033	-0.0021
	[0.58]	[0.43]	[0.65]	[-0.44]	[-0.44]	[-0.17]	[-0.50]	[-0.65]	[-0.36]	[-0.63]	[-0.74]	[-0.46]
Annual stock	0.0003	0.0002	0.0002	-0.0016	-0.0015	-0.0024	0.0042	0.0028	0.0006	0.0095	0.0066	-0.0006
	[0.45]	[0.35]	[0.33]	[-0.90]	[-0.86]	[-1.34]	[0.32]	[0.21]	[0.04]	[0.29]	[0.20]	[-0.02]
Board size	-0.0001	-0.0456	-0.0126	3.2E-5	0.0298	0.0145	0.0233	-0.3311	-0.3434	0.0265	-1.1887	-0.2509
	[-0.13]	[-1.53]	[-0.84]	[0.01]	[0.35]	[0.35]	[1.41]	[-0.53]	[-1.12]	[0.64]	[-0.76]	[-0.33]
Outside directors	-0.0022	-0.2654	0.0039	0.0017	-1.7233	-0.0342	-0.3404	9.8097	0.0727	-0.2723	14.3436	0.1664
	[-0.16]	[-0.40]	[0.22]	[0.42]	[-0.91]	[-0.70]	[-1.17]	[0.71]	[0.20]	[-0.37]	[0.42]	[0.18]
Institutional	0.0054	0.1175	0.0002	-0.0338	-0.8794	-0.0042	0.0759	3.6399	0.0220	0.1802	13.1231	0.0788
	[0.30]	[0.27]	[0.17]	[-0.68]	[-0.69]	[-1.05]	[0.21]	[0.39]	[0.74]	[0.20]	[0.57]	[1.06]
Board Ownership	0.0003		0.0038	-0.0045		-0.0126	0.0220		0.0300	0.0784		0.0382
	[0.20]		[0.70]	[-1.09]		[-0.84]	[0.74]		[0.27]	[1.05]		[0.14]
Executive Ownership	0.0301		0.0161	0.0129		0.0169	0.0394		-0.2053	0.0523		-0.5647
	[2.55]**		[2.18]**	[1.84]*		[1.82]*	[0.35]		[-1.35]	[0.19]		[-1.49]
Board gender	-0.0179		0.0052	-0.0171		-0.0024	-0.1893		0.2830	-0.5558		0.4942
	[-1.40]		[0.59]	[-0.82]		[-0.10]	[-1.25]		[1.56]	[-1.46]		[1.09]
Age of CEO	0.0034		-0.0432	-0.0052		0.0302	0.2722		-0.3346	0.4512		-1.1056
	[0.38]		[-1.43]	[-0.21]		[0.36]	[1.51]		[-0.54]	[0.10]		[-0.71]
Race of CEO			-0.2413			-1.1668			9.4492			18.7211
			[-0.35]			[-0.62]			[0.67]			[0.53]
Gender of CEO			0.0659			-0.7706			2.5357			11.8880
			[0.15]			[-0.62]			[0.27]			[0.51]
Year effect												

@ 1 years	-0.0096	0.057	0.0334	0.2583	0.2168	0.2020	-2.6111	-1.6525	-2.1112	-5.2103	-2.7985	-4.1140
	[-0.22]	[1.14]	[0.65]	[2.10]**	[1.53]	[1.42]	[-2.92]**	[-1.59]	[-1.29]	[-2.33]**	[-1.08]	[-1.56]
@ 2 years	-0.1055	0.0101	-0.0144	0.4035	0.3635	0.3095	-2.8187	-1.6148	-2.1250	-5.4327	-1.7078	-3.4569
	[-1.78]*	[0.12]	[-0.18]	[2.43]**	[1.59]	[1.36]	[-2.33]**	[-0.96]	[-1.25]	[-1.80]*	[-0.41]	[-0.82]
@ 3 years	-0.1153	0.0297	-0.0025	0.3656	0.3222	0.2311	-4.0952	-2.4435	-3.1593	-10.3392	-5.2735	-7.5929
	[-1.69]*	[0.29]	[-0.11]	[1.19]	[1.11]	[0.44]	[-2.39]**	[-1.15]	[-1.51]	[-2.59]**	[-0.99]	[-1.63]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0.4943	0.3198	0.5200	0.3159	0.1938	0.2076	0.1478	0.7969	0.1342	0.2308	0.6019	0.3419
Serial corr (p-value)	0.2884	0.3040	0.3299	0.4655	0.4272	0.2664	0.5434	0.2770	0.3158	0.2278	0.1627	0.1516
Observations	596	596	596	596	596	596	596	596	596	596	596	596

Note: Estimation results of our total African sample (164) with the elements in row 2 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

4.4.2.1 South Africa and Other African sub-sample groups

The results for the three separate estimations (deal, firm and corporate governance-specific factors) for South Africa (77) and Other African (87) samples are presented Appendix D. Under each compensation type, we present estimations involving the variables of interest (in column 1) for the four measures of firm performance. Kindly note an inclusion of stock option (STOP) compensation for South African sample in Appendix 4B, 4D and 4F. South Africa is the only market that has an active derivatives market in Africa. We start our presentation with estimation results of deal-specific factors (Appendix 4A and 4B) followed by firm-specific characteristics (Appendix 4C and 4D) and finally corporate governance variables (Table 4.8A and 4.8B). We, separately analyse the pay-performance link for STOP as well. This section is motivated, once again, by the differences in market, disclosure, corporate governance and executive pay characteristics. Indeed, we expect to see a clear and stronger link between performance and executive pay as well as differential impact of the control variables for the South African samples compared to the Other African firms.

The results, from Appendix 4A, indicate a significant negative (at least at 10% level) relation between performance and cash and total compensation for Other African samples, after controlling for deal-specific factors. In addition, the absolute value of the coefficients of the accounting performance variables for the compensation types are larger. For example, the coefficient of Q for cash is -0.2121 while that of ROA is -3.3302. This implies that a 10% increase in cash pay will trigger a 2.1% drop in market performance whereas a similar 10% increase in cash will result in a 33.3% drop in accounting performance. The above result is quite fascinating due to the higher magnitude of the coefficients and above all non-theoretically, as reported in most advanced markets (Ozkan, 2011). We do not find any strong evidence to establish a link between equity pay and firm performance for Other African firms contrary to literature and agency argument that strongly links equity compensation to

performance (Berger, Kick, Koetter & Schaeck, 2013; Ntim et al., 2015a; Ozkan, 2011). None of the coefficients for the lag of all compensation types is significant even though negative, implying previous pay does not count as such.

Surprisingly, the coefficients for performance variables of all pay types (South African sample, Table 4.6B) are all positive but not significant, contrary to (Ntim et al., 2015a)'s scholarly work that establish a positive association between pay and performance. In addition, the lag of compensations do not count. The result for South Africa is significantly different from the Other African firms due to the fact that the South African market is more regulated and closely monitored as outlined in the Kings reports (IoD, 2002; 2009), which is non-existent for Other African markets. Further, the departure our result from other related studies is due to the role of M&A activities, which is the distinct motivation for our study as well as the peculiar corporate governance issues in Africa. We establish that post-merger firm performance in Africa, as influenced by executive pay and other deal-related factors, is different from pay-performance link without M&A as suggested by Bodolica and Spraggon (2015) and Bugeja et al. (2012).

The implications drawn from Appendix 4A and 4B suggests that the link between pay and performance depends on the performance measure used and the compensation type being investigated. For instance, we see that the link between TSR and cash pay is stronger than that of Q, whereas ROA relates stronger to cash than ROE relates to cash. This finding is similar to equity and total pay. Besides, from Table 4.1 Panel A, the mean value of cash, equity and total pay for South Africa are USD 3.38m, USD 1.15m and USD 6.31m while those for Other African firms are USD 7.48, USD 5.51, and USD 17.08 million respectively. It appears that the magnitude of compensation effectively links the strength of the pay-performance nexus (compared with Appendix 4A and 4B).

Rationally, we expect the higher pay, as in the case of Other African firms, to translate into improved post-merger performance. This is unfortunately not the case. One explanation is that management in this case consider these pays as rewards for the successful completion of M&A deals which might not necessarily be aligned to other short-term firm performance outcomes. In addition, change of firm complexity after merger could contribute to the drop in performance. However, we caution readers to be careful with the generalisation of this finding since the magnitude of pay (in USD) disclosed by South African firms might be different from Other African firms. This is because South African firms are strictly required by Kings Report to disclose the pay of top three managers while the same is not necessarily true for non-South African firms. Rather, most of the pay disclosed by Other African firms, included in our sample, disclose figures for either two or three top management. These firms made it onto our sample because they report compensations for specific number of same management over the data period.

The coefficients of the control variables also present mixed results. Capex, for instance, positively influence market performance measures. The main difference between the effects of Capex on the two samples has to do with the negative direction of the accounting performance measures for South Africa, though insignificant. While the market performance variables report weak positive impact of Capex, accounting measures show negative insignificant results. According to Amewu and Alagidede (2018), both market groupings, generally, respond positively to capital investments such as M&A in the year of merger. We attribute the positive Capex impact to the prolong perception of the market to M&A announcements which are captured by the market performance measures whereas the negative accounting measure could be caused by the accounting liabilities from the M&A deals. The influence is stronger with equity executive pay than cash. This is so because, according to

Beiner et al. (2006), capital-intensive investment drains cash flow available to firms which forces managers to be paid more with equity.

Besides, our results suggest that ROA and ROE are negatively linked to firm size (proxy for total asset) for Other African sample. Sapp (2008) argues that large firms are more complicated to manage and will require highly experienced managerial team to run the firm. Subsequently, the negative relation implies Other African managers push for M&A deals but lack the needed skills to successfully manage the combined firms. Next, consistent with Bennouri et al. (2018) Girma et al. (2006a) and (Girma et al., 2006b), sales growth positively impacts performance (cash, equity and total pay but not stock option) for the South African sample.

Further, the coefficients of the deal related variables for Other African sample show some interesting results. First merger deal size (for cash and total pay only) is negative and significantly relate market performance in year one and year three after merger for market and accounting performance respectively. Second, cross-border deals negatively impact accounting performance becoming highly significant in the third year after merger. However, we find no evidence of the effect of deal size, target destination (cross-border) and target listing (public) on performance for South Africa.

Nonetheless, from Appendix 4B, we see that equity as a mode of deal payment (for equity pay) has a negative significant impact on performance and reserves the direction of the pay-performance links for South Africa. By Agency perspective, executive equity pay should improve firm performance. Besides, the extant literature generally supports positive executive equity pay and a weak or negative executive cash link to firm performance (Brick, Palmon & Wald, 2006; Mehran, 1995; Shaw & Zhang, 2010). However, this does not hold for firms that undergo M&A. According to Ntim et al. (2015a) when firms do capital intensive projects, it affects the firm's working capital available to managers to expropriate in the form unwarranted

compensation. Conversely, the same argument holds when M&As (capital expenditure) are financed with equity, in the sense that it leaves a lot of cash that could be used to reward management. Hence, for South African firms, we could infer that equity as a mode of M&A deal financing weakens or negatively affects the equity pay-performance relationship.

Additional, firms that acquire from different industries experience fewer short-term synergy and are characterised by complex integration problems (Coakley & Iliopoulou, 2006) which has the potential to negatively affect performance. Besides, the existing management will require time to understand the complex cross-industry post-merger characteristics. We expect firms that engage in same industry acquisitions to perform better in short-term post-merger. The negative and significant coefficients of same industry acquisition across all pay types (second and third year for market and only third year for accounting performance) from Table 4.6A indicate that Other African firms that acquire from same industry experience lower performance relative to their counterparts who do cross-industry acquisitions. Possible reason may be due to similar challenges faced by firms in the same industry that managers will find it difficult to diversify away when within industry merger occurs. On the contrary, cross-industry merger may bring some advantage in terms of diversification.

We find significant negative impact (market performance) for only cash compensation in the case of South Africa. This result is in line with Grinstein and Hribar (2004) discussion on the effect of industry differences in pay-related issues after merger in the USA.

Generally, we observe that equity compensation is relatively less sensitive to most of our control variables for Other African firms. Our best explanation to this general observation is, once again, attributed to bank-based nature of the African economy in the face of weak and inactive capital markets. As a result, executive will opt for more cash compensations than ownership. This is evident in the high payment of cash compensations for Other African firms compared to their South African counterparts (see Panel A of Table 4.1). Concerning year

effect, we do find significant differences in performance across the three years after merger (in year two and three) for Other African firms while the South African sample do not show any difference across the years.

Appendix 4C and 4D report the results of the estimations after controlling for firm-specific factors. The introduction of the firm-specific variables do not significantly change the conclusion drawn when considering the deal-specific factors except for the following two observations. First, the direction of the coefficients of compensation for all the performance measure has changed (become positive although insignificant again) for South Africa. We attribute the negative relation between pay and performance for equity compensation to the effect of equity as mode of deal payment.

Second, firm size (total asset) become significantly negative across all pay types contrary to Adams and Ferreira (2007) and Bennouri et al. (2018) who found a significant positive relationship between performance and total asset but in line with Ntim et al. (2015a). This implies that larger acquires in Africa appear to perform worse owing to the firm complexity argument and the widely documented evidence of total asset being one of the most significant determinant of executive pay (Lin et al., 2012). Additionally, the directions of the coefficients of the stock returns volatility, generally, show the expected signs but we find no strong evidence of volatility negatively impacting performance (although significant at 10% level for cash and equity pay as captured by TSR).

Regarding the influence of firm-specific factors, we see that foreign ownership positively relate ROA and ROE in year-three after merger for Other African firms while we find evidence to support positive link between pay and performance (in year two and three for ROA and ROE, but not always significant) for South African firms. This result is in line with our expectation owing to the high foreign ownership of firms that made up our sample which has the potential to put pressure on management to perform.

Concerning firm diversification, we observe that diversification and international operation has a positive effect on Other African firm's performance (in year three) consistent with Doukas and Lang (2003) who found geographical diversification to positively improve shareholders value and long-term performance when firms do same industry investments while cross-industry foreign investment rather impacts negatively on performance. They further explain that synergy gains from any cross-industry foreign investment are rooted rather in the core business of the company but nothing else. Their results is in line with Hitt, Hoskisson and Kim (1997) which documents that international diversification relates positively with performance for highly product-diversified firms.

In contrast to Other African firms, the coefficients of financial industry acquisitions for South African firms show interesting results. Tobin's Q and TSR show negative impact but not always significant either in year two or three after merger for all compensation whereas ROA and ROE report weak positive impact, most often in the first or second year. This result implies, in support of our earlier argument, that financial industry classification worsens the South African firm performance after merger and properly captured by market performance measures. Accounting measures, on the other hand, show weak positive impact immediately after merger which declines in subsequent years. We think the departure of accounting measures from market counterparts is probably due to accounting reporting system, strict regulatory and monitoring of financial firms in South Africa. Similarly, we find significant differences, in accounting performance for South Africa, across the three years post-merger. The yearly performance generally improves as the deal ages, becoming significantly positive in the third year.

Finally, we turn now to effect of corporate governance characteristic on performance for our split samples. The results are presented in Appendices in Table 4.8A and 4.8B for Other African and South African firms. The pay-performance relation remains significantly

unchanged even after controlling for CG factors. Due to the better CG practices and well regulated South African market, we expect to see an improved impact of EC on firm performance. Although the coefficients of EC increases slightly but were still not significant across all pay types. However, the effect of capital expenditure has vanished with a considerable improvement in sales growth and size sensitivity for South African firms.

From Appendix 4E, the only significant CG factor that enhances the pay-performance relation is executive share ownership (significant at least at 10% level with relatively a stronger impact with the market measures). The same observation holds for South Africa as well confirming the agency argument and literature that firms that reward their executives with equity turn to perform better because it aligns management interest to shareholders. The South African sample post significant impact of CG factors with performance measures.

Similarly, board member (usually have shares or represent institutions with majority shares) will act to protect their interest and other shareholders by push management and supporting decisions that adds to their investments as well. It is therefore not surprising to observe significance of board ownership (BoOwn) on performance. The positive coefficients of performance measures does not support the agency argument that larger boards are associated with poor communication, long decision-taking and weak monitoring role (Guest, 2009b; Jensen, 1993) but rather suggests that large board size improves firm performance.

Contrary to Bennouri et al. (2018) and Bird, Huang and Lu (2018), board size (highly significant for equity pay) positively correlate with performance, a finding that is consistent with Ntim et al. (2015b), Ntim (2015) and Guest (2009b). This is so because firms that are involved in M&A deals require diverse expertise on the board to perform effectively. All things equal, larger boards that are well constituted should have all the technical expertise to help management take the right decisions.

What is more intriguing is the highly positive influence of outside directors' representation on the board. The positive significant coefficient of OutD across all performance measures and types suggest that in South Africa, non-executive outside directorship plays significant role in improving firm performance and not total board size. Greater outside board representation does not give the board only greater power to discipline mischievous managements but also has diverse expertise to advise on issues in the interest of shareholders. Additionally, we find institutional ownership to positively relate performance for equity pay, while the results for board gender diversity and CEO personality factors vary in direction for different performance measure.

4.5 Conclusion

This study explored the relationship between various executive compensation types and firm performance (using both market and accounting measures). This relationship has been studied widely in the extant literature with contradicting results but very few have looked at this in relation to M&As. Besides, the empirical literature on the subject is excessively based on Western markets of similar institutional settings which is totally different from emerging markets. Africa provides compelling context for our study because of geographical, cultural, institutional and market differences compared to advanced markets in addition to consistent growth of M&A deals on the continent.

More so, prior studies have been critiqued for not using appropriate methodology that efficiently deals with endogeneity issues. Using a total sample of 164 listed firms across Africa from 2005 to 2013, we contribute to literature by exploring the significance of deal, firm and corporate governance factors as drivers of pay-performance nexus by using Generalised Method of Moment panel estimation technique. Unique to this study, we adopt a dummy variable approach to capture the year effect of some of our main control variables. The

executive compensation types considered for our analysis are total, equity and cash compensations.

We include derivative options to the South African sample because it is the only country in Africa with an active derivation market. Our main performance measures are Tobin's Q (market measure) and return on asset (accounting). We also include two other performance measures, total stock return (market) and return on equity (accounting) for robustness check. To provide a clearer insight to our results owing to market differences, we split our sample into Other African and South African firms.

By controlling for factors that have been found in literature to impact performance (capital expenditure, firm size, sales growth and firm risk), we find statistically significant negative relation between all compensation types (total, cash and equity) and both market and accounting performance measures for total sample and Other African firms. This implies executive compensation induced by M&A in Africa negatively affect the performance of listed firms.

However, for South Africa as a unique market, we find positive but insignificant relationship between various pay types and firm performance after merger. Based on these findings, we proceeded to include various controls for different models. We also included previous compensation to find out if previous year's pay motivates management to perform better in the coming year. The results show negative but weak significant (in some few instances at 10% level) influence of previous pay on performance for total executive pay on total sample. We, therefore, find no strong evidence to conclude that previous pay influences performance.

Besides, contrary to literature, the impact of the control variables (capital expenditure, firm size, sales growth and firm risk) do not always impact every performance measure but rather depends on individual pay type, type of performance measure and market location. For

instance, firm size (log of total asset) negatively impact performance for all measures of cash compensation and only market measures for equity compensation while it has no effect on total pay. When we split the sample, size negatively impact performance of total and equity pay for Other African firms but was, surprisingly, insignificantly inconsistent in direction across all measures and pay types for South African sample.

After controlling for deal-specific factors (deal size, cross-border, target listing and same industry acquisitions), the negative relation between pay types and various performance measures remain relatively unchanged with some slight variations in the other control variables (for total and Other African samples). In the case of South Africa, the coefficients of pay types improves slightly (especially for accounting measures) but still not significant. Interestingly, we also find evidence of significant interrelations of the various deal-specific variables on performance. For example, the results for cash compensation of our total sample reveal that deal size negatively impact Q year one after merger while cross-border deal positively improves accounting performance in second and third year after merger, whereas equity mode of deal payment and targeting listing negatively influence short-term post-merger accounting performance.

Conversely, the control of firm-specific factors (foreign ownership, diversification and international operation and industry classification) immensely alters the pay-performance relationship. Considering the total sample, for instance, the strongly significant negative coefficients of total pay virtually vanishes and only weakly significant for Q and ROA. Cash compensation become insignificant for compensation types weakening the impact of capital expenditure. Equity compensation was the only significant (but very weak at 10% level) value and change in direction for other coefficients. These results, therefore, suggest that the relationship between pay and performance depends heavily on the interactive effect of various firm related factors. We find that foreign ownership improves performance for total and equity

compensation, while diversification with international operations dampens accounting performance for equity pay. Financial industry classification differently impact performance for equity (positive impact) and total (negative impact) compensations.

Our final set of control variables, corporate governance factors, offers lot of insight into the corporate governance issues in Africa and how it influences performance. Even though executive ownership was the main factor that is consistently significant (for total sample), their collective impact slightly altered the pay-performance connection. We conclude that, generally, corporate governance factors in Africa worsen performance especially for cash and total pay. Equity pay shows no relation confirming the role of equity compensation in aligning management interest to shareholders.

Splitting our sample based on market differences reveals some remarkable results. First, we document that executive pay for other African markets negatively relates various performance measures whereas we find positive but insignificant effect of executive pay on performance. Second, while controlling for deal-specific factors worsen performance for Other African firms, the impact of South African post-acquisitions performance is not relevant. Specifically, deal size, cross-border, mode of payment and target listing were irrelevant for the South African market but impedes performance for Other African markets. Third, foreign ownership improves South African firm performance but not for others, suggesting different foreign ownership interest in South African and Other African countries. Fourth, board size, outside board representation, institutional, board and executive ownership significantly influence firm performance.

Further, consistent with literature, we observe that equity compensation generally improves performance while cash compensation have a deeper negative impact. In addition, both accounting and market performance measures are equally effective in detecting a link between our variables. Our findings are robust across all compensation types.

In conclusion, the findings of our study have some significant implications regarding governance, policy development, monitoring, regulation and research. First, we observe that corporate governance practices are loosely handled in Africa, which has serious consequences for financial market development and enhancing corrupt practices. There is, therefore, the need for governments and institutions to collaborate to develop stronger and comprehensive corporate governance practices to bring sanity to the corporate community.

Second, the strong link between executive pay and performance, especially in other African countries, raises concerns about the role of government and institutions to protect the interest of investors. We believe the weak legal systems, ineffective monitoring couple with weak or non-existent regulatory policy structures serves as perfect breeding grounds that nurtures further the unwarranted extraction of investor's wealth into few managerial pockets.

Third, our results show that equity pay relatively improves firm performance, most especially when deals are financed with equity. In line with agency prediction, equity pay seems to be one of the best tools that can effectively align managerial interest to shareholders. However, the use of massive cash-based compensations instead of equity-based in Africa is rather a worry. Remuneration committees must be encouraged, either by legislation compulsion, to dominate post-merger managerial rewards with equity pay. This calls for initiation of corporate governance reforms that, for instance, empowers shareholders to approve compensation committee's reports, as seen in the UK.

Fourth, there is the need to further research into the effect of other corporate governance issues around merger activities with special attention to other African markets. Because of lack of data, our analysis is unable to examine possible geographical or specific country differences. A deeper country analysis will accord researchers to gain clearer insight into locational similarities and differences which can serve as basis for government reforms.

CHAPTER FIVE

EXECUTIVE COMPENSATION AND FIRM RISK AFTER SUCCESSFUL MERGERS AND ACQUISITIONS IN AFRICA

5.1 Introduction

In recent years, there has been a resurgence of corporate governance studies that focus greatly on executive compensation (EC); possibly, due to the role it played in the the unprecedented 2007-2009 global financial meltdown. However, a large number of these studies focus on executive pay and how it relates to firm performance (Eichholtz et al., 2008; Gigliotti, 2013; Harris, 2009), with little or no attention to firm's risk position. The very few who attempt to provide insight into the dynamics of firm risk and how it is influenced by executive incentives post inconclusive results. While some, in line with agency theory (Jensen and Meckling, 1976), posit that equity pay motivates executives to take more risk (Deutsch et al., 2011; Sanders & Hambrick, 2007; Wu & Tu, 2007), others argue that EC rather persuade less risk-taking behaviours (Sawers, Wright & Zamora, 2011).

The inconsistency in literature has been blamed partly on methodological issues (Bennouri et al., 2018; Ntim et al., 2015a; Sila, Gonzalez & Hagendorff, 2016) and failure to isolate the influence of major market characteristics such as merger and acquisition. Mergers and acquisition (M&A), undoubtedly changes firm's structure significantly resulting in shift in firm's risk after merger. Not only that, M&A in literature has been proven to increase executive compensation excessively (Bodolica & Spraggon, 2009c; Firth, 1991; Girma et al., 2006a). It is therefore essential to consider this aspect of the literature that has been neglected in spite of its potential to provide clearer understanding on executive and firm risk dynamics.

This study provides a strong empirical evidence regarding the influence of several executive compensation (EC) types on various risk measures. Our paper makes enormous contribution to the existing literature in diverse ways. First, the literature on executive pay and

firm risk is not only inconsistent but also over-concentrated in advanced markets (predominantly U.S.A and some European countries). Little is known on how EC affects firm risk in emerging markets such as Africa. Emerging markets exhibit different market characteristics in comparison to advanced markets due to differences in market composition, efficiency, geographical, cultural, ownership concentration and institutional setups. We, therefore, contribute to the inconclusive debate on literature by providing extensive insight into EC and firm risk from an African perspective.

Second, in line with the agency theory prediction of using stock-related incentives to motivate top managers to act in shareholders' interest, most studies only consider these stock related rewards (stocks and options, hereafter referred to as SREs) when analysing firm risk. We argue that in a typical emerging market like Africa which is bank-based and exhibits weak corporate governance practices, executive pay emerging from successful completion of M&A deals will be predominantly cash-based due to relatively inactive capital market. Unlike previous studies that focus only on CEOs (Baixauli-Soler, Belda-Ruiz & Sanchez-Marin, 2015; Sanders & Hambrick, 2007), we provide robust evidence of the impact of various compensation types (cash, equity, and total pay) for top management on diverse firm risk measures (accounting and market risk measures) after the merger.

Third, various factors have been identified in literature to impact executive pay and/or firm risk. These factors, if not properly controlled for in EC and risk analysis have the potential to produce spurious results. For instance, firms consider diversification as one of the principal motives for involving in M&A. However, it is unclear whether diversification through M&A reduces firm risk and improves post-merger value of firms. In addition, there have been corporate legislative reforms, in some parts of Europe (Belgium, France and Italy) to promote gender equality of firm's boards. Some studies suggest that women are more risk averse than men and firm risk is likely to change with different levels of board gender diversity and CEO's

sex (Charness & Gneezy, 2012; Croson & Gneezy, 2009). Yet it is still not clear whether more female board representations makes firms take less risk or not, especially in Africa. These and many other factors have not been dealt with decisively in the corporate governance literature. We add to the existing studies by also establishing a relation between firm risk and executive pay types after controlling for firm, deal and corporate governance-specific factors.

Four, Miller, Wiseman and Gomez-Mejia (2002) examine the effect of systematic and unsystematic firm risk on CEO compensation on all publicly traded S&P 500 firms in the US. Their findings show that the proportion of CEO's variable compensation is highest under moderate unsystematic (firm-specific) risk. The reverse is likely to hold towards the middle of risk distribution since managers would require higher compensation for firm-specific volatilities that they are responsible for. Thus, in keeping with the agency theory arguments, it suggests that there should be a stronger relationship between firm-specific risks than what is created by the market (unsystematic risk). We contribute to this literature by confirming that there is a stronger compensation-systematic risk link than in the case of unsystematic risk.

Finally, both observable and unobservable firm characteristics create various endogeneity issues for studies on EC and firm risk or performance ((Ntim et al., 2015a; Sapp, 2008; Sila et al., 2016). Besides, reverse causality between EC and risk also creates methodological issues. We employ different estimation methods, which include instrumental variable techniques to deal with these problems. Using these different estimation procedures makes an important contribution to the methodology literature on dealing with potential endogeneity.

The rest of the paper is presented as follows. Section two outlines relevant literature review while Section three provides detailed data description and methodology. Section four presents and discusses the results and Section five finally provides the study conclusion.

5.2 Empirical Review

Literature has documented various reasons why firms undergo M&A activities. One of the main reasons is the diversification motive, which has been established to influence firm's risk. There are two strands of literature on this subject (managerial interest and firm risk and performance within the M&A context). On one hand, some researchers argue that managers of firms have the mandate to alter firm's risk position through investment channels that lower cash flow risk or take on capital-intensive projects (diversification activities) that stabilises or improve the firm's income position (Hermalin & Katz, 2000; Stulz, 1990). Managers, in general, will avoid a value-enhancing investment if they think the associated risk far outweighs the responding firm value while investors will push for this kind of projects irrespective of the risk (Low, 2009). Getting the right managerial team to take the investment decisions that add value is a big problem to most shareholders. Thus, some writers have justified the use of more juicy incentives as tools to attract the best brain for the job (Baker et al., 1988; Brealey et al., 2014).

Contrarily, another group of researchers contend that managers pursue firm diversification not necessarily because of risk reduction and maximisation of performance but rather for their interests (Aggarwal & Samwick, 2003; Smith & Stulz, 1985). Their personal interest drives them to engage in M&A deal which results in excessive compensation request that adversely affects firm value (Denis, Denis & Sarin, 1997). Potential investors consider investments that will add significant value to their investment and as a result, will prefer executives who are less risk averse and capable of taking investment decisions to increase return (Core et al., 2003).

Theoretically, the fundamental structure of the agency theory is based on the assumptions that investors and executives are rational and risk averse. In reality, however, executives have different risk preference and will act in such a manner to satisfy their self-

interest, thereby increasing the agency cost (Porta et al., 1999). The risk-taking propensity of executives coupled with self-seeking behaviour makes them take some investment decisions that have the tendency to increase the risk of the firm. In view of this, proponents of the agency theory suggest the use of equity based EC to control and align executives' interest to that of shareholders interest (Bloom & Milkovich, 1998; Tosi et al., 2000; Weston et al., 1998). Fama (1976) and Core et al. (2003) strongly argue that equity-based incentives will encourage executives risk-taking behaviour. Following this argument, executives with equity-based incentives will be motivated to take risky investment decisions, which they know, will yield higher returns and result in greater returns for shareholders. In addition, equity-based compensations do not require concurrent cash payment. It makes a lot of managerial sense to use equity compensation in place of cash payment for a firm that is cash constraint.

Empirically, the effectiveness of these equity-based incentives in aligning the risk preferences of executives and shareholders has not been properly established in the literature due to contradicting and confusing findings (Jensen & Murphy, 1990; Mehran, 1995; Tosi et al., 2000). For instance, Bryan et al. (2000) show that while stock option incentives reduce risk aversion of CEOs, stock incentives rather worsens it. Sanders (2001), similarly, looked at how stock and stock options relate to firm acquisition behaviour. He concluded that while stock options relate positively to risky behaviours such as M&A deals, equity incentives have a negative influence such behaviours. Anderson and Fraser (2000) examined the relationship between CEO compensation and their risk-taking behaviour with a sample of 150 commercial banks on the U.S.A market from 1987 to 1994. Their finding shows that CEO compensation (option-based) positively influences the risk-taking behaviour. Earlier, Agrawal and Mandelker (1987) sampled 209 acquiring U.S.A firms from 1974 to 1982 and examined the relationship between executive holdings (common stock and stock option) and changes in firm variance (a measure of firm risk). Their finding revealed a positive relationship between the two variables.

Besides, Balachandran, Harnal and Kogut (2010) studied some financial firms on the U.S.A market during the 2007 – 2009 financial crisis and show that equity-based compensation increases the probability of banks' risk of default. Other studies, Aggarwal and Samwick (1999), Deutsch et al. (2011) and Devers, McNamara, Wiseman and Arrfelt (2008) also confirm a positive relationship between forms of EC and firm's risk passion. Guay (1999) and Belkhir and Chazi (2010) also show that the sensitivity of EC to risk-taking comes more from stock options. The reason could be that stock volatility relates strongly to stock options since a high stock volatility will positively influence the value of stock options. The empirical evidence in the literature is mixed. The potential point of departure could be the kind of risk measure that is used. For example, Bloom and Milkovich (1998) and Miller et al. (2002) found a negative relationship between stock option compensations and unsystematic firm risk.

Concerning compensation types, Devers et al. (2008) examined EC's effect on firm risk and raised some theoretical issues on this subject. They argued that the use of aggregated compensation package might not be enough to understand executive behaviour on risk. Their views was supported by Huang, Wu and Liao (2013) who show that executives react differently to the various components of EC packages. Secondly, they suggest that individual EC components within a package coexist, which is an indication of possible correlative influences. Subsequently, based on the Garen (1994)'s idea that cash incentives are insurance against inherent risk within an EC package, they argued that cash incentives rather moderates the impact of equity-based incentive elements on executive risk propensity. It is, therefore, very important to put into better perspective how specific compensation types relate to different types of risk.

Finally, apart from EC packages, several research have shown that firm-specific characteristics affect the risk position of a firm (Bloom & Milkovich, 1998; Devers et al., 2008). Not only that but also some factors could simultaneously determine both EC and risk

which needs to be properly controlled for in this kind of studies. For instance, firm diversity has been cited as one of the determinants of EC and at the same time the most common risk reduction tool. A well-diversified firm reduces risk yet poses complex corporate issues to handle which managers will want to be compensated for. Moreover, some researchers have argued that cross-border M&A activities provide incentives to reduce bank's risk of insolvency (Amihud, DeLong & Saunders, 2002; Berger, Buch, DeLong & DeYoung, 2004; Berger, DeYoung, Genay & Udell, 2001; Vander Vennet, 1996). In support of merger form, John, Saunders and Senbet (2000a) claims that banks involved in cross-border acquisitions rather have the potential to increase risk exposure beyond a privately optimal level. The above issues raise concern about the tendency of firm, deal and other factors to influencing the risk of the acquirer.

5.3 Data and Methodology

5.3.1 Data

The study uses a dataset of completed M&A deals from two separate sources, namely Bloomberg and extraction from firms' annual reports. The data from Bloomberg contain publicly traded acquirers in Africa between 2005 and 2013. We use data spanning this period because of limitation of obtaining outside this range. The countries included in our dataset are South Africa, Botswana, Namibia, Mauritius, Zimbabwe, Kenya, Tanzania, Uganda, Nigeria, Ghana, Ivory Coast, Morocco, Tunisia and Egypt based on availability of data. The focus of this study is on executive compensation and firm risk; however, to ensure that our findings are robust we collect various firm, deal and corporate governance data. These variables were used as controls and treated as the potential determinants of the dependent variables. Any missing data in the sample from Bloomberg data is manually extracted from the firm's annual reports.

Firm selection criteria require that; (a) there is availability of data (mainly for acquirers and some deal and firm characteristics of targets) three years before and after merger:- making seven years in all, (2) the firm has disclosed compensation data for the same top three managers of the firm over seven years period, however, firms that disclosed such data for the same top two managers consistently over the period are also included, (3) the firm does not change its CEO or any of the other two managers on whom they disclosed compensation, (4) the firm should not make any other acquisition at least three years before or after the acquisition. All these criteria are set to make sure that the data is not contaminated by other firm events that have the potential to swing variables direction and other unnecessary data structural breaks. In this case, the main and only structure break we expect to observe in our data should be at the year of acquisition.

Besides, to avoid the influence of the extreme outliers, our variables at winsorised at the first and ninety-nine percentile values. Our final sample is made up of clean data on 164 listed firms. Our analysis involves multiple countries with different currencies. To avoid currency disparity shocks, we convert all currencies at the respective year exchange rates to US dollar. The choice of the US dollar is motivated mainly by its stability and because it is a global currency. And because data is only available from 2002, we deflate all monetary figures by the 2002 USA Consumer Price Index (CPI).

5.3.2 Variables

According to literature (Devers et al., 2008; Low, 2009; Sila et al., 2016), firm risk could be sensitive to different range of factors which needs to be controlled for. We, therefore, classified the variables used in our study into risk, firm specific, deal-specific and corporate governance factors. Following the literature, we adopt two sets of firm risk measure as our dependent variables. The first measure is total risk, which is a market measure of risk is computed as the

average of the standard deviation of the daily stock returns over the year. Second, we also want to investigate the ability of accounting measure of firm risk to capture the change in firm's risk position post-merger. As suggested by Fama and French (1992), we include *ratio of book value of equity to the market value of equity (hereafter referred to as BME)* as our alternative risk measure. The former has been criticised in terms of its use to measure firm risk (Lakonishok, Shleifer & Vishny, 1994; Porta, Lakonishok, Shleifer & Vishny, 1997).

However, it has been shown to be the best proxy for sensitivity to the risk factor in returns (Deutsch et al., 2011; Fama & French, 1995; 1996a; 1996b; 2004). For the purpose of robustness check, we employ two other risk measures, namely systematic (market risk) and the *Degree of Combine Leverage (DCL)*. The DCL model is rarely used but highly recommended for measuring firm risk because of its combined effect of business and financial risk (Gritta, Freed & Chow, 1998; Li & Henderson Jr, 1991).

The independent variables are the various types of executive compensation. For the purpose of our study, we use cash (salary, bonuses and other cash related pay), equity (value of common stock, stock options (total value of stock option awarded to executives over the year, as in the case of South Africa) and total compensation (the sum of all compensations). In our analysis, we assume that the unobservable factors that influence firm risk and executive pay types across different countries remain unchanged over time. Details of all variables used are explained in Appendix A1.

Further, several variables are included in our estimations to control for firm, deal and corporate governance characteristics as suggested by literature and based on intuition. First, we use market-to-book ratio (MTB), sales growth and capital expenditure (Capex) as proxies for investment opportunities and growth, following Guay (1999) and Sila et al. (2016). Second, we include firm complexity as measured by firm size (total asset) to ensure that variations in firm size over time do not influence our result. Third, the existing literature suggests that

executive compensation awarded can be influenced immensely by various deal characteristics, which we need to control for (Dutta & Jog, 2009; Guest, 2009; Khorana & Zenner, 1998). Therefore, we include deal size, merger form, diversification and cross listing, target listing and target industry.

Finally, corporate governance factors have many implications for executive pay and drive the appetite for firm risk. For instance, according to Sah and Stiglitz (1991) large board size can lead to compromises that make managers to take less risky decisions or investments. Fama and Jensen (1983b) similarly argue that a more independent board and ownership structure usually result in shareholder-focused board, which has the propensity to push management to take more risky decisions. Not only that but also board gender diversity and CEO personality play essential role in post-merger firm risk position (Ahern & Dittmar, 2012; Kim & Lu, 2011; Maccrimmon & Wehrung, 1986). To address these concerns, we control for the effect of board size, outside board representation (OutD), institutional ownership (InsOwn), executive ownership (ExOwn), gender diversity (BoGen) and CEO personality (CEO's age and sex). Apart from testing the risk appetite for the CEOs and subsequent influence on the managerial team, we also include the CEO's race (RaceC) to determine if race plays any part in risk-taking.

5.3.3 Model specifications and estimation strategy

Corporate governance studies that seek to establish the relation between two distinct variables have some issues with endogeneity. The inability of these studies to deal with these problems lead to spurious results, and that may be the main reason for the divergent results reported by various studies on these variables for same sample over the same periods. In the CG literature, the two main sources of endogeneity issues that studies deal with are simultaneity and unobservable heterogeneity, assuming that current observations of a variable are totally

independent of the past values of the dependent variable (Wintoki, Linck & Netter, 2012). Ignoring these sources of endogeneity (strong exogeneity assumption) could have dire consequences on inference, according to the authors. We address this concern in establishing the relationship between various firm risk and executive pay types.

Studies on firm risk have acknowledged that firm risk is persistent over time (in other words, current risk can be determined by past risk) which depends, also, on past values of other variables as well (Sila et al., 2016). To correctly determine the effect of EC on firm risk, we need a model that captures the influence of past risk and past EC and addresses the simultaneity and unobservable heterogeneity problems (dynamic nature of risk and EC relationship). Our theoretical argument is based on the agency theory that contends that the risk aversion behaviour of managers depends on the level and kind of compensation, which is a function of managerial ability (firm performance). Hence, if EC is dynamic in nature and firm i with risk at time t-1 awards executive compensation of EC_{it} that align managerial interest to shareholders at time t, then the dynamic model can be formulated as

$$EC_{it} = f(Risk_{it-1}, Risk_{it-2}, ..., Risk_{it-q}, Controls_{it}, \zeta_i), \qquad \text{q=1 and 2} \tag{5.1}$$

where *Controls*, ς and q are control variables, unobserved firm effects and number of risk lags respectively. From equation (5.1), our empirical model that estimates the link between firm risk and EC can be written as

$$Risk_{it} = \alpha + \beta_1 EC_{it} + \beta_2 EC_{it-1} + \lambda_1 Risk_{it-1} + \lambda_2 Risk_{it-2} + \sum_{i=1}^{m} \delta_i Controls_{it} + \zeta_i + \varepsilon_{it} \tag{5.2}$$

where, m is the number of control variables ε_{it} is the error term and β captures the impact of EC on firm risk. We assume unobserved heterogeneity exist (that is, the unobservable factors that influence firm risk and executive pay types) but remain unchanged over time. This is a reasonable assumption considering that within the relatively short period, unobservable factors such as managerial ability might not change. We did not include any Heckman (1979)

correction factor in the estimation because the explanatory variables of the probit regression that model the probability of a firm undertaking a large M&A are all non-significant.

The estimation of such a dynamic panel data model with the traditional OLS provides inconsistent and biased results due to autocorrelation and heteroskedastic error terms (Bliese, 2000; Certo & Semadeni, 2006). Besides, in the face of possible unobserved firm fixed-effects, Wooldridge (2002) suggests the use of panel fixed-effect (FE) estimation. Also, as argued by Ntim et al. (2015a) and consistent with other previous studies (John et al., 2010; Sapp, 2008), the FE has the power to capture unobservable firm-level variations like executive talent and firm complexity.

However, the nature of our data and model could render the FE estimation bias and inconsistent as well. First, for a large number of firms (164) with relatively short-year periods, the FE is inconsistent and leads to loss of degree of freedom (Baltagi, Bratberg & Holmås, 2005). Second, the FE techniques require significant variations of the independent variables within the panel (Wooldridge, 2003). Even though we expect wide variations in EC after the merger, the variation in EC prior to merger might not be significant enough to meet the FE assumption. In addition, the strict exogeneity assumption of the FE requires that all independent variables should not correlate with past and future residual term. Conversely, with a dynamic panel model, as specified above, this assumption is violated since risk is persistent across time.

In order to avoid the above problems and reverse causality issues, we estimate our model with the dynamic panel generalised method of moment (GMM) introduced by Arellano and Bond (1991). Following similar approach by Girma et al. (2006a), Wintoki et al. (2012) and Guest (2009), we write the basic dynamic model in equation (2) in the first-difference form follows.

$$\Delta Risk_{it} = \alpha_{it} + \beta_1 \Delta EC_{it} + \beta_2 \Delta EC_{it-1} + \lambda_1 \Delta Risk_{it-1} + \lambda_2 \Delta Risk_{it-2} + \sum_{i=1}^{m} \delta_i \Delta Controls_{it} + \zeta_i + \varepsilon_{it} \quad (5.3)$$

First differencing of equation (5.2) purges our estimation of any potential effect of unobserved time invariant factors. The GMM technique requires the use of external exogenous variables as instruments but finding such variables for our kind of study is an impossible task (Bennouri et al., 2018). We, therefore, use the lag of the independent variables as instruments. We test the validity of the instruments and the model over-identification using the Sargan test. In addition, to be sure that our estimations are free of serial correlation, we use the second-order autocorrelation test.

As mentioned above, we include two lags of risk measure in our estimation. In order to avoid any bias in the estimation, it is equally important to know exactly how many lags of the risk variables that are enough to capture fully the influence of past risk. Sila et al. (2016) suggest that including two risk lags is enough to capture all past effects. Following their recommendation, we also include two risk lags. However, to be sure the suggested two lags applies to our sample and meet dynamic panel requirement(dynamic completeness), we run an OLS estimation of current risk (using total risk, beta, BME and DCL) on four past lags, controlling for MTB, Capex, firm size and sales growth. The results are presented in Appendix 5A. The coefficients of the first two lags are statistically significant while older ones are not; confirming that adding two risk lags is adequate to capture all the effects of past risk.

5.4 Results and discussion

5.4.1 Descriptive statistics

The descriptive statistics are presented in Tables 5.1A. The variables are grouped into compensation, risk, firm, deal and corporate governance specific variables. Panel A and B provide the pre and post average values for compensation and risk measure variables. We also present similar descriptive statistics for South Africa for the purpose of comparison due to the uniqueness of the South Africa economy. We observe a colossal increase in compensation

value after merger with relatively higher variations. Total compensation, for instance, increase from USD6.96 million (pre-merger) to USD12.40 million (post-merger), indicating about 78% change with a standard deviations of 23.78 and 50.56 respectively. Likewise, the South African executives received about 68% (i.e an average increase from USD3.75 million before merger to USD6.31 million after merger), with relatively smaller variations (standard deviation of 6.39 pre-merger and 9.6 post-merger). Similar compensation growth patterns are observed for other compensation types. South African studies on executive pay (Ntim et al., 2012; Okeahalam, 2004) report an average annual compensation growth rate of about 18% which is above the national average pay growth rate (Ntim et al., 2015a). These studies, therefore, support our observations that the exponential increase in pay post-merger (about 68% for South Africa and 78% for Africa) may be as a result of merger-related compensation payment.

Besides, cash compensations, in general, account for almost 50% of the average total pay and far higher for equity pay. For example, the difference in cash and equity pay for Africa is about USD2.13 million (i.e 5.56-3.43) while that of South Africa is USD1.23 million (i.e 3.38-2.15). Again, we could say that greater portion of the pay post-merger could come from rewards for the successful completion of the M&A deals. Besides, the African financial market is predominantly cash-based and most executives are likely to push for cash compensation, which is exacerbated by the inactive capital market. This run contrary to the agency theory suggestion and calls by institutions such as Kings Report in the case of South Africa (IoD, 2009) to use equity pay as a tool to align managerial interest to shareholders (Jensen & Meckling, 1976). Indeed if firm value maximization through diversification is the main motive for managers to do M&A, then that alone should motivate them enough to accept equity pay (higher share ownership).

Comparatively, compensation pays for Africa is higher than that of South Africa but it is lower than what is granted to executives of advanced economies (Bodolica, 2005; Bodolica

& Spraggon, 2009c; Kabir, Li & Veld-Merkoulova, 2013). If the average compensation for Africa is relatively higher than that of South Africa, then it implies that the rise in the value of Africa is due to higher average compensation for other African countries included in the sample. It is not surprising to observe a higher pay for other African countries because most of the firms involved in M&A deals (as in our sample) are multinational with roots in North America and Europe who are likely to pay compensations similar to their home standard.

Panel B of Table 5.1A shows the risk measure descriptive statistics. All the values, generally, show an upward increase, indicating that the risk position of firms increase after merger. The average post-merger total risk is far above what is reported in prior studies, especially in the US but the average beta risk measure is similar and consistent (Belkhir & Chazi, 2010; Berger et al., 2013; Sila et al., 2016). The average total risk, for instance, increased from 35.12% to 41.62% in post-merger while beta increased from 0.42 to 0.66. These results are consistent with the South African values as well except that average beta is higher for South African firms. The pattern for the accounting risk measures is not different either except that they exhibit wider variation, most especially the DCL. The average firm size (total assets) is about USD143 million for all African firms with a wide standard deviation of 212.22. South Africa average firm size is about three times as big as the whole African sample. Besides, capital expenditure is about USD47.6 million with an annual average sales growth of 16.25%. 64.64% of our total sample is made up of firms that are diversified with international operations and 37.54% are financial firms.

For our deal-specific variables, average deal size is USD796.06 million against USD 502.4 million for only South Africa firms. The average acquisition values are higher than acquisition values reported for other emerging markets (Deng & Yang, 2015; Gaffney, Karst & Clampit, 2016; Lebedev, Peng, Xie & Stevens, 2015). This is so because our sample is characterised by huge merger deals within the mining, telecommunication and financial

industry. In addition, 65.25% of the total sample acquired targets from the same industry while 41.34% of them target cross-border acquisitions. Once again, the high cross-border acquisitions support the strategic drive by most firms to expand to other African countries, most especially within the financial and service sector. It is therefore not surprising to see a 54.03% of South Africa's acquisitions to be cross-border. In addition, only 30.12% of the total sample deals are financed with stock and about 28.66% of the targets are listed firms. The Africa market is characterised by complex application and bureaucratic processes for acquiring listed firms. As a result, most of the bidders are likely to target private firms with less diversified ownership. It is therefore not surprising to see low percentage of listed firm targets.

In addition, Panel E of Table 5.1A provides the descriptive statistics for the various corporate governance variables. Starting with board size, the average board size in Africa is about 11 members (10.81 for Africa and 10.71 for South Africa). This figure does not indicate whether board size increases after merger but rather gives an average board composition of the firms sampled over the period. This is consistent with South Africa studies (Ntim, Lindop, Thomas, Abdou & Opong, 2017; Ntim et al., 2012) but slightly lower than what is reported for advanced markets (Abernethy, Kuang & Qin, 2014; Pathan, 2009; Patton & Baker, 1987).

However, outside board representation is rather low (i.e 46% for Africa and 54.6% for South Africa) in comparison to the above 57% reported for advanced markets by the same authors. Such a greater managerial power of executives exacerbates the high agency cost situation in the face of weak corporate governance issues across African countries. Unfortunately, managerial power, as in this case, does not reflect higher executive ownership. In fact, total executive ownership in these firms is only 6.7%, just slightly above total board ownership (9.83%). In any case, we expect both executive and board ownership to be low because in Africa, just like other emerging markets, institutional, family and individual ownership is high with relatively lower executive ownership.

Table 5.1A: Descriptive statistics

		Total (164)		South Africa(77)	
		Mean	**Std Dev**	**Mean**	**Std Dev**
Panel A: Executive compensation types					
Cash	Post-merger	5.56	18.38	3.38	5.32
	Pre- merger	3.11	10.44	2.62	6.09
Equity	Post- merger	3.43	28.38	2.15	1.41
	Pre- merger	1.47	10.3	0.76	0.98
Stock-options	Post- merger	-	-	1.36	2.67
(STOP)	Pre- merger	-	-	0.70	1.66
ToCom	Post- merger	12.4	50.56	6.31	9.60
	Pre- merger	6.96	23.78	3.75	6.39
Panel B: Risk variables					
Total Risk	Post- merger	41.62	44.62	43.62	23.64
	Pre- merger	35.12	41.64	40.64	28.32
Systematic risk	Post- merger	0.66	5.20	0.81	12.24
	Pre- merger	0.42	9.90	0.30	8.90
Unsystematic risk	Post- merger	10.73	141.34	7.15	128.07
	Pre- merger	8.16	662.3	10.19	475.64
BME	Post- merger	1.58	2.79	1.81	3.22
	Pre- merger	1.49	3.56	1.43	143
DCL	Post- merger	2.52	653.25	32.00	953.02
	Pre- merger	1.13	99.96	3.78	134.41
Panel C: Financial variables					
Firm Size (total asset)		143.44	212.22	407.25	242.33
Capex		47.6	15.5	27.1	6.91
Sales growth		16.25	69.25	11.59	36.31
D&I (%)		64.63	47.96	64.94	48.03
Financial industry (%)		37.54	48.14	37.66	48.77
Panel D: Deal and firm-specific variables					
Deal value (mil)		796.06	3077.66	502.14	955.71
Same industry (%)		65.24	47.77	62.34	48.77
Cross-border (%)		41.34	45.36	54.03	44.14
MoP (Stock), %		30.12	40.21	33.38	42.6
Public (%)		28.66	45.36	31.17	46.62
Panel E: Corporate governance variables					
BoSize		10.81	3.31	10.71	3.11
OutD (%)		46.00	4.39	54.6	14.94
BoGen (%)		4.47	8.99	6.78	10.89
Inst. Ownership (%)		58.3	25.99	69.04	22.38
Board ownership (%)		9.83	17.10	6.57	12.75
Ex. ownership (%)		6.70	12.48	6.74	12.41
Age (years)		49.95	6.47	49.62	6.78
RaceC (%)		31.1	46.43	11.69	32.34
SexC (%)		6.48	24.21	3.12	16.15

Note: The definitions of all variables are explained in Appendix 1A. Firm size is measured as acquirer's total asset. Std Dev is the standard deviation, Pre-merger is a three-year average of the variable before merger and Post-merger is a three-year average of the variable after merger. Deal and corporate governance variables including D&I, industry classification and foreign ownership are firm averages for each year.

Table 5.1B: Summary statistics for variable medians and difference in median

	Africa (164)			South Africa (77)		
	Before merger	After merger	Z Test for difference	Before merger	After merger	Z Test for difference
Compensation types						
Cash (000)	3,097.94	5,886.52	3.91***	3,955.00	6,970.25	2.95***
Equity (000)	1,408.70	4,713.17	4.78***	909.00	2,402.00	3.12***
STOP (000)	-	-	-	779.87	1,415.90	3.79***
Total (000)	5,989.50	11,243.60	4.40***	6,942.00	10,126.00	3.62***
Risk measures						
Total risk	30.96	37.96	1.18	29.06	35.03	1.36
Systematic risk	0.93	0.96	0.14	0.84	0.96	0.09
Unsystematic risk	5.03	2.07	0.79	7.38	3.96	0.06
BME	1.01	1.08	1.54	1.03	1.12	1.50
DCL	-0.36	-0.35	0.27	-0.28	-0.35	0.16

Note: The table shows the average median value of compensation types and risk measures immediately before and after merger for Africa and South Africa firms. The definitions of all variables are explained in Appendix 1A. All monetary figures are in American dollar (USD). The test of statistical significant difference is the Wilcoxon rank-sum tests (Z). *, ** and *** denote significance at 10%, 5% and 1% respectively.

Therefore, with a 58.3% institutional ownership for the total sample, it means families and high net-worth individuals control greater portion of the remaining ownership. It implies, therefore, that majority of the board members are representatives of majority shareholders who might not necessarily have a significant share in the firm. Hence, the low board and executive ownership.

Generally, the African board composition is gender biased towards women representation. Female constitute only 4.47% (less than 10%) of total board size. This means that out of an average board size of 11 members, majority of these boards will have no female representation. If the argument that low female board representation results in risky decision taking holds, then we will expect African firms to be riskier. Concerning CEO's personality, the average CEO's age is about 50 years with only 31% of them being blacks and 6.48% being women.

From Table 5.1A, we observe variations in the three-year arithmetic averages of various compensation and risk variables before and after merger but we are unable to confirm if the variations are actually statistically significant. The use of the arithmetic average over years t-3

to t-1 is intended to eradicate yearly noise and give a true firm characteristic. To provide a more precise inference, we conduct test of difference in cross-sectional median values using a year prior to merger and a year after merger. The results show that median compensation after merger are significantly different (at 1% level) in value from values before merger for both Africa and South Africa samples. Thus, merger activities trigger significant change in various executive compensations. It is expected that the significant increase in compensation should influence management to take investment decisions that will either increase or reduce firm risk, depending on which management strategy adopted.

However, Table 5.1B shows that this is not exactly the case. The median total risk before merger is slightly lower than after merger value (30.96% vs 37.96% for Africa and 29.03% vs 35.06% for South Africa), but it is statistically insignificant. Similarly, the firm specific risk dropped to almost half (5.03% to 2.89% for Africa and 7.38% to 3.96% for South Africa) but the difference is also insignificant, indicating that these firms are enjoying risk reduction from the diversification associated with merger. The rest of the risk measures are insignificant and similar in values. Table 5.1A shows that for EC and risk, post-merger values are higher than pre-merger but for Table 5.1B, this is not the case especially for some of the risk types.

For Table 5.1A, the pre and post-merger values are three-year averages while the test in Table 5.1B uses the values for the year immediately before and after merger. Hence, the insignificance of the risk difference immediately before and after merger could be explained possibly by yearly noise within the risk values. This observation could suggest that there is higher inertia in firm risk after merger.

5.4.2 Empirical results

Our main risk measure variables are total risk (ReV) and book value to market value of equity (BME) while the main independent variables are EC types and lags of risk measure. Risk can be persistent over years and to control for past risk, we include up to second lags in our models.[13] Tables 5.2 and 5.3 present the results of the estimation for total risk and BME respectively. Each of these tables present estimations for both panel system GMM (with fixed-effect) and the panel fixed-effect estimators. For each estimator, we present three different models. Model (1) is made up of the major and firm-specific variables, including diversification with international presence (D&I), while model (2) includes all our corporate governance variables (with D&I) and finally model (3) includes all the variables (firm and corporate governance specific variables).

We include year dummies in all our estimation and we do not report the values for these time dummies (first three years after merger) if all the values are insignificant. The tables in this study present the two most important specification tests (Sargan and the second-order serial correlation tests). The results of these test show that our estimations are not suffering from any over or misspecifications and second-order serial correlation in the residuals.

Before we discuss the results, we provide an overview of the estimations in relation to the two estimation techniques used in our study-GMM and FE. Table 5.2 to 5.6 present the estimation results of various variables for both the GMM and FE. Generally, the direction of the coefficients and statistical significance of lagged risk variables are similar. However, we observe major deviations across all tables. We use Table 5.2A, for instance, to explain the

[13] In as much as we need the lagged risk variables for the dynamically complete model, too long past risk might not be relevant to cause any change in our estimation parameters. For this reason, we run an OLS estimation of current risk (using total risk, beta, BME and DCL) on four past lags, controlling for MTB, Capex, firm size and sales growth. The results are presented in Appendix 5A. The coefficients of the first two lags are statistically significant while older ones are not; confirming that adding two risk lags is adequate to capture all the effects of past risk. Hence, we report only the estimations involving two lags of risk variable.

differences. First, variations in total cash pay is negative and significant for GMM but turns positive and insignificant (except for model 1) for the FE. The GMM estimation result is consistent with literature and the agency theory conclusion that posits the use of cash compensation is a disincentive for managers to take considerable risk as they avoid risky but high positive net present value projects (Devers et al., 2008; Hall & Liebman, 1998). This is so because the cash compensation awarded to the executives are diversified into other investment to offset any potential loss. Secondly, difference in previous year's cash compensation has a negative and significant impact on total risk (at least at 10% level) for GMM while it has negative and insignificant effect for model (1) under the FE estimation.

From Table 5.2, our results generally agree that variations in previous risk (past two consecutive years) influence present total risk, as reported by both The GMM and FE estimators. This result implies that previous risk does not only affect current executive pay but it also negatively (significant at least at the 5% level) influence the current risk position post-merger. Our result runs contrary to Pina, Torres and Bachiller (2017), Sila et al. (2016) and Benson, Park and Davidson (2014) who studied US-based firms and find that previous years risk positively influence firm risk and the impact dies down as the lags increases. Earlier studies have also strongly argued that risk reduction is not the main motive for managers pursuing mergers but rather for personal gains (Agrawal & Mandelker, 1987; Lewellen, Loderer & Rosenfeld, 1989). Our finding is different in this case because, from the diversification point of view, when firms merged, the risk of the firm is expected to reduce. Therefore, after merger, the risk position should improve, which is exactly the outcome of our analysis. Besides, consistent with our observation and literature (Amihud & Lev, 1981), the D&I variables also strongly affect risk correctly in the negative direction.

Thirdly, for the GMM estimations, the coefficients for the difference in MTB, as a proxy for firm growth prospect, are negative and significant, implying that the future growth

prospect of a firm after going through merger reduces the total risk of acquirers. Besides, in line with the arguments that more outside board representation increases firm risk by forcing directors to accept risky net present value (NPV) projects that bring value to shareholders (Bennouri et al., 2018), we find that higher board independence positively impact total risk. This result confirms our prediction that firm in Africa have high institutional, family and blockholder ownership who nominate their preventatives to seat on the company boards. Their interest on those boards is to pursue the interest of those they represent by pushing for projects that are in the interest of those they represent. Hence, when executives are compensated significantly with cash pay after merger (which demotivates them to take more risk); independent board representatives put more pressure on managerial team to take more risky decisions aimed at increasing future profitability.

Finally, in support of the general conclusion in risk literature (Kim & Lu, 2011), we observe that older CEOs are risk averse, which is transmitted to the managerial team, resulting in reduction of total risk. However, the results from the FE show no significant impact of MTB, board independence and CEO's age on risk. These results support the observation that firm and corporate governance variables correlate little with firm risk and performance variables when FE estimators are used (Bennouri et al., 2018). In addition, Sila et al. (2016) contend that dynamic panel data (as in our case) are endogenous and therefore estimating with FE results in biased estimates, which (Roberts & Whited, 2013) claim to be the main cause of equivocal results reported in literature. Hence, we conclude that, despite some degree of consistency, the FE has some endogeneity issues and produces insensitive results. Our discussions, henceforth, focus on the GMM but we still report the results of FE for some other subsequent estimation to throw more light on the above issue.

Table 5.2A: Impact of cash compensation on total risk for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-4.9443	41.3525	-73.5262
				[-2.55]**	[0.51]	[-0.80]
Total risk(-1)	-0.3604	-0.4174	-0.8006	-0.4164	-0.4039	-0.4019
	[-16.32]***	[-3.47]***	[-17.90]***	[-10.89]***	[-10.57]***	[-10.57]***
Total risk(-2)	-0.0765	-0.6413	-0.5244	-0.3463	-0.3385	-0.3354
	[-4.76]***	[-2.20]**	[-11.63]***	[-8.79]***	[-8.61]***	[-8.58]***
Cash	-10.7090	-7.8036	-2.3199	-0.3219	1.9336	0.7658
	[-3.72]***	[-2.32]**	[-2.04]**	[-9.11]***	[0.66]	[0.26]
Cash(-1)	-5.6865	-2.6979	-2.7689	-1.3544	-1.0847	-0.6028
	[-2.43]**	[-1.68]*	[-2.02]**	[-0.46]	[-0.35]	[-0.20]
Market-to-book value	-0.0142	-0.0950	-0.0600	0.0027	0.0019	0.0023
	[-2.13]**	[-2.02]**	[-2.00]**	[0.10]	[0.07]	[0.09]
Capital expenditure	-0.1521	-2.5514	-2.8655	-1.8289	-2.0825	-2.3901
	[-0.12]	[-1.15]	[-0.69]	[-0.85]	[-0.94]	[-1.08]
Firm size	-0.7510	-6.5235	-5.6206	-1.1998	-2.1011	-1.9806
	[-0.14]	[-1.36]	[-0.75]	[-0.38]	[-0.66]	[-0.62]
Sales growth	-0.0003	0.0002	0.0004	0.0001	0.0001	0.0001
	[-0.59]	[0.43]	[0.35]	[0.07]	[0.15]	[0.19]
D&I	-7.0202		-16.9645	-17.0273		-15.5169
	[-2.31]**		[-1.77]*	[-3.25]***		[-2.51]**
Board Size		-0.3494	-3.7458		5.3479	5.0603
		[-0.06]	[-1.31]		[1.71]*	[1.66]*
Outside directors		3.0304	2.8372		1.6396	1.8831
		[1.99]**	[1.76]*		[0.94]	[1.08]
Institutional Ownership		0.1108	-0.1527		0.0661	0.0700
		[0.50]	[-0.26]		[0.45]	[0.48]
Executive Ownership		-0.2320	-0.3630		0.3745	0.1670
		[-0.39]	[-0.25]		[0.54]	[0.24]
Board gernder diversity		0.5900	0.9544		-0.5801	-0.5629
		[1.17]	[0.51]		[-0.77]	[-0.75]
Age of CEO		-4.8689	-12.9267		-1.6021	0.8076
		[-2.00]**	[-2.06]**		[-0.97]	[0.42]
Gender of CEO		44.5552	127.7838		43.1965	11.6941
		[0.99]	[0.88]		[1.47]	[0.36]
Race of CEO		1.5642	1.3660		99.7074	72.5281
		[0.20]	[0.16]		[1.73]*	[1.24]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.25**	1.30**	1.35***
Adjusted R^2				0.6281	0.7688	0.8715
Sargan	0.4516	0.6445	0.7554			
AR(2)	0.4994	0.8336	0.9100			

Note: This table present the GMM and FE estimations of total risk on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.2B: Impact of equity compensation on total risk for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-5.1103	43.2052	-84.0570
				[-2.68]***	[0.54]	[-0.91]
Total risk(-1)	-0.3795	-0.3777	-0.8026	-0.4176	-0.4049	-0.4014
	[-3.71]***	[-3.69]***	[-18.03]***	[-10.96]***	[-10.61]***	[-10.58]***
Total risk(-2)	-0.6800	-0.6866	-0.5233	-0.3461	-0.3385	-0.3349
	[-2.38]**	[-2.52]**	[-11.74]***	[-8.74]***	[-8.57]***	[-8.53]***
Equity	0.5476	0.7095	-0.5185	-0.0853	-0.0164	-0.1168
	[0.28]	[0.38]	[-0.30]	[-0.16]	[-0.03]	[-0.22]
Equity(-1)	-0.2587	-0.3894	-0.3605	0.1609	0.1388	0.1933
	[0.17]	[-0.28]	[-0.24]	[0.28]	[0.23]	[0.32]
Market-to-book value	0.0066	0.0080	0.0045	0.0024	0.0003	0.0031
	[0.33]	[0.41]	[0.13]	[0.09]	[0.01]	[0.12]
Capital expenditure	-3.6054	-3.2110	-3.1035	-1.9849	-2.2402	-2.4946
	[-1.71]*	[-1.40]	[-0.74]	[-0.92]	[-1.01]	[-1.13]
Firm size	-7.1666	-7.2610	-5.3016	-1.2128	-1.7947	-1.8474
	[-2.12]**	[-1.68]*	[-1.70]*	[-0.39]	[-0.57]	[-0.59]
Sales growth	0.0003	0.0004	0.0041	0.0001	0.0001	0.0001
	[2.20]**	[2.56]**	[2.34]**	[0.10]	[0.15]	[0.19]
D&I	-20.2929		-17.3094	-17.2847		-16.4587
	[-2.12]**		[-1.79]*	[-3.38]***		[-2.70]***
Board Size		3.8095	3.8397		5.3869	5.0740
		[2.14]**	[2.37]**		[1.71]*	[1.65]*
Outside directors		2.9384	2.8491		1.6541	1.9111
		[1.86]*	[1.76]*		[0.95]	[1.10]
Institutional Ownership		0.1784	-0.1353		0.0743	0.0824
		[0.72]	[-0.23]		[0.51]	[0.57]
Executive Ownership		0.0074	-0.2640		0.4320	0.2035
		[0.01]	[-0.18]		[0.62]	[0.29]
Board gernder diversity		0.7525	1.0686		-0.5801	-0.5611
		[1.14]	[0.57]		[-0.77]	[-0.75]
Age of CEO		-5.2846	-13.2521		-1.6466	1.0154
		[-2.71]***	[-2.08]**		[-1.01]	[0.54]
Gender of CEO		48.2465	131.5961		44.2030	9.7332
		[0.85]	[0.51]		[1.52]	[0.31]
Race of CEO		0.0477	0.0458		99.7241	70.3420
		[0.25]	[0.25]		[1.71]	[1.19]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.25**	1.29**	1.34***
Adjusted R^2				0.6205	0.7458	0.8554
Sargan test (p-value)	0.8851	0.5668	0.8854			
AR(2) test (p-value)	0.9357	0.9177	0.1005			

Note: This table present the GMM and FE estimation of total risk on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.2C: Impact of total compensation on total risk for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-5.2218	-103.8805	-89.8361
				[-2.70]***	[-1.56]	[-0.95]
Total risk(-1)	-0.3641	-0.3594	-0.8055	-0.4190	-0.2508	-0.4045
	[-3.35]***	[-3.65]***	[-17.88]***	[-10.99]***	[-8.27]***	[-10.67]***
Total risk(-2)	-0.7910	-0.7197	-0.5372	-0.3482	-0.1059	-0.3362
	[-2.46]**	[-2.78]***	[-11.47]***	[-8.82]***	[-3.37]***	[-8.56]***
Total compensation	-3.7250	-3.8656	-7.6036	-1.5440	1.1848	-0.1423
	[-0.55]	[-0.77]	[-0.91]	[-0.62]	[0.57]	[-0.06]
Total compensation(-1)	-2.4319	-2.4199	-4.0539	0.3897	0.5547	1.5441
	[-0.72]	[-0.75]	[-0.67]	[0.17]	[0.28]	[0.62]
Market-to-book value	0.0058	0.0063	0.0142	0.0041	-0.0032	0.0022
	[0.34]	[0.45]	[0.40]	[0.15]	[-0.15]	[0.08]
Capital expenditure	-3.1720	-2.7879	-2.8010	-1.9942	-1.9600	-2.5513
	[-1.70]*	[-1.32]	[-0.67]	[-0.92]	[-1.11]	[-1.16]
Firm size	-7.4527	-7.4704	-5.4630	-1.0232	-1.5847	-1.7988
	[-2.17]**	[-1.70]*	[-0.72]	[-0.33]	[-0.63]	[-0.57]
Sales growth	0.0003	0.0003	0.0004	0.0001	0.0001	0.0001
	[2.25]**	[1.61]	[1.35]	[0.09]	[0.13]	[0.21]
D&I	-18.9917		-16.4096	-18.2007		-16.6070
	[-2.05]**		[-1.69]*	[-3.46]***		[-2.70]***
Board Size		0.9745	4.1573		3.6957	5.0974
		[0.19]	[1.43]		[1.07]	[1.47]
Outside directors		2.8354	2.6887		1.6968	1.9192
		[1.75]*	[1.71]*		[1.22]	[1.10]
Institutional Ownership		0.1291	-0.1805		0.0207	0.0710
		[0.59]	[-0.31]		[0.18]	[0.49]
Executive Ownership		-0.0186	-0.1311		0.4786	0.1482
		[-0.03]	[-0.09]		[0.87]	[0.22]
Board gernder diversity		0.7288	1.2370		-0.3098	-0.6027
		[1.55]	[0.67]		[-0.52]	[-0.80]
Age of CEO		-5.8177	-14.5957		-1.8682	1.1486
		[-2.36]**	[-1.92]*		[-1.37]	[0.59]
Gender of CEO		53.4879	146.5057		41.5871	7.5577
		[1.20]	[1.02]		[1.76]*	[0.24]
Race of CEO		-0.0045	-0.0047		90.3762	68.1410
		[-0.51]	[-0.08]		[1.95]*	[1.16]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.26**	2.48***	1.35***
Adjusted R^2				0.6325	0.2886	0.8774
Sargan test (p-value)	0.6658	0.8445	0.7741			
AR(2) test (p-value)	0.8554	0.9283	0.19963			

Note: This table present the GMM and FE estimation of total risk on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

In contrast to our findings on cash compensation (see Table 5.2A), the coefficients of changes in equity and total compensation are insignificant, indicating that total pay or rewarding executives with equity does not affect the total risk-taking behaviour of management. This finding is not surprising, although it runs contrary to suggestions to use equity pay to encourage managerial risk-taking. Three reasons could best explain such an observation. First, by the agency argument (Jensen & Meckling, 1976), higher equity pay should align managerial interest to shareholders, *ceteris peribus*. However, a section of the literature contend that when executives are rewarded with large equity, it rather makes them too risk averse since their portfolios are heavily weighted in the firm's stock, resulting in the pursue of projects that stabilises revenue stream such as M&As (Amihud & Lev, 1981; Benson et al., 2014; May, 1995). Obviously, such behaviour has the potential to alter direction and significance of equity pay on firm risk. An earlier study by (Amihud et al., 2002) on cross-border bank mergers confirms that the acquirers total bank risk neither decrease nor increase after merger.

Secondly, the equity compensation, as suggested by agency theory and regulatory bodies such as Kings Report II, does not form a greater portion of executive pay as shown in our sample, but rather cash pay does. Hence, if managerial reward portfolio is not equity dominated, then there is no motivation for a rational manager to take risky decisions but he will rather target investments that improve performance related incentives instead of taking more risk. Third, Africa markets are inactive but with very high stock return volatilities that do not necessarily match their respective returns. There is therefore the possibility of very high equity total risk that has little correlation with equity returns, just like managerial equity.

For equity compensation, several controls variables are significant. We notice also that large firms with higher capital expenditure reduces total risk through mergers compare to smaller firms, a finding that is consistent with those of (Benson et al., 2014). Measure of firm's operational performance (sales growth) is positively related to total risk. Besides, apart from

CEO's age, board dependent variables (not always significant at the 5%blevel) are also positively correlated with total risk, suggesting that firms with large board size and higher independent outside directors experience lower total firm risk through M&As.

The results for total pay are similar to those of equity pay, except that board size was not significant as in the case of equity. Contrary to various arguments in literature, we do not find any evidence to support the influence of board gender diversity (BoGen), CEO's gender (SexC), board and executive ownership on the total risk-compensation relationships. We see inconsistency in the relationship between total pay and firm total risk, perhaps, due to the bi-directional effect of cash and equity pay on risk since total risk is made up of cash, equity and other peripheral compensation forms. This brings to question the use of total compensation to establish a link with firm risk or performance.

The discussions, by far, is centred on total risk which is a measure of financial risk. Miller and Bromiley (1990), in their study, classified risk into three different categories, viz. firm level risk, industry strategic risk and stock market risk. According to Deephouse and Wiseman (2000), stock market risks are the most important risk measures to investors because it indicates how equity market prices firm's cash flows even though it does not address the cash flow generation process. Fiegenbaum and Thomas (1988) on the other hand argue in favour of income-stream risk measures as the most relevant to executives since it is based on forecasting uncertainties about firm's cash flow. Indeed, the use of a market risk measure to determine the risk profile of publicly traded firms might not be adequate to properly inform managerial and investor decisions. In fact, the market risk measures, in general, mostly place much emphasis on the level of risk and its associated risk premium and stock performance. However, operational, default risk and firm distress (as captured by accounting risk measures), leading to bankruptcy are largely ignored in post-merger firm research. The accounting risk measures, on the other hand, depict enough signal about the financial distress position of acquirers. It is

equally important to provide a holistic view on risk and EC from both investor and managerial stand.

The big question is whether accounting risk measures capture the impact of compensation types the same way as equity market risks, and if not what are the possible points of divergence. To answer this question, we first employ book value of equity to market value of equity (BME), an accounting risk measure to investigate this relation. The choice of BME is motivated by (Fama & French, 1992) who document the importance of BME as risk measure, based on US data. According to them, firms with high BME are assigned high-risk premium due to the higher risk of financial distress. Although their study spark lot of debate and contrary views on BME, the results are consistent with similar studies conducted on other market (Fama & French, 1997; Griffin, 2002; Keim & Hawawini, 2002). These studies generally conclude that firms with higher BME have insistently high financial leverage, very low earning, high earnings volatility and very high probability of cutting dividend (Griffin & Lemmon, 2002). Besides, in their study to develop a leveraged-based alternation to the traditional asset pricing models, Peterkort and Nielsen (2005) conclude that the BME is the best alternative for risk proxy, in line with Vassalou and Xing (2004).

Table 5.3A, 5.3B and 5.3C show the results of cash, equity and total compensation respectively on BME risk. Starting with the influence of past risk (using the GMM), we find that BME (-1) strongly relates to current risk while previous two year's BME(-2), generally, does not impact on current risk (weakly significant for cash pay only), suggesting that BME risk is persistent but from only the immediate past year. Moreover, in models (2) and (3), outside board representation has positive and statistically significant coefficient at 5% level for all compensation types, similar to total risk. In addition, board size weakly impact on BME for all pay types. Besides, we do not find any evidence to support the effect of any executive pay type on firm risk. We do not see any change in our results after controlling for other firm and

deal specific factors. In line with Fama and French's argument and results of other studies on the use of BME to predict firm's distress (Capaul, Rowley & Sharpe, 1993; Griffin, 2002), we find that EC makes no significant impact on the firms risk of distress and earnings uncertainty for successful Africa acquirers.

The variations in the compensation-risk relationship using total risk and BME raises questions about how different EC impact different risk measures. This observation also brings to light how investors and executives perceive different forms of firm's risk and pay dynamics. This observation is consistent with Miller et al. (2002) who investigate the relationship between executive pay and four different form of firm risk (systematic market, unsystematic market, systematic income and unsystematic income risk), and conclude that market risk and income risk measures influence EC differently. Although we find no significant impact of EC on our two different risk measures, except for the relation between cash and total risk, we are unable to conclude on the similarities and differences in how equity market and accounting risks capture the effect of EC types. To provide more insight and as robustness check, we run similar estimations for two other alternative risk measures. That's, systematic risk (market risk) and degree of combine leverage (DCL) and the results are presented in Appendices B and C.

Table 5.3A: Impact of cash compensation on BME for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				0.2090	-4.6302	-3.0543
				[2.39]**	[-1.28]	[-0.73]
BME(-1)	-0.3632	-0.3674	-0.3667	-0.7955	-0.7973	-0.7958
	[-2.76]***	[-2.79]***	[-7.26]***	[-28.05]***	[-28.09]***	[-27.96]***
BME(-2)	-0.7170	-0.7410	-0.0738	-0.3963	-0.3960	-0.3956
	[-1.80]*	[-1.82]*	[-1.69]*	[-14.27]***	[-14.22]**	[-14.20]***
Cash	-0.2642	-0.3912	-0.3843	-0.0846	-0.1036	-0.0873
	[-0.63]	[-0.90]	[-0.85]	[-0.64]	[-0.78]	[-0.65]
Cash(-1)	0.0879	-0.0138	-0.0090	0.1650	0.1737	0.1674
	[0.32]	[-0.05]	[-0.03]	[1.25]	[1.25]	[1.20]
Market-to-book value	0.0006	0.0008	0.0007	-0.0002	-0.0002	-0.0002
	[1.13]	[1.59]	[0.41]	[-0.15]	[-0.13]	[-0.13]
Capital expenditure	0.2209	0.1528	0.1514	0.2098	0.1582	0.1627
	[0.69]	[0.50]	[0.66]	[2.17]**	[1.58]	[1.62]
Firm size	-0.5294	-0.5122	-0.5118	-0.3034	-0.2293	-0.2306
	[-1.15]	[-1.15]	[-1.23]	[-2.15]**	[-1.58]	[-1.59]
Sales growth	2.3E-5	3.4E-5	8.1E-5	5.5E-5	5.3E-5	3.9E-5
	[1.07]	[1.16]	[0.31]	[0.69]	[0.47]	[0.45]
D&I	-0.1066		-0.1380	-0.2495		-0.2138
	[-2.30]**		[-2.26]**	[-1.06]		[-0.76]
Board Size		-0.0929	-0.0905		-0.0376	-0.0335
		[-1.90]*	[-1.95]*		[-0.73]	[-0.65]
Outside directors		0.0902	0.0611		-0.0117	-0.0151
		[2.47]**	[2.03]**		[-0.15]	[-0.19]
Institutional Ownership		-0.0170	-0.0168		0.0006	0.0005
		[-0.58]	[-0.54]		[0.09]	[0.08]
Executive Ownership		0.0622	0.0647		0.0741	0.0770
		[1.61]	[0.82]		[2.37]**	[2.44]**
Board gernder diversity		0.0394	0.0383		-0.0009	-0.0012
		[0.93]	[0.37]		[-0.03]	[-0.03]
Age of CEO		-0.0844	-0.0928		0.0989	0.0658
		[-0.45]	[-0.14]		[1.33]	[0.77]
Gender of CEO		-1.7347	-1.8267		-1.5354	-1.1034
		[-0.82]	[-0.23]		[-1.16]	[-0.77]
Race of CEO		0.00425	0.0355		-2.0697	-1.6956
		[0.07]	[0.85]		[-0.79]	[-0.64]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				6.73***	6.49***	6.45***
Adjusted R^2				0.6012	0.6005	0.6002
Sargan test (p-value)	0.6645	0.8521	0.7541			
AR(2) test (p-value)	0.7235	0.5548	0.3110			

Note: This table presents the GMM and FE estimation of BME on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.3B: Impact of equity compensation on BME for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				0.2324	-4.4205	-2.1554
				[2.69]***	[-1.23]	[-0.51]
BME(-1)	-0.3583	-0.3609	-0.3601	-0.7970	-0.7988	-0.7967
	[-2.73]***	[-2.75]***	[-7.20]***	[-28.02]***	[-28.02]***	[-27.88]***
BME(-2)	-0.0679	-0.0691	-0.0688	-0.3970	-0.3966	-0.3962
	[-0.77]	[-0.77]	[-1.59]	[-14.24]***	[-14.17]***	[-14.16]***
EQT	0.0039	0.0067	0.0065	-0.0022	-0.0013	0.0004
	[0.06]	[0.11]	[0.07]	[-0.09]	[-0.05]	[0.02]
EQT(-1)	0.0024	0.0040	0.0041	-0.0012	0.0023	0.0013
	[0.04]	[0.08]	[0.05]	[-0.05]	[0.08]	[0.05]
Market-to-book value	0.0004	0.0003	0.0003	0.0001	0.0001	0.0000
	[0.76]	[0.77]	[0.17]	[0.05]	[0.07]	[0.03]
Capital expenditure	0.2398	0.1751	0.1723	0.2234	0.1666	0.1715
	[0.75]	[0.56]	[0.74]	[2.30]**	[1.65]*	[1.70]*
Firm size	-0.5263	-0.4920	-0.4933	-0.3098	-0.2390	-0.2375
	[-1.03]	[-0.97]	[-1.18]	[-2.21]**	[-1.66]*	[-1.65]*
Sales growth	1.4E-5	8.6E-5	4.6E-5	3.7E-5	2.3E-5	7.4E-5
	[0.94]	[0.94]	[0.28]	[0.64]	[0.42]	[0.40]
D&I	-0.1666		-0.2193	-0.2864		-0.2940
	[-2.50]**		[-2.41]**	[-1.24]		[-1.05]
Board Size		-0.0909	-0.0873		-0.0432	-0.0374
		[-1.91]*	[-1.85]*		[-0.83]	[-0.72]
Outside directors		0.0350	0.0120		-0.0135	-0.0181
		[2.19]**	[2..01]**		[-0.17]	[-0.23]
Institutional Ownership		-0.0213	-0.0211		0.0005	0.0004
		[-0.74]	[-0.66]		[0.08]	[0.05]
Executive Ownership		0.0558	0.0600		0.0749	0.0790
		[1.38]	[0.75]		[2.36]**	[2.47]**
Board gernder diversity		0.0418	0.0400		0.0007	0.0003
		[1.16]	[0.39]		[0.02]	[0.01]
Age of CEO		-0.1724	-0.1863		0.0949	0.0475
		[-1.67]*	[-1.82]*		[1.28]	[0.55]
Gender of CEO		-2.7015	-2.8557		-1.4892	-0.8759
		[-0.89]	[-0.36]		[-1.13]	[-0.61]
Race of CEO		-0.0045	-0.0058		-2.0633	-1.5388
		[-0.59]	[-0.55]		[-0.78]	[-0.57]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				6.65***	6.39***	6.36***
Adjusted R^2				0.5986	0.5974	0.5975
Sargan test (p-value)	0.8746	0.9985	0.8879			
AR(2) test (p-value)	0.7040	0.7447	0.2170			

Note: This table presents the GMM and FE estimation of BME on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.3C: Impact of total compensation on BME for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				0.2137	-4.8242	-3.1149
				[2.45]	[-1.28]	[-0.72]
BME(-1)	-0.3583	-0.3620	-0.3613	-0.7961	-0.7980	-0.7964
	[-2.70]***	[-2.72]***	[-7.21]***	[-28.07]***	[-28.11]***	[-27.98]***
BME(-2)	-0.0679	-0.0700	-0.0698	-0.3967	-0.3965	-0.3961
	[-0.75]	[-0.76]	[-1.61]	[-14.28]***	[-14.23]***	[-14.21]***
Total compensation	0.0762	-0.0318	-0.0346	-0.0411	-0.0544	-0.0423
	[0.18]	[-0.06]	[-0.08]	[-0.37]	[-0.46]	[-0.36]
Total compensation (-1)	0.1851	0.0977	0.0984	0.1122	0.1263	0.1181
	[0.78]	[0.34]	[0.30]	[1.07]	[1.11]	[1.04]
Market-to-book value	0.0005	0.0007	0.0007	0.0001	0.0002	0.0002
	[0.70]	[0.80]	[0.37]	[0.12]	[0.17]	[0.13]
Capital expenditure	0.2262	0.1688	0.1663	0.2108	0.1589	0.1636
	[0.76]	[0.58]	[0.73]	[2.17]**	[1.58]	[1.62]
Firm size	-0.5050	-0.4839	-0.4850	-0.3038	-0.2299	-0.2304
	[-1.02]	[-0.98]	[-1.17]	[-2.17]**	[-1.60]	[-1.60]
Sales growth	2.4E-5	3.8E-5	6.6E-5	7.6E-5	2.0E-5	3.6E-5
	[0.95]	[1.02]	[0.29]	[0.66]	[0.44]	[0.43]
D&I	-0.1460		-0.1904	-0.2676		-0.2291
	[-2.46]**		[-2.36]**	[-1.13]		[-0.81]
Board Size		-0.0968	-0.0941		-0.0383	-0.0338
		[-1.74]*	[-0.61]		[-0.74]	[-0.65]
Outside directors		0.0760	0.0350		-0.0122	-0.0158
		[2.33]**	[2.02]**		[-0.15]	[-0.20]
Institutional Ownership		-0.0197	-0.0194		0.0008	0.0007
		[-0.74]	[-0.62]		[0.12]	[0.10]
Executive Ownership		0.0546	0.0583		0.0735	0.0767
		[1.25]	[0.73]		[2.35]**	[2.43]**
Board gernder diversity		0.0477	0.0462		-0.0016	-0.0019
		[1.32]	[0.46]		[-0.05]	[-0.05]
Age of CEO		0.1425	0.1538		0.1035	0.0676
		[0.61]	[0.23]		[1.33]	[0.76]
Gender of CEO		-2.3523	-2.4797		-1.5749	-1.1069
		[-0.83]	[-0.32]		[-1.17]	[-0.76
Race of CEO		-0.0081	-0.0043		-2.2048	-1.7932
		[-0.53]	[-0.43]		[-0.84]	[-0.67]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				6.72***	6.47***	6.43***
Adjusted R^2				0.6003	0.5996	0.5994
Sargan test (p-value)	0.8899	0.9887	0.8995			
AR(2) test (p-value)	0.6977	0.7555	0.2328			

Note: This table presents the GMM and FE estimation of BME on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

5.4.2.1 Alternative risk measures.

Jin (2002) empirically investigated whether disaggregation of total risk to subcomponents might better explain executive behaviour and compensation scheme. He found that firm-specific risk (idiosyncratic risk) influences EC differently from systematic risk. According to them, managers usually value firm's equity or options less than the market, simply because a greater share of their wealth is tied to the firm's performance. This result, according to Duan and Wei (2005), discourages managers from increasing systematic risk of the firm's equity in order to decrease exposure to firm-specific risk. In spirit of the above results, we investigate further the link between EC and market risk measure using systematic risk (also called the market beta). Systematic risk, by definition, is the risk associated with a stock because of variations in the stock returns and the overall market index. From the asset pricing perspective, investors are rewarded for taking on systematic risk (Sharpe, 1964). We discuss the results as presented in Appendix 5B, 5C and 5D in relation to what is reported in Table 5.2A, 5.2B and 5.2C respectively.

From Appendix 5B, we find that the results reported are similar to those reported in Tables 5.2A. The main difference has to do with the strong impact of cash pay on stock beta. Total risk has a slightly stronger relationship with current and previous year's cash compensation than beta, after controlling for firm and corporate governance factors. For example, from model 1, cash pay negatively affects total pay (at 1% level) which dropped to 5% after controlling for the various factors (see Table 5.2A). Similarly, cash pay negatively impacts beta, but at 5% significance level, which became weakly significant at 10% level after controlling for the same set of variables.

Indeed, if systematic risk adds value to equity, then we expect compensation to strongly influence systematic risk more than total risk. Such an argument does not hold in our case. Rather, rewarding executive with more cash pay discourages them from taking investment

decisions that improves firm risk. For the control variables, in addition to lag beta risk, market-to-book value, diversification, outside board representation, firm size and CEO's age have negative effects (at least at 5% level) while CEO's gender has a positive (at 5% level) influence on systematic risk. These latter results suggest that small firms have higher systematic risk relative to large firms while female CEO take on more systematic risk than their male counterparts in Africa. The latter observation runs contrary to the assertion that female are more risk averse than men. The best explanation, perhaps, is that women cannot withstand majority shareholder's pressure and are therefore venerable to manipulation by these principal shareholders to increase firm's systematic risk,

Appendix 5C, which presents the results of beta and equity pay shows a significant difference in impact of equity pay on beta. Specifically, while there was no link between equity pay and total risk, we find evidence to support a positive relationship between these two variables of interest. Both current and previous equity pay improves managerial systematic risk-taking behaviour post-merger. Our result suggests that African executives are rather motived to take on more market risk, which they have no control over, but increases shareholders value. This brings to question the claim that managers will only take on more market risk because they have greater portion of their wealth tied to the firm's fortune. Africa executives do not have greater portion of their rewards tied to equity but rather cash, as shown above, yet their decisions are aligned to shareholder's interest. Perhaps, their decisions are substantially influenced by majority institutional and foreign shareholders.

Finally, from Appendix 5D (our main variable of interest is risk and total pay) the results reported are not different from those in Table 5.2C except for differences in the significance of capital expenditure and sales growth. Besides, we also observe that the coefficients of total executive pay and its first lag are all positive in Appendix 5D but negative for Table 5.2C, although insignificant. Our findings so far point to the fact that different risk

measures are linked to various compensation types differently. More so, executives risk appetite is determined by the nature of the risk, suggesting that executives might respond differently to risk that they have no control over but improves value (systematic risk) and risks that come from within the firm (unsystematic). We explore this at the latter part of this session.

As an alternative to BME, we explore the relationship between DCL and various compensation types. Firm's leverage has diverse effect on firm structure and financing decisions, especially after going through successful M&A. For example, Ozdagli (2012) contends that the financial leverage of a firm directly affects equity returns through it's effect on equity risk and also indirectly through firm's business risk by influencing investment decisions. Gomes and Schmid (2010), in a similar context, contends that financial leverage impacts firms' growth options which subsequently affects stock performance. The discussion shows the possible effect of firm leverage position on risk.

Besides, Gahlon and Gentry (1982) earlier in their theoretical model state that the combined effect of both financial and operational leverage is a true measure of real-asset risk measure, which provides better conceptualisation of firm revenue variability and degree of cash flow sensitivity to development in economic and environmental factors. This explanation is in line with Li and Henderson Jr (1991) who conclude that DCL better explains stock risk. If a firm's leverage is high, adding more debt increases the probability of default. In the same vain, if EC can increases the DCL of acquires, then this has the potential to raise the default risk forcing investors to request for higher risk premium.

We present the results of the DCL relationship with EC in Appendix 5E, 5F and 5G. We do not find any difference between the results of the BME as shown in Tables 5.3 and the DCL except that DCL(-2) is significant for all the compensation types. This suggests that the DCL is more persistent that BME. We conclude that accounting measures used in our analysis are consistent but not sensitive to detecting significant link between our major variables of

interest and the impact of control variables. That is, accounting risk measures are not influenced by variations in EC after mergers. In spite of the differences in the accounting and market risk measures, we still present the results of the BME and DCL in subsequent analysis for the purpose of comparison but we pay greater attention to the market equity risk measures.

One interesting observation consistent with the results of total and systematic risk throughout our analysis so far is the relationship between current risk and current EC. The significant relationship that exists between these two variables suggests that they occur simultaneously. In other words, the EC awarded to management in a year determines the level of risk they take. From operational point of view, the value of EC compensation is approved at the end of the firm's fiscal year and besides, the investment decisions are determined at the beginning of the year or in most cases towards the end of the previous year. Our argument is that, for an action that is determined at the beginning of the year to be influenced by an outcome that is approved at the end of that same year brings into question the mode of compensation committee's operations in Africa. Technically, what this means is that managers know precisely what kind and level of compensations they will receive far before the start of the year, irrespective of whether they perform well or not. In as much as the reverse could hold, it still counters the argument advanced in literature that calls for tying the level of EC to performance indicators.

5.4.2.2 Effects of deal-specific factors

We have so far observed the effect of managerial cash compensation on post-merger total and systematic risk (it reduces them); as well as the roles of firm and corporate governance variables. Cain and McKeon (2016) in their recent study found that risk-loving executives rather use M&A as an important channel to increase the riskiness of a firm. Nevertheless, in the spirit of diversification, proponents such as Amihud and Lev (1981) realised that executives

use diversification through merger to reduce firms' risk. This is not ruling out the fact that the empire-building and firm-size-increase motives advanced in literature could still apply as a principal tool for M&As. Mergers and acquisitions can totally change the corporate structure of firm and this will affect the risk position of the firm. However, the M&A literature has been silent on post-merger risk and deal characteristics. It is not clear how deal related characteristics affect the risk-compensation relationship.

We now examine whether some major deal related characteristics contribute to the risk reduction process or not. We choose variables based on the firm risk literature and control for other firm factors. Just as in our previous models, we control for potential omitted variable bias issues that come because of autocorrelation between current and past risk. The deal-specific variables included in our estimation are deal size, same industry acquisition, cross-border, mode of payment and target listing effect. We report the results of the two types of risk measures (financial- total & systematic and accounting-BME & DCL) for both GMM and FE (see Table 5.4). Note that we discuss only the findings of the total risk (TR) and systematic risk (beta) for the GMM as mentioned earlier. Besides, we do not report the statistics of the post-merger year dummies because they were not significant.

Columns 2 and 3 of Table 5.4A provide the results for the total and systematic risk respectively. The estimated coefficients of current cash pay and its lag are significantly negative at least at the 5% level. Again, this means that both the total risk and beta are negatively affected by cash compensation. In addition, case, we find that the previous cash pay has a stronger impact on current risk, suggesting that managerial risk level is influenced strongly by the previous year's cash compensation post-merger. It should be recalled that, the literature on EC generally agrees that executives are paid excessively for completing mergers, irrespective of whether the deal is value-enhancing or not.

Besides, greater portion of the compensations are paid in the year of merger and the following year. This result shows that the values of cash compensation at the end of merger year, determines the level of managerial risk level. Similar to the earlier results, we find only beta to be influenced by equity pay at 5% level (see Table 5.4B). The strength of the relation between past pay and current risk comes as a result of controlling for deal related factors. Indeed, when firms undergo M&A, the immediate future state of the combined firm is influenced by major merger characteristics. Controlling for these factors gives a better insight of the issues surrounding merger deal analysis. However, there is no evidence of link between equity pay and total risk. In addition, from Table 5.5C, total executive pay has no significant impact on total risk and beta.

In addition and consistent throughout the three tables (Table 5.4), several deal related variables are significant. First, we observe that cross-border acquisitions reduces while public targets increases both total and systematic risk for cash, equity and total compensation. Several reasons could be advanced for this observation. Cross-border acquisitions is a form of diversification which increases the international exposure of firms. Although this exposure comes with numerous currencies, political cultural and other related risk, it also provides avenue for the acquirer to tap into opportunities in other economies. Besides, cross-border deal are associated with higher executive pay (Guest, 2009), which is dominated by cash compensation. Our earlier results show that more cash executive pay makes managers more risk averse. It's therefore not surprising to observe that cross-border acquisitions makes managers more risk averse relative to domestic acquisitions.

Concerning the positive link between public targets and risk, especially total risk, the literature on market reaction upon M&A deal announcement (for both acquirers and targets) shows significant fluctuations in stock prices. This fluctuation is the principal cause of stock

return variations, which even last months after deal announcement depending on the aftermath issues surrounding the acquisition.

More so, the politics pertaining to public acquisitions such as target defensive strategies, dealing with regulatory requirement, target shareholders management coupled with some other challenges exacerbates the acquirer's stock volatility (total risk). Such peculiar characteristics about listed targets, within the African context, possess more risk to acquirers than acquiring private targets.

Furthermore, the M&A literature is silent on the influence of the mode of deal payment on the post-merger risk profile of acquirers. We provide the first analysis on this subject. Among the deal variables, mode of payment (equity) positively affects total and systematic risk. We think that the positive impact of equity as a mode of payment on risk can be attributed to shareholder ownership and power dilution. Firstly, when deals are paid purely with equity, target shareholders join the existing acquirer shareholders, assuming all things are equal. These new shareholders are so hopeful of the prospects of the new firm; and management is forced to take risky investment decisions that will improve the firm's performance, leading to increase in risk, especially beta because higher beta has higher rewards premium.

Additionally, the composition of the board of directors might change slightly if the target's share ownership is not diverse or targets are private. Not only will the new directors on the board, representing new block or institutional shareholders, will want to proof their existent on the board by pushing for risky and profitable decisions but also they dilute the power of management control of the board. Besides, paying M&A deals purely with equity could be a signal of liquidity issues with acquirers, and as a result, executives might be compensated with more equity. Thus, the higher executive equity ownership ties their fortune to the new firm and it aligns their interest to that of shareholders, as suggested by the agency theory.

Table 5.4A: Effect of deal-specific factors on cash pay and risk relation for African firms

	GMM				Fixed-effect			
Variable	TR	Beta	BME	DCL	TR	Beta	BME	DCL
Constant					-4.6224	-0.9533	0.2302	-37.4909
					[-2.32]**	[-1.95]	[2.56]**	[-0.90]
Risk-1)	-0.2458	-0.5310	-0.3573	-1.1118	-0.4215	-0.4905	-0.7976	-0.7638
	[-4.16]***	[-12.24]***	[-2.76]***	[-7.78]***	[-10.99]***	[-12.02]***	[-27.92]***	[-21.41]***
Risk(-2)	-0.1579	-0.0899	-0.0706	-0.7112	-0.3492	0.0050	-0.3982	-0.3512
	[-2.60]**	[-1.99]**	[-0.79]	[-3.30]***	[-8.85]***	[0.55]	[-14.30]***	[-0.46]
Cash	-0.1923	-0.5437	-0.2727	-151.9858	-0.4264	-0.2819	-0.0521	51.0511
	[-2.31]**	[-1.96]**	[-0.67]	[-0.76]	[-0.14]	[-0.38]	[-0.38]	[0.81]
Cash(-1)	-7.7083	-0.9957	-0.0951	17.4237	-1.2948	-0.1335	0.1797	151.1222
	[-2.93]***	[-3.77]***	[-0.35]	[0.14]	[-0.44]	[-0.18]	[1.35]	[2.45]**
Market-to-book	-0.9310	-0.1320	0.0006	0.0640	0.0023	0.0012	-0.0001	-0.1274
	[-1.90]*	[-1.75]*	[1.17]	[0.24]	[0.09]	[0.19]	[-0.11]	[-0.23]
Capital expenditure	-3.5139	0.5625	0.2115	27.2212	-0.9374	0.4807	0.2145	18.3484
	[-1.58]	[0.87]	[0.64]	[0.99]	[-0.43]	[0.90]	[2.20]**	[2.41]**
Firm size	-8.0326	-1.6044	-0.5448	-1.7761	-1.9019	-0.1034	-0.3084	-40.1541
	[-1.79]*	[-1.96]**	[-1.16]	[-0.04]	[-0.60]	[-0.13]	[-2.16]**	[-2.61]**
Sales growth	0.0003	1.9E-5	7.3E-5	0.0042	1.5E-5	7.6E-5	7.4E-5	0.0045
	[1.41]	[0.15]	[0.88]	[1.57]	[-0.00]	[0.20]	[0.85]	[0.30]
Deal size	9.3272	0.8765	0.4194	375.1632	7.1550	1.2926	0.2859	-23.3398
	[0.74]	[0.56]	[1.33]	[1.80]*	[0.95]	[0.70]	[0.85]	[-0.15]
Same industry	-0.8815	-1.1212	-0.1615	212.3470	1.0367	-2.0021	-0.4214	-102.1492
	[-0.07]	[-1.01]	[-0.53]	[0.88]	[0.13]	[-1.02]	[-1.19]	[-0.62]
Cross-border	-3.2956	-2.9949	-0.4256	382.6252	-12.8300	0.9418	-0.2480	-12.7314
	[-2.02]**	[-2.57]**	[-1.23]	[1.57]	[-1.55]	[0.46]	[-0.66]	[-0.07]
Mode of payment	-7.1591	-1.0758	0.4202	213.1308	-11.0831	2.2572	-0.2247	-20.3543
	[-1.03]	[-0.96]	[1.13]	[1.45]	[-1.12]	[0.92]	[-0.50]	[-0.10]
Target listing	23.8504	1.4712	0.7809	-24.2441	22.8889	-0.1807	0.1102	101.1257
	[2.10]**	[1.91]*	[1.57]	[-0.10]	[2.51]**	[-0.08]	[0.27]	[0.53]
Year dummies	Yes							
Adjusted R^2					0.6450	0.1379	0.6004	0.3078
F-value					1.26*	1.60***	6.59***	2.66***
Sargan test (p-value)	0.9854	0.8325	0.9558	0.9871				
AR(2) test (p-value)	0.4844	0.5389	0.7215	0.6895				

Note: This table presents the GMM and FE estimation of all the four risk measures on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.4B: Effect of deal-specific factors on equity pay and risk relation for African firms

	GMM				Fixed-effect			
Variable	TR	Beta	BME	DCL	TR	Beta	BME	DCL
Constant					-4.7712	-0.9774	0.1657	-20.0849
					[-2.43]**	[-2.02]**	[1.56]	[-0.49]
Risk(-1)	-0.2595	-0.5195	-0.3536	-1.0838	-0.4221	-0.4901	-0.5315	-0.7636
	[-4.02]***	[-10.98]***	[-2.75]***	[-8.40]***	[-11.05]***	[-11.96]***	[-20.54]***	[-21.22]***
Risk(-2)	-0.1686	-0.0893	-0.0670	-0.6287	-0.3482	0.0055	0.0007	-0.3999
	[-1.80]*	[-2.08]**	[-0.76]	[-4.05]***	[-8.79]***	[0.61]	[0.34]	[-0.51]
Equity	0.5710	0.5694	0.0116	2.3602	-0.1934	-0.0448	-0.0039	-0.8042
	[0.25]	[1.96]**	[0.18]	[0.11]	[-0.36]	[-0.34]	[-0.13]	[-0.07]
Equity(-1)	0.1528	1.5080	0.0086	-3.9625	0.0912	-0.0038	-0.0048	-1.3778
	[0.09]	[3.97]***	[0.16]	[-0.21]	[0.16]	[-0.03]	[-0.15]	[-0.11]
Market-to-book	0.0071	-0.0039	0.0003	-0.1392	0.0030	0.0017	0.0001	-0.0016
	[0.29]	[-1.53]	[0.64]	[-0.66]	[0.11]	[0.26]	[0.04]	[-0.00]
Capital expenditure	-4.2225	-0.6378	0.2299	39.6002	-1.0691	0.4781	0.2311	26.3836
	[-1.80]*	[-1.91]*	[0.70]	[1.35]	[-0.49]	[0.89]	[1.97]**	[0.58]
Firm size	-8.7320	-1.3113	-0.5456	7.2126	-1.9094	-0.1380	-0.2842	-24.9686
	[-1.96]**	[-2.68]***	[-1.06]	[0.20]	[-0.61]	[-0.18]	[-1.68]*	[-0.38]
Sales growth	0.0003	2.5E-5	1.4E-5	0.0036	4.4E-5	2.0E-5	8.4E-5	0.0020
	[1.49]	[0.27]	[0.80]	[1.40]	[-0.02]	[0.22]	[0.49]	[0.13]
Deal size	9.8757	0.5340	0.3653	343.5006	6.5563	1.3362	0.1526	-18.1597
	[0.73]	[0.34]	[1.28]	[1.76]*	[0.86]	[0.71]	0.37][	[-0.11]
Same industry	0.4764	-0.5005	-0.2410	177.2279	1.4647	-2.1161	-0.3126	-71.7194
	[0.04]	[-0.44]	[-0.72]	[0.75]	[0.19]	[-1.08]	[-0.74]	[-0.44]
Cross-border	-0.5167	-4.0606	-0.4616	357.5468	-14.0043	0.9461	-0.4055	-13.3251
	[-2.04]**	[-2.06]**	[-1.38]	[1.35]	[-1.67]*	[0.46]	[-0.89]	[-0.08]
Mode of payment	6.8076	6.0538	0.3947	216.1161	-10.7245	2.1961	-0.1122	28.5752
	[2.89]***	[3.63]***	[1.09]	[1.49]	[-1.08]	[0.89]	[-0.21]	[0.14]
Target listing	26.4746	2.3343	0.7036	-39.3504	24.4132	-0.1985	0.3752	112.8679
	[2.33]**	[2.41]**	[1.39]	[-0.15]	[2.63]**	[-0.09]	[0.74]	[0.58]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2					0.0644	0.1363	0.4259	0.2979
F-value					1.26**	1.59***	3.75***	2.57***
Sargan test (p-value)	0.7554	0.9554	0.6897	0.7999				
AR(2) test (p-value)	0.4936	0.3915	0.7135	0.5388				

Note: This table present the GMM and FE estimation of all the four risk measures on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.4C: Effect of deal-specific factors on total pay and risk relation for African firms

	GMM				Fixed-effect			
Variable	TR	Beta	BME	DCL	TR	Beta	BME	DCL
Constant					-4.9346	-0.9103	0.1442	-33.4759
					[-2.48]**	[-1.86]*	[1.35]	[-0.81]
Risk(-1)	-0.2627	-0.5332	-0.3535	-1.1091	-0.4239	-0.4908	-0.5306	-0.7631
	[-4.08]***	[-12.16]***	[-2.71]***	[-8.18]***	[-11.091***	[-12.03]***	[-20.59]***	[-21.34]***
Risk(-2)	-0.1790	-0.0902	-0.0671	-0.7035	-0.3514	0.0048	0.0006	-0.4073
	[-1.83]*	[-2.03]**	[-0.74]	[-3.73]***	[-8.881***	[0.53]	[0.32]	[-0.53]
Total compensation	-6.2208	1.2374	0.0573	-188.2013	-1.8568	-0.3232	0.0367	28.3486
	[-0.68]	[0.92]	[0.14]	[-1.31]	[-0.71]	[-0.50]	[0.26]	[0.52]
Total compensation (-1)	-3.9696	0.5447	0.1726	-64.3343	-0.0763	-0.3882	0.1516	90.0669
	[-0.848744	[0.59]	[0.74]	[-0.81]	[-0.03]	[-0.67]	[1.20]	[1.83]*
Market-to-book value	0.0093	-0.0018	0.0006	0.3945	0.0041	0.0017	0.0000	-0.0336
	[0.41]	[-0.73]	[0.75]	[1.30]	[0.16]	[0.26]	[0.00]	[-0.06]
Capital ecpenditure	-3.6379	-0.4626	0.2156	37.1414	-1.0720	0.5097	0.2160	18.1877
	[-1.67]*	[-1.73]*	[0.70]	[1.29]	[-0.49]	[0.95]	[1.85]*	[0.40]
Firm size	-9.2022	-1.3927	-0.5234	-3.7919	-1.7335	-0.1268	-0.2850	-26.4369
	[-2.01]**	[-1.74]*	[-1.04]	[-0.10]	[-0.55]	[-0.16]	[-1.69]*	[-0.40]
Sales growth	0.0003	2.4E-5	2.4E-5	0.0044	9.2E-5	7.0E-5	8.4E-5	0.0028
	[1.66]*	[1.22]	[0.79]	[1.58]	[-0.00]	[0.20]	[0.51]	[0.19]
Deal size	11.7844	0.4919	0.3529	407.2139	7.9384	1.3305	0.1124	-28.7581
	[1.00]	[0.32]	[1.21]	[1.83]*	[1.06]	[0.72]	[0.28]	[-0.18]
Same industry	-0.9539	-0.6775	-0.2201	135.0629	1.3499	-2.0269	-0.3111	-78.3533
	[-0.07]	[-0.63]	[-0.68]	[0.61]	[0.17]	[-1.04]	[-0.74]	[-0.48]
Cross-border	-1.0608	-3.1727	-0.4812	351.8626	-12.2439	0.9129	-0.4154	-4.5054
	[-2.08]**	[-1.67]*	[-1.42]	[1.42]	[-1.48]	[0.45]	[-0.92]	[-0.03]
Mode of payment	7.0430	1.0996	0.4203	208.6213	-10.6780	2.2568	-0.0952	31.5709
	[1.02]	[0.65]	[1.17]	[1.45]	[-1.08]	[0.92]	[-0.18]	[0.15]
Target listing	26.1179	1.5454	0.7052	-6.0098	23.3385	-0.0526	0.3536	85.2961
	[2.09]**	[1.93]*	[1.42]	[-0.03]	[2.55]**	[-0.02]	[0.71]	[0.44]
Year dummies								
Adjusted R^2					0.0651	0.1387	0.4285	0.3039
F-value					1.26**	1.60***	3.79***	2.63***
Sargan test (p-value)	0.8775	0.9512	0.6997	0.7998				
AR(2) test (p-value)	0.4991	0.2405	0.7020	0.8610				

Note: This table presents the GMM and FE estimation of all the four risk measures on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Furthermore, when deals are financed purely with equity, it possibly leaves lots of cash for acquirers which executives might use to compensate themselves, through the power they have over their board which is a typical characteristic in Africa. Hence, we expect that the large cash compensations should encourage management to pursue strategies that will stabilise the firm's cash flow position after merger instead of engaging in risky projects. Such behaviour should cause equity mode of deal payment to negatively impact risk through executive cash compensation. However, we find no evidence of significant link between equity mode of payment and total or systematic risk after successful merger completion. Likewise, we find no evidence that deal size and the same industry acquisition affect firms' risk. However, cross-border acquisition has a negative effect on risk (total and systematic risks).

5.4.2.3 Are financial firms different?

The total sample for our analysis so far contains all firms across all industries. However, studies have shown that industry classification could affect the findings of various corporate governance studies (Belkhir & Chazi, 2010; Deutsch et al., 2011; John, Saunders & Senbet, 2000b). A typical example of such classifications is financial and non-financial firms. According to Berger, Kick and Schaeck (2014), financial institutions such as banks have different corporate governance arrangements from those of non-financial firms and have diverse stakeholder interest which are not limited to shareholders and other peripheral owners but also regulators as well. This is important because of the severe consequences on economies and society in general when these financial firms are poorly managed. For example, poorly addressed governance issues relating to executive compensation within the financial sector in the U.S.A has been cited as one of the major causes of the recent 2007-2009 global financial crisis (Chudik & Fratzscher, 2010). The effect of this unprecedented financial meltdown on the global economy cannot be over emphasised. There has been subsequent debate in both industry

and academia on how to improve upon corporate governance in the financial sector and examine the principal drivers of managerial risk-taking.

Besides, the very few studies that investigate the risk-taking behaviour of financial institutions do only concentrate on banks; and barely test jointly the impact of EC from merger completion, as well as firm and governance factors on excessive risk-taking. Our study adds new dimension to the literature by exploring the dynamics of risk-taking behaviour post-merger within the African context. To achieve this, we modify equation (5.2) by interacting D with current executive pay, where D is a dummy that takes one if the firm belongs to the financial sector, else zero. We include some of variables as in our previous analysis and guided by literature. The regression model with estimate is

$$Risk_{it} = \alpha_{it} + \beta_1 EC_{it} + \beta_2 EC_{it-1} + \lambda_1 Risk_{it-1} + \lambda_2 Risk_{it-2} + \sum_{i=1}^{m} \delta_i Controls_{it} + \phi_1 D * EC_{it} + \phi_2 D * EC_{it-1} + \zeta_i + \varepsilon_{it} \quad (5.4)$$

Table 5.5 shows the result of our estimation using the GMM for cash, equity and total compensation. Again, we present the results for total, systematic and the two accounting risk measures. The discussion is based on the total and systematic risk. Our main variables of interest here are the coefficients of the two interactive terms. They are both positive and significant for total and systematic risk under all the compensation measures. Therefore, the influence of current and previous year's compensation pay on firm's risk for financial firms is statistically different from non-financial firm. The difference is stronger with the first lag of EC compared with current compensation. The tight monitoring and regulation of financial firms could account for the stronger link of previous compensation to risk. Financial institutions such as banks are noted for taking excessive risk perhaps due to high executive pay, moral hazard coming from deposit insurance and the notion that they are too important to fail (Bebchuk & Fried, 2004). Regulators use capital requirement as one of the tools to reduce bank's risk-taking by forcing shareholders to invest to commit sentential portion of their

personal capital into the bank. According to Laeven and Levine (2009), this rather forces owners to put more pressure on management to accept more riskier investments to make up for the loss in utility Hence, the positive link between the various pay types and different risk measures properly explains the higher risk profile of financial firms.

The results (Table 5.5), regarding the effect of EC and other control variables on risk are generally similar to earlier findings except for the following: First, the coefficients for EC and its lag for cash compensation are positive (for beta and total risk) although insignificant, contrarily to what we found earlier. The relationship is significant for equity pay with a stronger impact with equity lag than current equity pay. Previous year's total compensation is also positive for total and systematic risk. Second, we find institutional ownership to positively influence financial firms' risk-taking behaviour irrespective of the EC type but the relation is stronger for total risk. Our result suggest that financial institutions ownership structure greatly impacts risk-taking, consistent with Boyd and De Nicolo (2005) who contend that bank shareholders with large voting rights have the power to influence the risk-taking direction of the bank. In addition, the EC of financial firm's executives positively influence their post-merger risk-taking behaviour. The differences in the results between financial and non-financial firms can be attributed, once again, to the monitoring and regulatory environment of financial firms.

Table 5.5: Effect of executive compensation on risk for financial firms after merger in Africa

	Cash				Equity				Total			
Variable	TR	Beta	BME	DCL	TR	Beta	BME	DCL	TR	Beta	BME	DCL
Risk(-1)	-0.2110	-0.5497	-0.4046	-0.9330	-0.2036	-0.5333	-0.4280	-0.9507	-0.2165	-0.5397	-0.4144	-0.9357
	[-6.93]***	[-16.61]***	[-7.98]***	[-60.89]***	[-4.60]***	[-15.11]***	[-14.21]***	[-79.89]***	[-6.34]***	[-16.87]***	[-9.52]***	[-61.29]***
Compensation	5.1684	0.7452	-0.8941	20.9595	1.2258	0.6520	-0.3109	0.9822	3.5626	0.2680	-1.2429	10.4550
	[1.57]	[0.64]	[-0.90]	[0.25]	[1.99]**	[2.24]**	[-1.09]	[0.07]	[0.53]	[0.22]	[-1.47]	[0.18]
Compensation (-1)	2.7616	0.3503	0.9561	15.2502	2.1928	1.2879	-0.0578	-2.0295	1.4252	1.1149	0.9537	-24.9413
	[1.02]	[0.37]	[1.07]	[0.30]	[2.97]***	[2.75]***	[-0.28]	[-0.23]	[2.28]**	[1.93]*	[1.43]	[-0.69]
Market-to-book value	-0.0089	-0.0001	-0.0003	-0.0154	0.0495	0.0019	0.0051	-0.0292	-0.0117	-0.0011	0.0055	-0.0654
	[-0.99]	[-0.03]	[-0.14]	[-0.14]	[1.45]	[0.51]	[1.47]	[-0.15]	[-0.62]	[-0.40]	[1.97]**	[-0.45]
Capital expenditure	-0.7510	0.5535	0.4518	25.1742	0.7494	0.7529	0.3252	16.2504	-0.4781	0.4606	0.3482	22.2741
	[-0.33]	[0.99]	[1.00]	[0.71]	[0.25]	[1.49]	[1.00]	[0.60]	[-0.19]	[0.95]	[0.87]	[0.68]
Firm size	-6.2899	1.3876	-0.2684	13.2600	-8.2175	0.8664	-0.5073	-10.3143	-7.6640	1.2684	-0.3365	-8.5940
	[-1.41]	[1.51]	[-0.39]	[0.35]	[-1.38]	[0.90]	[-0.77]	[-0.42]	[-1.39]	[1.43]	[-0.45]	[-0.28]
Sales growth	0.0001	0.0002	0.0001	-0.0047	0.0005	0.0002	0.0001	-0.0019	0.0003	0.0001	0.0001	-0.0027
	[1.25]	[1.70]*	[1.75]*	[-1.50]	[1.67]*	[2.15]**	[1.93]*	[-0.76]	[165]*	[1.45]	[1.75]*	[-0.79]
D&I	-6.0270	-0.4294	-0.0457	113.0334	-9.5112	-0.2004	-0.8990	-119.1660	-2.5576	-0.3039	-1.1748	-176.7937
	[-2.39]**	[-2.24]**	[-0.02]	[0.53]	[3.46]***	[-2.12]**	[-0.54]	[-1.82]*	[-4.14]***	[-1.81]*	[-0.51]	[-0.93]
Board size	5.3563	-1.8286	2.3858	-17.8634	9.5133	-1.7019	1.4968	-16.9028	3.8780	-1.8608	2.1772	-28.8361
	[0.70]	[-2.44]**	[3.26]***	[-0.53]	[0.87]	[-2.20]**	[3.24]***	[-0.50]	[0.37]	[-2.56]**	[3.37]***	[-0.64]
Outside directors	28.4924	3.1472	2.8282	109.5979	6.7818	3.8902	-4.4518	73.1250	2.6205	3.3700	-1.7501	25.1129
	[1.67]*	[1.99]**	[0.45]	[0.54]	[2.00]**	[2.42]**	[-0.83]	[0.37]	[1.87]*	[2.52]*	[-0.31]	[0.14]
Board gender	-4.3259	-1.2919	-4.7869	127.6125	-16.8579	-1.2852	-2.8779	78.3627	-7.4395	-0.0892	-4.3234	118.1373
	[-0.75]	[-0.67]	[-1.84]*	[3.77]***	[-1.78]*	[-0.80]	[-2.07]**	[2.67]***	[-1.27]	[-0.06]	[-2.25]**	[3.05]***
Institutional Ownership	0.4543	0.6011	0.1036	1.6018	0.7995	0.2920	0.8100	1.5706	0.4789	0.5293	0.0776	2.4927
	[2.57]**	[1.98]**	[1.16]	[0.34]	[2.52]**	[1.74]*	[2.41]**	[1.74]*	[2.39]**	[1.84]*	[2.08]**	[1.65]*
Executive Ownership	0.0289	0.3932	-0.1074	-10.2184	-0.1517	0.2075	-0.0565	-11.0435	0.0653	0.3397	-0.0929	-11.1223
	[0.04]	[1.51]	[-0.57]	[-1.15]	[-0.14]	[0.86]	[-0.48]	[-1.72]*	[0.08]	[1.41]	[-0.65]	[-1.23]
CEO's age	0.1208	-0.7456	0.3500	-79.3899	7.8587	-0.2631	0.7046	-63.1207	1.6954	-0.0038	0.1280	-65.6988

	[0.03]	[-0.85]	[0.47]	[-1.29]	[0.89]	[-0.33]	[1.34]	[-1.18]	[0.34]	[-0.00]	[0.21]	[-1.08]
CEO's gender	1.1192	0.6476	1.8532	885.1374	-69.4765	-3.1768	-2.9225	672.2131	-17.8059	-7.7943	4.5201	673.3613
	[0.02]	[0.06]	[0.17]	[1.26]	[-0.66]	[-0.31]	[-0.43]	[1.13]	[-0.25]	[-0.66]	[0.47]	[0.99]
Deal size	-4.7008	1.0762	0.4409	-45.9146	-7.0334	1.0684	0.4947	-57.8192	-2.3598	0.9365	0.0387	-28.4673
	[-0.43]	[0.73]	[0.18]	[-0.36]	[-0.48]	[0.76]	[0.30]	[-0.67]	[-0.21]	[0.72]	[0.02]	[-0.25]
Cross-border acquisition	-6.2251	-4.7405	-0.8128	-159.9985	-11.3142	-5.3808	-2.4112	-89.2195	-3.3824	-3.7617	-0.5049	-179.6243
	[-2.48]**	[-1.74]*	[-0.26]	[-1.30]	[-2.51]**	[-2.19]**	[-1.03]	[-0.60]	[-2.23]**	[-2.45]**	[-0.17]	[-1.37]
Mode of payment (Equity)	13.8442	-3.0475	-3.6053	123.9002	22.1034	3.0166	-2.9786	105.8245	1.0141	-1.7779	-2.2556	95.9169
	[0.56]	[-1.12]	[-0.89]	[0.88]	[1.67]*	[2.16]**	[-1.10]	[0.75]	[0.03]	[-0.71]	[-0.64]	[0.55]
Target listing	3.9353	4.2224	3.0852	-221.0922	3.9717	-0.0815	3.8876	-110.4557	13.4271	0.5225	2.1400	-142.1286
	[2.25]**	[2.11]**	[1.96]**	[-1.32]	[1.39]	[-0.04]	[1.49]	[-0.67]	[0.59]	[0.29]	[0.66]	[-0.86]
D*EC	3.3285	3.5067	3.3995	146.9705	1.8884	0.3507	0.2468	12.1310	0.5144	1.4407	0.5447	42.8309
	[1.79]*	[2.18]**	[2.16]**	[0.71]	[1.73]*	[1.16]	[1.93]*	[1.82]*	[2.09]**	[1.86]*	[2.36]**	[1.73]*
D*EC(-1)	4.9842	4.5128	2.4674	25,006	2.4715	1.1776	0.6175	32.0583	0,5222	1.395	0.3631	26,1603
	[3.73]***	[2.82]**	[1.82]*	[0.80]	[2.46]**	[1.93]*	[2.76]**	[0.75]	[2..58]**	[1.96]**	[1.72]*	[0.69]
@ 1 year	6.5531	6.6761	2.2958	-213.9279	20.1210	5.9671	2.1370	-112.9326	14.3297	6.0031	0.3334	-140.1424
	[0.39]	[2.71]***	[0.65]	[-0.81]	[0.91]	[2.86]***	[0.89]	[-0.63]	[0.62]	[2.78]***	[0.10]	[-0.62]
@ 2 year	4.4421	7.5119	2.6978	-153.6101	6.9640	6.6884	1.2620	-66.8658	13.6906	5.7494	1.0276	-122.0190
	[0.26]	[2.47]**	[0.73]	[-0.62]	[0.29]	[2.81]***	[0.53]	[-0.38]	[0.64]	[2.20]**	[0.33]	[-0.58]
@ 3 year	6.1635	7.3674	4.2495	-169.3773	8.2974	6.5931	2.0180	-82.2247	17.5437	4.7212	2.9203	-152.2437
	[0.35]	[2.06]**	[1.04]	[-0.66]	[0.32]	[2.34]**	[0.78]	[-0.43]	[0.82]	[1.45]	[0.88]	[-0.69]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-value	0.2250	0.2019	0.1467	0.2287	0.3258	0.1963	0.1371	0.1893	0.2966	0.1959	0.1221	0.2907
AR(2) test, p-value	0.8951	0.7565	0.1691	0.5488	0.5668	0.7336	0.4885	0.5210	0.8998	0.9219	0.1376	0.2470

Note: This table present the GMM estimation of all the four risk measures on various compensation types and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

5.4.2.4 Systematic and unsystematic risk: Are they affected differently

The discussion on firm risk has been treated generally as the total uncertainty in firm position and market risk (systematic). Firm risk, however, can take any form or nature. Following up on Sharpe (1964)'s popular asset pricing model, researchers group firm risk into systematic (risk created by the movement of major economic or environmental factors) and unsystematic risk (uncertainty created within an organization). The systematic risk captures the quantum of variability in company output associated with the general market while the unsystematic risk captures the degree of variation in the company's stock returns or cash flow (Kerr & Kren, 1992). It is equally essential to investigate how different compensation types influence these two risk types.

Miller et al. (2002) examine the effect of systematic and unsystematic firm risk on CEO compensation on all publicly traded S&P 500 firms in the U.S.A Their findings suggest that the proportion of CEO's variable compensation is highest under moderate unsystematic (firm-specific) than systematic risk. The same authors, however, conclude that systematic risk reflects exogenous determinants of pay changes and CEOs may be compensated for environmentally driven performance outcome volatilities that lie beyond their control. Hence, in keeping with this argument and agency theory view, we think that there should be a stronger relationship between firm-specific risks and EC than what is created by the market. Moreover, managers largely are not solely responsible for the effects of systematic risk (performance relating to this risk is determined by the market) on firm outputs but are concerned about unsystematic. Because in any case, peer firms also suffer from the same systematic volatilities in performance operations. Therefore, performance incentives should be geared towards firm-specific risk than systematic risk.

We test this argument by analysing the relationship between the various pay types and the two risk types. Table 5.6 presents the comparative GMM estimation results of both

systematic and unsystematic risk for the three compensation types, controlling for deal, firm and corporate governance variables. A comparison of the coefficients of cash and total compensation type for systematic and unsystematic risk are similar, contrary to our prediction. However, the main difference between the two risk measures has to do with equity compensation. While equity pay motivates increase in firm's systematic risk, we find no significant effect of equity pay on unsystematic risk. This result suggests that African firms pay executives more for bearing systematic risk but not necessarily the risk determine by endogenous factors. In other words, shareholders are mainly interested in market performance related risk when it comes to approving managerial pay. The African market is perceived to exhibit high level of firm-specific risk due to weak corporate governance practices, frequent labour unrest, corruption and internal security issues (Okeahalam, 2004; Ntim, et al. 2015; Ntim, et al, 2017).

Yet, how these issues are managed at firm-specific levels in order to create the best atmosphere for value maximization rather plays no significant role in fixing executive pay. Our result runs contrary to the call by Miller et al. (2002) to consider idiosyncratic conditions as a more fruitful avenue to search for link between executive pay and performance.

Among the control variables, we include two lags of previous risk to control for risk persistence. The coefficient estimates on previous two year's unsystematic risk is negative and significant (at 1% level) across all compensation types while that of systematic risk is not. It suggests therefore, that unsystematic risk persists longer than systematics risk. Certainly, the effect of internal firm-specific risk caused by events such as lawsuit can persist sometimes throughout the legal process. It is important therefore to consider risks differently when it comes to their persistence. Furthermore, the significant coefficients of firm size indicate that, while large firms increase systematic risk, it lows unsystematic risk, a finding that is consistent with Pathan (2009).

Table 5.6: Systematic and Unsystematic risk on compensation types for African firms

	Cash		Equity		Tocom	
Variables	Beta	Unsyt	Beta	Unsyt	Beta	Unsyt
Risk(-1)	-0.5494	-0.3139	-0.5464	-0.3528	-0.5533	-0.3073
	[-16.46]***	[-8.55]***	[-15.14]***	[-9.97]***	[-16.445]***	[-7.99]***
Risk(-2)	-0.0453	-0.2184	-0.0395	-0.1833	-0.0414	-0.2118
	[-1.64]	[-9.51]***	[-1.48]	[-4.56]***	[-1.62]	[-7.41]***
Compensation	-1.6093	3.1505	1.2746	2.4403	1.3003	30.7581
	[-1.44]	[0.08]	[1.97]**	[1.08]	[1.11]	[0.46]
Compensation (-1)	-1.1671	6.8693	1.2297	1.6826	0.2308	2.1142
	[-1.14]	[0.21]	[2.35]**	[0.79]	[0.24]	[1.56]
Market-to-book value	-0.0020	-0.1255	-0.0021	-0.4831	-0.0030	-0.1623
	[-1.04]	[-1.58]	[-1.07]	[-2.25]**	[-1.32]	[-1.06]
Capital expenditure	0.5044	6.1617	0.4794	11.6106	0.1996	6.6127
	[0.84]	[0.23]	[0.86]	[0.42]	[0.37]	[0.27]
Firm size	2.1828	-5.8166	1.8035	-5.1932	1.9442	-4.3686
	[2.72]**	[-2.21]**	[2.31]**	[-2.49]**	[2.40]**	[-2.16]**
Sales growth	0.0004	0.0014	0.0005	0.0012	0.0007	0.0003
	[-0.36]	[0.65]	[-0.11]	[0.57]	[-0.61]	[0.15]
D&I	-0.7245	-73.6248	-1.0734	-56.2929	-1.4390	-70.3326
	[-2.44]**	[-2.26]**	[-2.68]***	[-1.89]*	[-1.85]*	[-2.14]**
Board size	-0.1965	27.0960	-0.2916	-35.0250	-0.1757	19.9356
	[-0.23]	[0.71]	[-0.36]	[-0.69]	[-0.20]	[0.56]
Outside directors	-4.5406	-247.0766	-4.6084	-111.2420	-4.3178	-238.6676
	[-1.50]	[-2.16]	[-1.38]	[-0.81]	[-1.43]	[-2.02]
Board gender	0.6529	-47.8690	0.6188	62.4548	1.1298	-12.9824
	[0.58]	[-0.85]	[0.60]	[0.80]	[1.02]	[-0.20]
Institutional Ownership	0.365	-1.0737	0.0497	-6.8187	0.0409	-2.2311
	[1.45]	[-0.37]	[0.63]	[-1.40]	[0.51]	[-0.87]
Executive Ownership	0.1845	7.4267	0.1424	4.4073	0.2180	8.4856
	[0.72]	[0.72]	[0.57]	[0.50]	[0.84]	[0.82]
CEO's age	-0.8822	34.8818	-1.1961	3.8267	-0.6856	23.8356
	[-1.08]	[1.16]	[-1.91]*	[0.11]	[-0.84]	[0.74]
Deal size	1.9006	-10.5964	1.5627	42.0339	1.4348	15.4783
	[1.29]	[-0.16]	[1.15]	[0.59]	[0.99]	[0.23]
Cross-border acquisition	-0.2946	-12.6641	-0.7197	-0.2478	-0.3076	-15.3555
	[-3.13]***	[-2.30]**	[-3.32]***	[-2.51]**	[-1.93]*	[-1.74]*
Mode of payment (Equity)	0.1459	-58.1016	0.0623	-6.0816	0.8670	-50.7931
	[0.07]	[-0.68]	[0.03]	[-0.06]	[0.42]	[-0.57]
Target listing	0.7739	52.9268	0.8565	-71.7435	0.9829	31.7087
	[2.45]**	[0.60]	[0.48]	[-0.60]	[0.55]	[0.36]
@ 1 year	4.7144	-128.7348	4.7907	-100.9084	4.4249	-137.2093
	[2.71]**	[-1.88]*	[3.12]***	[-1.15]	[2.65]***	[-1.91]*
@ 2 year	1.3168	-37.1618	2.8090	24.6432	0.9388	-19.3975
	[1.10]	[-0.86]	[1.97]**	[0.40]	[0.80]	[-0.46]
@ 3 year	-0.0688	9.9991	1.3884	17.5687	-0.4278	14.2962
	[-0.07]	[0.34]	[1.40]	[0.50]	[-0.41]	[0.44]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-value	0.2660	0.1335	0.2145	0.1527	0.2497	0.2165
AR(2 test), p-value	0.5562	0.9854	0.7327	0.7281	0 .8996	0.2554

Note:This table presents the GMM estimation of all the risk measures on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively

Additionally, the combined effects of the independent variables on systematic risk are significantly felt in a year after merger whereas the impact for unsystematic risk is either weak or insignificant. The year effect on systematic risk for equity pay diminishes in the second year and becomes insignificant after year three.

5.4.2.5 Is South Africa different?

South Africa, the most developed economy in Africa has been vigorously pursuing corporate governance practices transformation through the Kings Reports over the past decade. These reports focus on raising the standard of CG practices and adopting strategies that align managerial interest to that of shareholders. One significant achievement of these policies is the requirement by public firms to fully disclose executive compensation details in their annual reports and making it available to investors (Ntim et al., 2015a). Such development is far ahead of what is pursued in other African countries. For an economy with such different institutional settings, solid CG practices and detailed compensation disclosure, we expect the connection between EC and firm risk position to differ from other African markets.

This study provides the first evidence on the nexus between EC and post-merger firms' risk in South Africa. In addition, we investigate if our findings are different for financial firms due to the tight and well-regulated financial institutions in South Africa (Daniels, 2004; Maredza & Ikhide, 2013). We include the same set of control variables and same interaction for the financial firms. We also include an extra analysis for stock options (STOP) because South Africa is the only country in Africa that has an active stock option market. We use collect data on the total value of stock options awarded to executives over the years as captured in Bloomberg or annual reports.

Table 5.7 present the results for the different risk measures using the GMM estimator. Model 1 (columns 2-5) show the results for the general estimation whereas model 2 (column

7-11) reports similar estimates but controls for financial institutions. The results for cash compensation (see Table 5.7A) show that executive cash compensation after merger has no significant effect on total, systematic and unsystematic risk. From the previous analysis on African total sample, cash pay negatively impact both total risk and systematic risk with no significant effect on unsystematic risk.

However, for South African firms, the direction of the coefficients of cash and lag of cash are different (although insignificant) from those of Africa. It should be noted that, South Africa is part of the total African sample and if cash compensation does not impact on risk for South Africa, then it means that the negative impact of cash pay on various risk measures (for total sample) is driven by the relationship between cash pay and risk for the other African firms. This may be explained by the compensation different structures in the two samples. The structure of EC, under the agency theory settings, has long been argued to influence the risk appetite of executive (Garen, 1994; Gomez-Mejia & Wiseman, 1997). Garen (1994) specifically argues that managers consider cash pay as an insurance against their compensation risk. It, therefore, implies that if majority of executive compensation package is made up of cash pay, then executives will not be motivated to take on more risky investment. In line with this argument, it is not surprising to see a negative impact of a heavy weighted cash-pay compensation package on risk.

This is the setting in which most African firms are found, with executive pays dominated by cash. However, South Africa's setting is slightly different from the other African firms in the sense that, by regulation, South African firms are required to use equity to constitute greater portion of executive pay. Hence, if cash pay is not the main determinant of compensation pay but rather equity, then we expect little impact of cash pay on risk and a greater impact of equity on risk for South African firms.

Similarly, an equity dominated compensation package (as in the case of South Africa) can encourage management risk-taking since an increase in the stock price of a firm's equity on the market results in an increase in managerial incentive package (Jensen & Meckling, 1976; Smith & Stulz, 1985). Our results, as reported under model 1 of Table 5.7B, are in line with this argument. Specifically, we find that equity pay significantly affects systematic risk positively but it relates to unsystematic risk negatively. The relationship in both cases is stronger with previous equity pay than current pay. The combined effect of cash and equity pay within the South African managerial compensation portfolio renders the effect on total risk to be insignificant. These findings suggest that the equity pay of executives positively influence systematic risk and reduces unsystematic risk. The results in Table 5.8B, about our variables of interest, are similar to those recorded in Table 5.7D for total compensation.

Stocks and stock options are the two types of equity related compensation; and studies that examine the dynamics of equity related pays split them accordingly. Both stock and stock options are found to relate to various factors under study differently (Benson et al., 2014; Ross, 2004) and combining them into a single incentive type could affect the accuracy of our findings. Hence, for South Africa, we consider separately the impact of stock option compensation (STOP) on risk. The literature on stock option and risk relationship is inconclusive. Contrary to the agency theory's conclusion and evidence from other studies, a section of studies contend that stock options, especially those that are in-the-money, do not necessarily lead to increase in risk-taking behaviours but rather they increase the sensitivity of executive compensation portfolio to equity price volatilities and also impact firms' leverage choices (Carpenter, 2000; Lewellen, 2006; Ross, 2004).

However, the consensus converges to the positive effect of option pays on equity risk. For instance, according to Devers et al. (2008), managers are motivated to enhance the value of unexercisable options granted them; hence, they invest more in risky investments that have

the potential to further increases the value of these options. Consistent with the latter argument, we find a significantly (at 5% level) positive effect of previous stock option compensation on South African firms' systematic risk. This implies that previous year option granted to executives motivates them to increase firm market risk, similar to the findings for equity pay. In other words, the value of stock options granted to executives in the year of merger determines the firm's systematic risk in year one after merger. This result is expected since the value of option is greatly influence by changes in stock prices. Besides, from Table 5.1, the average value of post-merger options granted to management is about 22% of the total compensation, which is large enough to influence managerial behaviour.

Stock options however, have no effect on unsystematic risk. We conclude that equity related compensations (both stock and stock options) granted to executives, post-merger, positively influences the systematic risk of acquirers.

The coefficients of the interaction variables of the various ECs and financial industry status in model 2 of Table 5.7 are at most weakly significant at 10%. We, therefore, do not find enough evidence to establish a relationship between the interactions variables and risk. Hence, we find no statistical difference between the impacts of executive compensation on risk on financial and non-financial firms after controlling for deal, firm and corporate governance specific factors for the South African sub-sample.

Table 5.7A: Cash compensation and risk for South African firms

Model	(1)					(2)				
Variable	TR	Unsyt	Beta	BME	DCL	TR	Unsyt	Beta	BME	DCL
Risk(-1)	-0.3085	-0.4162	-0.6146	-0.1354	-1.1787	-0.1885	-0.4010	-0.5866	-0.1342	-1.2706
	-[1.96]**	[-2.77]***	[-6.77]***	[-1.07]	[-18.44]***	[2.28]**	[-2.67]**	[-5.88]***	[-1.05]	[-14.89]***
Risk(-2)	-0.1420	-0.1761	-0.2666	0.1868	-0.6453	-0.1617	-0.1707	-0.2509	0.1957	-0.9171
	[-1.75]*	[-2.12]**	[-4.35]***	[1.47]	[-3.90]***	[-1.98]**	[-2.10]**	[-3.55]***	[1.44]	[-4.00]***
Cash	0.3097	-1.6694	0.7311	0.1279	-56.9835	-0.0215	3.8686	-0.6435	0.1606	-17.3716
	[0.06]	[-0.15]	[0.51]	[0.78]	[-0.30]	[-0.00]	[0.27]	[-0.24]	[0.83]	[-0.08]
Cash(-1)	2.9955	-4.4391	0.4246	0.1084	34.0379	2.6143	-9.7546	-0.0977	0.1317	-26.4853
	[0.85]	[-0.51]	[0.34]	[0.74]	[0.30]	[0.80]	[-1.13]	[-0.06]	[0.83]	[-0.24]
Market-to-book value	-0.0946	-2.3547	0.0238	0.0012	0.9639	-0.1396	-2.7113	0.0308	0.0006	1.6371
	[-0.33]	[-1.74]*	[0.90]	[0.42]	[0.46]	[-0.48]	[-2.27]**	[0.92]	[0.20]	[0.70]
Capital expenditure	-0.3736	33.6980	-1.0016	0.0842	14.1244	0.0782	29.9035	-1.3253	0.0988	3.4839
	[-0.11]	[1.27]	[-1.25]	[0.80]	[0.26]	[0.02]	[1.21]	[-1.28]	[0.85]	[0.06]
Firm size	2.3990	-48.8927	1.5848	-0.0496	1.4790	1.4063	-44.3906	2.0080	-0.0586	-2.4964
	[0.62]	[-2.88]***	[2.17]**	[-0.62]	[0.06]	[0.40]	[-2.45]**	[2.53]**	[-0.67]	[-0.09]
Sales growth	-6.5139	-28.5867	0.4939	0.0423	-4.7398	-6.3650	-25.7366	0.5473	0.0417	-4.8111
	[-9.68]***	[-2.04]**	[2.15]**	[1.33]	[-0.27]	[-9.64]***	[-1.85]*	[2.46]**	[1.31]	-0.2433
D&I	-2.7795	37.5176	-0.4983	-0.1035	365.9977	-2.4444	7.6054	-0.2636	-0.1387	461.9131
	[-0.36]	[0.63]	[-0.24]	[-0.47]	[1.61]	[-0.34]	[0.11]	[-0.11]	[-0.57]	[2.02]**
Board size	-1.5822	12.5527	-0.2267	-0.1512	14.0383	-1.0236	7.1411	0.5508	-0.1680	-34.7771
	[-0.47]	[0.87]	[-0.34]	[-0.76]	[0.21]	[-0.32]	[0.51]	[0.57]	[-0.86]	[-0.58]
Outside directors	-40.0283	-1028.1150	29.0840	-0.8083	137.8194	-48.8827	-1038.1120	47.6036	-1.0805	-203.1664
	[-0.48]	[-1.75]*	[1.20]	[-0.17]	[0.05]	[-0.64]	[-1.77]	[1.92]	[-0.23]	[-0.06]
Board gender	0.2167	1.1919	0.2695	0.0054	60.0545	-0.2417	7.4326	1.0310	-0.0150	50.1519
	[0.10]	[0.05]	[0.39]	[0.05]	[1.49]	[-0.11]	[0.28]	[1.24]	[-0.12]	[1.48]
Institutional Ownership	-0.1173	-1.3773	0.0713	-0.0042	4.7839	0.0067	-1.9994	0.0441	-0.0005	7.1515
	[-0.27]	[-0.54]	[0.98]	[-0.31	[0.74]	[0.02]	[-0.75]	[0.47]	[-0.03]	[1.19]
Executive Ownership	1.9288	-17.5902	0.1361	0.1136	-23.0213	1.5281	-14.9330	0.1359	0.1115	-0.7335

	[1.00]	[-1.51]	[0.32]	[2.60]**	[-0.77]	[0.80]	[-1.23]	[0.24]	[2.49]	[-0.03]
CEO's age	-1.3985	25.3004	-0.5742	0.1942	-558.5210	-1.6707	28.7067	-2.6597	0.2325	-293.2974
	[-0.38]	[0.92]	[-0.35]	[1.57]	[-1.03]	[-0.45]	[1.08]	[-1.74]*	[1.35]	[-0.87]
CEO's gender	-52.5046	107.4973	-5.8850	0.2483	-233.9305	-41.2540	-148.0887	-6.6332	0.2397	-242.5913
	[-2.37]**	[0.51]	[-1.72]*	[0.48]	[-0.65]	[-1.70]*	[-0.57]	[-1.80]*	[0.47]	[-0.58]
Deal size	5.7824	-125.7766	2.4416	-0.0434	238.3152	5.8246	-105.3934	5.1282	-0.0644	328.6560
	[0.81]	[-1.62]	[0.92]	[-0.12]	[1.16]	[0.88]	[-1.30]	[1.60]	[-0.18]	[1.25]
Cross-border acquisition	5.1212	-147.5744	0.9045	-0.1087	-1.3461	6.2793	-132.1606	0.0312	-0.0682	97.2907
	[0.60]	[-2.27]**	[0.36]	[-0.36]	[-0.00]	[0.76]	[-2.19]**	[0.01]	[-0.21]	[0.21]
Mode of payment (Equity)	3.3385	-17.0432	1.9093	0.2350	39.6886	2.8427	-19.4269	1.9078	0.2444	118.8585
	[0.47]	[-0.22]	[0.77]	[0.60]	[0.14]	[0.42]	[-0.24]	[0.60]	[0.60]	[0.51]
Target listing	3.2101	22.5875	0.2583	0.4444	-99.0005	4.2706	25.0924	-1.9101	0.4677	-116.6384
	[0.46]	[0.36]	[0.12]	[1.49]	[-0.31]	[0.65]	[0.40]	[-0.78]	[1.49]	[-0.33]
D*EC						-5.6610	-15.5124	6.3234	-0.1043	-244.5383
						[-0.89]	[-1.28]	[1.51]	[-0.35]	[-0.56]
D*EC(-1)						-6.5542	-18.5462	5.5642	-0.8452	-215.4558
						[-1.75]*	[-1.88]*	[1.88]*	[-1.58]	[-1.02]
@ 1 year	12.6987	-124.4442	2.0303	0.2382	786.6460	14.2413	-115.6224	3.0967	0.2258	751.7180
	[1.72]*	[-2.21]**	[0.85]	[0.90]	[1.37]	[1.96]**	[-2.01]**	[1.02]	[0.80]	[1.86]*
@ 2 year	6.1525	-43.7014	1.2932	-0.2355	533.1715	6.3127	-54.2183	2.9591	-0.2493	264.0192
	[1.42]	[-1.10]	[0.69]	[-1.13]	[0.97]	[1.49]	[-1.45]	[1.72]*	[-1.10]	[0.75]
@ 3 year	0.2400	3.8044	-3.6563	-0.2440	511.2775	0.7538	-10.3168	-1.7812	-0.2812	291.6885
	[0.05]	[0.10]	[-1.63]	[-1.36]	[1.00]	[0.16]	[-0.26]	[-0.68]	[-1.30]	[0.96]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-values	0.5789	0.2866	0.3867	0.5327	0.6150	0.5246	0.3140	0.5643	0.4073	0.4059
AR(2) test, p-values	0.3550	0.6817	0.2626	0.1571	0.8548	0.1152	0.9401	0.3040	0.1281	0.3558

Note: This table presents the GMM estimation of all the risk measures on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively

Table 5.7B: Equity compensation and risk measures for South African firms

Model	(1)					(2)				
Variable	TR	Unsyt	Beta	BME	DCL	TR	Unsyt	Beta	BME	DCL
Risk(-1)	0.4055	-0.4193	-0.5925	-0.0596	-1.0564	0.2114	-0.4413	-0.6050	-0.0387	-1.2817
	[2.47]**	[-3.13]***	[-6.65]***	[-0.36]	[-11.13]	[1.11]	[-3.18]***	[-5.41]***	[-0.22]	[-18.79]***
Risk(-2)	-0.1316	-0.1766	-0.2496	0.1891	-0.4432	-0.1777	-0.1891	-0.2588	0.1959	-0.9072
	[-1.35]	[-2.34]**	[-3.78]***	[1.28]	[-1.95]**	[-1.64]	[-2.34]**	[-3.18]***	[1.17]	[-4.51]***
Equity	1.1582	-1.8417	0.3309	-0.0492	58.6505	-0.6074	-5.5798	0.4610	-0.0448	12.9289
	[1.19]	[-2.62]**	[2.20]**	[-1.85]*	[1.80]*	[-2.50]**	[-1.75]*	[1.95]*	[-1.55]	[1.68]*
Equity(-1)	0.1454	-1.5453	0.2295	-0.0400	43.1366	-0.1097	-3.0183	1.3054	-0.0404	14.2773
	[1.24]	[-3.35]***	[3.00]***	[-1.90]*	[1.70]*	[-2.18]**	[-6.75]***	[4.91]***	[-2.11]**	[1.92]*
Market-to-book value	-0.0088	-2.1186	0.0259	0.0022	8.1821	-0.1708	-2.4858	0.0535	0.0015	1.2255
	[-0.03]	[-1.76]	[0.82]	[0.65]	[1.30]	[-0.58]	[-2.16]	[1.24]	[0.42]	[0.60]
Capital expenditure	-0.4007	30.1867	-0.9374	0.1027	16.5634	0.7739	47.9110	-0.9221	0.1028	17.5046
	[-0.11]	[1.01]	[-1.22]	[0.83]	[0.12]	[0.20]	[1.53]	[-0.71]	[0.80]	[0.36]
Firm size	1.3790	-36.7933	1.2838	-0.0573	26.5238	0.9339	-28.8344	1.4068	-0.0545	-19.8151
	[0.37]	[-1.49]	[1.68]*	[-0.77]	[0.35]	[0.25]	[-1.00]	[1.36]	[-0.76]	[-0.60]
Sales growth	-6.8368	-23.6512	0.5747	0.0562	-56.5005	-6.3437	-29.3817	0.3879	0.0608	-6.7667
	[-11.43]***	[-1.73]*	[2.77]**	[1.89]*	[-1.23]	[-9.64]***	[-2.26]**	[1.37]	[1.79]*	[-0.76]
D&I	-3.2543	15.4594	-0.3220	-0.2895	794.9934	-1.7543	59.3535	-1.1658	-0.2713	427.4742
	[-2.15]**	[3.23]***	[-2.17]**	[-2.07]**	[1.90]*	[-2.22]**	[1.85]*	[-3.06]***	[-1.83]*	[2.16]**
Board size	-1.7314	-15.2090	0.0905	-0.2385	278.6594	-2.6838	-4.5848	1.6255	-0.2567	14.3403
	[-0.48]	[-1.16]	[0.16]	[-1.15]	[1.08]	[-0.85]	[-0.35]	[1.20]	[-1.21]	[0.27]
Outside directors	-13.6937	-1581.2140	22.0865	-0.5870	9863.1710	-114.1828	-1531.1840	72.9170	-1.5512	-187.8656
	[-2.18]**	[-3.11]***	[2.04]**	[-0.12]	[1.19]	[-3.06]***	[-2.51]**	[2.42]**	[-2.28]**	[-0.08]
Board gender	-0.1771	5.4029	-0.1492	0.0130	159.4751	-1.9153	11.5546	0.9018	0.0218	14.3999
	[-0.08]	[0.19]	[-0.27]	[0.09]	[1.70]*	[-0.72]	[0.35]	[0.97]	[0.11]	[0.41]
Institutional Ownership	-0.1759	-0.8931	0.0225	-0.0122	-0.4963	-0.1350	-0.0112	1.457	-0.0140	9.0210
	[-0.41]	[-0.35]	[0.29]	[-0.74]	[-0.04]	[-0.35]	[-0.01]	[2.44]**	[-0.61]	[1.29]
Executive Ownership	3.1854	-11.8614	0.0593	0.1555	-62.7919	3.5757	-14.3914	-0.1012	0.1630	-11.2701

	[1.39]	[-1.17]	[0.13]	[2.94]***	[-0.89]	[1.53]	[-1.53]	[-0.15]	[2.93]***	[-0.59]
CEO's age	-0.4469	9.1217	-0.2384	0.1755	-822.6433	0.5034	14.6273	-2.2239	0.1840	-307.2059
	[-0.13]	[0.20]	[-0.14]	[1.36]	[-1.14]	[0.15]	[0.30]	[-1.66]*	[1.26]	[-0.83]
CEO's gender	-59.9866	111.6309	3.7296	-0.7501	438.9301	-26.0697	-184.5779	1.6971	-0.7547	139.9441
	[-1.82]*	[0.79]	[0.64]	[-0.65]	[0.45]	[-0.70]	[-0.77]	[0.17]	[-0.70]	[0.29]
Deal size	5.9066	-118.3325	0.8663	0.0111	1068.4410	-1.4366	-113.8415	5.3101	-0.0603	240.3957
	[0.79]	[-1.62]	[0.36]	[0.03]	[1.40]	[-0.15]	[-1.40]	[1.38]	[-0.16]	[1.19]
Cross-border acquisition	3.1545	-94.6435	2.1593	0.1180	-121.1138	4.6197	-160.9558	0.8962	0.1071	44.9610
	[0.39]	[-0.97]	[0.95]	[0.37]	[-0.18]	[0.54]	[-1.76]*	[0.22]	[0.28]	[0.13]
Mode of payment (Equity)	4.6248	-24.2950	1.6462	0.0178	400.4071	2.7647	66.4002	2.7871	0.0597	81.3596
	[0.62]	[-0.24]	[0.70]	[0.04]	[0.77]	[0.31]	[0.57]	[0.63]	[0.11]	[0.37]
Target listing	5.0771	4.8879	-0.1249	0.3325	-465.6526	6.7875	102.2689	-1.1914	0.3579	-75.5114
	[0.81]	[0.06]	[-0.06]	[0.97]	[-0.83]	[0.97]	[1.13]	[-0.39]	[1.00]	[-0.21]
D*EC						0.6865	26.8471	-0.0181	-0.0062	-337.7270
						[0.88]	[1.95]*	[-0.05]	[-0.12]	[-0.51]
D*EC(-1)						0.8665	28.1536	-0.0668	-0.0105	-292.23
						[1.75]*	[1.89]*	[-0.28]	[-0.53]	[-0.58]
@ 1 year	14.2577	-107.3870	1.7307	0.1666	1270.2800	14.9702	-20.0747	2.5705	0.1641	640.3734
	[1.79]*	[-1.46]	[0.85]	[0.60]	[1.49]	[1.85]*	[-0.23]	[0.95]	[0.51]	[1.56]
@ 2 year	4.5429	-15.4725	2.0691	-0.3376	658.4761	4.5856	-9.6741	4.0882	-0.3341	342.1911
	[0.86]	[-0.28]	[1.09]	[-1.50[	[0.93]	[0.99]	[-0.17]	[2.31]**	[-1.46]	[0.93]
@ 3 year	-2.0071	41.0226	-3.9827	-0.2887	643.2403	0.2897	18.7833	-3.2640	-0.2833	323.0902
	[-0.42]	[0.78]	[-1.69]*	[-1.56]	[0.96]	[0.06]	[0.34]	[-1.42]	[-1.39]	[0.98]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-values	0.5116	0.2749	0.3576	0.6364	0.8137	0.7181	0.1926	0.5023	0.4710	0.3666
AR(2) test, p-values	0.1683	0.3959	0.5655	0.1149	0.2512	0.4131	0.1307	0.5942	0.1242	0.5339

Note: This table presents the GMM estimation of all the risk measures on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively

Table 5.7C: Stock option compensation and Risk for South African firms

Model	(1)					(2)				
Variable	TR	Unsyt	Beta	BME	DCL	TR	Unsyt	Beta	BME	DCL
Risk(-1)	0.2898	-0.3951	-0.5786	-0.1604	-1.1508	0.2554	-0.3677	-0.5805	-0.1452	-1.1491
	[2.17]**	[-3.27]***	[-6.33]***	[-1.22]	[-17.72]	[1.76]*	[-2.44]**	[-6.37]***	[-0.88]	[-17.20]***
Risk(-2)	-0.1427	-0.1699	-0.2415	0.1326	-0.5680	-0.1685	-0.1653	-0.2447	0.0956	-0.5711
	[-1.45]	[-2.56]**	[-3.96]***	[1.10]	[-4.50]***	[-1.55]	[-1.99]**	[-3.81]***	[0.66]	[-4.32]***
STOP	0.9825	-37.0522	0.0550	-0.0125	20.8950	0.3296	-19.6710	0.0142	-0.0174	11.6383
	[1.39]	[-0.69]	[0.20]	[-0.30]	[0.21]	[0.45]	[-0.32]	[0.05]	[-0.36]	[0.12]
STOP(-1)	0.2277	-14.1605	0.1309	0.0198	8.5238	0.2566	-19.0319	0.1188	0.0157	6.2947
	[0.54]	[-0.30]	[1.97]**	[0.95]	[0.46]	[0.69]	[-0.44]	[1.74]**	[0.80]	[0.43]
Market-to-book value	-0.1128	-2.3230	0.0451	0.0016	1.8835	-0.1797	-2.0204	0.0474	0.0047	2.1825
	[-0.47]	[-1.91]*	[1.39]	[0.49]	[0.90]	[-0.76]	[-1.62]	[1.39]	[1.08]	[1.08]
Capital expenditure	3.3474	36.0972	-0.1878	0.0563	13.2229	3.0792	48.6716	-0.3335	0.0869	20.6226
	[1.26]	[1.17]	[-0.13]	[0.50]	[0.17]	[1.06]	[1.50]	[-0.25]	[0.74]	[0.28]
Firm size	-0.1933	-44.8626	0.7526	0.0432	7.6788	0.4684	-58.9456	0.6630	0.0433	10.9840
	[-0.06]	[-1.59]	[0.64]	[0.53]	[0.071]	[0.15]	[-2.45]	[0.55]	[0.59]	[0.09]
Sales growth	-6.6619	-21.5471	0.3184	0.0349	-24.6497	-6.9144	-26.8474	0.3569	0.0393	-25.0100
	[-12.70]***	[-1.51]	[1.25]	[1.25]	[-1.39]	[-12.04]***	[-2.33]***	[1.31]	[1.18]	[-1.38]
D&I	-3.5747	9.3679	-1.2534	-0.0055	446.9121	-0.2518	-22.3491	-1.2166	-0.1187	415.5688
	[-0.50]	[0.17]	[-0.50]	[-0.02]	[1.69]	[-0.03]	[-0.35]	[-0.44]	[-0.46]	[1.56]
Board size	-1.1663	-12.4838	1.4648	-0.0262	59.7654	-0.3362	-13.4276	1.1786	-0.0583	69.1542
	[-0.45]	[-0.67]	[1.06]	[-0.14]	0.57]	[-0.11]	[-0.79]	[0.90]	[-0.28]	[0.65]
Outside directors	-50.8979	-1403.9800	72.0280	0.8913	2628.0940	-84.0427	-1044.0960	68.3419	1.6997	2942.6490
	[-1.71]*	[-2.08]**	[2.72]***	[0.20]	[0.95]	[-1.00]	[-1.62]	[2.64]**	[0.36]	[1.02]
Board gender	-0.6185	-10.7783	0.8664	0.0053	69.2807	-0.9551	-14.3650	0.9042	0.0354	72.9099
	[-0.25]	[-0.50]	[1.10]	[0.04]	[1.24]	[-0.33]	[-0.61]	[1.11]	[0.27]	[1.30]
Institutional Ownership	-0.1131	-1.8187	0.0731	0.0023	6.4808	-0.0836	-1.7023	0.0583	-0.0059	6.8826
	[-0.32]	[-0.71]	[0.88]	]0.14]	[0.78]	[-0.22]	[-0.63]	[0.70]	[-0.32]	[0.87]
Executive Ownership	1.4657	-13.1656	-0.1943	0.1068	-25.4937	1.7063	-12.3748	-0.1343	0.1137	-27.2008

	[0.90]	[-1.33]	[-0.33]	[2.56]**	[-0.90]	[0.93]	[-1.22]	[-0.23]	[2.55]**	[-0.95]
CEO's age	2.6373	35.5136	-2.5938	0.0408	-462.7381	1.1432	75.6180	-2.4183	0.0031	-508.8409
	[0.64]	[1.31]	[-1.57]	[0.24]	[-0.70]	[0.27]	[2.31]**	[-1.47]	[0.02]	[-0.76]
CEO's gender	-48.6714	107.8467	-6.1611	0.6346	-547.6329	-59.8924	77.6197	-4.5312	0.8290	-456.4291
	[-2.36]**	[1.15]	[-1.73]*	[0.97]	[-0.48]	[-2.26]**	[0.75]	[-0.70]	[1.07]	[-0.41]
Deal size	2.8283	-159.3455	5.1403	0.1847	485.9235	0.2249	-158.8583	4.8919	0.2288	529.8240
	[0.46]	[-2.07]**	[1.62]	[0.56]	[1.30]	[0.03]	[-1.98]**	[1.59]	[0.64]	[1.46]
Cross-border acquisition	6.6724	-80.6834	-0.1598	-0.3102	-24.6344	1.5516	-24.2968	0.2921	-0.0959	1.8616
	[0.83]	[-1.03]	[-0.04]	[-0.85]	[-0.09]	[0.15]	[-0.32]	[0.07]	[-0.26]	[0.01]
Mode of payment (Equity)	2.1539	-33.1151	1.1248	0.3171	215.9667	8.2025	-14.2331	1.0118	0.1259	155.6736
	[0.30]	[-0.40]	[0.30]	[0.84]	[0.65]	[0.88]	[-0.16]	[0.25]	[0.26]	[0.51]
Target listing	2.4486	14.8310	-2.0814	0.6587	-239.3165	10.8980	46.4622	-2.2129	0.3825	-303.8295
	[0.33]	[0.23]	[-0.66]	[2.19]**	[-0.73]	[1.26]	[0.62]	[-0.75]	[0.99]	[-1.10]
EC*industryD						2.1701	-21.5760	-0.2211	-0.0279	-2.5222
						[1.80]*	[-0.05]	[-0.37]	[-0.32]	[-0.10]
@ 1 year	10.7409	-140.2311	0.3742	0.4673	816.3403	18.5345	-142.4026	0.4741	0.3110	795.5336
	[1.49]	[-1.77]*	[0.13]	[1.89]*	[1.42]	[2.13]**	[-1.66]*	[0.17]	[1.07]	[1.34]
@ 2 year	1.9069	-24.8588	3.3460	-0.0923	390.0041	3.3795	-61.4991	3.0901	-0.0123	427.9947
	[0.40]	[-0.70]	[1.61]	[-0.43]	[0.62]	[0.69]	[-1.55]	[1.47]	[-0.05]	[0.67]
@ 3 year	-2.6108	7.7024	-4.0819	-0.1062	434.9503	-1.4341	-44.4134	-4.0632	-0.1105	460.3815
	[-0.52]	[0.20]	[-1.67]*	[-0.68]	[0.77]	[-0.27]	[-0.88]	[-1.65]*	[-0.62]	[0.79]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-values	0.3190	0.3131	0.5657	0.2818	0.4067	0.5499	0.3525	0.5599	0.2595	0.3918
AR(2) test, p-values	0.1320	0.6969	0.9103	0.1570	0.5663	0.2287	0.6686	0.1042	0.1208	0.8554

Note: This table presents the GMM estimation of all the risk measures on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.7D: Total compensation and firm risk for South African firms

Model	(1)					(2)				
Variable	TR	Unsyt	Beta	BME	DCL	TR	Unsyt	Beta	BME	DCL
Risk(-1)	0.1054	-0.4113	-0.5591	-0.1504	-0.9342	-0.0637	-0.4057	-0.5700	-0.1542	-0.9309
	[0.61]	[-2.98]***	[-6.38]***	[-1.25]	[-4.43]***	[-0.28]	[-2.85]***	[-5.51]***	[-1.17]	[-4.23]***
Risk(-2)	-0.1934	-0.1781	-0.2339	0.1738	-0.0785	-0.2436	-0.1753	-0.2336	0.1539	-0.0703
	[-2.19]**	[-2.27]***	[-3.52]***	[1.35]	[-0.18]	[-2.53]**	[-2.19]**	[-3.19]***	[1.13]	[-0.16]
Total compensation	-13.8164	34.3139	1.7328	0.1341	769.8847	-14.2017	-0.5220	2.2060	0.2183	948.5729
	[-1.56]	[0.52]	[1.76]*	[0.64]	[1.37]	[-1.42]	[-1.52]*	[1.70]*	[1.05]	[1.40]
Total compensation (-1)	-3.8434	65.7407	2.4343	0.1976	202.7228	-2.8309	-1.4298	1.1556	0.1763	184.8500
	[-0.84]	[1.40]	[2.27]**	[1.39]	[0.77]	[-0.60]	[-3.44]***	[4.55]***	[1.07]	[0.68]
Market-to-book value	-0.1885	-2.7749	0.0385	0.0010	14.8833	-0.3570	-2.8827	0.0676	0.0005	7.5672
	[-0.71]	[-2.07]**	[1.08]	[0.33]	[1.35]	[-1.31]	[-1.85]*	[1.20]	[0.11]	[0.92]
Capital expenditure	-0.1060	21.1427	-0.6308	0.0294	63.9771	0.4463	19.4543	-0.5800	0.0136	49.7402
	[-0.03]	[0.62]	[-0.62]	[0.30]	[0.31]	[0.12]	[0.57]	[-0.46]	[0.13]	[0.29]
Firm size	1.0804	-37.9909	1.2955	-0.0391	27.5501	0.5046	-38.8954	1.2546	-0.0419	3.4122
	[0.31]	[-1.42]	[1.38]	[-0.54]	[0.25]	[0.15]	[-1.51]	[1.17]	[-0.56]	[0.03]
Sales growth	-6.0338	-19.6907	0.3879	0.0453	-76.4319	-5.6142	-19.6456	0.2472	0.0508	-48.3390
	[-8.45]***	[-1.20]	[1.57]	[1.47]	[-1.15]	[-7.05]***	[-1.18]	[0.79]	[1.62]	[-0.97]
D&I	-3.7401	-9.7111	-0.3859	-0.0435	805.6230	-5.1707	-14.2514	-0.6143	-0.7390	543.8922
	[-2.41]**	[-2.14]**	[-3.178]***	[-2.19]**	[1.48]	[-2.53]**	[-2.18]**	[-3.19]***	[-2.30]**	[1.30]
Board size	-1.5902	-14.5609	0.7296	-0.1281	347.4192	-1.5424	-12.3837	1.6915	-0.1331	239.6219
	[-0.54]	]-0.94]	[0.84]	[-0.73]	[0.88]	[-0.44]	[-0.82]	[1.11]	[-0.67]	[0.64]
Outside directors	-91.1925	-1778.5550	46.0699	-0.8953	16064.7700	-146.0816	-1713.3680	87.3130	-0.8416	14732.7800
	[-2.00]**	[-3.00]***	[2.23]**	[-0.21]	[1.18]	[-1.43]	[-2.84]**	[2.74]***	[-0.17]	[1.13]
Board gender	-1.0782	-23.9358	0.3448	0.0016	175.6029	-2.4426	-24.3456	1.0130	0.0216	164.3455
	[-0.41]	[-1.05]	[0.58]	[0.02]	[0.93]	[-0.79]	[-1.06]	[1.09]	[0.22]	[0.85]
Institutional Ownership	0.1360	-2.1221	0.0261	-0.0035	-7.9555	0.2235	-2.0059	0.0182	-0.0101	-8.8757
	[0.39]	[-0.70]	[0.33]	[-0.23]	[-0.50]	[0.64]	[-0.68]	[0.19]	[-0.53]	[-0.62]
Executive Ownership	3.9169	-12.9229	-0.1329	0.1175	-86.3211	3.7789	-12.6617	-0.1363	0.1293	-59.4962

	[1.58]	[-1.21]	[-0.25]	[2.84]***	[-0.93]	[1.47]	[-1.16]	[-0.20]	[3.04]***	[-0.78]
CEO's age	-9.1671	68.5613	-0.3606	0.2254	-760.9825	-8.1413	70.5000	-1.1386	0.2601	-665.2528
	[-0.87]	[1.834]*	[-0.15]	[1.16]	[-0.98]	[-0.81]	[1.67]*	[-0.49]	[1.21]	[-0.96]
CEO's gender	-35.7521	79.2601	-3.0033	0.2256	-785.8067	-18.9954	69.1263	-5.0335	0.0608	-1639.1670
	[-1.95]**	[0.83]	[-0.83]	[0.47]	[-0.90]	[-0.81]	[0.59]	[-0.92]	[0.12]	[-1.40]
Deal size	4.9925	-199.9579	2.7802	-0.0984	1323.6610	2.4015	-195.9779	5.6966	-0.1320	1244.6790
	[0.68]	[-2.67]**	[1.09]	[-0.26]	[1.22]	[0.30]	[-2.62]**	[1.53]	[-0.34]	[1.31]
Cross-border acquisition	6.4115	-53.9104	0.4938	-0.1142	191.0847	8.3314	-53.8008	0.7337	-0.0879	434.4675
	[0.70]	[-0.64]	[0.18]	[-0.38]	[0.27]	[0.83]	[-0.67]	[0.18]	[-0.29]	[0.68]
Mode of payment (Equity)	1.6773	-48.8633	1.5997	0.2707	270.3302	-0.3884	-41.9821	2.2881	0.3153	333.2967
	[0.19]	[-0.52]	[0.58]	[0.67]	[0.40]	[-0.04]	[-0.44]	[0.59]	[0.74]	[0.56]
Target listing	6.0762	1.2017	-0.5466	0.4685	-773.5706	5.5970	2.3393	-1.2320	0.4365	-944.1202
	[0.84]	[0.02]	[-0.24]	[1.65]	[-1.15]	[0.66]	[0.03]	[-0.43]	[1.51]	[-1.31]
D*EC						-2.3554	-11.5215	-0.2499	-0.2461	-1032.9270
						[-0.30]	[-0.11]	[-0.06]	[-0.81]	[-1.29]
D*EC(-1)						-3.5211	-10.2335	-0.5332	-0.1256	-2425.0115
						[-1.10]	[-0.93]	[-0.13]	[-069]	[-1.69]
@ 1 year	18.1717	-180.0191	1.9979	0.1668	1609.8340	16.5354	-182.5079	2.9168	0.1077	1340.2840
	[1.47]	[-2.15]	[0.74]	[0.57]	[1.41]	[1.27]	[-2.03]**	[0.84]	[0.32]	[1.44]
@ 2 year	11.2974	-6.5556	0.5539	-0.1706	643.9206	11.7821	-7.5020	1.1466	-0.2069	573.3646
	[1.07]	[-0.15]	[0.24]	[-0.79]	[0.84]	[1.15]	[-0.17]	[0.53]	[-0.87]	[0.79]
@ 3 year	10.9751	-5.8785	-5.3815	-0.2488	405.7307	11.6666	-10.1055	-5.4459	-0.2905	273.1054
	[0.96]	[-0.12]	[-1.90]*	[-1.17]	[0.55]	[1.08]	[-0.17]	[-1.77]	[-1.24]	[0.41]
Year dummies	Yes	Yea	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test, p-values	0.7550	0.3058	0.3837	0.4897	0.9225	0.8635	0.3122	0.5390	0.3517	0.8091
AR(2) test, p-values	0.9680	0.5760	0.3587	0.1196	0.2164	0.1499	0.6312	0.9712	0.1858	0.8452

Note: This table presents the GMM estimation of all the risk measures on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

5.4.2.6 Does accounting risk determine market risk?

Finally, we conclude our analysis by exploring if managers and investors consider accounting risks and how these risks feed into the market risks. In other words, does the accounting risk recorded in accounting books have any impact on market risks after mergers? For instance, studies have long tried to investigate the determinants of systematic and unsystematic risks but they post divergent results (Breen & Lerner, 1973; Melicher, 1974; Thompson, 1976). Huffman (1989) in his theoretical paper shows that both financial and operational leverage feed into systematic risk. His result is consistent with Mandelker and Rhee (1984) who found a positive impact of operational and financial leverage on systematic risk.

Similarly, Gahlon and Gentry (1982b) explore the risk decomposition and conclude that stock beta is a function of degree of combined leverage. A more recent studies by Agusman, Monroe, Gasbarro and Zumwalt (2008) and Beltrame, Previtali and Sclip (2018) show a negative but insignificant effect of firm's leverage on common stock beta. In spite of the different accounting risk measures used by investors and practitioners in stock return volatility analysis, its effect on systematic or unsystematic risk still remain unsolved within the finance literature. There are lots of uncertainties surrounding firm return and risk profile after going through M&As. It is certainly essential to provide an insight into how accounting risks feed into market/financial risks. We provide the first study that explores the links between BME or DCL and firm systematic or unsystematic risk after merger within Africa.

To achieve this we estimate the dynamic equation (5.5) below using the dynamic panel GMM estimator. The choice of the dynamic estimation is motivated by the influence of past risk on current risk measure as evident in the above estimations. The choice of the GMM is to deal with possible endogeneity and reverse causality issues that might exist within our

variables. The GMM estimator is still consistent even if firm-specific effects correlate with accounting risk and firm size.

$$FinRisk_{it} = \alpha + \beta_1 AcctRisk_{it} + \beta_2 AcctRisk_{it-1} + \beta_3 FinRisk_{it-1} + \beta_4 Size_{it} + \lambda_t + \varepsilon_{it} \quad (5.5)$$

where $FinRisk_{it}$ is the financial risk variable (either total, systematic or unsystematic), $AcctRisk_{it}$ and $AcctRisk_{it-1}$ are the previous accounting risk measures (BME or DCL) respectively. We test for the impact of current and immediate past accounting risk on financial risks. The lag of accounting measure is included because we assume the annual accounting risk is only available for use at the end of firm year which could be used for next financial year's decisions. Size is the logarithm of firms' total assets and λ_t is the year fixed effects intended to purge the estimation of time-varying firm heterogeneity. The estimation results are presented in Table 5.8. Column 2 presents the estimation between systematic risk and BME while column 3 shows the estimates for DCL. Similar estimations are presented in column 4 and 5 for unsystematic risk and column 6 and 7 for total risk. The Sargen and AR(2) of the results in Table 5.8A and 5.8B show that the results are free of instrument over-identification and second order serial correlation respectively.

For our variables of interest (accounting risk), we observe that systematic and total firm risk is unaffected by neither BME nor DCL for our total Africa sample (see Table 5.8A). However, unsystematic risk is positively (significant at 5% for BME and 10% level for DCL) influenced by past accounting risk measures (although the relationship is weak for DCL). This result implies that managers consider immediate past accounting risk in dealing with firm-specific risk. As far as managers, shareholders and investors are concerned, when firms do M&As, firm-specific risk is more important than systematic risk. This is consistent with (Agusman et al., 2008) and (Claessens, Djankov & Lang, 2000) who indicate that

unsystematic risk is more significant than systematic risk for emerging markets. The possible reasons for this observation are in two folds.

First, we have indicated that the African capital market trades thinly and are generally inactive. And as a result, investors could be more interested in the accounting equity returns that the firms generate through dividend payment rather than market reward from risk premium. In that case, shareholders would be more concerned with firm-specific risk than market risk. Second, due to the weak corporate governance practices that characterise African firms, shareholders might want to keep a closer eye on risks that come from internal decisions or behaviours and firm complexity due to M&A.

The results for the South African sample differ slightly from the total sample. From Table 5.8B, we find that current accounting risk positively impacts total risk but not systematic and unsystematic risk. That is, increase in accounting risk measures move in tandem with total risk. It should be noted that, the South Africa capital market is relatively more efficient in processing information. So monthly or quarterly accounting information are immediately captured and reflected in the total risk of the firm's equity risk.

Secondly, although unsystematic risk exposure might not be a principal concern to managers and shareholders due to a relatively well-regulated market, they are equally concerned about the combined effect of both risk types. Indeed, if the capital market is efficient and systematic risk rewards investors for taking more risk, then we expect South Africa managers and investors to be more concerned about market risk. However, the result does not show that. Rather, investors request for post-merger risk premium based on the total risk position of the acquirer instead of only systematic risk as proposed by advanced market studies (Agusman et al., 2008; Beltrame et al., 2018; Mandelker & Rhee, 1984).

Further, book value of equity to market value of equity –BME- (a measure of firm distress) and degree of combined leverage –DCL (a measure of financial leverage) are both consistent in their impact on a given equity risk. In comparison, we conclude that while previous years accounting risk information signals the level of unsystematic risk in Africa, current accounting risk information rather transmit into the total risk of South African firms.

Table 5.8 A: Financial risk and accounting risk nexus post-merger for Africa

Independent variables	Beta	Beta	Unsyst	Unsyst	Total risk	Total risk
BME	0.8034		6.0597		-0.5625	
	[1.38]		[1.10]		[-0.19]	
BME(-1)	0.4246		3.2971		-0.3874	
	[1.49]		[1.96]**		[-0.25]	
DCL		-0.0003		0.0023		0.0003
		[-1.63]		[0.53]		[0.77]
DCL(-1)		-0.0002		0.0390		0.0002
		[-1.02]		[1.74]*		[0.55]
Beta(-1)	-0.0337	-0.0463	-0.0313	-0.0322	0.4155	0.4343
	[-1.59]	[-2.48]**	[-4.33]***	[-4.46]***	[22.63]***	[27.93]***
Log(Size)	-0.8137	-1.0896	55.4492	51.5457	1.7776	1.0173
	[-1.31]	[-2.17]**	[3.08]***	[2.61]**	[1.19]	[0.62]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vaalue)	0.8490	0.1196	0.7400	0.7460	0.4943	0.5128
AR(2) test (p-value)	0.2285	0.1260	0.2293	0.2090	0.5958	0.3140

Note: This table present the GMM estimation results on the impact of accounting risk measures (BME and DCL) on financial risk measures (beta, unsystematic and total risk). The GMM is estimated with cross-section difference and fixed period approach. All estimations control for firm year effects. Beta is the market equity risk while Unsyst is the firms unsystematic risk. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Table 5.8 B: Financial risk and accounting risk nexus post-merger for South Africa

Independent variables	Beta	Beta	Unsyst	Unsyst	Total risk	Total risk
BME	-1.9672		16.5453		2.6034	
	[-1.49]		[1.25]		[1.98]**	
BME(-1)	1.1137		-9.2252		-0.2062	
	[1.00]		[-0.90]		[-0.22]	
DCL		-0.0001		0.0033		0.0006
		[-0.60]		[0.95]		[1.96]**
DCL(-1)		0.0000		0.0001		0.0003
		[0.30]		[0.03]		[0.72]
Beta(-1)	-0.1759	-0.1675	-0.0719	-0.0709	0.4377	0.5072
	[-15.06]***	[-11.18]***	[-13.96]***	[-14.01]***	[6.33]***	[7.61]***
Log(Size)	-0.5907	-1.0577	53.1022	59.5976	0.3779	2.5326
	[-0.75]	[-1.66]*	[2.98]***	[3.63]***	[0.22]	[1.89]*
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-vaalue)	0.5808	0.4609	0.2586	0.1902	0.4223	0.1588
AR(2) test (p-value)	0.2327	0.4068	0.6719	0.7154	0.9000	0.6000

Note: This table present the GMM estimation results on the impact of accounting risk measures (BME and DCL) on financial risk measures (beta, unsystematic and total risk). The GMM is estimated with cross-section difference and fixed period approach. All estimations control for firm year effects. Beta is the market equity risk while Unsyst is the firms unsystematic risk. Details of all variables are presented in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

5.0 Conclusion

Mergers and acquisitions are one of those market events that can alter completely firms' structures and strongly influence executive's compensations and firm's risk profile. As the compensations of executives increase after merger, the general literature provides little or non-existent evidence on how such excessive post-merger compensations can influence the risk of firms, especially in Africa. Employing various estimation methods and using panel data spanning from 2002 to 2017, we contribute to the debate by providing fresh insight on the link between various executive pay and risk within the African context.

We begin by exploring the use of the GMM and why it is the most appropriate estimator for investigating the relation between EC and firm risk within a dynamic framework. We compare our results from the GMM to the Fixed-effect (FE) estimator and find the FE to be biased when estimating the dynamic effects of EC types on various risk measures, while

controlling for firm, deal and corporate governance specific factors. For instance, we apply these two estimators to investigate the link between cash executive compensation and total risk and find that previous EC has no effect on current risk for the FE estimator (past two lags of risk and current EC were significant for both estimators), when we controlled for firm specific factors. Besides, after controlling for both firm and corporate governance factors, we find no casual relation between cash pay (current cash and previous cash pay) and firm total risk using the FE. We argue that the bias may explain the variations in previous studies that do not consider the dynamic nature when investigating the link between corporate governance variables and risk, and most specially using the FE to estimate such relations.

Moreover, across both estimators, we find strong effect of previous risk (lasting to two years) on current risk of firms. This result confirms the risk persistence in literature. Usually and in most studies, immediate past risks (lag 1) are reported to impact on current risk but our result shows the persistence from lag two. The results suggest that risk could be more persistent in emerging markets than in advanced markets.

Additionally, in order to put into broader perspective the effect of EC on risk, we adopted three measure of equity risk (total, systematic and unsystematic) and accounting risk measures (book value of equity to market value of equity and degree of combined leverage). The existing literature lacks studies that use accounting risk measures, especially the DCL in spite of its importance in practice, to investigate EC and risk. We find that the two accounting risk measures are generally consistent but insensitive to detecting the effect of changes in EC. We conclude that accounting measures used in our analysis are consistent but not sensitive to detecting significant effects of our major variables of interest and control variables on them. That is, accounting risk measures are not influenced by variations in EC after mergers. Hence, EC does not contribute to firm distress and leverage related problems for merged firms in

Africa. Comparing the BME and DCL, we realise that the DCL is a better measure of risk when exploring the link between EC changes and accounting risk. The empirical conclusion in this study is however based on the finding based on the equity risk measures.

Further, the findings of our study for total Africa sample can be summarise as follows. Firstly, we find that rewarding executive with cash compensation for merger reduces the post-merger risk of acquirers. However, managers are motivated to increase systematic risk when they are rewarded with stocks, implying that managerial interest plays a special role in determining the risk profile of acquires. Secondly, we find a strong impact of previous EC on firm risk across all compensation types, indicating that the nature and form of current managerial pay affect the kind of investments they pursue in the next year. Thirdly, based on the argument that managerial compensation portfolio might impact on systematic and unsystematic risk differently we investigated the effect of EC on these forms of risks and our findings show no evidence of the impact of executive pay on systematic risk.

Fourthly, we explore if financial firms are different from other firms in our sample. We find that the coefficients for EC and its lag for cash compensation are positive although insignificant, contrary to what we find with the total sample. The relationship is significant for equity pay with a stronger impact from equity lag relative to current equity pay. Previous year's total compensation is also positive for total and systematic risk. We attribute the slight difference between the financial firms and others to the stringent regulatory and monitoring environment of financial firms. Also, financial institutions such as banks are noted for taking excessive risk perhaps due to huge executive pay, moral hazard coming from deposit insurance and the notion that they are too important to fail (Bebchuk & Fried, 2004). Besides, the use of capital requirement as one of the tools to reduce bank risk-taking by regulators, according to Laeven and Levine (2009), rather forces owners to put more pressure on

management to accept more riskier investments to make up for the loss in utility. Hence, the positive link between the various pay types properly explains the higher risk profile of financial firms.

Fifthly, we observe that firm, deal and corporate governance factors play significant and moderating role in the compensation-risk nexus. For instance, firm diversification through international operation reduces firm risk while outside board representation increases firm risk after successful merger. Also, a CEO's age rather than gender reduces total firm risk for all compensation types. More so, while cross-border deals relatively reduce both total and systematic risk, target listing positively impacts total and systematic risk. Equity mode of payment on the other hand, positively influences total and systematic risk. Also, unique to only financial firms, institutional ownership is found to positively affects firm risk, indicating the role of institutional shareholders in pushing financial firms like the banks to take more risk.

Besides, to determine whether South Africa as a separate market behaves differently, we run similar analysis for only South African firms. The results are similar to those of the African total sample except for the following differences. Executive cash compensation has no significant effect on total, systematic and unsystematic risk contrary to the observed negative impact of cash pay on both total and systematic risk for the African sample. Furthermore, for South African firms, the direction of the coefficients of cash and lag of cash are different (although insignificant) from those of Africa. South Africa is part of the total African sample, and if cash compensation does not impact on risk among South African firms, then it means the negative impact of cash pay on various risk measures (for total sample) is driven by the relationship between cash pay and risk for the other African firms. Again, the difference can be explained by the compensation structure and regulatory

differences between the two samples. Unique to South Africa, we find positive effects of previous stock option compensation on firms' systematic risk, implying that previous year option granted to executives motivates them to increase firm market risk, similar to the findings for equity pay. In other words, the value of stock options granted to executives in the year of merger informs the firm's systematic risk in year one after merger. Concerning financial firms, we find no statistical evidence to suggest that South African financial firms are different from other firms.

Finally, we consider how accounting risk affects equity risk. The results show that managers consider accounting risk in dealing with systematic and firm-specific risk. As far as managers, shareholders and investors are concerned, when firms do M&As, firm-specific risk is more important than systematic risk, Specifically for South Africa, we observe that current accounting risk positively impacts total risk but not systematic and unsystematic risk. That is, increase in accounting risk measures move in tandem with total risk.

The findings documented in this study have several implication for regulators, reactionaries and researchers. The results highlight the importance of past risk on current risk position of firms that underwent mergers and acquisitions. To adopt strategies to reduce or increase firm risk to meet specific investment goals, there is the need for managers or analyst to factor in previous risk interference.

Secondly, international diversification emerges as an important risk reduction strategy after successful merger contrary to results posted by non-merging firms (Switzer & Tahaoglu, 2015; Yücel & Önal, 2015). For investors, investing in internationally diversified merged firm has the potential to reduce the risk position of their investment portfolio, *ceteris peribus*. Specially, holding an individual diversified portfolio is more exposed to idiosyncratic risk than systematic risk benefits.

Besides, since accounting risk impacts on unsystematic risk, which does not reward investors, it is equally important for managers and regulators to monitor and provide strategic framework that target firm-specific risk exposure immediately after merger to protect shareholders interest. The results also serve as a useful guild to board of directors and the compensation committees in using EC to meet specific firm goal relating to various risk types. In addition, we observed the effect of EC on firm risk position and the role of some corporate governance factors, which determines the future success of the firm. Therefore, regulators should increase compensation disclosures and demand for more stringent corporate governance requirements such as outside board diversity.

In short, the study raises concern about how EC types influence different risk types. This obviously is a clear area that needs both empirical and theoretical research. Likewise, further research is needed to explore other corporate governance factors within the M&A context, especially in emerging markets. Finally, one important control variable that was not directly considered in our potential explanatory factors is firm leverage. This factor was deliberately omitted due to lack of data, and we acknowledge the omission as a limitation.

CHAPTER SIX

SUMMARY, CONCLUSION AND POLICY RECOMMENDATION

6.1 Introduction

The final chapter of this thesis presents the summary, conclusion, policy recommendation and further research areas.

6.2 Summary and conclusion

This study explored the relationship between various executive compensation types and firm performance and risk within mergers and acquisitions context in Africa. The EC (on one side) and firm risk and performance (on the other side) relationship has received some attention in the extant literature, even that, with contradicting results, possibly due to methodological issues or failure to properly control for some institutional factors. Most importantly, very few have looked at this in relation to M&As. Besides, the empirical literature on the subject is excessively based on Western markets of similar institutional settings, which is very different from emerging markets. Africa provides compelling context for our study because of geographical, cultural, institutional and market differences compared to advanced markets in addition to consistent growth of M&A deals on the continent. The study also examined how selected African capital markets react to M&A announcements employing event study and regression methodologies. Specifically, the thesis provided specific answers to the following research questions:

i. Do M&A announcements generate abnormal returns for acquirer firms on Africa's emerging markets?

ii. To what extent does different executive compensation packages of bidder firms differ from those of acquirer firms after successful M&A deals for African markets?

iii. What are the potential effects of various EC types (cash, equity and options and total compensation) on a firm's performance and risk?

iv. How different does executive compensation influence firms' systematic and unsystematic risk in Africa?

v. What are the effects of M&A deal, firm and corporate governance specific characteristics on the EC, risk, and performance nexus?

6.2.1 Do mergers and acquisitions announcements create value for target shareholders

By employing event study and regression techniques, this study has examined how selected African capital markets react to M&A announcements The results are in two categories; African markets (involves all African firms including South Africa) and only South Africa market. We engage four different statistical tests (cross-sectional t-test, adjusted Patell test, generalised sign test and generalised rank test) to capture the presence of abnormal returns involving sample size of 135 and 245 M&A announcements for South Africa and African markets respectively. The results show that the African capital market reacts positively to public M&A announcements. The market reaction occurs several days prior to the first public announcements are made, which signals a wide spread of information leakage. The South African market experiences significant abnormal returns two days before and two days after merger announcements. For African markets, traces of increasing abnormal returns are realised about thirteen days (13) prior to the event but these returns are statistically significant from six (6) days before and lasting till two (2) days after announcement. Increasing abnormal

returns cumulated over all windows are positive and significant. The positively significant cumulative abnormal returns last up to 25 days before and 25 days after an announcement (51-day event window).

To execute a more thorough analysis, the study further investigated the effect of deal-specific factors such as acquirer industry, diversification, mode of deal payment, types and forms of merger deal on abnormal returns. Our results reveal that firms from financial industry, same industry acquisition, cross-border, private and stock acquisitions strongly influence abnormal return generation on South Africa market, whereas in the case of Africa, abnormal returns are only affected by cross-border and same industry acquisitions. We fail to find evidence in support of the effect of diversification and cross listing, domestic, public firms, cash only and mix of cash and stock acquisition as reported by some advanced and emerging markets studies. We demonstrate that our results are consistent and robust to alternate test statistics and model specifications.

Furthermore, apart from deal-specific, we try to understand the role of some firm-specific factors in creating abnormal returns. We document that South Africa investors are influenced by firm size, measured by market capitalization, and return on equity when M&A acquisition announcements are made. Surprisingly, cumulative abnormal returns for Africa firms are only significantly influenced by firm size. The debt composition of acquirers, measured by the debt-to-equity ratio, affects CARs negatively though insignificant, indicating that firms with high debt-to-equity ratios reduce the value-creation process induced by M&A announcements.

Finally, we employ sets of parametric and non-parametric test to detect abnormal returns. We realised that both tests are consistent and equally detects abnormal returns. However, the non-parametric tests were more powerful especially with the African data.

6.2.2 Mergers and executive cmpensations in Africa

This section contributes to the debate surrounding the effects of completed M&A deals on various EC components (cash, equity, stock options and total compensation) of top three managers. We also include analysis of total board pay in order to understand the management and board members dynamics in terms of compensation determination. Our total sample is made up of 164 completed deals between 2002 and 2016. Due to the uniqueness of the South African market, we further sub-divided our sample into South African (77) and Other African (87) firms to help explore any possible differences in the results. Specifically, this study investigates whether there is a significant change in compensation packages of acquirer's executives in Africa after successful M&A deal. The paper also concluded by exploring the possible determinants of these compensation packages after the merger deals.

Mergers and Acquisitions effect on compensation, shareholders wealth maximization and managerial interest propositions are the main motives why executives engaged in M&A deals. While shareholders value maximization hypothesis result in share price and profitability measure increases, that of managerial interest concentrates on increase in firm size, irrespective of the effect it has on firm value reduction. In spite of managerial interest driven acquisitions, management still keep an open eye on the performance (profitability) of the firm in order to avoid being acquired by another acquirer, due to poor performance, and also winning the confidence of the shareholders to escape being fired. Our results show that executives of acquirers in Africa are rewarded heavily in the year of acquisition for completion of successful deals. The change in executive reward after merger is seen in all compensation components (cash payments-salary+bonus, equity and total compensation. including the total compensation of board of directors. These findings, therefore, support managerial interest hypothesis, (through increase in firm size) as the main motive for deal

acquisitions in Africa, even though firm profitability (ROE) impacts equity payment for the South Africa market. We also noticed drastic incline in the compensation packages years after acquisition, lasting even into the third year indicating a significant one-off payments in the year of acquisition. However, we find no evidence of higher stock options compensations for South African firms.

In line with the classical view of agency theory and results of Bugeja et al (2012), our findings suggest that executives are awarded higher compensations for exerting effort and skill to execute bigger M&A deals.

Particularly, our empirical analyses show a very strong relation between deal size and level of cash, equity and total pay movements. In the same way, Girma et al (2006) argue that the act of M&A deals provides information for compensation determination and as such, the way stock market perceive a deal may serve as a signal about M&A and pay variation nexus. We provide a detail analysis on this phenomenon. With the exception of Other African sub-group (possibly due to market inactiveness), we find that market perception of an M&A deal quality can explain level of executive pay rise in the year of acquisition.

Furthermore, one of the inconclusive contemplation in extant literature is whether executives are stirred to prefer domestic against cross-border and private against public target acquisitions. We find significant increase in executive pay after two years of acquisition for South African firms that target domestic deals compared to their counterparts who do cross-border acquisitions. Similarly, we do find that private acquisitions impact pay rise in the first year of acquisition, even though the relationship is weak for Other African firms. We concluded our panel analysis by exploring the possible impact of some firm-specific variables on executive pay movement. We discover that industry categorization, diversification and international operations mode of payment and cross-listing effects, in general, do not drive

executive pay determination upon deal completion, even though there is evidence of the influence of mode of payment (stock) effect for South African firms.

Turning to the cross-sectional analysis, and role of corporate governance factors, the results support the view that firms with larger outside board of directors' representation negatively determine executive total pay and there is no evidence that CEO's age and gender influence executive pay. However, the experience of the CEO leading the managerial team has a very high positive influence on the level of compensation for South Africa sub-sample. Consistent with other studies on managerial power proposition, we found that CEO duality plays positively significant role in determining cash and total executive pay. Also, similar to results of total sample and Other African firms, executives of acquirers in South Africa involved in merger deals are paid higher (equity and total compensations) compared to other form of deal financing.

More so, we provide the first exposition on board of directors total pay exposition in relation to the effect of M&A activities. We conclude that board of directors' total reward is higher in the year of deal completion and is influenced, to a large extent, by size of M&A deal. The general results of this study consequently emphasis that dissimilarities in market structure, culture, and firm's specific structure across various geographical locations (countries) have diverse repercussions for executive pay structuring influenced by M&A.

6.2.3 Mergers and acquisition, executive compensation and firm performance in Africa

The study explored the relationship between various executive compensation types and firm performance (using both market and accounting measures). Prior studies have been critiqued for not using appropriate methodology that efficiently deals with endogeneity issues. Using a total sample of 164 merger deals across Africa from 2005 to 2013, we contribute to literature

by exploring the significance of deal, firm and corporate governance factors as drivers of pay-performance nexus by using Generalised Method of Moment panel estimation technique. Unique to this study, we adopt a dummy variable approach to capture the year effect of some of our main control variables. We include derivative options to the South African sample because it is the only country in Africa with an active derivation market. Our main performance measures are Tobin's Q (market measure) and return on asset (accounting measure). We also include two other performance measures, total stock return (market) and return on equity (accounting) for robustness check. To provide a clearer insight to our results owing to market differences, we split our sample into Other African and South African firms.

By controlling for factors that have been found in literature to impact performance (capital expenditure, firm size, sales growth and firm risk), we find statistically significant negative relation between all compensation types (total, cash and equity) and both market and accounting performance measures for total sample and Other African firms. This implies executive compensation induced by M&A in Africa negatively affect the performance of listed firms.

However, for South Africa as a country, we find positive but insignificant relationship between various pay types and firm performance after merger. Based on these findings, we proceeded to include various controls for different models. We also included previous compensation to find out if previous year's pay motivates management to perform better in the coming year. The results show negative but weak significant (in some few instances at 10% level) impact of previous pay on performance for total executive pay on total sample. We, therefore, find no strong evidence to conclude that previous pay influences performance. Besides, contrary to literature, the impact of the control variables (capital expenditure, firm size, sales growth and firm risk) do not always impact every performance measure but rather

depends on individual pay type, type of performance measure and market location. For instance, firm size (log of total asset) negatively impact performance for all measures of cash compensation and only market measures for equity compensation while it has no effect on total pay. When we split the sample, size negatively impact performance of total and equity pay for Other African firms but was, surprisingly, insignificantly inconsistent in direction across all measures and pay types for South African sample.

After controlling for deal-specific factors (deal size, cross-border, target listing and same industry acquisitions), the negative relation between pay types and various performance measures remain relatively unchanged with some slight variations in the other control variables (for total and Other African samples). In the case of South Africa, the coefficients of pay types improves slightly (especially for accounting measures) but still not significant. Interestingly, we also find evidence of significant interrelations of the various deal-specific variables on performance. For example, the results for cash compensation of our total sample reveal that deal size negatively impact Q in year one after merger while cross-border deal positively improves accounting performance in second and third year after merger, whereas equity mode of deal payment and targeting listing negatively influence short-term post-merger accounting performance.

Conversely, the control of firm-specific factors (foreign ownership, diversification and international operation and industry classification) immensely alters the pay-performance relationship. Considering the total sample, for instance, the strongly significant negative coefficients of total pay virtually vanishes and only weakly significant for Q and ROA. Cash compensation become insignificant for compensation types weakening the impact of capital expenditure. Equity compensation was the only significant (but very weak at 10% level) value and change in direction for other coefficients. These results, therefore, suggest that the

relationship between pay and performance depends heavily on the interactive effect of various firm related factors. We find that foreign ownership improves performance for total and equity compensation, while diversification with international operations dampens accounting performance for equity pay. Financial industry classification differently impact performance for equity (positive impact) and total (negative impact) compensations.

Our final set of control variables, corporate governance factors, offers lot of insight into the corporate governance issues in Africa and how it influences performance. Even though executive ownership was the main factor that is consistently significant (for total sample), their collective impact slightly altered the pay-performance connection. We conclude that, generally, corporate governance factors in Africa worsen performance especially for cash and total pay. Equity pay shows no relation confirming the role of equity compensation in aligning management interest to shareholders.

Splitting our sample based on market differences reveals some remarkable results. First, we document that executive pay for other African markets negatively relates various performance measures whereas we find positive but insignificant effect of executive pay on performance. Second, while controlling for deal-specific factors worsen performance for Other African firms, the impact of South African post-acquisitions performance is not relevant. Specifically, deal size, cross-border, mode of payment and target listing were irrelevant for the South African market but impedes performance for Other African markets. Third, foreign ownership improves South African firm performance but not for Other African firms, suggesting different foreign ownership interest in South African and Other African countries. Fourth, board size, outside board representation, institutional, board and executive ownership significantly influence firm performance.

Further, consistent with literature, we observe that equity compensation generally improves performance while cash compensation have a deeper negative impact. Also, both accounting and market performance measures are equally effective in detecting a link between our variables. Our findings are robust across all compensation types.

6.2.4 Executive compensation and firm risk

Mergers and acquisitions are one of those market events that can alter completely firms' structures and strongly influence executive's compensations and firm's risk profile. As the compensations of executives increase after merger, the general literature provides little or non-existent evidence on how such excessive post-merger compensations can influence the risk of firms, especially in Africa. Employing various estimation methods and using panel data spanning from 2002 to 2017, we contribute to the debate by providing fresh insight on the link between various executive pay and risk within the African context.

We begin by exploring the use of the GMM and why it is the most appropriate estimator for investigating the relation between EC and firm risk within a dynamic framework. We compare our results from the GMM to the Fixed-effect (FE) estimator and find the FE to be biased when estimating the dynamic effects of EC types on various risk measures, while controlling for firm, deal and corporate governance specific factors. For instance, we apply these two estimators to investigate the link between cash executive compensation and total risk and find that previous EC has no effect on current risk for the FE estimator (past two lags of risk and current EC were significant for both estimators), when we controlled for firm specific factors. Besides, after controlling for both firm and corporate governance factors, we find no casual relation between cash pay (current cash and previous cash pay) and firm total risk using the FE. We argue that the bias may explain the variations in previous studies that

do not consider the dynamic nature when investigating the link between corporate governance variables and risk, and most specially using the FE to estimate such relations.

Moreover, across both estimators, we find strong effect of previous risk (lasting to two years) on current risk of firms. This result confirms the risk persistence in literature. Usually and in most studies, immediate past risks (lag 1) are reported to impact on current risk but our result shows the persistence from lag two. The results suggest that risk could be more persistent in emerging markets than in advanced markets.

Additionally, in order to put into broader perspective the effect of EC on risk, we adopted three measure of equity risk (total, systematic and unsystematic) and accounting risk measures (book value of equity to market value of equity and degree of combined leverage). The existing literature lacks studies that use accounting risk measures, especially the DCL in spite of its importance in practice, to investigate EC and risk. We find that the two accounting risk measures are generally consistent but insensitive to detecting the effect of changes in EC. We conclude that accounting measures used in our analysis are consistent but not sensitive to detecting significant effects of our major variables of interest and control variables on them. That is, accounting risk measures are not influenced by variations in EC after mergers. Hence, EC does not contribute to firm distress and leverage related problems for merged firms in Africa. Comparing the BME and DCL, we realise that the DCL is a better measure of risk when exploring the link between EC changes and accounting risk. The empirical conclusion in this study is however based on the finding based on the equity risk measures.

Further, the findings of our study for total Africa sample can be summarise as follows. Firstly, we find that rewarding executive with cash compensation for merger reduces the post-merger risk of acquirers. However, managers are motivated to increase systematic risk when they are rewarded with stocks, implying that managerial interest plays a special role in

determining the risk profile of acquires. Secondly, we find a strong impact of previous EC on firm risk across all compensation types, indicating that the nature and form of current managerial pay affect the kind of investments they pursue in the next year. Thirdly, based on the argument that managerial compensation portfolio might impact on systematic and unsystematic risk differently we investigated the effect of EC on these forms of risks and our findings show no evidence of the impact of executive pay on systematic risk.

Fourthly, we explore if financial firms are different from other firms in our sample. We find that the coefficients for EC and its lag for cash compensation are positive although insignificant, contrary to what we find with the total sample. The relationship is significant for equity pay with a stronger impact from equity lag relative to current equity pay. Previous year's total compensation is also positive for total and systematic risk. We attribute the slight difference between the financial firms and others to the stringent regulatory and monitoring environment of financial firms. Also, financial institutions such as banks are noted for taking excessive risk perhaps due to huge executive pay, moral hazard coming from deposit insurance and the notion that they are too important to fail (Bebchuk & Fried, 2004). Besides, the use of capital requirement as one of the tools to reduce bank risk-taking by regulators, according to Laeven and Levine (2009), rather forces owners to put more pressure on management to accept more riskier investments to make up for the loss in utility. Hence, the positive link between the various pay types properly explains the higher risk profile of financial firms.

Fifthly, we observe that firm, deal and corporate governance factors play significant and moderating role in the compensation-risk nexus. For instance, firm diversification through international operation reduces firm risk while outside board representation increases firm risk after successful merger. Also, a CEO's age rather than gender reduces total firm risk for

all compensation types. More so, while cross-border deals relatively reduce both total and systematic risk, target listing positively impacts total and systematic risk. Equity mode of payment on the other hand, positively influences total and systematic risk. Also, unique to only financial firms, institutional ownership is found to positively affects firm risk, indicating the role of institutional shareholders in pushing financial firms like the banks to take more risk.

Besides, to determine whether South Africa as a separate market behaves differently, we run similar analysis for only South African firms. The results are similar to those of the African total sample except for the following differences. Executive cash compensation has no significant effect on total, systematic and unsystematic risk contrary to the observed negative impact of cash pay on both total and systematic risk for the African sample. Furthermore, for South African firms, the direction of the coefficients of cash and lag of cash are different (although insignificant) from those of Africa. South Africa is part of the total African sample, and if cash compensation does not impact on risk among South African firms, then it means the negative impact of cash pay on various risk measures (for total sample) is driven by the relationship between cash pay and risk for the other African firms.

Again, the difference can be explained by the compensation structure and regulatory differences between the two samples. Unique to South Africa, we find positive effects of previous stock option compensation on firms' systematic risk, implying that previous year option granted to executives motivates them to increase firm market risk, similar to the findings for equity pay. In other words, the value of stock options granted to executives in the year of merger informs the firm's systematic risk in year one after merger. Concerning financial firms, we find no statistical evidence to suggest that South African financial firms are different from other firms.

Finally, we consider how accounting risk affects equity risk. The results show that managers consider accounting risk in dealing with systematic and firm-specific risk. As far as managers, shareholders and investors are concerned, when firms do M&As, firm-specific risk is more important than systematic risk, Specifically for South Africa, we observe that current accounting risk positively impacts total risk but not systematic and unsystematic risk. That is, increase in accounting risk measures move in tandem with total risk.

6.3. Policy implications and recommendations

The findings from this thesis has useful managerial and policy implications. First, results on market reaction to M&A deals in Africa have some implications to the investor community. The findings can be extended to other emerging markets that are similar in nature and composition to the African market. Besides, the results should be relevant for regulation and policy development regarding the severity of information leakage possibly influence by insider trading. Likewise, managers can take advantage of the signal of market movement upon M&A announcement to make strategic acquisitions, considering all the influencing factors, that add value to shareholder equity.

Second, the findings in chapter two and three has significant implications regarding governance, policy development, monitoring, regulation and research. We observe that corporate governance practices are loosely handled in Africa, which has serious consequences for financial market development and enhancing corrupt practices. There is, therefore, the need for governments and institutions to collaborate to develop stronger and monitorable corporate governance practices to bring sanity to the corporate community. In addition, the strong link between executive pay and performance, especially in other African countries, raises concerns about the role of government and institutions to protect the interest of

investors. We believe weak legal systems, ineffective monitoring couple with weak or non-existent regulatory policy structures on EC packaging serves as perfect breeding grounds that nurtures further the unwarranted extraction of investor's wealth into few managerial pockets. Moreover, our results show that equity pay relatively improves firm performance, most especially when deals are financed with equity. In line with agency prediction, equity pay seems to be one of the best tools that can effectively align managerial interest to shareholders. However, the use of massive cash-based compensations instead of equity-based in Africa is rather a worry. Remuneration committees must be encouraged, either by legislation, compulsion or by any other possible means to dominate post-merger managerial rewards with equity pay. This, also, calls for initiation of corporate governance reforms that, for instance, empowers shareholders to approve compensation committee's reports, as seen in the UK.

Another critical result is the importance of past risk on current risk position of firms that underwent mergers and acquisitions, as reported in Chapter five. To adopt strategies to reduce or increase firm risk to meet specific investment goals, there is the need for managers or analyst to factor in previous risk interference. Furthermore, international diversification emerges as an important risk reduction strategy after successful merger contrary to results posted by non-merging firms (Switzer & Tahaoglu, 2015; Yücel & Önal, 2015). For investors, investing in internationally diversified merged firm has the potential to reduce the risk position of their investment portfolio, *ceteris peribus*. Specially, holding an individual diversified portfolio is more exposed to idiosyncratic risk than systematic risk benefits. Above and beyond, since accounting risk impacts on unsystematic risk, which does not reward investors, it is equally important for managers and regulators to monitor and provide strategic framework that target firm-specific risk exposure immediately after merger to protect shareholders interest. The results also serve as a useful guild to board of directors and the

compensation committees in using EC to meet specific firm goal relating to various risk types. As well, we observed the effect of EC on firm risk position and the role of some corporate governance factors, which determines the future success of the firm. Therefore, regulators should increase compensation disclosures and demand for more stringent corporate governance requirements such as outside board diversity.

6.4 Areas for further research effects

The conclusions presented in this thesis regarding M&A, EC, firm performance and risk calls for a more detailed research efforts to re-scrutinise the pay-performance nexus. First, the M&A announcement value-creation paradox, according to Golubov, Yawson and Zhang (2015), is strongly influenced by the acquisition appetite of the acquirer. The same authors argue that, positive announcement returns is persistent, suggesting that firms that created short-term abnormal returns in their initial acquisitions will experience positive abnormal returns in their immediate and subsequent acquisitions. They explain that the role of top team talent, which is mostly overlooked in prior studies (Billett & Qian, 2008; Moeller, Schlingemann & Stultz, 2005) is the key determinant of acquirer performance. Besides, Golubov, Yawson and Zhang's (2015) study sheds more light on the value-enhancing acquisition strategies and contend that avoidance of stock deals, propensity to engage in cash deals, selection of subsidiary targets and ability to pick up synergistic targets are very important strategies for abnormal return creation. Further research that explore the compelling effect of these factors could be helpful.

Second, the existing empirical evidence on EC, performance and risk consider the relationship between these variables in general without paying attention to the influence of M&A. Failure to properly capture the impact of M&A in investing the relationship between

these variables could account for the divergence in the findings from prior studies. It is therefore essential to re-examine these relationships by decoupling the M&A effects to bring to rest the long and divergent view on the subject. Third, the very few studies that attempt to address the influence of M&A effect on the EC, performance and risk relationships are predominantly on Western markets. The variations in our findings compared to previous studies suggest the need to factor market, governance, cultural and institutional differences into such studies. It is erroneous therefore to use results from studies on Western markets for regulatory and policy development in emerging markets like Africa.

Fourth, the study raises concern about how EC types influence different risk types. This obviously is a clear area that needs both empirical and theoretical research. Likewise, further research is needed to explore other corporate governance factors within the M&A context, especially in emerging markets. Fifth, our sample split show differences in some results when we compare South Africa to the Other African firms. Even though South African shares lots of similarities with Other African countries, the financial market structure and efficiency in South Africa is different from the rest. There is the need to further research into the effects of corporate governance issues around merger activities while paying special attention to potential points of divergence between South Africa and other African markets.

Sixth, because of lack of adequate data, our analysis is unable to examine possible urban and reginal as well as specific country differences, although such sacles of analysis could help to better understand the growing activities of transnational corporations in cities in Africa (Obeng-Odoom, 2018). Future studies in these areas could provide insights into locational similarities and differences which can usefully serve as the basis for public policy reforms.

The main estimation strategy used in our analysis is the GMM. This estimator has been employed basically to address endogeneity and potential reverse causality issues. An alternative approach to deal with these issues, in future studies, is to use (i) quasi natural experiment (difference-in-difference approach by identifying a relevant shock); (ii) instrumental variables, two-stage least squares (2SLS) regression approach, to help establish causality. Besides, to address selection bias issues, the propensity score matching approach could be used as an alternative to Heckman correction method.

REFERENCE

Abernethy, M. A., Kuang, Y. F., & Qin, B. (2014). The influence of CEO power on compensation contract design. *The Accounting Review, 90*(4), 1265-1306.

Abor, J., Graham, M., & Yawson, A. (2011). Corporate governance and restructuring activities following completed bids. *Corporate Governance: An International Review*, *19*(1), 61-76.

Adams, R. B., & Ferreira, D. (2007). A theory of friendly boards. *The Journal of Finance, 62*(1), 217-250.

Adelegan, O. J. (2009). *The impact of the regional cross-listing of stocks on firm value in sub-Saharan Africa*. Washington, D.C., United States: International Monetary Fund.

Adrian, T., & Shin, H. S. (2010). Liquidity and leverage. *Journal of Financial Intermediation, 19*(3), 418-437.

Agarwal, N. C. (1981). Determinants of executive compensation. *Journal of Economy and Society*, *20*(1), 36-45.

Aggarwal, R. K., & Samwick, A. A. (1999). Executive compensation, strategic competition, and relative performance evaluation: Theory and evidence. *The Journal of Finance, 54*(6). 1999-2043

Aggarwal, R. K., & Samwick, A. A. (2003). Why do managers diversify their firms? Agency reconsidered. *The Journal of Finance, 58*(1), 71-118.

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis, 31*(03), 377-397.

Agrawal, A., & Mandelker, G. N. (1987). Managerial incentives and corporate investment and financing decisions. *The Journal of Finance, 42*(4), 823-837.

Agusman, A., Monroe, G. S., Gasbarro, D., & Zumwalt, J. K. (2008). Accounting and capital market measures of risk: Evidence from Asian banks during 1998–2003. *Journal of Banking & Finance, 32*(4), 480-488.

Aharony, J., Liu, C., & Yawson, A. (2015). Corporate litigation and executive turnover. *Journal of Corporate Finance*, *34*, 268-292.

Ahern, K. R., & Dittmar, A. K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *The Quarterly Journal of Economics, 127*(1), 137-197.

Aintablian, S., & Roberts, G. S. (2005). Market response to announcements of mergers of Canadian financial institutions. *Multinational Finance Journal, 9*(1/2), 72-98.

Alagidede, P. (2010). Equity market integration in Africa. *African Review of Economics and Finance, 1*(2), 88-119.

Alexandridis, G., Mavrovitis, C. F., & Travlos, N. G. (2012). How have M&As changed? Evidence from the sixth merger wave. *The European Journal of Finance, 18*(8), 663-688.

Alexandridis, G., Petmezas, D., & Travlos, N. G. (2010). Gains from mergers and acquisitions around the world: New evidence. *Financial Management, 39*(4), 1671-1695.

Amewu, G., & Alagidede, P. (2018). Do mergers and acquisitions announcements create value for acquirer shareholders in Africa. *International Journal of Finance & Economics, 23*(4), 606-627.

Amihud, Y., DeLong, G. L., & Saunders, A. (2002). The effects of cross-border bank mergers on bank risk and value. *Journal of International Money and Finance, 21*(6), 857-877.

Amihud, Y., & Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *The Bell Journal of Economics, 12*(2), 605-617.

Anderson, T. W., & Hsiao, C. (1982). Formulation and estimation of dynamic models using panel data. *Journal of Econometrics, 18*(1), 47-82.

Anderson, C. W., Becher, D. A., & Campbell II, T. L. (2004). Bank mergers, the market for bank CEOs, and managerial incentives. *Journal of Financial Intermediation, 13*(1), 6-27.

Anderson, R. C., & Fraser, D. R. (2000). Corporate control, bank risk taking, and the health of the banking industry. *Journal of Banking & Finance, 24*(8), 1383-1398.

Andrade, G., Mitchell, M. L., & Stafford, E. (2001). *New Evidence and Perspectives on Mergers*. Harvard Business School Working Paper Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=269313 [accessed 1 June 2016]

Andre, P., Kooli, M., & L'her, J.-F. (2004). The long-run performance of mergers and acquisitions: Evidence from the Canadian stock market. *Financial Management, 33*(4), 27-43

Antoniou, A., Petmezas, D., & Zhao, H. (2007). Bidder gains and losses of firms involved in many acquisitions. *Journal of Business Finance & Accounting, 34*(7-8), 1221-1244.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies, 58*(2), 277-297.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics, 68*(1), 29-51.

Armstrong, P. (2003). *Status report on corporate governance reform in Africa.* Paper presented at the Pan Africa Consultative Forum on Corporate Governance, Johannesburg, South Africa.

Arnold, B., & De Lange, P. (2004). Enron: an examination of agency problems. *Critical Perspectives on Accounting, 15*(6), 751-765.

Asimakopoulos, I., & Athanasoglou, P. P. (2013). Revisiting the merger and acquisition performance of European banks. *International Review of Financial Analysis, 29(September)*, 237-249.

Asquith, P. (1983). Merger bids, uncertainty, and stockholder returns. *Journal of Financial Economics, 11*(1), 51-83.

Atkinson, T., Luttrell, D., & Rosenblum, H. (2013). How bad was it? The costs and consequences of the 2007–09 financial crisis. *Federal Reserve Bank of Dallas Staff Papers, July*(20), 1-22.

Bae, S. C., Chang, K., & Kim, D. (2013). Determinants of target selection and acquirer returns: Evidence from cross-border acquisitions. *International Review of Economics & Finance, 27*(June), 552-565.

Baixauli-Soler, J. S., Belda-Ruiz, M., & Sanchez-Marin, G. (2015). Executive stock options, gender diversity in the top management team, and firm risk taking. *Journal of Business Research, 68*(2), 451-463.

Baker, G. P., Jensen, M. C., & Murphy, K. J. (1988). Compensation and incentives: Practice vs. theory. *The Journal of Finance, 43*(3), 593-616.

Balachandran, S., Harnal, H., & Kogut, B. (2010). *The probability of default, excessive risk, and executive compensation: A study of financial services firms from 1995 to 2008*: Columbia Business School, Working paper. Retrieved from https://www8.gsb.columbia.edu/leadership/sites/leadership/files/balachandran_kogut_harnal_excessive_risk_compensation.pdf [accessed on 1 June, 2016]

Baltagi, B. H., Bratberg, E., & Holmås, T. H. (2005). A panel data study of physicians' labor supply: the case of Norway. *Health Economics, 14*(10), 1035-1045.

Barber, B. M., & Lyon, J. D. (1996). Detecting abnormal operating performance: The empirical power and specification of test statistics. *Journal of Financial Economics, 41*(3), 359-399.

Barber, N., Ghiselli, R., & Deale, C. (2007). Assessing the relationship of CEO compensation and company financial performance in the restaurant segment of the hospitality industry. *Journal of Foodservice Business Research, 9*(4), 65-82.

Barkema, H. G., & Gomez-Mejia, L. R. (1998). Managerial Compensation and Firm Performance: A General Research Framework. *Academy of Management Journal, 41*(2), 135-145.

Bartholdy, J., Olson, D., & Peare, P. (2007). Conducting event studies on a small stock exchange. *The European Journal of Finance, 13*(3), 227-252.

Bayazitova, D., Kahl, M., & Valkanov, R. (2009). Which mergers destroy value? Only mega-mergers. *Unpublished working paper. University of North Carolina at Chapel Hill, University of Colorado Boulder, University of California, San Diego*.

Bebchuk, L., & Grinstein, Y. (2005). The growth of executive pay. *Oxford Review of Economic Policy, 21*(2), 283-303.

Bebchuk, L. A. (2009). *Pay without performance: The unfulfilled promise of executive compensation*: Harvard University Press.

Bebchuk, L. A., Cohen, A., & Spamann, H. (2010). Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000-2008. *Yale Journal on Regulation, 27*, 257-282.

Bebchuk, L. A., & Fried, J. (2004). Pay without performance: Cambridge, MA: Harvard University Press.

Bebchuk, L. A., & Fried, J. (2005). Pay without performance: The unfulfilled promise of executive compensation. *International Company and Commercial Law Review, 16*(11), 461.

Beiner, S., Drobetz, W., Schmid, M. M., & Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management, 12*(2), 249-283.

Beitel, P., Schiereck, D., & Wahrenburg, M. (2004). Explaining M&A success in European banks. *European Financial Management, 10*(1), 109-139.

Belkhir, M., & Chazi, A. (2010). Compensation Vega, Deregulation, and Risk-Taking: Lessons from the US Banking Industry. *Journal of Business Finance & Accounting, 37*(9-10), 1218-1247.

Beltrame, F., Previtali, D., & Sclip, A. (2018). Systematic risk and banks leverage: The role of asset quality. *Finance Research Letters, (In press).*

Bennouri, M., Chtioui, T., Nagati, H., & Nekhili, M. (2018). Female Board Directorship and Firm Performance: What Really Matters? *Journal of Banking & Finance, 88*(March), 267-291.

Benson, B. W., Park, J. C., & Davidson, W. N. (2014). Equity-Based Incentives, Risk Aversion, and Merger-Related Risk-Taking Behavior. *Financial Review, 49*(1), 117-148.

Berger, A. N., Buch, C. M., DeLong, G., & DeYoung, R. (2004). Exporting financial institutions management via foreign direct investment mergers and acquisitions. *Journal of International Money and Finance, 23*(3), 333-366.

Berger, A. N., DeYoung, R., Genay, H., & Udell, G. F. (2001). *Globalization of financial institutions: Evidence from cross-border banking performance*. FRB Chicago Working paper. Social Science Research Network. Retrieved from http://ssrn.com/abstract=203509 [accessed on 1 June, 2016]

Berger, A. N., Kick, T., Koetter, M., & Schaeck, K. (2013). Does it pay to have friends? Social ties and executive appointments in banking. *Journal of Banking & Finance, 37*(6), 2087-2105.

Berger, A. N., Kick, T., & Schaeck, K. (2014). Executive board composition and bank risk taking. *Journal of Corporate Finance, 28(October)*, 48-65.

Bernard, V. L. (1987). Cross-sectional dependence and problems in inference in market-based accounting research. *Journal of Accounting Research, 25*(1), 1-48.

Berry, S. K. (2000). Excess returns in electric utility mergers during transition to competition. *Journal of Regulatory Economics, 18*(2), 175-188.

Billett, M. T., Qian, Y., 2008. Are overconfident CEOs born or made? Evidence of self-attribution bias from frequent acquirers. Management Science, 54: 1037–1051.

Bird, R., Huang, P., & Lu, Y. (2018). Board independence and the variability of firm performance: Evidence from an exogenous regulatory shock. *Australian Journal of Management, 43*(1), 3-26.

Bishop, M. (1994). Watching the boss: A survey of corporate governance. *Economist, 24*(29 January (Survey)), 1-18.

Black, F., & Scholes, M. (1973). The pricing of options and corporate liabilities. *The Journal of Political Economy, 81*(3), 637-654.

Bliese, P. D. (2000). *Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis*. San Francisco: Jossey-Bass.

Bliss, R. T., & Rosen, R. J. (2001). CEO compensation and bank mergers. *Journal of Financial Economics, 61*(1), 107-138.

Bloom, M., & Michel, J. G. (2002). The relationships among organizational context, pay dispersion, and among managerial turnover. *Academy of Management Journal, 45*(1), 33-42.

Bloom, M., & Milkovich, G. T. (1998). Relationships among risk, incentive pay, and organizational performance. *Academy of Management Journal, 41*(3), 283-297.

Bloomberg, (2016). Mergers and Acquisition for Africa. *Bloomberg Professional*. [Online]. Available at: Bloomberg Subscription Service (Accessed: June 15, 2016)

Bodolica, V. (2005). *Impacts of mergers and acquisitions on executive compensation of acquiring firms.* (Unpublised PhD thesis)), University of Montreal, Montreal, Canada.

Bodolica, V., & Spraggon, M. (2009a). 3 Merger and Acquisition Transactions and Executive Compensation: A Review of the Empirical Evidence. *The Academy of Management Annals*, *3*(1), 109-181.

Bodolica, V., & Spraggon, M. (2009b). The implementation of special attributes of CEO compensation contracts around M&A transactions. *Strategic Management Journal*, *30*(9), 985-1011.

Bodolica, V., & Spraggon, M. (2009c). Merger and Acquisition Transactions and Executive Compensation: A Review of the Empirical Evidence. *The Academy of Management Annals*, *3*(1), 109-181.

Bodolica, V., & Spraggon, M. (2015). *Mergers and Acquisitions and Executive Compensation*. NY: Routledge.

Boehmer, E., Masumeci, J., & Poulsen, A. B. (1991). Event-study methodology under conditions of event-induced variance. *Journal of Financial Economics*, *30*(2), 253-272.

Borio, C. E. (2009, April 14). The macroprudential approach to regulation and supervision. Retrieved from http://voxeu.org/article/we-are-all-macroprudentialists-now?quicktabs_tabbed_recent_articles_block=0 [accessed on 1 June, 2016]

Borio, C. E., & Drehmann, M. (2009). Assessing the risk of banking crises–revisited. *BIS Quarterly Review*, *March*, 29-46.

Boyd, J. H., & De Nicolo, G. (2005). The theory of bank risk taking and competition revisited. *The Journal of Finance*, *60*(3), 1329-1343.

Boyson, N. M., Gantchev, N., & Shivdasani, A. (2017). Activism mergers. *Journal of Financial Economics, 126*(1), 54-73.

Brealey, R. A., Myers, S. C., & Allen, F. (2014). *Principles of Corperate Finance,* (11 ed.). Irwin: McGraw Hill.

Breen, W. J., & Lerner, E. M. (1973). Corporate financial strategies and market measures of risk and return. *The Journal of Finance, 28*(2), 339-351.

Brick, I. E., Palmon, O., & Wald, J. K. (2006). CEO compensation, director compensation, and firm performance: Evidence of cronyism? *Journal of Corporate Finance, 12*(3), 403-423.

Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. *Journal of Financial Economics, 14*(1), 3-31.

Bryan, S., Hwang, L., & Lilien, S. (2000). CEO Stock-Based Compensation: An Empirical Analysis of Incentive-Intensity, Relative Mix, and Economic Determinants. *The Journal of Business, 73*(4), 661-693.

Bugeja, M., da Silva Rosa, R., Duong, L., & Izan, H. (2012). CEO compensation from M&As in Australia. *Journal of Business Finance & Accounting, 39*(9-10), 1298-1329.

Cain, M. D., & McKeon, S. B. (2016). CEO personal risk-taking and corporate policies. *Journal of Financial and Quantitative Analysis, 51*(1), 139-164.

Campbell, C. J., Cowan, A. R., & Salotti, V. (2010). Multi-country event-study methods. *Journal of Banking & Finance, 34*(12), 3078-3090.

Camuffo, A. (2009). Le retribuzioni dei Ceo delle maggiori società italiane: equità e competitività. *Economia e Management, 21*(6), 1-36.

Capaul, C., Rowley, I., & Sharpe, W. F. (1993). International value and growth stock returns. *Financial Analysts Journal, 49*(1), 27-36.

Capron, L., & Shen, J. C. (2007). Acquisitions of private vs. public firms: Private information, target selection, and acquirer returns. *Strategic Management Journal, 28*(9), 891-911.

Carney, R. W., & Child, T. B. (2013). Changes to the ownership and control of East Asian corporations between 1996 and 2008: The primacy of politics. *Journal of Financial Economics, 107*(2), 494-513.

Carpenter, J. N. (2000). Does option compensation increase managerial risk appetite? *The Journal of Finance, 55*(5), 2311-2331.

Certo, S. T., & Semadeni, M. (2006). Strategy research and panel data: Evidence and implications. *Journal of Management, 32*(3), 449-471.

Chang, S. C., & Tsai, M.-T. (2013). The effect of prior alliance experience on acquisition performance. *Applied Economics, 45*(6), 765-773.

Chang, S. J., & Hong, J. (2000). Economic performance of group-affiliated companies in Korea: Intragroup resource sharing and internal business transactions. *Academy of Management Journal, 43*(3), 429-448.

Chalmers, K., Koh, P. S., & Stapledon, G. (2006). The determinants of CEO compensation: Rent extraction or labour demand?. *The British Accounting Review*, *38*(3), 259-275.

Charness, G., & Gneezy, U. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization, 83*(1), 50-58.

Cheung, W., Fung, S., & Tsai, S.-C. (2010). Global capital market interdependence and spillover effect of credit risk: evidence from the 2007–2009 global financial crisis. *Applied Financial Economics, 20*(1-2), 85-103.

Chudik, A., & Fratzscher, M. (2010). *The Role of Liquidity, Risk and Economic Activity in the Global Transmission of the Financial Crisis*. European Central Bank. Retrieved from

http://ec.europa.eu/economy_finance/events/2010/20100723_advances_in_international_macroeconomics/p1-2_fratzscher_chudik_en.pdf [accessed on 1 June, 2016]

Claessens, S., Djankov, S., & Lang, L. H. (2000a). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics, 58*(1-2), 81-112.

Claessens, S., Djankov, S., & Lang, L. H. (2000b). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics, 58*(1), 81-112.

Claessens, S., & Yurtoglu, B. B. (2013). Corporate governance in emerging markets: A survey. *Emerging Markets Review, 15*, 1-33.

ClearSight. (2015). 3 reasons why M&As will continue to grow in 2015 Retrieved from http://clearsightadvisors.com/3-reasons-why-ma-will-continue-to-thrive-in-2015/ [accessed on 1 June, 2016]

Coakley, J., & Iliopoulou, S. (2006). Bidder CEO and other executive compensation in UK M&As. *European Financial Management, 12*(4), 609-631.

Colombage, S., Gunasekarage, A., & Shams, S. M. (2014). Target's organisational form and returns to Australian bidders in cross-border acquisitions. *Accounting & Finance, 54*(4), 1063-1091.

Comment, R., & Jarrell, G. A. (1995). Corporate focus and stock returns. *Journal of Financial Economics, 37*(1), 67-87.

Conn, R. L., Cosh, A., Guest, P. M., & Hughes, A. (2005). The impact on UK acquirers of domestic, cross-border, public and private acquisitions. *Journal of Business Finance & Accounting, 32*(5-6), 815-870.

Conyon, M. J., & Leech, D. (1994). Top Pay, Company Performance and Corporate Governance†. *Oxford Bulletin of Economics and Statistics, 56*(3), 229-247.

Core, J. E., Guay, W. R., & Larcker, D. F. (2003). Executive equity compensation and incentives: A survey. *Economic Policy Review, 9*(1), 27-50.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics, 51*(3), 371-406.

Corrado, C. J. (1989). A nonparametric test for abnormal security-price performance in event studies. *Journal of Financial Economics, 23*(2), 385-395.

Cowan, A. R. (1992). Nonparametric event study tests. *Review of Quantitative Finance and Accounting, 2*(4), 343-358.

Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature, 47*(2), 448-474.

Cybo-Ottone, A., & Murgia, M. (2000). Mergers and shareholder wealth in European banking. *Journal of Banking & Finance, 24*(6), 831-859.

Dahya, J., & McConnell, J. J. (2007). Board composition, corporate performance, and the Cadbury Committee recommendation. *Journal of Financial and Quantitative Analysis, 42*(03), 535-564.

Dahya, J., McConnell, J. J., & Travlos, N. G. (2002). The Cadbury committee, corporate performance, and top management turnover. *The Journal of Finance, 57*(1), 461-483.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal, 19*(3), 269-290.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal, 42*(6), 674-686.

Daniels, R. C. (2004). Financial intermediation, regulation and the formal microcredit sector in South Africa. *Development Southern Africa, 21*(5), 831-849.

Datta, D. K., & Puia, G. (1995). Cross-border acquisitions: An examination of the influence of relatedness and cultural fit on shareholder value creation in US acquiring firms. *MIR: Management International Review*, 35(4), 337-359.

Datta, S., Iskandar-Datta, M., & Raman, K. (2001). Executive compensation and corporate acquisition decisions. *The Journal of Finance, 56*(6), 2299-2336.

Dealogic. (2016). Global M&A Review, Full Year 2015. In D. LLC (Ed.), *http://www.dealogic.com/u-media/1440/dealogic-global-ma-review-full-year-2015.pdf*. [accessed on 1 June, 2016].

Deckop, J. R. (1988). Determinants of chief executive officer compensation. *Industrial & Labor Relations Review, 41*(2), 215-226.

Deephouse, D. L., & Wiseman, R. M. (2000). Comparing alternative explanations for accounting risk-return relations. *Journal of Economic Behavior & Organization, 42*(4), 463-482.

Deng, P., & Yang, M. (2015). Cross-border mergers and acquisitions by emerging market firms: A comparative investigation. *International Business Review, 24*(1), 157-172.

Denis, D. J., Denis, D. K., & Sarin, A. (1997). Agency problems, equity ownership, and corporate diversification. *The Journal of Finance, 52*(1), 135-160.

Deutsch, Y. (2005). The impact of board composition on firms' critical decisions: A meta-analytic review. *Journal of Management, 31*(3), 424-444.

Deutsch, Y., Keil, T., & Laamanen, T. (2011). A dual agency view of board compensation: The joint effects of outside director and CEO stock options on firm risk. *Strategic Management Journal, 32*(2), 212-227.

Devers, C. E., McNamara, G., Wiseman, R. M., & Arrfelt, M. (2008). Moving closer to the action: Examining compensation design effects on firm risk. *Organization Science, 19*(4), 548-566.

DeYoung, R., Evanoff, D. D., & Molyneux, P. (2009). Mergers and acquisitions of financial institutions: a review of the post-2000 literature. *Journal of Financial Services Research, 36*(2-3), 87-110.

Deysel, B., & Kruger, J. (2015). The relationship between South African CEO compensation and company performance in the banking industry. *Southern African Business Review, 19*(1), 137-169.

Dodd, P. (1980). Merger proposals, management discretion and stockholder wealth. *Journal of Financial Economics, 8*(2), 105-137.

Dorata, N. T., Williams, M. A., Michael, T. B., & Rao, R. P. (2008). Bank mergers, equity risk incentives, and CEO stock options. *Managerial Finance, 34*(5), 316-327.

Doukas, J., & Travlos, N. G. (1988). The effect of corporate multinationalism on shareholders' wealth: Evidence from international acquisitions. *The Journal of Finance, 43*(5), 1161-1175.

Doukas, J. A., Holmen, M., & Travlos, N. G. (2002). Diversification, ownership and control of Swedish corporations. *European Financial Management, 8*(3), 281-314.

Doukas, J. A., & Lang, L. H. (2003). Foreign direct investment, diversification and firm performance. *Journal of International Business Studies, 34*(2), 153-172.

Duan, J.-C., & Wei, J. (2005). Executive stock options and incentive effects due to systematic risk. *Journal of Banking & Finance, 29*(5), 1185-1211.

Duchin, R., & Schmidt, B. (2013). Riding the merger wave: Uncertainty, reduced monitoring, and bad acquisitions. *Journal of Financial Economics, 107*(1), 69-88.

Duru, A., Iyengar, R. J., & Zampelli, E. M. (2016). The dynamic relationship between CEO duality and firm performance: The moderating role of board independence. *Journal of Business Research, 69*(10), 4269-4277.

Duru, A., & Reeb, D. M. (2002). International diversification and analysts' forecast accuracy and bias. *The Accounting Review, 77*(2), 415-433.

Dutordoir, M., Roosenboom, P., & Vasconcelos, M. (2014). Synergy disclosures in mergers and acquisitions. *International Review of Financial Analysis, 31*, 88-100.

Dutta, S., & Jog, V. (2009). The long-term performance of acquiring firms: A re-examination of an anomaly. *Journal of Banking & Finance, 33*(8), 1400-1412.

Dutta, S., Saadi, S., & Zhu, P. (2013). Does payment method matter in cross-border acquisitions?. *International Review of Economics & Finance, 25*, 91-107.

Eichholtz, P. M., Kok, N., & Otten, R. (2008). Executive compensation in UK property companies. *The Journal of Real Estate Finance and Economics, 36*(4), 405-426.

Eisenhardt, K. M. (1985). Control: Organizational and economic approaches. *Management Science, 31*(2), 134-149.

El Akremi, A., Roussel, P., & Trépo, G. (2001). *CEO compensation strategies: Consequences on the structure and management of executive pay*: Groupe HEC.

Erel, I., Liao, R. C., & Weisbach, M. S. (2012). Determinants of cross-border mergers and acquisitions. *The Journal of Finance, 67*(3), 1045-1082.

Eriksson, T., & Lausten, M. (2000). Managerial pay and firm performance—Danish Evidence. *Scandinavian Journal of Management, 16*(3), 269-286.

Essen, M., Engelen, P. J., & Carney, M. (2013). Does "good" corporate governance help in a crisis? The impact of country-and firm-level governance mechanisms in the European financial crisis. *Corporate Governance: An International Review, 21*(3), 201-224.

Eun, C. S., Kolodny, R., & Scheraga, C. (1996). Cross-border acquisitions and shareholder wealth: Tests of the synergy and internalization hypotheses. *Journal of Banking & Finance, 20*(9), 1559-1582.

Faccio, M., McConnell, J. J., & Stolin, D. (2006). Returns to acquirers of listed and unlisted targets. *Journal of Financial and Quantitative Analysis, 41*(1), 197-220.

Fama, E. F. (1976). Inflation uncertainty and expected returns on treasury bills. *The Journal of Political Economy, 84*(3), 427-448.

Fama, E. F. (1980). Agency Problems and the Theory of the Firm. *The Journal of Political Economy*, 88(2), 288-307.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review, 10*(1), 1-21.

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *The Journal of Finance, 47*(2), 427-465.

Fama, E. F., & French, K. R. (1995). Size and book-to-market factors in earnings and returns. *The Journal of Finance, 50*(1), 131-155.

Fama, E. F., & French, K. R. (1996a). Multifactor explanations of asset pricing anomalies. *The Journal of Finance, 51*(1), 55-84.

Fama, E. F., & French, K. R. (1996b). The CAPM is wanted, dead or alive. T*he Journal of Finance, 51*(5), 1947-1958.

Fama, E. F., & French, K. R. (1997). Industry costs of equity. *Journal of Financial Economics, 43*(2), 153-193.

Fama, E. F., & French, K. R. (2004). The capital asset pricing model: Theory and evidence. *Journal of Economic Perspectives, 18*, 25-46.

Fama, E. F., & Jensen, M. C. (1983a). Agency problems and residual claims. *The Journal of Law & Economics, 26*(2), 327-349.

Fama, E. F., & Jensen, M. C. (1983b). Separation of ownership and control. *The Journal of Law & Economics, 26*(2), 301-325.

Farmer, M., Archbold, S., & Alexandrou, G. (2013). CEO Compensation and Relative Company Performance Evaluation UK Evidence. *Compensation & Benefits Review, 45*(2), 88-96.

Fee, C. E., & Thomas, S. (2004). Sources of gains in horizontal mergers: evidence from customer, supplier, and rival firms. *Journal of Financial Economics, 74*(3), 423-460.

Ferreira, M. A., Massa, M., & Matos, P. (2009). Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *The Review of Financial Studies, 23*(2), 601-644.

Ferris, G., Rosen, S. D., & Barnum, D. T. (1995). *Handbook of human resource management*. Cambridge, MA: Blackwell Publishing.

Fiegenbaum, A., & Thomas, H. (1988). Attitudes toward risk and the risk–return paradox: prospect theory explanations. *Academy of Management Journal, 31*(1), 85-106.

Finkelstein, S., Hambrick, D. C., & Cannella, A. A. (2009). *Strategic leadership: Theory and research on executives, top management teams, and boards*. New York: Oxford University Press Inc.

Firth, M. (1991). Corporate takeovers, stockholder returns and executive rewards. *Managerial and Decision Economics, 12*(6), 421-428.

Firth, M., Fung, P. M., & Rui, O. M. (2006). Corporate performance and CEO compensation in China. *Journal of Corporate Finance, 12*(4), 693-714.

Firth, M., Leung, T.Y., & Rui, O. M. (2010). Double signals or single signal? An investigation of insider trading around share repurchases. *Journal of International Financial Markets, Institutions and Money, 20*(4), 376-388.

Foley, C. F., & Greenwood, R. (2009). The evolution of corporate ownership after IPO: The impact of investor protection. *The Review of Financial Studies, 23*(3), 1231-1260.

Froot, K. A. (1989). Consistent covariance matrix estimation with cross-sectional dependence and heteroskedasticity in financial data. *Journal of Financial and Quantitative Analysis, 24*(03), 333-355.

Gaffney, N., Karst, R., & Clampit, J. (2016). Emerging market MNE cross-border acquisition equity participation: The role of economic and knowledge distance. *International Business Review, 25*(1), 267-275.

Gahlon, J. M., & Gentry, J. A. (1982a). On the relationship between systematic risk and the degrees of operating and financial leverage. *Financial Management, 11*(2), 15-23.

García-Meca, E., García-Sánchez, I.-M., & Martínez-Ferrero, J. (2015). Board diversity and its effects on bank performance: An international analysis. *Journal of Banking & Finance, 53*, 202-214.

Garen, J. E. (1994). Executive compensation and principal-agent theory. *Journal of Political Economy, 102*(6), 1175-1199.

Gaughan, P. A. (2015). *Mergers, acquisitions, and corporate restructurings* (Sixth ed.). New York: John Wiley & Sons.

Gentry, R. J., & Shen, W. (2010). The relationship between accounting and market measures of firm financial performance: How strong is it? *Journal of Managerial Issues, 22*(4), 514-530.

Ghosh, S. (2008). Leverage, foreign borrowing and corporate performance: firm-level evidence for India. *Applied Economics Letters, 15*(8), 607-616.

Gigliotti, M. (2013). The compensation of top managers and the performance of Italian firms. *The International Journal of Human Resource Management, 24*(4), 889-903.

Girma, S., Thompson, S., & Wright, P. W. (2006a). The impact of merger activity on executive pay in the United Kingdom. *Economica, 73*(290), 321-339.

Girma, S., Thompson, S., & Wright, P. W. (2006b). International acquisitions, domestic competition and firm performance. *International Journal of the Economics of Business, 13*(3), 335-349.

Golubov, A., Yawson, A., & Zhang, H. (2015). Extraordinary acquirers. *Journal of Financial Economics*, *116*(2), 314-330

Gomes, J. F., & Schmid, L. (2010). Levered returns. *The Journal of Finance, 65*(2), 467-494.

Gomez-Mejia, L. R., & Balkin, D. B. (1992). Determinants of faculty pay: An agency theory perspective. *Academy of Management Journal, 35*(5), 921-955.

Gomez-Mejia, L. R., & Wiseman, R. M. (1997). Reframing Executive Compensation: An Assessment and Outlook. *Journal of Management, 23*(3), 291-374.

Gray, J. (2004). Golden Years. *Canadian Business, 77*(10), 167 - 168.

Gregory, A., & McCorriston, S. (2005). Foreign acquisitions by UK limited companies: short- and long-run performance. *Journal of Empirical Finance, 12*(1), 99-125.

Griffin, J. M. (2002). Are the Fama and French factors global or country specific? *The Review of Financial Studies, 15*(3), 783-803.

Griffin, J. M., & Lemmon, M. L. (2002). Book-to-market equity, distress risk, and stock returns. *The Journal of Finance, 57*(5), 2317-2336.

Grinstein, Y., & Hribar, P. (2004). CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics, 73*(1), 119-143.

Gritta, R. D., Freed, E. J., & Chow, G. (1998). Measuring the Degrees of Operating, Financial and Combined Leverage for the Major US Air Carriers: 1979-1995. *Transp. LJ, 26*, 51-72.

Guay, W. R. (1999). The sensitivity of CEO wealth to equity risk: an analysis of the magnitude and determinants. *Journal of Financial Economics, 53*(1), 43-71.

Guest, P. M. (2009). The impact of mergers and acquisitions on executive pay in the United Kingdom. *Economica, 76*(301), 149-175.

Guest, P. M. (2009b). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance, 15*(4), 385-404.

Guillen, M. F. (2000). Business groups in emerging economies: A resource-based view. *Academy of Management Journal, 43*(3), 362-380.

Gujurati, D. N. (2003). *Basic Econometrics* (4th Edition ed.). NY, USA: McGraw-Hill.

Hadlock, C., Houston, J., & Ryngaert, M. (1999). The role of managerial incentives in bank acquisitions. *Journal of Banking & Finance, 23*(2), 221-249.

Hagendorff, J., Collins, M., & Keasey, K. (2007). Bank governance and acquisition performance. *Corporate Governance: An International Review, 15*(5), 957-968.

Hagendorff, J., Hernando, I., Nieto, M. J., & Wall, L. D. (2012). What do premiums paid for bank M&As reflect? The case of the European Union. *Journal of Banking & Finance, 36*(3), 749-759.

Hall, B. J., & Liebman, J. B. (1998). Are CEOs really paid like bureaucrats? *The Quarterly Journal Of Economics, 113*(3), 653-691.

Hansen, G. S., & Hill, C. W. (1991). Are institutional investors myopic? A time-series study of four technology-driven industries. *Strategic Management Journal, 12*(1), 1-16.

Harford, J., & Li, K. (2007). Decoupling CEO wealth and firm performance: The case of acquiring CEOs. *The Journal of Finance*, *62*(2), 917-949.

Harford, J., Humphery-Jenner, M., & Powell, R. (2012). The sources of value destruction in acquisitions by entrenched managers. *Journal of Financial Economics, 106*(2), 247-261.

Harris, J. D. (2009). What's wrong with executive compensation? *Journal of Business Ethics, 85*(1), 147-156.

Harris, J. D., & Bromiley, P. (2007). Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organization Science, 18*(3), 350-367.

Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *The Journal of Finance, 58*(6), 2351-2374.

Harvey, C. R. (1995). Predictable risk and returns in emerging markets. *Review of Financial Studies, 8*(3), 773-816.

Hayn, C. (1989). Tax attributes as determinants of shareholder gains in corporate acquisitions. *Journal of Financial Economics, 23*(1), 121-153.

Hayward, M. L., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42(1), 103-127.

Healy, P. M., Palepu, K. G., & Ruback, R. S. (1992). Does corporate performance improve after mergers? *Journal of Financial Economics, 31*(2), 135-175.

Heckman, J. (1979). Sample Selection Bias as a Specification Error, Econometrica, 47

(1). 153-*161*.

Henderson, R. I. (2003). *Compensation management in a knowledge-based world* (Tenth ed.). Upper Saddle River, NJ: Prentice Hall

Henderson, R. I. (2006). *Compensation management in a knowledge-based world* (Tenth ed.). Upper Saddle River, NJ: Prentice Hall

Hermalin, B. E., & Katz, M. L. (2000). Corporate diversification and agency. *Incentives, Organization, and Public Economics: Papers in Honour of Sir James Mirrlees, Working Paper RPF-291,* 17-39.

Herman, E. S. (1981). *Corporate control, corporate power* (Vol. 98): Cambridge University Press Cambridge.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal, 40*(4), 767-798.

Hoskisson, R.E., & Hitt, M.A. (1990). Antecedents and performance outcomes of diversification: A review and critique of theoretical perspectives. *Journal of Management, 16*(2), 461-509.

Hoskisson, R. E., Hitt, M. A., Johnson, R. A., & Grossman, W. (2002). Conflicting voices: The effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies. *Academy of Management Journal*, *45*(4), 697-716.

Hribar, P. (2004). Discussion of competitive costs of disclosure by biotech IPOs. *Journal of Accounting Research, 42*(2), 357-364.

Huang, Y.-T., Wu, M.-C., & Liao, S.-L. (2013). The relationship between equity-based compensation and managerial risk taking: Evidence from China. *Emerging Markets Finance and Trade, 49*(sup2), 107-125.

Huffman, S. P. (1989). The impact of the degrees of operating and financial leverage on the systematic risk of common stocks: another look. *Quarterly Journal of Business and Economics, 28*(1), 83-100.

IoD. (2002). *King Report on Corporate Governance for South Africa*. Johannesburg: Institute of Directors in Southern Africa.

IoD. (2009). *King III Report on Corporate Governance for South Africa*. Retrieved from Pietermaritzburg, Lexix Nexis:

Izan, H., Sidhu, B., & Taylor, S. (1998). Does CEO pay reflect performance? Some Australian evidence. *Corporate Governance: An International Review, 6*(1), 39-47.

Jain, P., & A. Sunderman, M. (2014). Stock price movement around the merger announcements: insider trading or market anticipation? *Managerial Finance, 40*(8), 821-843.

Jain, P. C. (1982). Cross-sectional association between abnormal returns and firm specific variables. *Journal of Accounting and Economics, 4*(3), 205-228.

Jain, P. C. (1986). Analyses of the distribution of security market model prediction errors for daily returns data. *Journal of Accounting Research, 24*(1), 76-96.

Jeanne, G. (2016). Baltic M&A Monitor 2016. Retrieved from http://mergermarketgroup.com website: http://mergermarketgroup.com/wp-content/uploads/2017/03/Ellex-Baltic-Monitor_LR.pdf [accessed on 1 June, 2016]

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance, 48*(3), 831-880.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top-management incentives. *Journal of Political Economy*, 225-264.

Jin, L. (2002). CEO compensation, diversification, and incentives. *Journal of Financial Economics, 66*(1), 29-63.

John, K., Mehran, H., & Qian, Y. (2010). Outside monitoring and CEO compensation in the banking industry. *Journal of Corporate Finance, 16*(4), 383-399.

John, K., Saunders, A., & Senbet, L. (2000a). A theory of bank compensation and management regulation. *Review of Financial Studies, 3*(1), 95-126.

John, K., Saunders, A., & Senbet, L. W. (2000b). A theory of bank regulation and management compensation. *The Review of Financial Studies, 13*(1), 95-125.

Johnston, D., & Malina, M. A. (2008). Managing Sexual Orientation Diversity The Impact on Firm Value. *Group & Organization Management, 33*(5), 602-625.

Kabir, R., Li, H., & Veld-Merkoulova, Y. V. (2013). Executive compensation and the cost of debt. *Journal of Banking & Finance, 37*(8), 2893-2907.

Kapopoulos, P., & Lazaretou, S. (2007). Corporate ownership structure and firm performance: evidence from Greek firms. *Corporate Governance: An International Review, 15*(2), 144-158.

Keim, D., & Hawawini, G. (2002). The cross section of common stock returns: A review of the evidence and some new findings. *Rodney L. White Center Working Paper, No. 08-99*.

Kerr, J. L., & Kren, L. (1992). Effect of relative decision monitoring on chief executive compensation. *Academy of Management Journal, 35*(2), 370-397.

Khanna, T., & Palepu, K. (2000). Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *The Journal of Finance, 55*(2), 867-891.

Khanna, T., & Rivkin, J. W. (2001a). Estimating the performance effects of business groups in emerging markets. *Strategic Management Journal, 22*(1), 45-74.

Khanna, T., & Rivkin, J. W. (2001b). The structure of profitability around the world. Harvard Business School Working Paper, No. 01-056, April 2001

Khorana, A., & Zenner, M. (1998). Executive compensation of large acquirors in the 1980s. *Journal of Corporate Finance, 4*(3), 209-240.

Kim, E. H., & Lu, Y. (2011). CEO ownership, external governance, and risk-taking. *Journal of Financial Economics, 102*(2), 272-292.

Kolari, J. W., & Pynnonen, S. (2011). Nonparametric rank tests for event studies. *Journal of Empirical Finance, 18*(5), 953-971.

Kolari, J. W., & Pynnönen, S. (2010). Event study testing with cross-sectional correlation of abnormal returns. *Review of Financial Studies, 23*(11), 3996-4025.

Kren, L., & Kerr, J. L. (1997). The effects of outside directors and board shareholdings on the relation between chief executive compensation and firm performance. *Accounting and Business Research, 27*(4), 297-309.

Kroll, M., Simmons, S. A., & Wright, P. (1990). Determinants of chief executive officer compensation following major acquisitions. *Journal of Business Research, 20*(4), 349-366.

Kubo, K. (2005). Executive compensation policy and company performance in Japan. *Corporate Governance: An International Review, 13*(3), 429-436.

Kyriazis, D. (2010). The long-term post acquisition performance of Greek acquiring firms. *International Research Journal of Finance and Economics, 43*, 69-79.

Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics, 93*(2), 259-275.

Lakonishok, J., Shleifer, A., & Vishny, R. W. (1994). Contrarian investment, extrapolation, and risk. *The Journal of Finance, 49*(5), 1541-1578.

Lambert, R. A., & Larcker, D. F. (1988). Executive compensation effects of large corporate acquisitions. *Journal of Accounting and Public Policy, 6*(4), 231-243.

Lambert, R. A., Larcker, D. F., & Weigelt, K. (1993). The structure of organizational incentives. *Administrative Science Quarterly, 38*(3), 438-461.

Larcker, D., & Tayan, B. (2015). *Corporate governance matters: A closer look at organizational choices and their consequences* (Second Edition ed.). Upper Saddle River, NJ: Pearson

Larcker, D. F., Ormazabal, G., Tayan, B., & Taylor, D. J. (2014). Follow the Money: Compensation, Risk, and the Financial Crisis. *Rock Center for Corporate Governance at Stanford University Closer Look Series: Topics, Issues and Controversies in Corporate Governance and Leadership, No. CGRP-28*, 14-34.

Lavelle, L., Jespersen, F., Ante, S., & Kerstetter, J. (2003). Executive pay. Business Week 3829(21 April): 86–90. *Business Week, 3829*(21 April), 80-90.

Lebedev, S., Peng, M. W., Xie, E., & Stevens, C. E. (2015). Mergers and acquisitions in and out of emerging economies. *Journal of World Business, 50*(4), 651-662.

Lewellen, K. (2006). Financing decisions when managers are risk averse. *Journal of Financial Economics, 82*(3), 551-589.

Lewellen, W., Loderer, C., & Rosenfeld, A. (1989). Mergers, executive risk reduction, and stockholder wealth. *Journal of financial and quantitative analysis, 24*(4), 459-472.

Lewellen, W. G., Loderer, C., & Martin, K. (1987). Executive compensation and executive incentive problems: An empirical analysis. *Journal of Accounting and Economics, 9*(3), 287-310.

Lewellen, W. G., Loderer, C., & Rosenfeld, A. (1985). Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics, 7*(1), 209-231.

Li, R.-J., & Henderson Jr, G. V. (1991). Combined leverage and stock risk. *Quarterly Journal of Business and Economics, 30*(1), 18-39.

Liargovas, P., & Repousis, S. (2011). The impact of mergers and acquisitions on the performance of the Greek banking sector: An event study approach. *International Journal of Economics and Finance, 3*(2), 89.

Lin, H.-C., Chou, T.-K., & Wang, W.-G. (2012). Capital Structure and executive compensation contract design: A theoretical and empirical analysis. *Journal of Banking & Finance, 36*(1), 209-224.

Liu, Y., Padgett, C., & Varotto, S. (2017). Corporate governance, bank mergers and executive compensation. *International Journal of Finance & Economics*, *22*(1), 12-29.

Livne, G., Markarian, G., & Mironov, M. (2013). Investment horizon, risk, and compensation in the banking industry. *Journal of Banking & Finance*, *37*(9), 3669-3680.

Long, M. S., & Walkling, R. A. (1984). Agency theory, managerial welfare, and takeover bid resistance. *Rand Journal of Economics, 15*(1), 54-68.

Low, A. (2009). Managerial risk-taking behavior and equity-based compensation. *Journal of Financial Economics, 92*(3), 470-490.

Ma, J., Pagan, J. A., & Chu, Y. (2009). Abnormal returns to mergers and acquisitions in ten Asian stock markets. *International Journal of Business, 14*(3), 235-250.

Maccrimmon, K., & Wehrung, D. A. (1986). The management of uncertainty: Taking risks. *New York*.

Magnan, M., St-Onge, S., & Thorne, L. (1995). A comparative analysis of the determinants of executive compensation between Canadian and US firms. *Relations Industrielles/Industrial Relations, 50*(2), 297-319.

Magnusson, M., & Wydick, B. (2002). How efficient are Africa's emerging stock markets? *Journal of Development Studies, 38*(4), 141-156.

Malatesta, P. H. (1983). The wealth effect of merger activity and the objective functions of merging firms. *Journal of Financial Economics, 11*(1), 155-181.

Mandelker, G. N., & Rhee, S. G. (1984). The impact of the degrees of operating and financial leverage on systematic risk of common stock. *Journal of Financial and Quantitative Analysis, 19*(1), 45-57.

Maniam, B., Subramaniam, G., & Johnson, J. (2006). Perspectives of corporate governance in the US and abroad. *The Business Review, 5*(2), 36-42.

Maredza, A., & Ikhide, S. (2013). Measuring the impact of the global financial crisis on efficiency and productivity of the banking system in South Africa. *Mediterranean Journal of Social Sciences, 4*(6), 553-568.

Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking & Finance, 32*(10), 2148-2177.

May, D. O. (1995). Do managerial motives influence firm risk reduction strategies?. *The Journal of Finance, 50*(4), 1291-1308.

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics, 38*(2), 163-184.

Melicher, R. W. (1974). Financial factors which influence beta variations within an homogeneous industry environment. *Journal of Financial and Quantitative Analysis, 9*(2), 231-241.

Merhebi, R., Pattenden, K., Swan, P. L., & Zhou, X. (2006). Australian chief executive officer remuneration: pay and performance. *Accounting & Finance, 46*(3), 481-497.

Merton, R. C. (1973). Theory of rational option pricing. *The Bell Journal of Economics and Management Science, 4*(1), 141-183.

Mikkelson, W. H., & Partch, M. M. (1988). Withdrawn security offerings. *Journal of Financial and Quantitative Analysis, 23*(02), 119-133.

Milkovich, G. T., & Newman, J. M. (2002). *Compensation*. Boston:: McGraw-Hill Irwin.

Miller, J. S., Wiseman, R. M., & Gomez-Mejia, L. R. (2002). The fit between CEO compensation design and firm risk. *Academy of Management Journal, 45*(4), 745-756.

Miller, K. D., & Bromiley, P. (1990). Strategic risk and corporate performance: An analysis of alternative risk measures. *Academy of Management Journal, 33*(4), 756-779.

Mitchell, J., & Kodongo, O. (2016). Insider trading law and illegal insider trading in South Africa's equity market: lessons from corporate takeovers. *African Finance Journal, 18*(1), 1-19.

Mitchell, M. L., & Stafford, E. (2000). Managerial Decisions and Long-Term Stock Price Performance. *The Journal of Business, 73*(3), 287-329.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics, 73*(2), 201-228.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2005). Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. *The Journal of Finance, 60*(2), 757-782.

Morck, R., Shleifer, A., & Vishny, R. W. (1990). Do managerial objectives drive bad acquisitions? *The Journal of Finance, 45*(1), 31-48.

Murphy, K. J. (1986). Incentives, learning, and compensation: A theoretical and empirical investigation of managerial labor contracts. *The Rand Journal of Economics*, 17(1), 59-76.

Murphy, K. J. (1998). Executive Compensation, Handbook of Labor Economics, III. North Holland, Amsterdam.

Murphy, K. J. (1999). Executive compensation. *Handbook of labor economics, 3*, 2485-2563.

Mushidzhi, T., & Ward, M. (2004). Abnormal returns for cash vs share funded acquisitions. *Investment Analysts Journal, 33*(60), 17-31.

Nelson, R. L. (1959). Merger movements in American industry, 1895-1956. *NBER Books*. Princeton: Princeton University Press.

Netter, J., Stegemoller, M., & Wintoki, M. B. (2011). Implications of data screens on merger and acquisition analysis: A large sample study of mergers and acquisitions from 1992 to 2009. *Review of Financial Studies, 24*(7), 2316-2357.

Nguyen, P., Rahman, N., & Zhao, L. (2014). Returns to acquirers of listed and unlisted targets: An examination of Australian bidders. *Available at SSRN 2486096*.

Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica*, 49(6), 1417-1426.

Ntim, C. G. (2015). Board diversity and organizational valuation: unravelling the effects of ethnicity and gender. *Journal of Management & Governance, 19*(1), 167-195.

Ntim, C. G., Lindop, S., Osei, K. A., & Thomas, D. A. (2015a). Executive compensation, corporate governance and corporate performance: a simultaneous equation approach. *Managerial and Decision Economics, 36*(2), 67-96.

Ntim, C. G., Lindop, S., Thomas, D. A., Abdou, H., & Opong, K. K. (2017). Executive pay and performance: the moderating effect of CEO power and governance structure. *The International Journal of Human Resource Management*, 1-43.

Ntim, C. G., Opong, K. K., & Danbolt, J. (2012). The relative value relevance of shareholder versus stakeholder corporate governance disclosure policy reforms in South Africa. *Corporate Governance: An International Review, 20*(1), 84-105.

Ntim, C. G., Opong, K. K., & Danbolt, J. (2015b). Board size, corporate regulations and firm valuation in an emerging market: a simultaneous equation approach. *International Review of Applied Economics, 29*(2), 194-220.

Obeng-Odoom F, 2015, 'Africa: On the rise but to where?', Forum for Social Economics, 44(3), 234-250.

Obeng-Odoom F, 2016, *Reconstructing Urban Economics: Towards a Political Economy of the Built Environment*, Zed, London.

Obeng-Odoom F, 2018,'Transnational corporations and urban development', American Journal of Economics and Sociology**,** .47 (2),. 447-510.

Okeahalam, C. (2004). Foreign ownership, performance and efficiency in the banking sector in Uganda and Botswana. *Studies in Economics and Econometrics, 28*(1), 89-118.

Onyuma, S. O., Mugo, R. K., & Karuiya, J. K. (2012). Does cross-border listing (still) improve firm financial performance in Eastern Africa? *Journal of Business, Economics, 1*(1), 92-109.

Owen, S., & Yawson, A. (2010). Corporate life cycle and M&A activity. *Journal of Banking & Finance, 34*(2), 427-440.

Ozdagli, A. K. (2012). Financial leverage, corporate investment, and stock returns. *The Review of Financial Studies, 25*(4), 1033-1069.

Ozkan, N. (2011). CEO compensation and firm performance: An empirical investigation of UK panel data. *European Financial Management, 17*(2), 260-285.

Patell, J. M. (1976). Corporate forecasts of earnings per share and stock price behavior: Empirical test. *Journal of Accounting Research, 18*(1), 246-276.

Pathan, S. (2009). Strong boards, CEO power and bank risk-taking. *Journal of Banking & Finance, 33*(7), 1340-1350.

Pathan, S., & Faff, R. (2013). Does board structure in banks really affect their performance? *Journal of Banking & Finance, 37*(5), 1573-1589.

Patton, A., & Baker, J. C. (1987). Why directors won't rock the boat. *Harvard Business Reisiew, 65*(6). 10-12, 16, 18

Peng, M. W., Lee, S.-H., & Wang, D. Y. (2005). What determines the scope of the firm over time? A focus on institutional relatedness. *Academy of Management Review, 30*(3), 622-633.

Peterkort, R. F., & Nielsen, J. F. (2005). Is the book-to-market ratio a measure of risk? *Journal of Financial Research, 28*(4), 487-502.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies, 22*(1), 435-480.

Peterson, P. P. (1989). Event studies: A review of issues and methodology. *Quarterly Journal of Business and Economics, 28*(3), 36-66.

Pina, V., Torres, L., & Bachiller, P. (2017). Mergers Between Savings Banks. The Solution for Improving Risk in the Spanish Banking Sector? *International Review of Entrepreneurship, 15*(1), 63-84.

Porta, R., Lakonishok, J., Shleifer, A., & Vishny, R. (1997). Good news for value stocks: Further evidence on market efficiency. *The Journal of Finance, 52*(2), 859-874.

Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance, 54*(2), 471-517.

Rani, N., Yadav, S. S., & Jain, P. (2015). Impact of Mergers and Acquisitions on Shareholders' Wealth in the Short Run: An Event Study Approach. *Vikalpa Journal for Decicion Markers, 40*(3), 293-312.

Rankin, M. (2007). Determinants of executive remuneration: Australian evidence. *Monash University, August, Retrieved from https://researchbank.rmit.edu.au/view/rmit:6788/Rankin.pdf. [accessed on 1 June, 2016]*

Ravenscraft, D. J., & Scherer, F. M. (1987). Life after takeover. *The Journal of Industrial Economics, 36*(2), 147-156.

Renders, A., Gaeremynck, A., & Sercu, P. (2010). Corporate-governance ratings and company performance: a cross-European study. *Corporate Governance: An International Review, 18*(2), 87-106.

Roberts, J., & Milgrom, P. (1992). *Economics, organization and management*. Englewood Cliff's, New Jersey: Prentice-Hall, Inc.

Roberts, M. R., & Whited, T. M. (2013). Endogeneity in empirical corporate finance1 *Handbook of the Economics of Finance*, 2, 493-572): Elsevier.

Roe, M. J. (2003). *Political determinants of corporate governance: Political context, corporate impact*. New York: Oxford University Press Inc.

Rosen, R. J. (2005). *Betcha can't acquire just one: Merger programs and compensation*. FRB Chicago Working paper.

Rosen, S. (1981). The economics of superstars. *The American Economic Review, 71*(5), 845-858.

Ross, S. A. (2004). Compensation, incentives, and the duality of risk aversion and riskiness. *The Journal of Finance, 59*(1), 207-225.

Rwegasira, K. (2000). Corporate governance in emerging capital markets: whither Africa? *Corporate Governance: An International Review, 8*(3), 258-267.

Ryan Jr, H. E., & Wiggins III, R. A. (2002). The interactions between R&D investment decisions and compensation policy. *Financial Management*, 31(1), 5-29.

Sah, R. K., & Stiglitz, J. E. (1991). The quality of managers in centralized versus decentralized organizations. *The Quarterly Journal of Economics, 106*(1), 289-295.

Sanders, W. G. (2001). Behavioral responses of CEOs to stock ownership and stock option pay. *Academy of Management Journal, 44*(3), 477-492.

Sanders, W. G., & Hambrick, D. C. (2007). Swinging for the fences: The effects of CEO stock options on company risk taking and performance. *Academy of Management Journal, 50*(5), 1055-1078.

Sapp, S. G. (2008). The impact of corporate governance on executive compensation. *European Financial Management, 14*(4), 710-746.

Sawers, K., Wright, A., & Zamora, V. (2011). Does greater risk-bearing in stock option compensation reduce the influence of problem framing on managerial risk-taking behavior? *Behavioral Research in Accounting, 23*(1), 185-201.

Scholes, M., & Williams, J. (1977). Estimating betas from nonsynchronous data. *Journal of Financial Economics, 5*(3), 309-327.

Scholtz, H., & Smit, A. (2012). Executive remuneration and company performance for South African companies listed on the Alternative Exchange (AltX). *Southern African Business Review, 16*(1), 22-38.

Sehgal, S., Banerjee, S., & Deisting, F. (2012). The impact of M&A announcement and financing strategy on stock returns: Evidence from BRICKS markets. *International Journal of Economics and Finance, 4*(11), 76-90.

Shams, S. M., Gunasekarage, A., & Colombage, S. R. (2013). Does the organisational form of the target influence market reaction to acquisition announcements? Australian evidence. *Pacific-Basin Finance Journal, 24*(September), 89-108.

Shapiro, S. P. (2005). Agency theory. *Annual Review of Sociology, 31*, 263-284.

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance, 19*(3), 425-442.

Shaw, K. W., & Zhang, M. H. (2010). Is CEO cash compensation punished for poor firm performance? *The Accounting Review, 85*(3), 1065-1093.

Shick, R. A., & Jen, F. C. (1974). Merger benefits to shareholders of acquiring firms. *Financial Management, 3*(4), 45-53.

Shleifer, A., & Vishny, R. W. (2003). Stock market driven acquisitions. *Journal of Financial Economics, 70*(3), 295-311.

Short, J. C., McKelvie, A., Ketchen, D. J., & Chandler, G. N. (2009). Firm and industry effects on firm performance: A generalization and extension for new ventures. *Strategic Entrepreneurship Journal, 3*(1), 47-65.

Siew Peng, L., & Isa, M. (2012). Long-term share performance of Malaysian acquiring firms. *Managerial Finance, 38*(10), 958-976.

Sila, V., Gonzalez, A., & Hagendorff, J. (2016). Women on board: Does boardroom gender diversity affect firm risk? *Journal of Corporate Finance, 36*, 26-53.

Smimou, K. (2015). Regional equity market conditions and cross-border mergers and acquisitions (M & A) Evidence from the BRIC, Eastern Europe, and Africa. *International Journal of Emerging Markets, 10*(3), 535-559.

Smit, C. J., & Ward, M. (2007). The impact of large acquisitions on the share price and operating financial performance of acquiring companies listed on the JSE. *Investment Analysts Journal, 36*(65), 5-14.

Smith, C. W., & Stulz, R. M. (1985). The determinants of firms' hedging policies. *Journal of Financial and Quantitative Analysis, 20*(4), 391-405.

Smith, C. W., & Watts, R. L. (1982). Incentive and tax effects of executive compensation plans. *Australian Journal of Management, 7*(2), 139-157.

Sorkin, A. R. (2002). Those sweet trips to the merger mall. *New York Times, 7*(3), 1.

Spraggon, M., & Bodolica, V. (2011). Post-acquisition structuring of CEO pay packages: Incentives and punishments. *Strategic Organization, 9*(3), 187-221.

Stafford, T. (2014). Mergers and Acquisitions: African's resurgence. July 10,. Retrieved from http://www.financialmail.co.za/moneyinvesting/2014/07/10/mergers-acquisitions-africa-s-resurgence *[accessed on 1 June, 2016]*

Stimpert, J. L., & Duhaime, I. M. (1997). Seeing the big picture: The influence of industry, diversification, and business strategy on performance. *Academy of Management Journal, 40*(3), 560-583.

Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics, 26*(1), 3-27.

Subramaniam, C. (2001). Are golden parachutes an optimal contracting response or evidence of managerial entrenchment?: Evidence from successful takeovers. *Journal of Business Finance & Accounting, 28*(1-2), 1-34.

Switzer, L. N., & Tahaoglu, C. (2015). The benefits of international diversification: market development, corporate governance, market cap, and structural change effects. *International Review of Financial Analysis, 42*, 76-97.

Thompson, D. J. (1976). Sources of systematic risk in common stocks. *The Journal of Business, 49*(2), 173-188.

Tirole, J. (2010). Illiquidity and all its friends. *Working Paper, Nota di Lavoro, 78*.

Tosi, H. L., Werner, S., Katz, J. P., & Gomez-Mejia, L. R. (2000). How much does performance matter? A meta-analysis of CEO pay studies. *Journal of Management, 26*(2), 301-339.

Travlos, N. G. (1987). Corporate takeover bids, methods of payment, and bidding firms' stock returns. *The Journal of Finance, 42*(4), 943-963.

Travlos, N. G., & Waegelein, J. F. (1992). Executive compensation, method of payment and abnormal returns to bidding firms at takeover announcements. *Managerial and Decision Economics, 13*(6), 493-501.

Triana, M. d. C., Miller, T. L., & Trzebiatowski, T. M. (2013). The double-edged nature of board gender diversity: Diversity, firm performance, and the power of women directors as predictors of strategic change. *Organization Science, 25*(2), 609-632.

Tuch, C., & O'Sullivan, N. (2007). The impact of acquisitions on firm performance: A review of the evidence. *International Journal of Management Reviews, 9*(2), 141-170.

Tyson, S., & Bournois, F. (2005). *Top pay and performance*. NY: Routledge.

Uddin, M., & Boateng, A. (2009). An analysis of short-run performance of cross-border mergers and acquisitions: Evidence from the UK acquiring firms. *Review of Accounting and Finance, 8*(4), 431-453.

Ujunwa, A., Okoyeuzu, C., & Nwakoby, I. (2012). Corporate board diversity and firm performance: Evidence from Nigeria. *Revista de Management Comparat International, 13*(4), 605.

Vander Vennet, R. (1996). The effect of mergers and acquisitions on the efficiency and profitability of EC credit institutions. *Journal of Banking & Finance, 20*(9), 1531-1558.

Vassalou, M., & Xing, Y. (2004). Default risk in equity returns. *The Journal of Finance, 59*(2), 831-868.

Wachudi, E. J., & Mboya, J. (2012). Effect of board gender diversity on the performance of commercial banks in Kenya. *European Scientific Journal, 8*(7), 128-148.

Wang, Q., & Boateng, A. (2007). Cross-border M&As by Chinese firms: An analysis of strategic motivation and performance. *International Management Review, 3*(4), 19-29.

Weber, Y., Tarba, S. Y., & Bachar, Z. R. (2011). Mergers and acquisitions performance paradox: the mediating role of integration approach. *European Journal of International Management, 5*(4), 373-393.

Wernerfelt, B., & Montgomery, C. A. (1988). Tobin's q and the importance of focus in firm performance. *The American Economic Review*, 78(1), 246-250.

Weston, J. F., Chung, K. S., & Siu, J. A. (1998). *Takeovers, Restructurings and Corporate Governance*: Prentice Hall.

Wilson, M., & Vencatachellum, D. (2016). *Determinants of Cross-Border Mergers and Acquisitions Targeting Africa: 1991-2011*. ERSA Working Paper 600. Retrieved from https://econrsa.org/system/files/publications/working_papers/working_paper_600.pdf [Accessed on 1 December, 2017]

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics, 105*(3), 581-606.

Wiseman, R. M., & Gomez-Mejia, L. R. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review, 23*(1), 133-153.

Wooldridge, J. M. (2002). Inverse probability weighted M-estimators for sample selection, attrition, and stratification. *Portuguese Economic Journal, 1*(2), 117-139.

Wooldridge, J. M. (2003). Cluster-sample methods in applied econometrics. *American Economic Review, 93*(2), 133-138.

Wright, P., Kroll, M., & Elenkov, D. (2002). Acquisition returns, increase in firm size, and chief executive officer compensation: The moderating role of monitoring. *Academy of Management Journal, 45*(3), 599-608.

Wu, J., & Tu, R. (2007). CEO stock option pay and R&D spending: a behavioral agency explanation. *Journal of Business Research, 60*(5), 482-492.

Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics, 108*(1), 250-273.

Yücel, E., & Önal, Y. B. (2015). Industrial diversification and risk in an emerging market: Evidence from Turkey. *Emerging Markets Finance and Trade, 51*(6), 1292-1306.

Zephyr (2008), Zephyr Annual M&A Report: Global 2008, Amsterdam: Bureau Van Dijk

Zephyr (2014), Zephyr Annual M&A Report: Global 2014, Amsterdam: Bureau Van Dijk

Zajac, E. J., & Westphal, J. D. (1995). Accounting for the explanations of CEO compensation: Substance and symbolism. *Administrative Science Quarterly, 40*(2), 283-308.

APPENDICES

Appendix 1 A: Variable descriptions

	Variable Category	Unit	Definition
Compensation types	Cash (Salary and bonuses)	USD	The sum of annual salary, performance related bonuses and other short-term cash benefits paid to executives.
	Stock (Equity)	USD	Value of total common equity awarded to executives of the firm in a year.
	Stock Option (STOP)	USD	The value of stock options that were granted to executives during a firm's fiscal year.
	Total compensation (ToCom)	USD	The sum of all compensations awarded (short and long-term) to executives in a firm's fiscal year.
	Total board compensation (TbCom)	USD	The sum of all compensations awarded (short and long-term) to board of directors in a firm's fiscal year
Performance and risk Variables	Total Stock Return (TSR)	%	It is the total yield (capital and dividend yield) on an equity over the financial year.
	Tobin's Q (Q)		Ratio of total asset minus book value of equity plus market value of equity to firm's total asset in a fiscal
	Return on Equity (ROE)	%	The ratio of total net income to total shareholders equity
	Return on Asset (ROA)	%	The ratio of gross profit to book value of total asset
	Total risk (TR, ReV)	%	The average standard deviation of daily stock returns in a fiscal year
	Systematic risk (Syst)	%	The volatility of an asset relative to that of a market index
	Book value to market value of equity (BME)		The ratio of book value of equity to market value of equity
	Degree of Combine Leverage (DCL)		It is the ratio of %change in earnings per share to %change in sales.
Corporate governance	Board size (BoSize)		It is the total number of company's board members in a year
	Board ownership (BoOwn)	%	The percentage of total board of directors ownership
	Board gender (BoGen)		The percentage of female total board representation
	Gender of CEO, SexC	1 or 0	The gender of the CEO. It is a dummy that takes 1 if the CEO is female, else 0
	Executive ownership (ExOwn)	%	The percentage of total executives' ownership in a year
	Foreign ownership	%	It is the percentage of foreign ownership in a firm
	Institutional ownership (InsOw)[14]	%	The total value of institutions investment in the firm for the firm's fiscal year
	Outside Directors (OutD)	%	It is the total number of outside board of directors express as a percentage of total board size
	CEO duality (BoCha)	1 or 0	Takes 1 if the CEO is board chair, else 0
	Gender diversity (BoGen)	%	The percentage of females on the firm's board.
	CEO age,	years	The age of the CEO

[14] Institutional investors have the political incentives to monitor executive's action and also control the behaviour of firms (Hansen & Hill, 1991; Hoskisson, Hitt, Johnson & Grossman, 2002).

Appendix 1 B (continued)

	Variable Category	Unit	Definition
Other firm and deal specific variables	Total Asset (TotAs)	USD	Value of current and non-current assets as stated in financial statements.
	Size	USD	Total sales of the firm
	Market capitalisation (MktC)	USD	It is the market capitalization of the firm
	Market to book value (MTB)	USD	The ratio of market to book value of a firm
	Capital expenditure (Capex)		It is the log of firm's total capital expenditure for a year
	Deal size	USD	It is the total value of the deal
	Sales Growth (SaGro)		The ratio of current sales to previous sales
	Debt-equity ratio (DER)		It's the ratio of total firm debt over book value of equity
	Mode of payment (MoP)	1 or 0	It is a dummy that takes 1 if the deal is paid with stock else 0.
	Cash	1 or 0	A dummy that takes 1 if the target is purchased with cash,
	Mix	1 or 0	A dummy that takes 1 if the target is purchased with a mix of
	Cumulative abnormal returns, CAR(-25,25)	%	It is a 51-day (25 days before and 25 days after announcement of deal) cumulative abnormal returns computed using the market model
	Diversification and international operations (D&I)	1 or 0	It indicates whether the firm is a mix of different industries and operates outside the home market. It is a dummy that takes 1 if the firm is diversified or has international operation, else 0.
	Merger form (CrossB)	1 or 0	An M&A characteristic that takes 1 if the deal is cross-border, else 0.
	Financial industry (Fin)	1 or 0	A dummy that takes 1 if the firm is in the financial industry, else 0
	Listing (Public)	1 or 0	It is a dummy that takes 1 if the firm is listed, else 0
	Cross listing **(CrossL)**	1 or 0	A dummy that takes 1 if the firm is cross listed on a foreign exchange, else 0
	Same industry merger, (SameInd)	1 or 0	It is a dummy that takes 1 if the acquirer and target are in the same industry, else 0.

Appendix 1 C: List of African stock market for inclusion in analysis

Block	Country	Exchange	Location	Founded	Listing
North	Egypt	Egyptian Stock Exchange (EGX)	Cairo	1883	833
	Morocco	Casablanca Stock Exchange (Casa SE)	Casablanca	1988	81
	Tunisia	Bourse de Tunis	Tunis	1969	56
West	Nigeria	Nigeria Stock Exchange (NSE)	Lagos	1960	223
	Ghana	Ghana Stock Exchange (GSE)	Accra	1990	37
	Ivory Coast	Bourse Regionale des Valeurs Mobilieres, BRVM	Abidjan	1998	39
East	Kenya	Nairobi Stock Exchange (NSE)	Nairobi	1954	64
	Tanzania	Dares Salaam Stock Exchange (DSE)	Dares Salaam	1998	25
	Uganda	Uganda Security Exchange	Kampala	1997	17
Southern	South Africa	Johannesburg Stock Exchange (JSE)	Johannesburg	1887	407
	Botswana	Botswana Stock Exchange (BSE)	Gaborone	1989	44
	Namibia	Namibia Stock exchange	Windhoek	1992	38
	Mauritius	Stock Exchange of Mauritius	Port Louis	1988	170
	Zimbabwe	Zimbabwe Stock Exchange	Harare	1948	64

Note: The information presented in this Appendix has been extracted from individual exchanges as at 25-12-2016

Appendix 1 D: Valuing executive's stock option

To compute the value of the executive stock options awarded to executives in a year, we employ the (Black & Scholes, 1973) option valuation model which was subsequently adjusted for dividends by (Merton, 1973). If S is the price of firm's stock and K is the strike price of the executive's stock option at a given time, T, then the value of the option is computed as:

$$C = Se^{-dT}N(d) - Ke^{-rT}N(d - \sigma\sqrt{T} \quad \text{(C1)}$$

where $d = ln\frac{S}{K} + \left(r - q + \frac{\sigma^2}{2}\right)\sigma T\sqrt{T}$, q is the dividend yield on the stock over the life of the option, r is the risk-free interest rate and σ is the stock return volatility. The sensitivity of the stock option to stock volatility and the underlining stock is referred to as Vega (δC/δσ) and Delta (δC/δS). Core et al. (2003) defines Vega and Delta as the change in stock option's per 1% increase in the firm's annualised stock return volatility (δC/δσ * 0.01) and the change in the value of the stock and stock options per 1% increase in firms stock price (δC/δS * 0.01 * S) respectively.

The motivation behind the use of the Black and Scholes's option valuation model is its credibility and popularity within researchers. More so, it is one of the two option valuation models recommended by the America Security Exchange Committee (Lambert, Larcker & Weigelt, 1993; Sanders, 2001). We will introduce Generalised AutoRegressive Conditional Heteroscedasticity (GARCH) Model type for the volatility input due to its efficiency and accuracy than that of return standard deviation.

Appendix 1 E: Computing cumulative abnormal returns (CAR)

The CAR is computed using event study approach, introduced by Fama et al. (1969) and widely used by seasoned researchers (Brown & Warner, 1985; Kolari & Pynnönen, 2010; Liargovas & Repousis, 2011), based on the market model to investigate how M&A announcements induces markets abnormal returns in stock prices influencing the short-term performance of the firms. We will adopt the market model to determine the abnormal returns after the announcement event because it is the commonly used and properly capture returns and firm risk. The market model shows a linear relationship between the returns of stock and the returns on the market. For every stock *i* at time *t*, the normal return is estimated using

$$R_{it} = \propto_i + \beta_i R_{mt} + \varepsilon_{it} \quad \text{(D1)}$$

where R_{it} is the rate of returns of stock *i* at time *t* (200 days prior to the M&A announcement), R_{mt} is the market rate of return for day t, β_i is the systematic risk of stock *i*, $\propto_i$ is the intercept and ε_{it} is the model prediction error term for stock *i* at day *t* with the $E(\varepsilon_{it}) = 0$.

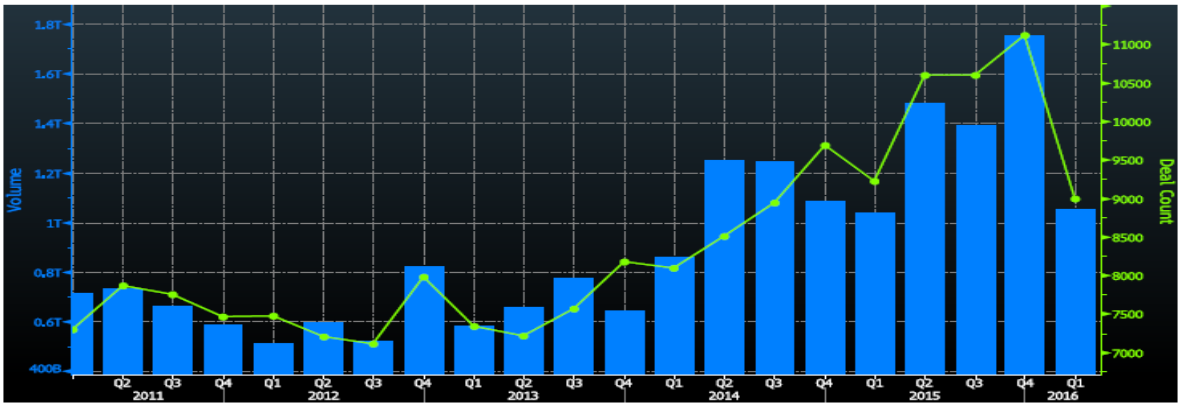
Secondly, we estimates the daily abnormal returns (AR) for the *i*th stock as follows

$$AR_{it} = R_{it} - (a_i + b_i R_{mt}) \quad \text{(D2)}$$

where a_i and b_i are the *ordinary least square* (OLS) parameter estimation of α_i and β_i respectively. Finally, the CAR is computed as the sum of all AR over the event window.

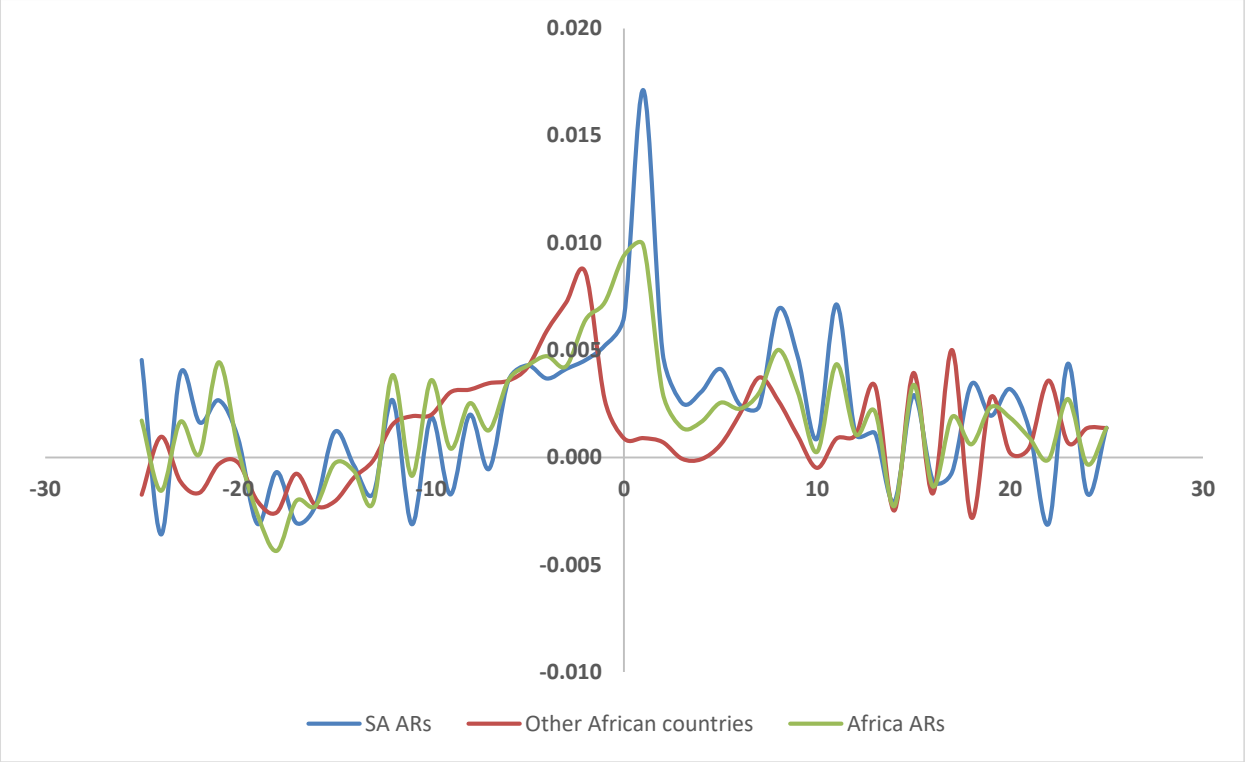
$$CAR_i = \sum_{t=1}^{T} AR_{it} \quad \text{(D3)}$$

where T is the length of the chosen event window. For the purpose of our analysis, we estimate three different event windows, (-1,1), (-2,2) (-5,5), (-10,10) and (-25,25) to properly capture the deal effect surrounding the announcement day.

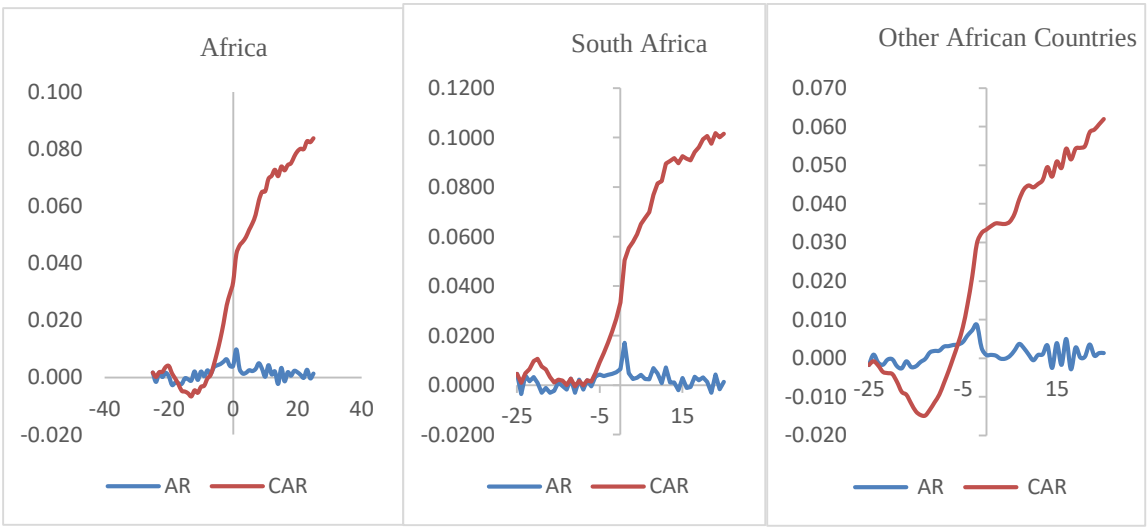


Appendix 1 F: Quarterly trend of global M&A activities
Note: This graphs shows the plot of quarterly trend of global M&A deal volume from 2011 to 2016
Source: Bloomberg (2016)

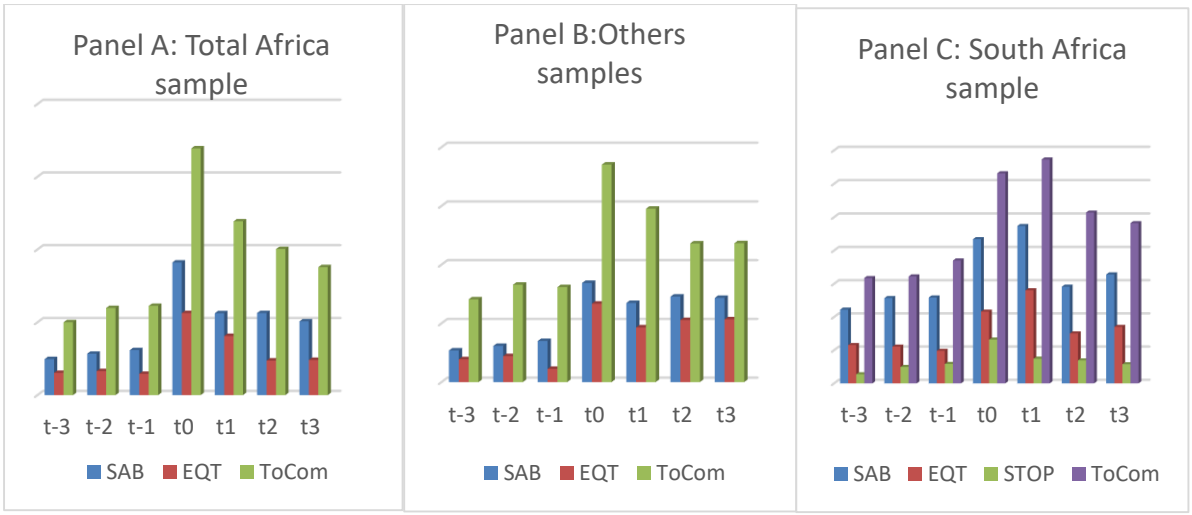
Appendix 1 G: Trend of M&A deals in Middle East and Africa
Note: This graphs shows the trend of annual global M&A deal count, volume and average premium from 2006 to 2016
Source: Bloomberg (2016)



Appendix 2 A: Abnormal returns for South Africa, other African countries and African markets



Appendix 2 B: Cumulative average abnormal returns (CAR) and abnormal returns (AR) for 51-day event window



Appendix 3 A: Various compensation components before and after merger:

Note: This graphs show the various executive compensation components: - cash (SAB), equity (EQT), stock option (STOP) and total compensation (ToCom)- before and after mergers.

Appendix 3 B: Probit regression for Heckman correction

Variable	Africa		South Africa		Others	
	Coef.	t-Stat.	Coef.	t-Stat.	Coef.	t-Stat.
Constant	0.6567	[2.98]**	0.2895	[7.75]***	0.7683	[17.64]***
LOG(Sales)	0.0157	[1.18]	0.0518	[1.20]	0.0024	[1.16]
Market-to-book value	0.0002	[0.92]	0.0003	[0.53]	0.0002	[1.12]
Return on asset	0.0001	[0.66]	-0.0007	[-2.11]	0.0002	[1.28]
Board size	0.0082	[1.42]	-0.0155	[-1.50]	0.0163	[1.01]
Independent board of directors (%)	-0.0141	[-0.23]	-0.0096	[-0.74]	-0.0145	[-0.39]
Age of CEO	-0.0011	[-1.12]	-0.0004	[-0.69]	-0.0021	[-1.18]
Institutional ownership	0.0003	[1.15]	0.0004	[1.91]*	0.0002	[0.89]
Year fixed effect	Yes		Yes		Yes	
Firm fixed effect	Yes		Yes		Yes	
Adjusted R-squared	0.8176		0.9072		0.7756	
F-statistic	1217.60***		1268.58***		547.08***	
Observations	3528		1685		2054	

Note: This table shows the estimation results of probit regression for Heckman correction variable that corrects for selection bias. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.].. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 3C: Post-merger executive compensation changes for African acquirers

Variable	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	0.0700	[1.50]	0.0062	[0.15]	0.1420	[2.58]**	0.1418	[2.71]***
Sales	0.1300	[2.43]**	-0.1903	[-1.07]	0.0545	[2.19]**	0.0485	[2.09]**
Return on equity	-0.0003	[-0.39]	-0.0021	[-0.78]	0.0005	[0.67]	0.0007	[0.92]
Market-to-book	0.0002	[3.33]***	0.0121	[18.11]***	0.0019	[13.50]***	0.0019	[13.45]***
Relative deal size	0.1730	[1.75]*	0.6485	[1.94]*	0.0990	[1.79]*	0.0756	[0.60]
Market response	-0.0011	[-0.01]	0.8735	[1.36]	0.0104	[0.08]	0.0024	[0.02]
Private target	0.2120	[2.17]**	0.8534	[2.34]**	-0.1474	[-0.91]	-0.1423	[-0.86]
Mode of payment	-0.0548	[-0.38]	-0.3511	[-0.44]	0.0930	[0.51]	0.0717	[0.38]
D&I	0.0298	[0.28]	-0.1363	[-0.24]	-0.0159	[-0.11]	-0.0382	[-0.25]
Same industry	0.1810	[1.56]	-0.3972	[-0.58]	0.1314	[0.80]	0.1333	[0.81]
CEO gender	-6.9423	[-0.92]	7.8688	[0.28]	-0.5886	[-0.20]	-0.2627	[-1.24]
CEO's race	-16.0102	[-1.07]	15.9415	[0.33]	-0.3762	[-0.07]	0.2787	[0.88]
Board gender	-0.0038	[-0.54]	-0.0025	[-0.04]	0.0000	[0.00]	0.0001	[0.01]
Board size	-0.0504	[-1.26]	0.1227	[0.80]	-0.0149	[-0.62]	-0.0083	[-2.44]**
Outside directors	0.1554	[0.99]	0.9958	[2.50]**	-0.3023	[-1.66]*	0.3035	[1.75]
Age of CEO	0.4042	[0.89]	-0.3584	[-0.22]	0.0427	[0.25]	0.0078	[0.43]
Year effect								
Merger year	0.2765	[2.60]**	1.3072	[1.76]*	0.3174	[2.27]**	0.4420	[1.99]*
Year 1	-0.9417	[-1.07]	0.4189	[0.13]	-0.2124	[-0.63]	-0.0948	[-0.93]
Year 2	-1.3737	[-1.02]	-0.1291	[-0.03]	-0.4905	[-1.00]	-0.3414	[-3.48]***
Year 3	-1.7922	[-1.01]	0.6084	[0.10]	-0.5067	[-0.76]	-0.3509	[-3.29]***
Year dummies	Yes		Yes		Yes		Yes	
Sargan test (p-vale)	0.8572		0.2842		0.6625		0.6561	
Serial corr. (p-value)	0.8939		0.1758		0.7932		0.8097	
Observations	656		653		656		656	

Note: Estimation results of our total African sample with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. . Board gender is the board gender diversity, D&I is a dummy that takes 1 if the acquirer is diversified and has international operations else 0, OutD is the fraction of independent board members, Tbcom is total board compensation, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Appendix 3D: Post-merger executive compensation changes for South African acquirers

Variables	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	0.0392	[1.87]*	0.0842	[2.10]**	0.0336	[1.85]*	0.2084	[3.39]***
Sales	0.0472	[1.98]**	0.2039	[2.43]**	0.0593	[2.48]**	-0.0336	[-1.04]
Return on equity	0.0007	[1.29]	-0.0051	[-1.69]*	0.0011	[1.61]	0.0007	[0.96]
Market-to-book	0.0015	[0.91]	0.0007	[0.14]	0.0035	[2.21]**	0.0023	[2.32]**
Relative deal size	0.1638	[1.69]*	0.6619	[2.03]**	0.1655	10.91]*	-0.1715	[-1.05]
Market response	-0.0987	[-0.67]	1.9680	[2.89]***	0.0575	[0.31]	0.0441	[0.36]
Private target	0.0204	[0.21]	2.1289	[2.05]**	0.5628	[2.74]***	0.0331	[0.14]
Mode of payment	-0.1778	[-1.32]	-2.3507	[-2.22]**	-0.3017	[-1.59]	0.1449	[0.42]
D&I	-0.1443	[-1.22]	1.3371	[1.87]*	-0.0728	[-0.44]	-0.0037	[-0.02]
Same industry	0.2052	[1.66]*	-1.2079	[-1.65]*	0.1019	[0.60]	-0.1965	[-1.14]
CEO gender	-0.1639	[-0.54]	1.3004	[1.37]	-0.6392	[-2.29]**	-0.1599	[-0.58]
CEO's race	1.6399	[2.02]	-1.6031	[-1.36]	0.1421	[0.62]	-0.5563	[-1.07]
Board gender	-0.0077	[-1.08]	0.0016	[0.05]	-0.0062	[-0.44]	0.0028	[0.40]
Board size	-0.0111	[-0.49]	0.1014	[0.99]	-0.0223	[-1.11]	-0.0145	[-0.70]
Outside directors	0.0669	[0.55]	0.8786	[1.94]*	0.2318	[1.26]	0.1000	[0.88]
Age of CEO	0.0322	[0.28]	0.2474	[3.51]**	0.0524	[1.21]	-0.0818	[-1.20]
Year effect								
Merger year	0.4142	[2.22]**	1.1142	[1.56]	0.9070	[4.43]***	0.3999	[1.51]
Year 1	0.2847	[1.24]	0.6940	[3.26]***	0.3040	[2.64]**	0.0695	[0.53]
Year 2	-0.2900	[-0.81]	-1.5791	[-3.75]***	-0.3615	[-2.40]**	0.0254	[0.13]
Year 3	-0.3149	[-0.68]	-1.5193	[-3.86]***	-0.4021	[-2.16]**	0.2725	[1.04]
Year dummies	Yes		Yes		Yes		Yes	
Sargan test (p-vale)	0.2579		0.4507		0.4236		0.4996	
Serial corr. (p-value)	0.2433		0.2972		0.5889		0.8665	
Observations	308		305		308		308	

Note: Estimation results of our South African sample with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. . Board gender is the board gender diversity, D&I is a dummy that takes 1 if the acquirer is diversified and has international operations else 0, OutD is the fraction of independent board members, Tbcom is total board compensation, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Appendix 3E: Post-merger executive compensation changes for Other African acquirers

Variables	Cash		Equity		Total		Tbcom	
	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast	Coef.	t-stast
Lagged EC	0.1124	[2.43]**	0.0722	[1.45]	0.2651	[3.76]***	0.4661	[21.83]***
Sales	0.1095	[2.68]***	-0.1202	[-0.62]	0.0268	[1.58]	-0.0920	[-1.16]
Return on equity	-0.0033	[-1.79]*	-0.0075	[-1.92]*	0.0004	[0.18]	0.0006	[0.18]
Market-to-book	0.0002	[2.72]***	0.0122	[42.75]***	0.0018	[15.86]***	0.0010	[10.93]***
Relative deal size	0.5778	[3.34]***	0.5085	[1.72]*	0.2782	[2.44]**	-0.2741	[-1.05]
Market response	-0.0722	[-0.45]	0.2248	[0.29]	0.0567	[0.28]	-0.3128	[-1.14]
Private target	-0.2449	[-1.20]	-0.4674	[-0.93]	-0.2523	[-1.04]	0.1714	[0.61]
Mode of payment	0.0326	[0.18]	-1.1245	[-1.37]	0.3138	[1.17]	-0.1836	[-0.61]
D&I	-0.0384	[-0.23]	-0.9500	[-1.44]	-0.0159	[-0.07]	0.2659	[1.04]
Same industry	-0.0222	[-0.16]	0.9006	[1.41]	0.0249	[0.10]	0.4697	[1.91]
CEO gender	-0.2215	[-0.96]	0.9106	[0.93]	-0.2423	[-1.07]	-0.0904	[-0.40]
CEO's race	0.4371	[0.36]	4.8739	[0.83]	0.8148	[0.59]	0.0625	[0.03]
Board gender	-0.0120	[-0.56]	-0.0491	[-0.26]	-0.0014	[-0.07]	0.0761	[2.17]**
Board size	0.0290	[1.15]	0.0122	[0.15]	0.0048	[0.17]	-0.1562	[-2.67]***
Outside directors	0.0304	[0.16]	0.0908	[0.21]	0.3355	[1.37]	-0.0607	[-0.27]
Age of CEO	0.0071	[0.68]	-0.1248	[-0.76]	0.0116	[0.60]	-0.0758	[-0.66]
Year effect								
Merger year	0.2862	[2.04]**	0.3582	[2.37]**	0.3660	[2.20]**	0.4774	[1.56]
Year 1	-0.0975	[-1.21]	-0.4447	[-0.82]	0.0367	[0.24]	0.1232	[0.46]
Year 2	-0.2858	[-2.46]**	-1.1126	[-1.68]*	-0.3785	[-2.92]***	-0.2310	[-0.59]
Year 3	-0.2501	[-2.09]**	-1.1790	[-1.74]*	-0.4464	[-3.46]***	-0.0230	[-0.05]
Year dummies	Yes		Yes		Yes		Yes	
Sargan test (p-vale)	0.3010		0.1212		0.3285		0.1237	
Serial corr. (p-value)	0.8053		0.5792		0.2754		0.4318	
Observations	348		348		348		348	

Note: Estimation results of Other African sample with the elements in row 1 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. . Board gender is the board gender diversity, D&I is a dummy that takes 1 if the acquirer is diversified and has international operations else 0, OutD is the fraction of independent board members, Tbcom is total board compensation, *Coef* is the coefficient of the independent variables while *t-stat* is the respective t-statistics and *Serial corr* is the p-value of second-order serial correlation for each estimation.. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4A: Executive compensation, deal-specific factors and firm performance after M&A deals for Other African firms

OTHER AFRICA												
	CASH				EQUITY				TOTAL COMPENSATION			
Performance	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
Compensation	-0,2121	-0,7777	-3,3302	-9,4601	-0,0394	-0,0337	-0,5373	-1,0254	-0,1254	-0,7339	-3,2882	-7,1938
	[-1.72]*	[-2.37]**	[-2.07]**	[-1.72]*	[-1.69]*	[-0.52]	[-1.52]	[-0.88]	[-1.66]*	[-3.07]***	[-1.96]**	[-1.77]*
Compensation (-1)	-0,0279	-0,05866	-1,3660	-3,3810	-0,0328	0,0225	-0,4254	-0,6702	-0,0691	-0,5555	-1,0883	-3,3180
	[-0.37]	[-0.35]	[-1.12]	[-0.81]	[-1.49]	[0.37	[-1.27]	[-0.61]	[-1.17]	[-3.04]	[-1.22]	[-1.07]
Capital expenditure	0,2726	0,2488	-0,4479	-0,5261	0,0852	0,2922	-0,4109	-0,3421	0,0891	0,2635	-0,3645	-0,3135
	[1.77]*	[1.86]*	[-0.79]	[-0.27]	[2.11]**	[2.62]**	[-0.67]	[-0.17]	[2.32]**	[2.23]**	[-0.63]	[-0.16]
Firm Size	-0,1780	0,1506	-0,9090	-14,8229	-0,0980	-0,5078	-3,0297	-21,2876	-0,0218	0,2630	-2,5425	-16,0478
	[-1.22]	[0.33]	[-0.41]	[-1.96]**	[-0.75]	[-1.41]	[-1.73]*	[-3.26]***	[-0.15]	[0.58]	[-1.70]*	[-2.10]**
Sales growth	2.3E-5	1.5E-5	-3.1E-5	0,0001	2.2E-5	1.2E-5	-7.3E-5	0,0001	3.1E-5	1.5E-5	1.7E-5	0,0001
	[0.76]	[0.27]	[-0.09]	[0.27]	[0.20]	[0.54]	[-0.08]	[0.27]	[0.25]	[0.34]	[-0.03]	[0.29]
Annual stock volatility	0,0001	-0,0011	-0,0039	-0,0109	0,0005	-0,0007	-0,0004	-0,0060	3.2E-5	-0,0017	-0,0074	-0,0230
(ReV)	[0.08]	[-0.59]	[-0.41]	[-0.33]	[0.75]	[-0.37]	[-0.04]	[-0.18]	[0.06]	[-0.85]	[-0.74]	[-0.66]
Deal size												
Year 1	-0,2065	-0,7146	-1,6395	-4,8817	-0,1776	-0,5081	-0,5173	-1,0420	-0,2059	-0,8280	-1,1909	-3,6348
	[-1.87]*	[-1.97]**	[-0.92]	[-0.80]	[-1.50]	[-1.55]	[-0.29]	[-0.18]	[-1.74]*	[-2.27]**	[-0.67]	[-0.58]
Year 2	0,0378	-0,5342	-2,3203	-3,8353	0,0116	-0,1260	-1,1650	-0,0844	0,0326	-0,2705	-0,8720	0,2466
	[0.31]	[-1.44]	[-1.27]	[-0.61]	[0.10]	[-0.39]	[-0.66]	[-0.01]	[0.29]	[-0.78]	[-0.52]	[0.04]
Year 3	0,0043	-0,5793	-3,2863	-7,0428	0,0187	-0,4191	-1,0723	-0,8719	-0,0127	-0,4191	-3,6042	-3,2663
	[0.23]	[-1.36]	[-2.57]***	[-3.00]***	[0.02]	[-0.78]	[-0.54]	[-1.23]	[-0.10]	[-1.52]	[-1.99]**	[-2.43]**
Cross-border												
Year 1	0,0786	0,0562	-0,0909	-1,379	0,1023	0,2359	1,4632	2,7357	0,0494	0,1706	0,6048	0,5491
	[0.63]	[0.15]	[-0.05]	[-0.21]	[0.80]	[0.67]	[0.75]	[0.43]	[0.40]	[0.45]	[0.32]	[0.08]
Year 2	-0,0443	-0,2839	0,4531	1,1652	-0,0403	-0,0503	2,244	5,4557	-0,095	-0,0207	1,522	4,1563
	[-0.34]	[-0.74]	[0.24]	[0.18]	[-0.31]	[-0.14]	[1.15]	[0.84]	[-0.78]	[-0.06]	[0.83]	[0.65]
Year 3	-0,0208	-0,1602	-5,4239	-16,9484	-0,0247	0,1203	-3,6389	-12,3123	-0,0652	0,1081	-4,2583	-13,6799
	[-0.16]	[-0.41]	[-2.84]***	[-2.59]***	[-0.20]	[0.34]	[-1.90]*	[-1.94]*	[-0.54]	[0.29]	[-2.33]**	[-2.15]**
Mode of payment												
Year 1	-0,1771	-0,2066	0,0102	-2,2295	-0,1685	-0,179	0,4043	-0,7365	-0,1585	-0,0907	0,4607	-0,852
	[-1.20]	[-0.46]	[0..8]	[-0.30]	[-1.11]	[-0.43]	[0.18]	[-0.10]	[-1.08]	[-0.20]	[0.21]	[-0.11]
Year 2	-0,2377	0,2574	-0,5274	-6,4744	-0,0998	0,328	0,7991	-3,3767	-0,1329	0,5349	0,4312	-3,6267

	[-1.56]	[0.60]	[-0.25]	[-0.91]	[-0.68]	[0.81]	[0.36]	[-0.46]	[-0.95]	[1.23]	[0.20]	[-0.49]
Year 3	-0,0921	-0,1884	1,6181	1,2685	0,0367	-0,092	3,1336	4,8267	-0,0218	0,0192	2,2590	3,0738
	[-0.61]	[-0.43]	[0.77]	[0.18]	[0.25]	[-0.22]	[1.39]	[0.65]	[-0.16]	[0.04]	[1.07]	[0.42]
Listing (Public)												
Year 1	-0,0423	0,0192	1,6459	-1,8771	-0,0593	-0,0485	0,1516	-5,7631	-0,0454	-0,2954	0,2159	-6,2697
	[-0.31]	[0.05]	[0.82]	[-0.27]	[-0.42]	[-0.13]	[0.07]	[-0.82]	[-0.34]	[-0.71]	[0.11]	[-0.88]
Year 2	-0,1442	0,0435	2,5301	-4,4176	-0,1714	-0,1578	0,6334	-8,7127	-0,1345	-0,4281	0,9957	-8,8808
	[-1.02]	[0.11]	[1.26]	[-0.64]	[-1.21]	[-0.40]	[0.29]	[-1.22]	[-1.01]	[-1.04]	[0.50]	[-1.27]
Year 3	-0,0239	-0,1278	0,8521	-8,5525	-0,0772	-0,0892	-0,7516	-11,7718	0,0054	-0,3185	0,3067	-10,1873
	[-0.18]	[-0.33]	[0.45]	[-1.31]	[-0.53]	[-0.22]	[-0.34]	[-1.60]	[0.04]	[-0.79]	[0.16]	[-1.50]
Same industry												
Year 1	-0,1854	0,1045	-1,3657	-6,3427	-0,1934	0,1104	-1,0546	-5,6137	-0,1515	0,4353	-0,2423	-2,8172
	[-1.57]	[0.29]	[-0.78]	[-1.06]	[-1.59]	[0.33]	[-0.57]	[-0.92]	[-1.24]	[1.16]	[-0.13]	[-0.44]
Year 2	-0,5355	-0,6803	-2,0272	-12,9962	-0,4701	-0,8409	-0,3717	-8,8868	-0,4875	-0,1875	-0,5794	-8,9039
	[-4.16]***	[-1.79]*	[-1.90]*	[-2.04]**	[-3.78]***	[-1.91]*	[-0.20]	[-1.42]	[-4.07]	[-0.51]	[-0.32]	[-1.42]
Year 3	-0,5911	-0,9269	-2,9895	-19,9487	-0,518	-0,7217	-3,7916	-20,5705	-0,5513	-0,7000	-3,0557	-20,1529
	[-4.92]***	[-2.34]**	[-1.66]*	[-3.24]***	[-3.93]***	[-1.67]*	[-1.93]*	[-3.11]***	[-4.53]***	[-2.12]**	[-1.66]*	[-3.15]***
Year effect												
@ Year 1	-0,2125	0,1338	-1,9717	-2,9067	-0,2020	-0,1720	-2,0789	2,6425	0,2027	0,1309	-2,1175	2,3852
	[-1.37]	[0.29]	[-0.86]	[-0.37]	[-1.27]	[-0.39]	[-0.86]	[0.33]	[1.31]	[0.27]	[-0.91]	[0.29]
@ Year 2	-0,4747	-0,7326	-2,9384	-5,1686	-0,3628	-1,4607	-4,1011	-3,1742	0,3709	-0,2550	-4,4668	0,1760
	[-3.04]***	[-1.94]*	[-1.27]	[-0.65]	[-2.09]**	[-1.96]**	[-1.55]	[-0.36]	[2.19]**	[-0.49]	[-1.75]*	[0.02]
@ Year 3	-0,4166	-0,2273	1,1854	-17,8784	0,2988	0,5375	-0,0706	-16,1806	0,3171	-0,3538	-0,2917	-12,9853
	[-2.64]**	[-0.47]	[0.50]	[-2.19]**	[1.59]	[1.04]	[-0.02]	[-1.72]*	[1.76]*	[-0.64]	[-0.11]	[-1.83]*
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,2432	0,6523	0,6965	0,4981	0,3394	0,4582	0,8292	0,1492	0,3511	0,2482	0,225	0,1090
Serial corr (p-value)	0,4429	0,5335	0,3548	0,2148	0,1934	0,5578	0,1937	0,3651	0,8181	0,711	0,2741	0,4294

Note: Estimation results of Other African sample (87) with the elements in row 3 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively

Appendix 4 B: Executive compensation, deal-specific factors and firm performance after M&A deals for South African firms

SOUTH AFRICA																
	CASH				EQUITY				STOP				TOTAL COMPENSATION			
Performance	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
Compensation	0,0071	0,3335	0,2024	0,8239	-0,0197	-0,0082	-0,2768	-0,2721	0,0089	0,0934	0,0524	0,0353	0,4348	2,2889	10,1048	18,7921
	[0.08]	[1.26]	[0.08]	[0.17]	[-1.19]	[-0.15]	[-0.43]	[-0.21]	[0.21]	[0.32]	[0.05]	[0.02]	[1.28]	[1.33]	[1.16]	[1.09]
Compensation (-1)	-0,0309	-0,1886	-1,5024	-3,9912	-0,0167	0,0008	-0,1041	0,0296	-0,0086	0,0681	0,0628	0,1089	0,2912	-1,7055	-6,6179	-13,5711
	[-0.42]	[-0.89]	[-0.77]	[-1.03]	[-1.13]	[0.02]	[-0.17]	[0.02]	[-0.32]	[0.38]	[0.11]	[0.09]	[1.19]	[-1.37]	[-1.05]	[-1.09]
Capital	0,0709	0,4135	-0,0407	-0,3082	0,1006	0,1154	-5,5925	-11,3422	0,2669	-1,8877	-6,1671	-12,3882	0,7530	3,5721	-1,7788	-3,3618
	[1.94]*	[1.72]*	[-0.03]	[-0.11]	[2.04]**	[1.97]**	[-0.76]	[-0.76]	[0.65]	[-0.68	[-0.67]	[-0.67]	[1.74]*	[1.82]*	[-0.50]	[-0.48]
Firm Size	-0,0469	0,5156	1,5992	3,0633	-0,0458	0,0558	17,1598	34,0997	-0,6103	6,4499	19,2848	37,536	-0,0641	3,0287	8,1052	15,0168
	[-0.74]	[1.48]	[0.96]	[0.92]	[-0.79]	[0.90]	[0.79]	[0.77]	[-0.49]	[0.77]	[0.69]	[0.67]	[-0.14]	[1.31]	[0.69]	[0.65]
Sales growth	0,1000	0,6800	0,5229	0,5338	0,1193	0,1602	0,7398	1,9065	0,1425	0,3978	0,9532	2,1853	0,1219	4,2428	0,5392	1,2242
	[3.64]***	[2.21]**	[0.72]	[0.37]	[5.12]***	[1.99]*	[0.41]	[0.52]	[1.55]	[0.64]	[0.46]	[0.52]	[2.35]**	[1.93]*	[0.41]	[0.47]
Annual stock volatility (ReV)	-0,0001	-0,1590	-0,0044	0,0718	-0,0025	-0,0209	-0,0586	-0,0447	0,0021	-0,0431	-0,0599	-0,0552	-0,0036	-0,0127	0,0614	0,1662
	[-0.02]	[-1.66]*	[-0.05]	[0.41]	[-0.87]	[-2.16]**	[-0.45]	[-0.17]	[0.29]	[-0.9]	[-0.38]	[-0.17]	[-0.83]	[-0.58]	[0.55]	[0.76]
Deal size																
Year 1	0,016	0,008	-1,1111	-5,0044	0,0507	-0,0437	-7,188	-17,3785	0,2212	-2,2362	-7,6011	-18,0373	0,0536	-1,1887	-3,9474	-10,5773
	[0.14]	[0.02]	[-0.37]	[-0.84]	[0.51]	[-0.13]	[-0.81]	[-0.96]	[0.48]	[-0.72]	[-0.74]	[-0.87]	[0.24]	[-1.05]	[-0.69]	[-0.93]
Year 2	-0,1186	0,0982	0,3984	-3,3408	-0,1203	0,0543	-3,6998	-11,7037	0,0078	-1,3956	-3,9603	-12,4162	-0,1682	-0,3815	-0,0683	-4,8821
	[-1.03]	[0.30]	[0.13]	[-0.55]	[-1.16]	[0.16]	[-0.59]	[-0.91]	[0.02]	[-0.61]	[-0.52]	[-0.81]	[-1.03]	[-0.46]	[-0.02]	[-0.59]
Year 3	-0,1402	0,1996	-1,8699	-8,3841	-0,0313	0,2051	-5,531	-16,2568	0,0094	-1,4229	-6,1142	-16,9824	-0,2550	0,2016	-0,7338	-6,176
	[-1.28]	[0.63]	[-0.64]	[-1.46]	[-0.31]	[0.62]	[-0.85]	[-1.22]	[0.020]	[-0.54]	[-0.69]	[-0.96]	[-1.68]	[0.26]	[-0.19]	[-0.80]
Cross-border																
Year 1	-0,1001	0,1654	-0,5482	-0,4051	0,0775	0,1521	-3,0593	-6,6402	-0,0064	-0,9264	-3,8966	-7,2672	-0,2313	0,2638	1,5689	3,079
	[-0.70]	[0.40]	[-0.14]	[-0.05]	[0.60]	[0.35]	[-0.51	[-0.54	[-0.02]	[-0.49	[-0.62]	[-0.58]	[-1.20]	[0.27]	[0.32]	[0.31]
Year 2	-0,1942	0,5212	3,2363	5,4266	-0,013	0,4492	2,6792	1,974	-0,145	-0,2922	1,7951	1,4781	-0,4628	1,5209	8,7602	15,0459
	[-1.26]	[1.18]	[0.8]	[0.67]	[-0.10]	[0.99]	[0.50]	[0.18]	[-0.56]	[-0.17]	[0.31]	[0.13]	[-1.75]	[1.13]	[1.29]	[1.12]
Year 3	-0,2015	0,7139	-0,6997	-4,0331	0,055	0,7347	2,1414	-0,2274	-0,2819	1,3353	1,8863	0,2327	-0,3812	1,9925	3,5264	3,7015
	[-1.35]	[1.66]	[-0.18	[-0.51]	[0.38]	[1.53]	[0.30]	[-0.02]	[-0.93]	[0.65]	[0.28]	[0.02]	[-1.31]	[1.35]	[0.47]	[0.25]

Mode of payment																
Year 1	0,2492	0,0674	0,3234	0,2215	0,2149	0,8458	-5,8783	-9,7083	0,3755	-1,1805	-2,2587	-4,7608	0,2553	-0,2873	-0,7404	-1,4825
	[1.93]*	[0.16]	[0.08]	[0.03]	[2.14]**	[2.11]**	[-2.30]**	[-2.29]**	[0.88]	[-0.41]	[-0.23]	[-0.25]	[1.30]	[-0.29]	[-0.15]	[-0.15]
Year 2	0,0152	0,2929	-2,5715	-5,9972	-0,0587	0,2786	-4,4735	-8,8579	0,1173	-0,5467	-4,4776	-9,2074	0,0623	-0,0565	-4,0722	-8,1155
	[0.10]	[0.68]	[-0.65]	[-0.76]	[-0.44]	[0.63]	[-0.75]	[-0.73]	[0.34]	[-0.23]	[-0.57]	[-0.58]	[0.31]	[-0.06]	[-0.8]	[-0.80]
Year 3	0,0466	0,075	-2,1932	-6,1159	-0,0606	-0,0732	-7,1353	-15,9542	0,2574	-2,1037	-8,2874	-18,0187	-0,0693	-0,1719	-1,3474	-4,5647
	[0.33]	[0.18]	[-0.58]	[-0.82]	[-0.46]	[-0.17]	[-0.75]	[-0.82]	[0.49]	[-0.59]	[-0.71]	[-0.76]	[-0.34]	[-0.17]	[-0.26]	[-0.44]
Listing (Public)																
Year 1	0,2438	0,3568	-1,0006	-4,6515	0,0087	0,4216	-5,9108	-12,8444	0,4228	-1,4281	-6,2679	-14,4858	0,3816	-0,9165	-6,5324	-14,398
	[1.51]	[0.77]	[-0.23]	[-0.55]	[0.06]	[0.90]	[-0.79]	[-0.83]	[0.85]	[-0.42]	[-0.56]	[-0.64]	[1.37]	[-0.65]	[-0.91]	[-1.02]
Year 2	0,1532	0,6255	-1,8359	-5,1514	-0,0331	0,6019	-6,1173	-11,6597	0,3429	-1,0128	-6,2872	-12,9745	0,2711	-0,4578	-5,4674	-11,3616
	[0.95]	[1.35]	[-0.43]	[-0.61]	[-0.24]	[1.29]	[-0.82]	[-0.76]	[0.78]	[-0.34]	[-0.63]	[-0.65]	[1.10]	[-0.37]	[-0.86]	[-0.91]
Year 3	0,3176	0,275	-0,9796	-2,4754	0,0283	0,0992	-12,0365	-23,3507	0,6944	-3,6472	-13,0924	-25,9132	0,2629	-1,1277	-3,5725	-7,3615
	[2.10]**	[0.63]	[-0.25]	[-0.31]	[0.19]	[0.20]	[-0.77]	[-0.73]	[0.87]	[-0.67	[-0.73]	[-0.71]	[0.85]	[-0.72]	[-0.45]	[-0.47]
Same industry																
Year 1	-0,0224	-0,267	-3,9824	-6,1404	-0,0519	-0,2791	-9,133	-16,4191	0,1869	-2,4251	-10,6639	-18,9946	-0,0591	-0,9091	-5,5878	-8,9923
	[-0.2]	[-0.82]	[-1.33]	[-1.03]	[-0.49]	[-0.79]	[-1.09]	[-0.95]	[0.37]	[-0.71]	[-0.95]	[-0.84]	[-0.30]	[-0.91]	[-1.11]	[-0.9]
Year 2	--0,2810	-1,1041	-4,0478	-3,8901	0,0397	-1,1932	-7,3669	-10,9275	0,2020	-2,833	-8,6244	-12,8116	0,1011	-2,0816	-7,0154	-9,2236
	[-2.24]**	[-2.35]**	[-1.33]	[-0.65]	[0.35]	[-3.18]	[-0.96]	[-0.7]	[0.46]	[-0.95]	[-0.88]	[-0.65]	[0.45]	[-1.84]	[-1.23]	[-0.81]
Year 3	0,0582	-0,6437	-3,7579	-4,1505	0,0072	-0,6424	-8,2419	-12,7732	0,2282	-2,3624	-8,8792	-13,9809	0,2596	-2,3499	-10,373	-16,5487
	[0.50]	[-1.93]	[-1.22]	[-0.68]	[0.07]	[-1.82]	[-1.08]	[-0.82]	[0.50]	[-0.77]	[-0.88]	[-0.68]	[0.82]	[-1.46]	[-1.27]	[-1.03]
Year effect																
@ Year 1	0,0969	0,0200	2,0427	3,7732	0,0340	0,1649	11,4739	22,8722	0,5138	4,3941	13,3694	26,4223	0,0565	1,0016	1,7938	4,4430
	[0.61]	[0.04]	[0.49]	[0.46]	[0.23]	[0.34]	[0.79]	[0.77]	[0.55]	[0.69]	[0.63]	[0.62]	[0.19]	[0.67]	[0.24]	[0.30]
@ Year 2	0,0528	0,1806	-0,3031	-1,4783	0,021	0,5947	4,2395	9,5237	0,2300	3,3056	6,1267	12,4039	0,5149	1,098	9,0679	16,7897
	[0.30]	[0.35]	[-0.06]	[-0.16]	[0.13]	[1.08]	[0.40]	[0.44]	[0.32]	[0.67]	[0.37]	[0.38]	[1.55]	[-0.65]	[1.06]	[0.99]
@ Year 3	-0,0830	-0,1721	2,462	5,9581	0,1102	0,2303	12,5663	28,4455	-0,5359	4,8783	15,0173	31,9592	0,4151	-0,8635	-4,2509	5,7237
	[-0.45]	[-0.32]	[0.51]	[0.62]	[0.69]	[0.43]	[0.76]	[0.84]	[-0.48]	[0.65]	[0.61]	[0.64]	[1.33]	[-0.54]	[-0.53]	[0.36]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,1544	0,2187	0,6332	0,7689	0,3945	0,8812	0,1298	0,1438	0,7496	0,6072	0,2365	0,2658	0,6332	0,3225	0,4352	0,5124
Serial corr (p-value)	0,5025	0,0533	0,2880	0,4002	0,4865	0,7594	0,3296	0,416	0,8033	0,7173	0,3095	0,4201	0,4962	0,4322	0,8839	0,9723

Note: Estimation results of South African sample (77) with the elements in row 3 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4 C: Executive compensation, firm-specific factors and firm performance after M&A deals for Other African firms

OTHER AFRICA												
	CASH				EQUITY				TOTAL COMPENSATION			
Performance	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
Compensation	-0,5621	-0,7529	-6,1486	-5,8302	-0,0387	-0,1375	-0,4111	-0,7374	-0,9379	-0,7129	-1,1815	-2,4317
	*[-2.58]***	*[-2.59]***	*[-1.74]**	*[-1.75]**	*[-1.66]**	*[-1.95]**	*[-1.24]*	*[-0.66]*	*[-2.38]***	*[-3.44]****	*[-1.16]*	*[-0.69]*
Compensation (-1)	-0,0532	-0,6014	-0,7572	-1,5712	-0,0325	0,0221	-0,3262	-0,4702	-0,0535	-0,5649	-0,3465	-0,0841
	[-0.70]	*[-2.66]****	*[-0.66]*	*[-0.40]*	*[-1.49]*	*[0.37]*	*[-1.09]*	*[-0.47]*	*[-1.07]*	*[-3.69]*	*[-0.46]*	*[-0.03]*
Capital expenditure	0,0612	0,2339	-0,5204	-0,5717	0,0627	0,2548	-0,449	-0,3796	0,0619	0,2428	-0,4456	-0,3401
	*[1.70]**	*[2.17]***	*[-0.96]*	*[-0.30]*	*[1.65]**	*[2.47]***	*[-0.94]*	*[-0.24]*	*[2.05]***	*[2.63]***	*[-0.98]*	*[-0.22]*
Firm Size	-0,018	0,224	-7,0862	-36,5356	0,0529	0,2675	-7,4903	-38,2754	0,0163	0,2419	-7,5213	-37,9706
	[-0.07]	*[0.28]*	*[-1.79]**	*[-2.66]****	*[0.19]*	*[0.36]*	*[-1.99]***	*[-3.03]****	*[0.07]*	*[0.34]*	*[-2.15]***	*[-3.12]****
Sales growth	3.4E-5	3.2E-5	5.1E-5	0,0001	4.1E-5	5.2E-5	1.1E-5	0,0001	2.2E-5	1.7E-5	1.9E-5	0,0001
	[0.18]	*[0.55]*	*[-0.02]*	*[0.19]*	*[0.03]*	*[0.55]*	*[-0.10]]*	*[0.19]*	*[0.24]*	*[0.79]*	*[0.02]*	*[0.27]*
Annual stock volatility (ReV)	0,0003	-0,0007	0,0036	0,0122	0,0006	-0,0003	0,0065	0,0157	0,0002	-0,0013	0,0017	0,0074
	[0.40]	*[-0.35]*	*[0.37]*	*[0.36]*	*[0.88]*	*[-0.17]*	*[0.73]*	*[0.53]*	*[0.29]*	*[-0.78]*	*[0.19]*	*[0.25]*
Foreign ownership effect												
Year 1	0,1249	0,0831	-1,2067	-4,2709	0,1251	0,0537	-1,2818	-4,4464	0,0973	-0,1183	-1,6824	-5,4179
	[1.04]	*[0.23]*	*[-0.67]*	*[-0.68]*	*[1.00]*	*[0.16]*	*[-0.69]*	*[-0.71]*	*[0.82]*	*[-0.33]*	*[-0.94]*	*[-0.87]*
Year 2	0,1442	-0,42	-1,711	-3,4861	0,1749	-0,3082	-1,218	-2,3253	0,0916	-0,8086	-2,1559	-4,1183
	[1.24]	*[-1.20]*	*[-0.97]*	*[-0.57]*	*[1.42]*	*[-0.92]*	*[-0.47]*	*[-0.27]*	*[0.55]*	*[-1.58]*	*[-0.86]*	*[-0.47]*
Year 3	-0,0923	-0,2799	-3,8213	-14,5548	-0,0119	-0,1942	-2,8005	-12,518	-0,1206	-0,4815	-3,921	-14,4114
	[-0.80]	*[-0.79]*	*[-2.18]***	*[-2.40]***	*[-0.09]*	*[-0.54]*	*[-0.88]*	*[-1.18]*	*[-0.61]*	*[-0.79]*	*[-1.31]*	*[-1.39]*
D&I												
Year 1	-0,0036	0,5915	2,9337	7,9467	-0,0077	0,4834	2,6428	7,0587	-0,0023	0,5125	2,8143	7,6469
	[-0.03]	*[1.62]*	*[1.60]*	*[1.25]*	*[-0.06]*	*[1.42]*	*[1.43]*	*[1.14]*	*[-0.02]*	*[1.43]*	*[1.60]*	*[1.25]*
Year 2	-0,0736	0,467	3,1266	5,0377	-0,1638	0,2116	1,8113	2,1697	-0,0573	0,5166	2,9421	4,2079
	[-0.61]	*[1.30]*	*[1.72]*	*[0.80]*	*[-1.27]*	*[0.60]*	*[0.71]*	*[0.25]*	*[-0.36]*	*[1.07]*	*[1.24]*	*[0.51]*
Year 3	-0,115	0,605	6,5618	17,4081	-0,2032	0,376	5,454	15,2968	-0,0988	0,6753	6,5149	16,989

	[-0.98]	*[1.71]**	*[3.71]****	*[2.85]****	*[-1.62]*	*[1.09]*	*[1.80]**	*[1.50]*	*[-0.52]*	*[1.16]*	*[2.28]***	*[1.71]**
Financial												
Year 1	0,1389	0,0123	2,8349	5,9378	0,1158	0,1179	2,7586	6,0444	0,1394	0,0434	3,0061	6,4651
	[1.22]	*[0.04]*	*[1.65]*	*[1.00]*	*[0.97]*	*[0.36]*	*[1.56]*	*[1.02]*	*[1.25]*	*[0.13]*	*[1.79]*	*[1.11]*
Year 2	-0,0532	-0,7282	2,3331	3,1385	0,0018	-0,5833	3,2132	5,1498	-0,0499	-0,6352	2,6468	4,0575
	[-0.46]	*[-2.11]*	*[1.34]*	*[0.52]*	*[0.02]*	*[-1.80]*	*[1.31]*	*[0.63]*	*[-0.32]*	*[-1.35]*	*[1.14]*	*[0.50]*
Year 3	-0,0018	-0,2396	2,8774	8,4411	0,0645	-0,1167	3,5412	9,5099	-0,0038	-0,2594	2,8899	8,5674
	[-0.02]	*[-0.72]*	*[1.37]*	*[1.47]*	*[0.54]*	*[-0.36]*	*[1.20]*	*[0.96]*	*[-0.02]*	*[-0.46]*	*[1.04]*	*[0.88]*
Year effect												
@ Year 1	-0,1359	-0,5769	-4,7201	-11,5541	-0,1344	-0,2288	-3,8559	-8,9631	-0,1383	-0,3895	-4,0489	-9,5796
	[-1.06]	*[-1.5]*	*[-2.43]***	*[-1.72]**	*[-1.06]*	*[-0.66]*	*[-2.02]***	*[-1.40]*	*[-1.14]*	*[-1.05]*	*[-2.22]***	*[-1.51]*
@ Year 2	-0,0793	-0,3571	-5,1636	-11,9099	-0,1087	0,4592	-4,5768	-9,6087	-0,0984	-0,291	-4,5045	-9,5812
	[-0.53]	*[-0.80]*	*[-2.29]***	*[-1.93]**	*[-0.74]*	*[1.15]*	*[-1.67]**	*[-1.00]*	*[-0.55]*	*[-0.54]*	*[-1.69]**	*[-1.03]*
@ Year 3	0,1079	-0,6229	-8,0852	-21,9706	0,0254	0,2224	-8,1032	-20,7441	0,0704	-0,7436	-7,634	-19,9785
	[0.74]	*[-1.42]*	*[-3.67]****	*[-2.88]****	*[0.16]*	*[0.52]*	*[-2.34]***	*[-1.78]**	*[0.33]*	*[-1.14]*	*[-2.37]***	*[-1.78]**
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,3871	0,3700	0,7470	0,6243	0,2950	0,9682	0,3851	0,3255	0,1677	0,1899	0,1618	0,1088
Serial corr (p-value)	0,4121	0,3500	0,2022	0,2771	0,5920	0,7594	0,8470	0,4530	0,7223	0,1320	0,1578	0,4235

Note: Estimation results of Other African sample (87) with the elements in row 3 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A.. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4 D: Executive compensation, firm-specific factors and firm performance after M&A deals for South African firms

SOUTH AFRICA																
	CASH				EQUITY				STOP				TOTAL COMPENSATION			
Performance	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
EC	0,0125	0,3109	0,6198	0,4021	0,0194	0,0253	0,5552	0,8165	0,0141	0,0505	0,411	0,8085	0,2533	0,2928	6,554	10,9164
	[0.14]	[1.19]	[0.27]	[0.09]	[1.28]	[0.52]	[1.21]	[0.88]	[0.90]	[1.11]	[0.93]	[0.91]	[1.47]	[0.65]	[1.39]	[1.18]
EC(-1)	-0,0438	-0,1379	-1,0293	-3,0872	-0,0139	0,0125	-0,3947	-0,5355	0,0047	-0,0244	-0,2231	-0,4861	0,1656	-0,2935	-4,2959	-8,6013
	[-0.61]	[-0.65]	[-0.56]	[-0.83]	[-1.03]	[0.29]	[-0.96]	[-0.65]	[0.50]	[-0.88]	[-0.82]	[-0.90]	[1.44]	[-0.98]	[-1.36]	[-1.39]
Capex	0,2643	0,3732	-1,2549	-2,5202	0,3683	0,4507	-1,7236	-3,3258	0,0071	0,2233	-1,6875	-3,4773	0,3154	0,2787	-1,0024	-1,943
	[2.20]**	[2.09]**	[-0.84]	[-0.84]	[1.74]*	[2.58]**	[-1.14]	[-1.09]	[0.13]	[1.41]	[-1.09]	[-1.13]	[2.26]**	[1.79]*	[-0.61]	[-0.61]
Size	-0,0417	0,5168	3,2008	4,8275	0,1706	0,0483	3,4685	5,3109	0,1547	0,0523	3,3651	5,1895	0,1387	0,0886	3,7523	6,0476
	[-0.68]	[2.83]***	[2.58]***	[1.94]*	[4.14]***	[0.37]	[2.78]***	[2.11]**	[3.45]***	[0.40]	[2.64]**	[2.03]**	[2.68]***	[0.65]	[2.64]**	[2.18]**
Sale growth	0,1000	0,3602	-0,029	0,4242	0,1131	0,1343	0,091	0,6254	0,1004	0,1101	0,1705	0,7358	0,1072	0,4172	0,3778	0,9564
	[3.72]***	[2.45]**	[-0.04]	[0.30]	[4.99***]	[1.74]*	[0.13]	[0.45]	[4.16]***	[1.14]	[0.25]	[0.54]	[3.78]**	[2.23]**	[0.49]	[0.63]
ReV	-0,0001	-0,0174	0,0212	0,1356	-0,0042	-0,0159	0,0322	0,1542	-0,0021	-0,0125	0,0419	0,1647	-0,0032	-0,0135	0,0773	0,2041
	[-0.04]	[-1.84]*	[0.25]	[0.80]	[-1.45]	[-1.73]*	[0.37]	[0.88]	[-0.69]	[-1.44]	[0.49]	[0.97]	[-0.91]	[-1.46]	[0.8]	[1.08]
Foreign ownership																
Year 1	-0,0036	-0,0733	4,0918	10,4243	0,0542	-0,16	4,2426	10,6155	-0,0319	-0,1224	4,3754	11,288	-0,0662	-0,1172	5,176	12,3143
	[-0.03]	[-0.23]	[1.52]	[1.93]*	[0.60]	[-0.55]	[1.54]	[1.92]*	[-0.32]	[-0.43]	[1.56]	[2.01]**	[-0.58]	[-0.39]	[1.66]*	[2.02]**
Year 2	0,0534	0,0647	6,2237	17,0283	0,0771	0,0483	6,3453	17,3501	0,0292	0,034	6,5855	18,2061	0,0682	0,0082	5,4827	16,2534
	[0.51]	[0.21]	[2.31]	[3.15]***	[0.86]	[0.17]	[2.33]**	[3.17]***	[0.29]	[0.12]	[2.34]	[3.24]***	[0.61]	[0.03]	[1.79]*	[2.72]***
Year 3	0,1692	-0,1019	4,6885	13,7034	0,1314	-0,0761	3,7284	12,4806	0,1121	-0,0877	4,9527	14,4633	0,1771	-0,2185	3,3952	11,1428
	[1.62]	[-0.33]	[1.73]*	[2.51]**	[1.38]	[-0.25]	[1.29]	[2.15]**	[1.11]	[-0.30]	[1.73]*	[2.52]**	[1.52]	[-0.72]	[1.06]	[1.78]*
D&I																
Year 1	0,065	0,295	-1,6256	-3,9797	-0,0403	0,2549	-1,9893	-4,3638	0,0343	0,3667	-1,7305	-4,0132	0,0798	0,2646	-3,0661	-6,4543
	[0.52]	[0.80]	[-0.51]	[-0.62]	[-0.39]	[0.78]	[-0.64]	[-0.70]	[0.30]	[1.11]	[-0.54]	[-0.62]	[0.63]	[0.80]	[-0.88]	[-0.95]
Year 2	0,0131	0,3775	0,3182	-0,0774	-0,0414	0,2222	1,843	2,8056	-0,0092	0,4157	1,3182	2,1364	-0,0482	0,3616	2,1319	2,9327
	[0.11]	[1.06]	[0.10]	[-0.01]	[-0.38]	[0.64]	[0.56]	[0.42]	[-0.08]	[1.23]	[0.40]	[0.33]	[-0.37]	[1.06]	[0.60]	[0.42]
Year 3	0,1306	0,3757	-1,2755	-2,3194	-0,0486	0,2987	-1,5014	-2,9834	0,0806	0,2962	-1,579	-3,2137	-0,0079	0,4214	0,5611	0,6401

	[1.10]	[1.07]	[-0.41]	[-0.37]	[-0.47]	[0.90]	[-0.48]	[-0.479]	[0.72]	[0.90]	[-0.49]	[-0.50]	[-0.06]	[1.20]	[0.15]	[0.09]
Financial industry effect																
Year 1	-0,0567	-0,3188	4,8005	10,709	0,056	-0,1666	5,7001	12,1022	-0,0415	-0,1218	5,0291	11,3533	-0,0291	-0,1471	4,6494	10,6179
	[-0.50]	[-0.95]	[1.67]	[1.86]	[0.57]	[-0.53]	[1.90]*	[2.00]**	[-0.40]	[-0.40]	[1.68]*	[1.90]*	[-0.25]	[-0.48]	[1.45]	[1.69]*
Year 2	-0,1501	-0,7088	4,2872	7,7479	-0,0152	-0,6302	6,2140	10,5822	-0,141	-0,5691	4,8731	9,0674	-0,2278	-0,488	7,011	12,2213
	[-1.28]	[-2.04]**	[1.43]	[1.29]	[-0.14]	[-1.80]*	[1.87]*	[1.85]*	[-1.29]	[-1.79]*	[1.57]	[1.46]	[-1.61]	[-1.32]	[1.80]*	[1.61]
Year 3	-0,2493	-0,3375	3,5906	6,8269	-0,1362	-0,2977	4,3678	7,7016	-0,2518	-0,2108	4,1247	7,7671	-0,3363	-0,4087	6,2615	11,7458
	[-2.19]**	[-1.00]	[1.23]	[1.16]	[-1.37]	[-0.94]	[1.45]	[1.27]	[-2.37]**	[-0.68]	[1.36]	[1.28]	[-2.44]**	[-2.30]**	[1.66]*	[1.59]
Year effect																
@ Year 1	0,0159	0,1942	-5,8737	-14,7101	0,0161	0,3141	-7,123	-17,0209	0,0614	0,0658	-7,5612	-18,2811	0,1062	0,1964	-8,5413	-18,3761
	[0.13]	[0.52]	[-1.81]*	[-2.26]**	[0.14]	[0.88]	[-2.09]**	[-2.48]**	[0.48]	[0.18]	[-2.09]**	[-2.53]**	[0.69]	[0.49]	[-2.03]**	[-2.24]**
@ Year 2	0,0294	0,464	-8,3779	-20,701	0,1005	0,7304	11,9335	26,0108	0,0317	0,3576	-10,9658	-25,8687	0,2351	0,2752	-15,7541	-32,7428
	[0.21]	[1.10]	[-2.28]**	[-2.81]***	[0.70]	[1.59]	[2.73]***	[2.64]**	[0.22]	[0.83]	[-2.61]**	[-3.08]***	[0.98]	[0.44]	[-2.39]**	[-2.55]**
@ Year 3	0,151	0,2421	6,1301	16,6187	-0,0616	0,4179	7,7643	18,3351	-0,0089	0,1132	8,2261	20,1992	0,1965	0,0162	-3,2575	-8,047
	[1.02]	[0.55]	[1.66]*	[2.20]**	[-0.53]	[1.12]	[2.18]**	[2.56]**	[-0.06]	[0.28]	[2.06]**	[2.53]**	[0.87]	[0.03]	[-1.13]	[-1.30
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test	0,8245	0,1887	0,3105	0,1788	0,3562	0,1385	0,3354	0,3941	0,5712	0,1798	0,4936	0,7532	0,5765	0,1498	0,4111	0,6496
Serial corr	0,5291	0,0528	0,2579	0,3734	0,7887	0,0635	0,3557	0,4138	0,3492	0,0568	0,3123	0,4307	0,9665	0,0183	0,5556	0,5785

Note: Estimation results of Other African sample (77) with the elements in row 3 as dependent variables and those in column 1 as independent variables. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4 E: Executive compensation, corporate governance factors and firm performance after M&A deals for Other African firms

OTHER AFRICA												
	CASH				EQUITY				TOTAL COMPENSATION			
Perf	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
Compensation	-0,1740	-0,5489	-3,6691	-13,5908	-0,0407	0,0237	-0,6079	-1,7326	-0,0769	-0,7076	-1,402	-2,5197
	[-2.20]**	[-2.11]**	[-2.74]***	[-2.87]***	[-1.92]*	[0.41]	[-1.86]*	[-1.52]	[-0.56]	[-1.10]	[-0.88]	[-0.4]
Compensation (-1)	-0,0404	-0,4892	-1,8083	-6,6013	-0,0365	0,017	-0,5462	-1,4379	-0,0473	-0,5632	-0,6434	-0,423
	[-0.63]	[-2.56]***	[-1.84]*	[-1.90]*	[-1.88]*	[0.32]	[-1.82]*	[-1.37]	[-0.42]	[-1.07]	[-0.52]	[-0.09]]
Capital expenditure	0,0831	0,2808	-0,4384	-0,3064	0,0801	0,3098	-0,3679	-0,0007	0,0924	1,2941	-0,1161	0,9284
	[2.47]**	[2.80]***	[-0.85]	[-0.17]	[2.22]**	[3.13]***	[-0.66]	[-0.11]	[1.89]*	[1.73]*	[-0.23]	[0.59]
Firm Size	-0,1491	-0,3731	-0,4727	3,0197	-0,1392	-0,2114	-0,2801	3,7039	-0,0839	0,2976	-8,501	-43,0172
	[-1.17]	[-0.98]	[-0.24]	[0.44]	[-1.00]	[-0.55]	[-0.13]	[0.50]	[-0.45]	[0.38]	[-1.16]	[-1.49]
Sales growth	3.1E-3	4.2E-5	-3.1E-5	-0,0003	1.5E-5	5.5E-5	5.1E-5	-0,0003	5.2E-5	3.7E-5	0,0001	0,0003
	[0.79]	[0.92]	[-0.11]	[-0.57]	[0.81]	[0.77	[-0.02]	[-0.48]	[1.01]	[1.25]	[0.71]	[0.99]
Annual stock volatility (ReV)	0.0040	-0,0017	-0,0018	-0,0051	0,0004	-0,0012	0,0037	0,0106	0,0001	-0,0021	-0,0012	0,0003
	[0.07]	[-1.07]	[-0.22]	[-0.18]	[0.73]	[-0.79]	[0.41]	[0.34]	[0.20]	[-1.31]	[-0.22]	[0.01]
BOSIZE	-0,0271	0,0374	-0,5127	-0,889	-0,0371	0,0251	-0,83	-1,8749	-0,028	0,0035	-0,6166	-1,1672
	[-1.34]	[0.62]	[-1.67]	[-0.81]	[-1.71]	[0.42]	[-2.48]	[-1.60]	[-1.79]	[0.07]	[-2.92]	[-1.99]
OUTD	0,0034	-0,0158	0,0561	0,1709	0,0036	-0,0253	-0,0118	-0,0736	0,0046	-0,0244	0,1479	0,706
	[0.19]	[-0.30]	[0.21]	[0.18]	[0.20]	[-0.50]	[-0.04]	[-0.07]	[1.11]	[-1.64]	[1.34]	[1.55]
INSOWN	-0,0003	0,0021	0,0148	0,0926	0,0002	0,0014	0,0221	0,1133	-0,0002	0,0046	0,0198	0,1052
	[-0.17]	[0.41]	[0.57]	[1.00]	[0.12]	[0.29]	[0.80]	[1.18]	[-0.09]	[0.70]	[0.76]	[1.09]
BOOWN	0,0063	-0,0083	-0,0703	-0,34	0,0081	-0,0106	-0,0447	-0,273	0,0048	-0,0167	-0,073	-0,2878
	[0.90]	[-0.40]	[-0.66]	[-0.90]	[1.11]	[-0.53]	[-0.40]	[-0.69]	[0.95]	[-1.27]	[-1.09]	[-1.24]
EXOWN	0,0219	0,0478	-0,0893	-0,3553	0,0204	0,5121	0,1178	0,4831	0,0164	0,1970	0,1596	0,9111
	[2.29]**	[1.67]*	[-0.61]	[-0.69]	[2.08]**	[2.88]***	[1.78]*	[1.91]*	[3.00]***	[21.09]**	[1.95]*	[1.87]*
BOGEN	-0,0117	-0,0291	0,0869	0,959	-0,0186	-0,0597	-0,0994	0,3556	-0,0104	-0,0014	-0,1404	-0,3377
	[-0.37]	[-0.31]	[0.18]	[0.56]	[-0.58	[-0.67]	[-0.20]	[0.20]	[-0.60]	[-0.02]	[-0.32]	[-0.26]
AGEC	-0,0299	0,0361	-0,3606	-1,6157	-0,027	0,0405	-0,2722	-1,2821	-0,0244	0,0464	-0,1083	-0,5668

	[-0.94]	[0.38]	[-0.74]	[-0.94]	[-0.81]	[0.44]	[-0.53]	[-0.72]	[-0.73]	[1.02]	[-0.40]	[-1.02]
RACEC	-0,4212	0,9641	7,2532	4,6182	-0,4913	0,6995	4,6892	-3,4547	-0,8396	-0,4866	3,1246	1,6988
	[-0.56]	[0.43]	[0.63]	[0.11]	[-0.62]	[0.32]	[0.38]	[-0.08]	[-2.99]	[-0.67]	[0.72]	[0.20]
SEXC	-0,1788	-0,5287	1,1011	11,8713	-0,2469	-0,6468	-1,1104	4,7929	-0,2682	-0,7757	-2,7321	-3,4242
	[-0.38]	[-0.38]	[0.15]	[0.46]	[-0.50]	[-0.48]	[-0.15]	[0.18]	[-1.00]	[-1.13]	[-0.63]	[-0.40]
Year effect												
@ Year 1	-0,0135	-0,2081	-2,4378	-5,1997	-0,0579	0,0085	-1,6712	-1,9137	-0,0357	-0,2104	-2,7102	-7,2703
	[-0.20]	[-1.01]	[-2.31]**	[-1.39]	[-0.80]	[0.04]	[-1.50]	[-0.49]	[-0.5]	[-1.07]	[-2.21]	[-1.52]
@ Year 2	0,0018	-0,6900	-3,236	-7,9686	-0,0985	-0,0922	-2,3672	-3,1927	-0,054	-0,9124	-3,7903	-10,1243
	[0.02]	[-1.98]*	[-1.81]*	[-1.26]	[-0.81]	[-0.28]	[-1.26]	[-0.49]	[-0.25]	[-1.10]	[-1.86]	[-1.26]
@ Year 3	0,0108	-0,6567	-5,438	-17,1122	-0,0969	-0,0499	-4,887	-13,308	-0,0476	-0,9818	-6,1197	-19,3706
	[0.08]	[-1.58]	[-2.54]**	[-2.25]**	[-0.65]	[-0.12]	[-2.12]**	[-1.66]*	[-0.21]	[-1.21]	[-2.54]**	[-1.97]**
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sargan test (p-value)	0,2555	0,2378	0,6632	0,124	0,1599	0,2336	0,1838	0,7477	0,6785	0,6255	0,3006	0,2592
Serial corr (p-value)	0,2319	0,3998	0,6546	0,1475	0,1772	0,5221	0,2878	0,3958	0,1208	0,4322	0,6812	0,1198

Note: Estimation results of Other African sample (87) with the elements in row 3 as dependent variables and those in column 1 as independent variables. ReV is the annual volatility of stock returns, BOSIZE is size of board of directors, OUTD is the percentage of independent board of directors, INSOWN is the percentage value of institutional ownership, BOOWN is percentage value of board ownership, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board, AGEC is the age of the CEO, RACEC is the CEO's race and SEXC is CEO's gender. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4 F: Executive compensation, firm-specific factors and firm performance after M&A deals for South African firms

SOUTH AFRICA																
	CASH				EQUITY				STOP				TOTAL COMPENSATION			
Perf	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE	Q	TSR	ROA	ROE
EC	0,1808	0,3524	1,1117	3,1827	0,0155	0,0047	0,2607	0,2471	0,0041	0,0637	0,2928	0,6435	0,4608	2,4785	8,6802	16,4838
	[1.14]	[1.37]	[0.30]	[0.42]	[0.63]	[0.03]	[0.44]	[0.20]	[0.14]	[0.36]	[0.51]	[0.53]	[1.14]	[1.19]	[0.92]	[0.87]
EC(-1)	-0,1495	-0,1634	-2,2636	-5,4484	-0,0169	0,0383	-0,1211	0,011	-0,0057	0,0365	-0,1775	-0,4439	0,2916	-1,806	-6,4836	-13,6025
	[-1.10]	[-0.74]	[-0.95]	[-1.11]	[-0.78]	[0.27]	[-0.23]	[0.01]	[-0.32]	[0.33]	[-0.49]	[-0.6]	[1.03]	[-1.24]	[-0.99]	[-1.04]
Capex	0,0735	0,1363	-3,9378	-8,4401	0,2051	-1,6165	-5,2136	-11,217	0,2377	-1,6305	-4,4672	-9,3415	0,0632	-0,6069	-1,3109	-2,7542
	[0.73]	[0.84]	[-0.71]	[-0.73]	[0.66]	[-0.79]	[-0.69]	[-0.71]	[0.73]	[-0.81]	[-0.67]	[-0.69]	[0.41]	[-0.76]	[-0.36]	[-0.38]
Size	0,9842	0,5128	12,4674	25,006	0,4715	5,1776	15,6175	32,0583	-0,5222	5,395	13,3631	26,1603	-0,1506	3,2617	7,9444	15,2013
	[1.73]*	[2.82]**	[0.82]	[0.80]	[1.76]*	[0.93]	[0.76]	[0.75]	[-0.58]	[0.96]	[0.72]	[0.69]	[-0.29]	[1.23]	[0.67]	[0.64]
Sale growth	0,2641	0,5031	0,4649	1,2724	0,1577	0,6229	0,4785	1,3091	0,1314	0,2656	0,4478	1,0714	0,1295	3,2522	0,394	0,8463
	[2.20]**	[2..38]**	[0.30]	[0.40]	[2.36]**	[2.60]**	[0.29]	[0.39]	[1.96]**	[0.64]	[0.32]	[0.38]	[2.16]**	[1.81]*	[0.28]	[0.30]
ReV	0,0076	-0,0185	0,007	0,0802	-0,0019	-0,0378	-0,0255	0,0075	0,0017	-0,0398	-0,0042	0,0442	-0,0037	-0,0103	0,0734	0,1816
	[1.27]	[-1.90]*	[0.07]	[0.38]	[-0.39]	[-1.17]	[-0.21]	[0.03]	[0.28]	[-1.08]	[-0.03]	[0.18]	[-0.75]	[-0.41]	[0.65]	[0.80]
BOSIZE	0,5008	0,2980	0,6958	2,0013	0,8500	0,8473	0,8720	2,3628	0,0266	0,1786	0,7513	2,1375	0,3500	0,9900	0,3036	1,3097
	[1.82]*	[1.84]*	[1.49]	[1.37]	[3.22]***	[2.58]**	[1.93]*	[2.20]**	[0.58]	[0.63]	[0.8]	[1.12]	[1.82]*	[1.07]	[1.75]*	[1.36]
OUTD	1,0919	0,8146	1,946	10,8369	0,3996	2,3104	0,666	3,7399	0,3811	2,6999	1,0054	4,2298	0,2628	1,9132	3,1406	7,1112
	[2.45]**	[2.04]**	[2.14]**	[2.37]**	[3.95]***	[2.52]**	[2.04]**	[2.11]**	[1.94]*	[0.56]	[0.06]	[0.13]	[2.43]**	[2.68]***	[2.01]**	[2.25]**
INSOWN	0,002	0,0075	0,0323	0,0593	0,0411	0,1344	0,0475	0,0757	0,0017	0,0013	0,031	0,0526	0,2400	0,3755	0,0448	0,0727
	[0.57]	[1.29]	[0.44]	[0.39]	[2.11]**	[2.06]**	[0.57]	[0.43]	[0.50]	[0.06]	[0.43]	[0.36]	[1.74]*	[2.22]**	[0.59]	[0.48]
BOOWN	0,0554	0,004	0,0559	-0,0384	0,1000	0,1622	-0,1567	-0,5483	0,0237	-0,1635	0,0075	-0,1553	0,5600	0,0542	0,3367	0,52
	[2.12]**	[0.09]	[0.09]	[-0.03]	[2.27]**	[1.65]*	[-0.17]	[-0.29]	[0.64]	[-0.71]	[0.01]	[-0.1]	[2.26]**	[1.84]*	[0.67]	[0.52]
EXOWN	0,0444	0,1554	1,1965	2,2457	3,028	4,173	1,1048	1,0514	0,0328	0,1779	0,242	0,3821	1,0176	0,9797	1,4682	0,8660
	[1.67]*	[1.86]*	[1..82]*	[1.71]*	2.76]***	[2.72]***	[2.12]**	[1.73]*	[0.83]	[0.73]	[0.30]	[0.23]	[1.73]*	[1.69]*	[1.83]*	[1.77*]
BOGEN	0,0035	-0,0023	0,1867	0,2641	0,0078	-0,0644	0,0954	0,0487	0,0108	-0,0701	0,1483	0,1647	0,0022	-0,006	0,3108	0,5594
	[0.22]	[-0.09]	[0.60]	[0.41]	[0.49]	[-0.61]	[0.25]	[0.06]	[0.58]	[-0.61]	[0.39]	[0.21]	[0.18]	[-0.10]	[1.11]	[1.00]
AGEC	0,1634	0,0937	-1,1482	-1,5387	-0,0238	-0,079	-1,5108	-2,568	-0,0202	-0,0305	-1,5663	-2,7071	-0,0323	0,0089	-1,2127	-2,0465

	[1.10]	[0.39]	[-0.43]	[-0.28]	[-0.22]	[-0.11]	[-0.57]	[-0.46]	[-0.17]	[-0.04]	[-0.63]	[-0.53]	[-0.31]	[0.02]	[-0.50]	[-0.42]
RACEC	0,5779	-0,4492	23,5658	28,6715	0,2041	-3,809	12,1291	8,8611	0,574	-4,0308	23,1628	27,3782	0,1367	-0,8048	27,9124	37,4978
	[0.66]	[-0.32]	[1.46]	[0.86]	[0.20]	[-0.56]	[0.49]	[0.17]	[0.56]	[-0.64]	[1.11]	[0.64]	[0.21]	[-0.24]	[1.87]	[1.25]
SEXC	-0,4492	23,5658	28,6715	0,2041	-3,809	12,1291	8,8611	0,574	-4,0308	23,1628	27,3782	0,1367	-0,8048	27,9124	37,4978	1,2568
	[-0.32]	[1.46]	[0.86]	[0.20]	[-0.56]	[0.49]	[0.17]	[0.56]	[-0.64]	[1.11]	[0.64]	[0.21]	[-0.24]	[1.87]	[1.25]	[0.02]
Year effect																
@ Year 1	-0,1565	0,1427	-3,4233	-9,4755	0,1282	-0,0805	-3,5954	-9,2362	0,0874	0,0199	-3,4798	-8,9118	0,246	-0,7643	-5,6224	-12,0875
	[-0.74]	[0.42]	[-0.68]	[-0.91]	[0.76]	[-0.07]	[-0.88]	[-1.09]	[0.52]	[0.02]	[-1.01]	[-1.27]	[1.02]	[-0.62]	[-1.01]	[-1.08]
@ Year 2	-0,4028	0,2799	-3,2194	-10,1413	0,0549	0,0107	-2,8032	-7,5155	0,0679	0,0825	-2,324	-7,1654	0,4321	-1,9538	-8,6003	-18,744
	[-1.1]	[0.47]	[-0.40]	[-0.61]	[0.19]	[0.01]	[-0.41]	[-0.52]	[0.24]	[0.05]	[-0.39]	[-0.6]	[0.88]	[-0.77]	[-0.76]	[-0.82]
@ Year 3	-0,5069	0,0117	-0,7605	-2,8372	-0,0177	0,6886	0,1588	-1,5083	-0,0136	0,816	0,345	-2,2955	0,4242	-1,6753	-6,9405	1,5996
	[-1.02]	[0.01]	[-0.08]	[-0.31]	[-0.05]	[0.30]	[0.02]	[-0.09]	[-0.04]	[0.35]	[0.04]	[-0.15]	[0.86]	[-0.66]	[-0.61]	[-0.7]
Sargan test	0,1335	0,9923	0,3985	0,1689	0,9158	0,9332	0,9705	0,9115	0,7478	0,9005	0,9185	0,9252	0,9142	0,6452	0,9235	0,9223
Serial corr	0,4397	0,8098	0,2233	0,2846	0,8835	0,8718	0,2586	0,3045	0,6764	0,8022	0,2528	0,3307	0,4308	0,4338	0,5927	0,6577

Note: Estimation results of Other African sample (77) with the elements in row 3 as dependent variables and those in column 1 as independent variables. ReV is the annual volatility of stock returns, BOSIZE is size of board of directors, OUTD is the percentage of independent board of directors, INSOWN is the percentage value of institutional ownership, BOOWN is percentage value of board ownership, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board, AGEC is the age of the CEO, RACEC is the CEO's race and SEXC is CEO's gender. Definition and description of all variables in these estimations remain the same as outlined in Appendix 1A. For each independent variable, the t-statistics of the respective coefficient are captured in parenthesis [.] and *Serial corr* is the p-value of second-order serial correlation for each estimation. ***, ** and * are the significance levels at 1%, 5% and 10% respectively.

Appendix 4 G: Summary statistics for variable medians and difference in median

	Africa (164)			South Africa (77)		
	Before merger	After merger	Z Test for difference	Before merger	After merger	Z Test for difference
Compensation types						
Cash (000)	3,097.94	5,886.52	3.91***	3,955.00	6,970.25	2.95***
Equity (000)	1,408.70	4,713.17	4.78***	909.00	2,402.00	3.12***
STOP (000)	-	-	-	779.87	1,415.90	3.79***
Total (000)	5,989.50	11,243.60	4.40***	6,942.00	10,126.00	3.62***
Performance measures						
Q	1.26	1.14	1.04	1.30	1.17	0.66
TSR	0.16	0.09	0.33	0.20	0.12	0.24
ROA	6.84	3.90	3.29***	8.47	4.71	2.36**
ROE	19.55	15.35	2.87***	18.46	13.70	2.32**

Note: The table shows the avaerage median value of compensation types and risk measures immediately before and after merger for Africa and South Africa firms. All monetary figures are quoted in USD. The definition of all variables are explained in Appendices 1A. The test of statistical significant difference is the Wilcoxon rank-sum tests (Z). *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5A: Number of risk lags that are relevant

Variables	Total risk	Beta	BME	DCL
Risk(-1)	0.3154**	-0.2480***	0.8280**	-0.5308**
	[2.36]	[4.10]	[-1.93]	[-2.09]
Risk(-2)	-0.1048*	0.2174	0.0522**	-0.3619
	[-1.40]	[0.53]	[2.58]	[-1.19]
Risk(-3)	-0.0019	0.0221	0.0831	-0.3169
	[-0.04]	[1.62]	[0.72]	[-1.56]
Risk(-4)	-0.0099	-0.0625	0.0187	-0.2079
	-[0.22]	[0.61]	[-0.71]	[-1.95]
Market-to-book value	-0.0019	-0.0001	-0.0001	-0.0814**
	[-0.42]	[-0.80]	[-0.53]	[-1.99]
Log(capital expenditure)	0.0001	-2.5E-5	-1.4E-5	-0.0028
	[1.56]	[-0.42]	[-1.09]	[-1.21]
Log(firm size)	-0.4285	-0.1209	-0.0108*	16.8033*
	[-1.19]	[-0.37]	[-1.78]	[1.84]
Sales growth	-3.9232	0.3293	-0.3608	-82.2021*
	[-1.04]	[-1.09]	[0.22]	[-1.78]
R squared	0.2229	0.5002	0.6453	0.2207
F-statistics	13.80***	2.53**	87.50***	13.61***

Note: This table presents the result of panel OLS estimation of total risk measures on cash, equity and total compensation and control factors for 164 Africa firms. The model we estimate is:

$$Risk_{it} = \alpha + \sum_{j=1}^{5} \delta_j Risk_{it-j} + \sum_{p=1}^{m} \phi_p Controls_{it} + \gamma_i + \omega_{it}$$

where Risk is the total firm equity risk, controls are the control variables and m is the number of control variables included in the estimation. Details of all variables are presented in Appendix 1A. The t-statistic values are in []. . *, ** and *** denote significance at 10%, 5% and 1% respectively. Year dummies are included for all the specifications

Appendix 5 B: Effect of cash compensation on beta for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-0.9486	50.6748	52.3681
				[-2.04]**	[2.63]**	[2.36]**
Beta(-1)	-0.5303	-0.5271	-0.5255	-0.6478	-0.6506	-0.6500
	[-12.24]***	[-11.08]***	[-7.73]***	[-12.57]***	[-12.50]***	[-12.44]***
Beta(-2)	-0.0898	-0.0831	-0.0799	-0.2312	-0.2450	-0.2443
	[-2.0]**	[-1.98]**	[-1.88]*	[-4.91]***	[-5.03]***	[-4.99]***
Cash	-1.4781	-1.8195	-1.8912	-0.2121	-0.5246	-0.5075
	[-1.93]*	[2.50]**	[-1.92]*	[-0.30]	[-0.74]	[-0.71]
Cash(-1)	-0.0940	-1.1542	-1.2041	-0.2127	-0.6549	-0.6619
	[-1.97]**	[-1.84]*	[-1.73]*	[-0.30]	[-0.89]	[-0.90]
MTB	-0.0131	-0.0122	-0.0140	0.0009	0.0006	0.0006
	[-2.58]**	[-2.53]**	[-2.17]**	[0.14]	[0.10]	[0.10]
Capex	0.5743	0.4063	0.4000	0.3040	0.3067	0.3120
	[0.90]	[0.63]	[0.38]	[0.58]	[0.57]	[0.58]
Firm size	-1.6157	-2.3229	-2.3288	0.0599	-0.2264	-0.2286
	[-1.99]**	[-2.66]***	[-2.24]**	[0.08]	[-0.29]	[-0.30]
Sales growth	0.0000	-0.0001	-0.0001	1.8E-5	1.6E-5	1.9E-5
	[-0.30]	[-1.18]	[-0.27]	[0.14]	[0.24]	[0.24]
D&I	-0.7998		-1.4358	-1.3761		-0.2321
	[-2.53]**		[-2.59]**	[-1.09]		[-0.16]
Board Size		0.3744	0.3978		0.1102	0.1144
		[0.50]	[0.58]		[0.40]	[0.42]
OUTD		0.0472	0.1080		0.2566	0.2515
		[2.15]**	[2.01]**		[0.59]	[0.58]
INSOWNER		-0.0645	-0.0637		0.0662	0.0661
		[-0.60]	[-0.44]		[1.89]*	[1.88]*
EXOWNER		0.1746	0.2011		-0.1471	-0.1442
		[0.51]	[0.56]		[-0.88]	[-0.86]
BOGEN		0.0134	0.0018		0.0939	0.0936
		[0.07]	[0.00]		[0.52]	[0.52]
Age of CEO		-1.9606	-1.8687		-1.1301	-1.1656
		[-2.48]**	[-1.96]**		[-2.86]***	[-2.55]**
Gender of CEO		21.9129	20.8861		14.5786	15.0406
		[2.18]**	[2.59]**		[2.07]**	[1.96]**
Race of CEO		0.0314	0.0211		12.8559	13.2555
		[0.88]	[0.88]		[0.92]	[0.93]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.85***	1.84***	1.83***
Adjusted R^2				0.1819	0.1876	0.1859
Sargan test (p-value)	0.8664	0.7895	0.5842			
AR(2) test (p-value)	0.1898	0.5331	0.3186			

Note: This table presents the GMM and FE estimation of beta on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5 C: Effect of equity compensation on beta for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-0.9875	46.9677	48.7082
				[-2.15]**	[2.46]**	[2.19]**
Beta(-1)	-0.5224	-0.5232	-0.5221	-0.6471	-0.6494	-0.6487
	[-10.87]***	[-10.14]***	[-7.65]***	[-12.52]***	[-12.43]***	[-12.36]***
Beta(-2)	-0.0904	-0.0860	-0.0835	-0.2310	-0.2433	-0.2426
	[-2.16]**	[-1.70]*	[-1.24]	[-4.89]***	[-4.97]***	[-4.93]***
Equity	0.5822	0.6298	0.6286	-0.0013	-0.0770	-0.0757
	[1.97]**	[2.05]**	[2.46]**	[-0.01]	[-0.59]	[-0.58]
Equity(-1)	0.5183	0.5271	0.5277	0.0147	-0.0689	-0.0697
	[1.97]**	[1.99]**	[1.90]*	[0.11]	[-0.47]	[-0.48]
MTB	-0.0041	-0.0044	-0.0044	0.0008	0.0009	0.0009
	[-1.57]	[-1.60]	[-0.49]	[0.13]	[0.14]	[0.14]
Capex	0.6344	0.4779	0.4694	0.2910	0.2956	0.3000
	[0.96]	[0.71]	[0.44]	[0.56]	[0.55]	[0.55]
Firm size	-1.2923	-1.8465	-1.8310	0.0321	-0.3148	-0.3145
	[-2.64]**	[-2.34]**	[2.01]**	[0.04]	[-0.41]	[-0.41]
Sales growth	3.4E-5	2.9E-5	2.2E-5	2.1E-5	6.0E-5	7.4E-5
	[1.92]*	[1.86]*	[1.62]	[0.15]	[0.29]	[0.29]
D&I	-0.6655		-1.1420	-1.2457		-0.2284
	[-2.44]**		[-2.47]**	-[1.01]		[-0.15]
Board Size		0.1999	0.2155		0.1080	0.1123
		[2.27]**	[2.32]**		[0.39]	[0.41]
OUTD		0.0802	0.0505		0.2552	0.2501
		[2.29]**	[2.05]**		[0.58]	[0.57]
INSOWNER		-0.0710	-0.0701		0.0671	0.0669
		[-0.65]	[-0.48]		[1.90]*	[1.89]*
EXOWNER		0.1462	0.1676		-0.1459	-0.1430
		[0.41]	[0.46]		[-0.86]	[-0.84]
BOGEN		-0.1205	-0.1298		0.0822	0.0819
		[-0.60]	[-0.28]		[0.45]	[0.45]
Age of CEO		-1.8336	-1.7555		-1.0564	-1.0928
		[-2.30]**	[-2.58]**		[-2.69]***	[-2.38]**
Gender of CEO		19.3859	18.4995		13.4861	13.9553
		[1.96]**	[1.53]		[1.92]*	[1.82]*
Race of CEO		0.0231	0.0185		12.3659	12.7672
		[0.91]	[0.59]		[0.88]	[0.89]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.83***	1.82***	1.80***
Adjusted R sq				0.1800	0.1841	0.1824
Sargan test (p-value)	0.8331	0.2441	0.6310			
AR(2) test (p-value)	0.1399	0.5621	0.1714			

Note: This table presents the GMM and FE estimation of beta on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5 D: Effect of total compensation on beta for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				-0.9191	58.9610	60.8381
				[-1.98]**	[2.94]***	[2.65]***
Beta(-1)	-0.5341	-0.5335	-0.5324	-0.6473	-0.6499	-0.6492
	[-12.08]***	[-11.10]***	[-7.94]***	[-12.58]***	[-12.52]***	[-12.46]***
Beta(-2)	-0.0907	-0.0868	-0.0844	-0.2309	-0.2447	-0.2439
	[-2.09]**	[-1.66]*	[-1.76]*	[-4.91]***	[-5.04]***	[-4.99]***
TOCOM	1.1207	1.5757	1.5623	-0.3427	-0.8521	-0.8387
	[0.83]	[0.96]	[0.77]	[-0.57]	[-1.37]	[-1.34]
TOCOM(-1)	0.4536	0.7450	0.7495	-0.3447	-0.8804	-0.8900
	[0.50]	[0.67]	[0.51]	[-0.62]	[-1.47]	[-1.47]
MTB	-0.0017	-0.0021	-0.0021	0.0013	0.0014	0.0014
	[-0.69]	[-0.69]	[-0.24]	[0.201]	[0.23]	[0.22]
Capex	0.4793	0.2950	0.2868	0.3221	0.3262	0.3322
	[0.77]	[0.46]	[0.28]	[0.62]	[0.61]	[0.62]
Firm size	-1.3913	-2.0027	-1.9972	0.0538	-0.2767	-0.2782
	[-1.75]*	[-2.57]**	[-1.80]*	[0.07]	[-0.36]	[-0.37]
Sales growth	1.4E-5	0.0001	0.0001	2.1E-5	1.9E-5	2.3E-5
	[-0.16]	[-1.08]	[-0.23]	[0.14]	[0.26]	[0.26]
D&I	-0.5544		-1.1259	-1.4967		-0.2545
	[-2.37]**		[-2.47]**	[-1.18]		[-0.17]
Board Size		0.4244	0.4396		0.0679	0.0727
		[0.54]	[0.64]		[0.25]	[0.26]
OUTD		0.6982	0.5101		0.2465	0.2408
		[2.24]**	[1.74]*		[0.57]	[0.55]
INSOWNER		-0.0484	-0.0473		0.0675	0.0674
		[-0.46]	[-0.33]		[1.93]*	[1.92]*
EXOWNER		0.1676	0.1895		-0.1386	-0.1354
		[0.47]	[0.53]		[-0.83]	[-0.81]
BOGEN		-0.0503	-0.0584		0.1193	0.1191
		[-0.26]	[-0.13]		[0.66]	[0.66]
Age of CEO		-1.6494	-1.5790		-1.3058	-1.3451
		[-2.05]**	[-2.54]**		[-3.17]***	[-2.84]***
Gender of CEO		18.1016	17.3021		16.6309	17.1421
		[1.88]*	[1.75]*		[2.32]**	[2.20]**
Race of CEO		0.0960	0.0511		14.8684	15.3180
		[1.01]	[0.82]		[1.06]	[1.08]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				1.85***	1.86***	1.85***
Adjusted R sq				0.1826	0.1909	0.1892
Sargan test (p-value)	0.9958	0.8994	0.9921			
AR(2) test (p-value)	0.9740	0.1930	0.1427			

Note: This table presents the GMM and FE estimation of beta on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following Petersen (2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board. The definitions of all variables are explained in Appendices A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5 E: Effect of cash compensation on degree of combine leverage for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				45.0890	523.8746	956.3033
				[1.69]*	[0.50]	[0.79]
DCL(-1)	-1.1139	-1.0829	-1.0865	-1.7237	-1.6044	-1.6053
	[-8.13]***	[-7.55]***	[-7.94]***	[-38.43]***	[-35.09]***	[-35.08]***
DCL(-2)	-0.7180	-0.5791	-0.5834	-2.3684	-2.0591	-2.0595
	[-3.37]***	[-3.31]***	[-2.04]**	[-25.11]***	[-20.82]***	[-20.81]***
Cash	-150.5889	-8.5047	-20.4356	-80.6276	-77.4563	-73.0343
	[-0.76]	[-0.05]	[-0.13]	[-1.99]**	[-1.99]**	[-1.85]*
Cash(-1)	4.7446	109.6445	101.3618	34.8943	33.8372	31.9748
	[0.04]	[0.77]	[0.78]	[0.86]	[0.84]	[0.79]
MTB	0.0777	-0.1206	-0.0939	-0.0469	-0.0582	-0.0596
	[0.29]	[-0.46]	[-0.15]	[-0.13]	[-0.17]	[-0.17]
Capex	17.2584	38.8568	41.1209	31.0524	14.4073	15.6318
	[0.85]	[1.32]	[0.52]	[1.05]	[0.50]	[0.54]
Firm size	-14.5553	49.4126	48.4654	4.0266	0.3788	-0.0800
	[-0.36]	[0.76]	[0.34]	[0.09]	[0.01]	[-0.00]
Sales growth	0.0040	-0.0031	-0.0022	0.0013	0.0014	0.0013
	[1.51]	[-0.71]	[-0.11]	[0.14]	[0.16]	[0.15]
D&I	-1.2728		-2.6003	-2.8926		-5.4403
	[1.94]*		[-2.21]**	[-0.29]		[-0.72]
Board Size		-1.4303	-1.3524		25.2737	26.3698
		[-1.83]*	[-2.15]**		[1.75]*	[1.77]*
OUTD		0.3139	0.2579		6.2910	5.3637
		[2.04]**	[1.96]**		[0.28]	[0.23]
INSOWNER		7.5235	7.2961		0.6552	0.6423
		[1.33]	[0.67]		[0.35]	[0.34]
EXOWNER		-1.9634	-5.8539		3.9604	4.7374
		[-0.17]	[-0.21]		[0.44]	[0.52]
BOGEN		-2.7939	-5.8342		-2.0930	-2.2007
		[-0.84]	[-1.48]		[-2.70]***	[-2.71]***
Age of CEO		-78.1753	-91.2788		-13.2562	-22.3276
		[-0.71]	[-0.39]		[-0.62]	[-0.90]
Gender of CEO		1251.6230	1394.2310		286.0158	404.4848
		[0.86]	[0.50]		[0.75]	[0.97]
Race of CEO		0.1886	0.0996		387.1088	489.4583
		[0.28]	[0.51]		[0.51]	[0.64]
YD	Yes	Yes	Yes	Yes	Yes	Yes
F-value				9.96***	9.61***	9.55***
Adjusted R sq				0.7018	0.7021	0.7018
Sargan test (p-value)	0.9984	0.9001	0.9713			
AR(2) test (p-value)	0.2500	0.5334	0.5950			

Note: This table presents the GMM and FE estimation of DCL on cash compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following (Petersen, 2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board. The definitions of all variables are explained in Appendices A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5 F: Effect of equity compensation on degree of combine leverage for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				51.4086	385.0001	1150.9000
				[1.94]*	[0.37]	[0.94]
DCL(-1)	-1.0867	-1.0776	-1.0790	-1.7212	-1.5998	-1.6017
	[-8.85]***	[-8.00]***	[-8.19]***	[-38.28]***	[-34.90]***	[-34.94]***
DCL(-2)	-0.6381	-0.5654	-0.5634	-2.3558	-2.0414	-2.0436
	[-4.10]***	[-4.13]***	[-2.08]**	[-25.04]***	[-20.67]***	[-20.70]***
Equity	5.9048	20.2082	20.3425	-0.0930	-2.0921	-1.4993
	[0.23]	[0.72]	[0.62]	[-0.01]	[-0.30]	[-0.21]
Equity(-1)	-1.6108	8.6232	8.4154	-1.6026	-4.1140	-4.4474
	[-0.07]	[0.38]	[0.30]	[-0.20]	[-0.52]	[-0.56]
MTB	-0.1749	-0.3177	-0.3122	0.0246	0.0284	0.0118
	[-0.71]	[-1.10]	[-0.45]	[0.07]	[0.08]	[0.03]
Capex	31.6498	48.5483	51.9271	35.5734	18.1640	19.8276
	[1.46]	[1.52]	[0.64]	[1.20]	[0.62]	[0.68]
Firm size	-2.5014	17.6179	19.1045	-7.4959	-11.9769	-11.6386
	[-0.13]	[0.47]	[0.13]	[-0.18]	[-0.29]	[-0.28]
Sales growth	0.0034	-0.0020	-0.0011	0.0014	0.0016	0.0014
	[1.53]	[-0.44]	[-0.06]	[0.14]	[0.18]	[0.16]
D&I	-1.9805		-2.9765	-3.5674		-9.4266
	[-1.88]*		[-2.27]**	[-0.90]		[-1.23]
Board Size		1.7972	1.8063		24.2149	26.1565
		[1.83]*	[2.15]**		[1.61]	[1.73]*
OUTD		0.3632	0.6668		5.9593	4.3976
		[1.57]	[1.01]		[0.26]	[0.19]
INSOWNER		6.5292	6.2534		0.6691	0.6232
		[1.30]	[0.57]		[0.35]	[0.32]
EXOWNER		-6.1136	-10.5537		2.8287	4.2096
		[-0.69]	[-0.38]		[0.31]	[0.45]
BOGEN		-56.1656	-54.1248		-27.6353	-27.7953
		[-0.81]	[-1.54]		[-2.74]***	[-2.76]***
Age of CEO		-27.7546	-42.6908		-10.2786	-26.3005
		[-0.62]	[-0.18]		[-0.48]	[-1.04]
Gender of CEO		2.1458	6.1615		238.5965	445.9663
		[0.87]	[0.29]		[0.62]	[1.06]
Race of CEO		0.0888	0.1865		375.1850	552.2366
		[0.09]	[0.18]		[0.49]	[0.71]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				9.74***	9.39***	9.36***
Adjusted R sq				0.6976	0.6977	0.6980
Sargan test (p-value)	0.9963	0.9631	0.9810			
AR(2) test (p-value)	0.3564	0.2457	0.4880			

Note: This table present the GMM and FE estimation of DCL on equity compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following (Petersen, 2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.

Appendix 5 G: Effect of total compensation on degree of combine leverage for African firms

	GMM			Fixed effect		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
Constant				48.6305	736.8089	1289.7190
				[1.82]*	[0.67]	[1.03]
DCL(-1)	-1.1138	-1.0860	-1.0867	-1.7251	-1.6065	-1.6077
	[-8.54]***	[-7.95]***	[-8.15]***	[-38.43]***	[-35.05]***	[-35.06]***
DCL(-2)	-0.7174	-0.5922	-0.5890	-2.3689	-2.0605	-2.0613
	[-3.77]***	[-4.04]***	[-2.11]**	[-25.14]***	[-20.82]***	[-20.82]***
TOCOM	-19.7436	-59.8266	-56.6432	-63.3833	-57.1646	-53.2842
	[-1.36]	[-0.53]	[-0.36]	[-1.84]*	[-1.67]*	[-1.54]
TOCOM(-1)	-0.3136	-0.9826	-1.7256	11.7669	3.3263	0.5411
	[-0.93]	[-0.01]	[-0.02]	[0.37]	[0.10]	[0.02]
MTB	0.3985	0.1394	0.1379	0.1457	0.1163	0.1016
	[1.32]	[0.63]	[0.21]	[0.40]	[0.33]	[0.29]
Capex	28.7886	38.1693	41.3749	33.1196	16.4665	17.9992
	[1.45]	[1.47]	[0.53]	[1.12]	[0.57]	[0.62]
Firm size	-12.5535	24.9124	26.1618	0.1474	-4.9035	-5.1837
	[-0.50]	[0.60]	[0.18]	[0.00]	[-0.12]	[-0.13]
Sales growth	0.0039	-0.0022	-0.0015	0.0013	0.0014	0.0013
	[1.60]	[-0.52]	[-0.07]	[0.14]	[0.16]	[0.15]
D&I	-1.3052		-2.6180	-2.0493		-7.8347
	[-2.79]***		[-2.17]**	[-0.31]		[-0.91]
Board Size		-1.1066	-1.9700		22.8847	24.3457
		[-1.75]*	[-2.01]**		[1.53]	[1.62]
OUTD		-5.0383	-0.5107		5.6614	4.5069
		[-0.59]	[-0.01]		[0.25]	[0.20]
INSOWNER		6.8997	6.6321		0.7813	0.7555
		[1.28]	[0.62]		[0.41]	[0.40]
EXOWNER		-1.6547	-5.7793		3.8807	4.8945
		[-0.16]	[-0.21]		[0.43]	[0.54]
BOGEN		-47.8723	-46.1510		-26.3864	-26.4966
		[-0.73]	[-1.37]		[-2.61]**	[-2.62]**
Age of CEO		-42.1680	-54.8902		-17.6341	-29.2390
		[-0.70]	[-0.24]		[-0.78]	[-1.13]
Gender of CEO		829.3421	970.7654		338.9815	490.2973
		[0.93]	[0.36]		[0.87]	[1.15]
Race of CEO		0.1778	0.2001		414.9901	547.8510
		[0.07]	[0.08]		[0.54]	[0.70]
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
F-value				9.11***	9.88***	9.48***
Adjusted R sq				0.7122	0.6945	0.7000
Sargan test (p-value)	0.9011	0.9850	0.9934			
AR(2) test (p-value)	0.6314	0.2298	0.3790			

Note: This table present the GMM and FE estimation of DCL on total compensation and control factors. The GMM is estimated with cross-section difference and fixed period while the FE is estimated using robust firm-clustered standard errors approach, following (Petersen, 2009). D&I is the diversification and international operations, OUTD is the percentage of independent board of directors, EXOWNER is the value of executive ownership and BOGEN is the percentage of female on the board. The definitions of all variables are explained in Appendix 1A. The t-statistic values are in []. Sargan and AR(2) are the p-values of the Sargen and second-order serial correlation tests respectively. *, ** and *** denote significance at 10%, 5% and 1% respectively.