



School of Business

DETERMINANTS OF IFRS ADOPTION AND ACCOUNTING QUALITY OF GHANA
LISTED-FIRMS

Benjamin Yeboah

A thesis submitted in partial fulfillment of the requirements for the degree of
Doctor in Accounting

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(ISCTE-IUL)

June, 2017

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Resumo

Este estudo visa analisar até que ponto a decisão do Gana de adotar as International Financial Reporting Standards (IFRS) se enquadra nos determinantes da adoção das IFRS, como também verificar o efeito da adoção das IFRS na qualidade dos resultados das empresas do Ghana Stock Exchange (GSE), e analisar o efeito da adoção das IFRS nos rácios financeiros das empresas do Ghana Stock Exchange (GSE), para um período de 2003 a 2013. Confirma-se que o determinante Anglo-Americano, o legal e abertura económica influenciaram fortemente a decisão do Gana na adoção das IFRS. As medidas de qualidade dos resultados mostram uma melhoria na qualidade dos resultados devido a uma diminuição na gestão dos resultados após a adoção das IFRS. Os resultados dos testes para alguns dos rácios financeiros mostram que não existem diferenças na mensuração do desempenho quer pelas IFRS e Ghana National Accounting Standards (GNAS). No geral, tanto os investidores como os analistas reconhecem melhoramentos no ambiente do relato financeiro após a mudança para as IFRS. Este estudo contribui empiricamente para a literatura como a qualidade dos resultados contabilísticos é afetada pela adoção no Gana das IFRS. O resultado é útil para os participantes no mercado de capitais na mensuração e decisão nos investimentos quando tenham uma profunda compreensão da informação contabilística. As conclusões ajudam reguladores, o Institute of Chartered Accountants (ICA) do Gana e o governo do Gana no conhecimento de matérias que tenham efeito direto na aplicação das IFRS após a sua adoção no Gana.

Palavras-chave: adoção das IFRS, determinantes, qualidade contabilística, rácios financeiros, Gana

JEL Classification: M41; M48

Abstract

This study aims at examining the extent of Ghana's decision to adopt International Financial Reporting Standards (IFRS) fit into IFRS adoption determinants, but also to ascertain the effect of IFRS adoption on accounting quality of Ghana Stock Exchange (GSE) firms, and to analyze the effects of IFRS adoption on the financial ratios of the GSE firms, for a period of 2003 to 2013. It is confirmed that Anglo-Saxon, legal and economic openness determinants strongly influence Ghana's decision to adopt IFRS. The earnings quality measures reveal an improvement in accounting quality after the IFRS adoption. Test results of some financial ratios reveal no difference in performance measurement under both IFRS and Ghana National Accounting Standards (GNAS) principles. Overall, both investors and analysts recognize improvements in corporate reporting environment after the swift to IFRS. This study contributes empirically to literature on how the quality of accounting earnings is affected by IFRS adoption in Ghana. The result useful by capital market participants in their valuation and investment decisions when having in depth understanding of the accounting information. The finding assists regulators, the Institute of Chartered Accountants (ICA) of Ghana and government in cognizance to matters that have direct effect on IFRS applications after adoption in Ghana.

Key words: IFRS adoption, determinants, accounting quality, financial ratios, Ghana

JEL Classification: M41; M48

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List Abbreviations

CEO – Chief Executive Officer

CPA – Certified Public Accountants

DAS – Domestic Accounting Standards

DEA – Data Envelopment Analysis

EMH – Efficient Market Hypothesis

ERP – Economic Recovery Programme

EU – European Union

GNAS – Ghana National Accounting Standards

GSE – Ghana Stock Exchange

HIPC – Highly Indebted-Poor Countries

IAS – International Accounting Standards

IASB – International Accounting Standard Board

IASC – International Accounting Standards Committee

ICAG – Institute of Chartered Accountants of Ghana

IFAC – International Federation of Accountants Confederation

IFRS – International Financial Reporting Standards

IMF – International Monetary Fund

IOSCO – International Organisation of Securities Commission

JSE – Johannesburg Stock Exchange

NGAAP – Nigeria Generally Accepted Accounting Principles

NYSE – New York Stock Exchange

OECD – Organisation for Economic Cooperation and Development

OLS – Ordinary Least Squares

PAT – Positive Accounting Theory

PE – Price earnings

PER – Price Earnings Ratio

POEs – Private Owned Enterprises

ROA – Return on Assets

ROE – Return on Equity

ROSC – Report on the Observance of Standards and Codes

SAP – Structural Adjustment Programme

SOEs – State Owned Enterprises

SSA – Sub-Saharan Africa

US GAAP – United States Generally Accepted Accounting Principles

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1. Introduction

Accounting systems development has significant consequences for the economic and social progress of a country. It therefore serves as social instrument for macroeconomic regulation (Kurosawa, 1979) and is becoming an important condition for economic development success (Boka, 2010). For instance, the World Bank sees the need to link accounting with economy, and therefore initiated the setting of IFRS. Undoubtedly, the adoption of IFRS is associated with improving financial information in terms of bringing transparency, accountability, and efficiency to prevail in the financial markets in the global place (IASB, 2017; Banerjee & Duflo, 2014; Pope & McLeay, 2011; Ali, 2015). Major economies have adopted the new standards (e.g. European Union (EU) member countries and other emerging economies), except the United States (US) and Japan (PWC, 2011). It is unclear as to the reasons these countries have not adopted it. Indeed, IFRS-adopters perceive advantages in adoption, because it is more of principle-based than local standards and therefore tends to provide greater flexibility for differing challenging situations. Though, the IFRS implementation is faced with different macroeconomic environment and characteristics, the evidence of its benefits still persist in country-by-country basis (Leuz, Nanda & Wysocki, 2003; Barth, Beaver, & Landsman, 2005; Ball, 2006; George, 2008; Elbannan 2010; Zhou, Xiong, Ganguli, 2009; Morais & Curto 2008). As a matter of fact, the resultant change in the form of financial performance inherent in the IFRS swift may be of interest to the users of the financial information. For instance, the IFRS adoption by EU (Regulation 1606/2002) listed companies yield much positive effect on accounting quality as evidenced by prior empirical accounting researchers (Barth, Landsman & Lang, 2008; Chua, Cheong & Gould, 2012; Hung & Sabramanyam, 2007). Though there are few mixed findings (Paananen & Lin, 2009; Lin, Riccardi & Wang, 2012; Van Tendeloo & Vanstraelen, 2005; Goncharov & Zimmermann, 2007). Reasons some authors assign to such mixed results include systematic differences across variations in national cultures and differences in country's institutional factors in IFRS practices, weak corporate governance mechanisms, and lax enforcement laws (Ball, Kothari & Robin, 2000; Curto & Morais, 2009; Kvaal & Nobes, 2010, 2012; Lourenco, Sarquis, Branco & Pais, 2015).

According to the World Bank (2015), Sub-Saharan Africa achieves a growth of 4.1% as a result of IFRS harmonization. Therefore, it is a clear evidence that harmonization of IFRS gives

assurance of positive integration of markets and policies (Lourenco & Branco, 2014). This sees many listed companies in Africa realizing the need to mandatory adopt the IFRS in preparing and presenting financial statements so as to enjoy benefits such as comparability, efficiency and transparency. Whereas some listed-firms that have adopted IFRS in Africa evidence mix findings on accounting quality (Gunther, Gegenfurtner, Kaserer & Achleitner, 2009; Christensen, Lee & Walker, 2008; Capkun, Cazavan-Jeny, Jeanjean & Weiss, 2008), few ones confirm higher improvement on accounting quality (Bova & Pereira, 2012; Chamisa, 2000; Outa, 2001). Close political and economic ties between African countries and other EU member countries enhance synergy for adoption of common standards as proposed by Ramanna and Eva (2009) IFRS network theory. Additionally, nations that have no resources to develop rigorous national standards may resort to apply IFRS to heighten their international listing motivation. Ghana adopts IFRS in 2007, but it is still uncertain if this can lead to higher accounting quality.

This study aims at examining the relationships between the IFRS adoption by GSE firms on accounting numbers, and the influence of IFRS determinants on the firms adoption. Large numbers of institutions (e.g., listed-firms, government business enterprises, banks, insurance firms) in Ghana are mandatory expected to use the IFRS. The government therefore encourages the stakeholders to broadly apply the standards in their operations. The motivation of this study is to ascertain whether GSE firms' performance measurement and quality financial decisions can be positively assured after the swift to IFRS. Couple with weaknesses identified by the UN Report about the usage of GNAS, the adoption of the new standards is a step in right directions. It is obvious that adoption of the IFRS would address certain weaknesses in the GNAS. Undoubtedly, the adoption would improve the information environment of GSE market in terms of enhancing value-creation of wider group of stakeholders for informed decision-making.

I examine the IFRS adoption determinants and accounting quality consequences with listed firms of GSE. It therefore has three main objectives. The first objective examines the factors that influence Ghana's decision to adopt IFRS as to how they fit into the generally accepted adoption determinants. Several models are employed to explain the observed differences in financial reporting from global sense. This has been done both from developed and developing countries point of view as these models are not the same in view of diversity of accounting systems on an

international level. The Companies Code in Ghana, Act 179 underscores the rules governing financial information reporting, publication, auditing and disclosure, among other rules and regulations. Contrarily, the Act fails to mention the Ghana National Accounting Standards (GNAS) for preparing such financial reports. Therefore, the birth of IFRS in Ghana was a step in right direction. In light of the motivating effect of IFRS adoption, we seek to identify how the acceptable comprehensive IFRS adoption determinants of developing countries underscore Ghana's decision to adopt IFRS.

The second objective of the study is to examine the effect of IFRS adoption on accounting quality of the GSE listed firms. Many IFRS adoption empirical literatures on developed countries pioneer that, on average accounting quality in general has increased, especially with reference to IFRS adopted-firms in countries with strong reporting enforcement regimes and strong corporate governance (Wang, 2013; Christensen, Walker, & Zeng, 2015; Barth et al. 2008; Zeghal & Mhedhbi, 2012; Chen, Tang, Jiang & Lin, 2010). These findings were associated with both cross-country and country-specific studies that recognized the pre-IFRS adoption and post-IFRS adoption periods analysis. Even though, other studies address the contradictory findings on reporting quality effects of IFRS adoption (Wang & Campbell, 2012; Horton & Serafeim, 2010). The primary focus of this objective is to ascertain whether IFRS adoption is more comparable to Ghana national GAAPs and/or reporting improved accounting information in terms of firms' fundamental performance as already followed by Dechow, Ge & Schrand (2010) study. Despite that African investors remain uncertain about IFRS adoption benefits, most African listed firms empirical studies have evidenced improved accounting quality in earnings and returns under IFRS adoption (Yeboah & Yeboah, 2015, Roo & Warsame, 2014; Onalo et al. 2014;). Although, the findings are characterized by weak enforcement, weaknesses in capacity building and monitoring regimes, governance interference, and unmodified institutional factors in IFRS adoption process. There is no such study in Ghana as compared to South Africa and Kenya (Ames, 2013; Outa, 2011), hence this thesis fills this gap about listed firms in Ghana.

The third objective is to assess the effects of IFRS on the financial ratios (Lantto & Sahlstrom, 2009) of GSE listed-firms. International Financial Reporting Standards are associated with shareholder oriented-market and therefore promote fair value method of presentation and

preparation of financial statements to users of accounts (Dunne et al. 2008). The reduction of uncertainty of information accorded to the IFRS adoption assist users in making informed decisions, in relative performance of firms, and high certainty in predicting firm's future financial performance. Users are longing to employ financial ratios under the IFRS to make meaningful investment business decisions among investors and credit analysts. Financial ratios are among empirical studies that have received greater attention about measurement of firm performance over the past year (Joos & Lang, 1994) as a matter of tradition and convenience by both researchers and practioners. The efficacy of financial ratios under IFRS would be useful for financial statements interpretations. Therefore the aim is to examine the effect of IFRS adoption on key financial ratios¹.

Quantitative approach of business research strategy is what this study employs. The study employs two different sources of data: questionnaire survey and empirical data of GSE listed-firms. The questionnaire surveys 120 respondents mainly make up of: technical directors, course-teachers and markers of ICA of Ghana, practicing accountants and professional auditing staff (full-time and parttime). In addition, the study uses empirical data from the DataStream. I complement them by using the company's data as well. The study period spans from 2003 to 2013. I employ and adapt prior research designs estimation for this study (Chua et al. 2012; Zeghal et al. 2012).

This study finds that IFRS determinants like Anglo-Saxon factor, legal systems and financial legislation are responsible for Ghana's decision to adopt IFRS. There is statistically significant association between the adoption decision and determinants. This assertion holds true when micro-factors, that serve as reporting incentives are considered to be constant. The accounting quality model in the likes of pooled discretionary accruals, small loss avoidance and pooled price-earnings models achieve an improved accounting quality after IFRS adoption. Consistently, earnings smoothness, accrual quality, earnings persistence, cash flow predictability and conservatism evidence higher accounting information quality after the post adoption period. I can infer that the results of objective two are strongly expected as the gap between the GNAS

¹ Fair value measurement of IFRS impacts key financial ratios and perhaps may cause difference in the shape of distribution under IFRS and national standards of accounting-based performance measures.

and IFRS is wide. The study of the third objective evidences the following findings: (a) some financial ratios under IFRS period have positive effects on financial performance of GSE firms using equality test of means, (b) bivariate OLS test result confirm that IFRS adoption is associated a greater positive effect on accounting information of financial ratios under IFRS numbers (e.g. debt-worth, gross profit margin, dividend payout), and (c) Gray conservatism model asserts that net income, equity book value and total assets are higher (more conservative) under IFRS adopted-firms than under GNAS.

The findings of the study are relevant to the following areas: academicians in terms of integrating IFRS teaching into Ghana's universities accounting education curricula; practitioners to embrace accounting-based and market-based measures, and financial ratios to evaluate in-depth performance of firms for holistic investment decisions, and to policy-makers on matters of standard-setters about developing economies.

The contribution of this study is the application of direct questionnaire survey of macro-economic factors to assess IFRS determinants on Ghana using stepwise logit regressions as augmented, as opposed to previous studies that made use of empirical data on several countries on applying logit regressions. This is the first research of this kind on Ghana about IFRS adoption determinants. In addition, this thesis provides a contribution to research in financial accounting in terms of using several proxies in measuring earnings quality. It provides contribution to the application of accounting quality proxies to listed firms of Ghana. It shows that these proxies are relevant for the estimating accounting quality. It therefore contributes to the limited research on the accounting quality issues in Ghana, and is beneficial to literature in Africa as basis for research evidence. Moreso, this study is the first of in Ghana to have assessed financial ratios under IFRS and GNAS in comprehensive empirical basis on recent data about single country. Previous studies on the IFRS adoption and financial ratios made use of several countries. Another contribution is that, scant research on IFRS in Ghana is underscored by the fact that IFRS teaching is not fully integrated into Ghana's universities accounting education curricula. This study has fostered the need for a paradigm shift in the development of accounting education curricula to focus on IFRS teaching and application in Ghanaian universities to bring to bear the relevance for renewed approach to accounting education. Fifthly, traditional

managerial financial performance evaluation in Ghana is mostly based on financial ratios, which are said to be associated with problem of multicollinearity and heteroskedasticity in their estimations. The results of the study recognize price-earnings model, earnings persistence, cash flow predictability, smoothness and financial ratios in measuring firms' financial performance. The results would be heightened if the measurements recognize other non-financial performance estimations. This study offers some insights to the IASB when examining the suitability of IFRSs in developing countries (e.g. Ghana), and could serve as the basis by the IASB to explore the challenges faced by such countries during transition to IFRS. Ultimately, the results of this research are not only filling a gap in the literature, but also provide a basis for future empirical research in financial accounting about developing countries.

The thesis is organized into six chapters. Chapter two addresses the institutional settings which include key institutional settings and frameworks upon which auditing and accounting standards are applied in financial reporting by listed firms in Ghana, and OECD corporate governance principles of Ghana upon which control, direction and management of corporate firms are adhered to in Ghana. Chapter three provides the literature reviews from both theoretical (e.g. positive accounting theory and network theory of IFRS adoption) and empirical considerations. Chapter four explores the philosophical basis of the research methodology, research hypotheses and designs estimation models employed for this study. Chapter five explains data results, and chapter six presents the findings and conclusions.

2. Institutional settings

2.1 Ghanaian settings

The existing conceptual frameworks stress the need that listed firms' financial reporting should be designed to reflect the users' financial accounting information usefulness. Users of financial statements use the information for decision-making in the areas of credit, investment and contracting activities. It is undoubtedly true that accounting and disclosure practices in Ghana are influenced by the economic, political, legal systems as well as the institutional factors. Weak monitoring and enforcement of compliance marred effective and efficient regulatory environment in Ghana. The changing nature of business regulatory operations is not recognised by the Companies Code, which is the corporate legal framework of Ghana. Moreover, for the accounting procedures and process to be in line with the international accepted standards, the presence of both the ICA of Ghana and Ghana National Standard Board (GNASB) are not seen to be addressing the revision and updating of the accounting standards (Appiah-Sokye, 2007). Report on the Observance of Standard and Codes (2004) in Accounting and Auditing (ROSC A and A) identifies policy recommendations of the review of a 12 module (see Table 1) joint World Bank - IMF initiative to strengthen Ghana's financial systems, so that the institutional framework which underpins national accounting and auditing practices conform with international standards and good practices.

Table 1: 12 ROSC modules

Macroeconomic policy and data transparency	Financial regulation and supervision	Institutional and market infrastructure
Monetary and financial policy transparency	Banking supervision	Payment system
Fiscal transparency	Securities regulation	Insolvency and creditor rights
Data dissemination	Insurance supervision	Corporate governance
	Anti-money laundering and countering the financing of terrorism	Accounting and auditing

In general, ROSC A and A (2004) institutional framework reforms further strengthen proper accountability and efficacy of operational systems in Ghana that contributes to economic growth. The IFRS adoption of GSE firms is positioned under institutional and market infrastructure category of Table 1. The accounting and auditing module underscores this thesis. Nevertheless, its functioning interacts with other modules to achieve the goal congruence of the nation – ensuring economic growth. The module of accounting and auditing practices exhibit the conformity with international standards and ethical good practices. This framework examines the following: (a) the adequacy of the reporting requirements, (b) the capacity to implement applicable laws, standards and Codes, and (c) the effectiveness of enforcement mechanisms for ensuring compliance and applicable standards and Codes. On preparation for IFRS adoption, ROSC A and A (2004) report requires further institutional improvement and policy recommendations to revolve round the following:

1. Statutory framework of Companies Act, 1963 (Act 179 as amended) The Act is revised in 2006 and amended in 2012, ROSC A and A recommends that, the Act should be revised to have explicit legal backing for IFRS, IFRS for SMEs and Micro-sized entities alike. The Registrar-General has capacity challenge to effectively monitor registered companies and review their financial statements for compliance with legal and regulatory requirement as required by the Act. The Insurance Act, 2006 (Act 724) is still not giving mandate to apply IFRS. The IFRS mandate that this directive is being incorporated into the law for legitimate compliance. Since 1990s, the Ghana National Accounting Standards has never been updated and are still recognised as an allowable financial reporting framework equivalent to IFRS for SMEs prior 2009.
2. Accountancy education and training: collaboration between ICA of Ghana and accountancy tuition providers (e.g., universities and technical universities) in the area of curriculum development and syllabus content is non-existing. Continuous Professional Development (CPD) programs do not incorporate more practical, complex and emerging issues in accounting, auditing and practice development as demanded by the stakeholders. External professional qualifications practitioners are not required to write examinations in local variant courses such as Ghana tax and company law prior to practice. This inconsistency with practices in other jurisdictions may also affect audit quality. But the IFRS practice promotes

adherence in applications. The ROSC A and A report requests the ICA of Ghana to further strengthen adequate capacity to assist in IFRS, IFRS for SMEs, and other pronouncements implementation activities for compliance as mandatory required by the International Federation of Accountants (IFAC).

3. Setting accounting and auditing standards: there are still some pockets of firms that continue applying the Ghana National Accounting Standards. This tends to compromise their quality of financial reporting. Lack of awareness of IFRS adoption for SMEs has led to more SMEs to opt for GNAS prior 2009.
4. Ensuring compliance with accounting and auditing standards: regulators have weak capacity of different degrees to check compliance with laws and standards that define financial reporting in Ghana. They mostly rely on the quality of work performed by the external auditors. The exception is the Bank of Ghana (BoG).

2.2 Institutional quality and capital markets of Africa

The changing fast-paced of Africa capital market context and settings mainly due to automated-process requires institutional strategies to deal with regulatory infrastructures. A sound accountable institution assures and appeals for investor confidence in the markets. The need for planning the effective long-term management and optimal impact of institutional quality to govern the operations of Africa capital markets development is crucial. Flexible and strong institutional frameworks underscore effective and efficient operations of African capital markets. Funds mobilizations for the firms long-term capital needs is facilitated by institutional quality as the markets exhibit narrow and illiquid to serve as attraction to both domestic and foreign investors. Africa capital markets are associated with lower quality legal rules and law enforcement, leading to smaller and narrow capital markets. This concurrent condition reduces law and order, democratic accountability, increase political risk and weak shareholder protection, which in turn lead to low stock capital market development of Africa, which is inherent with poor economic performance. Despite these challenges to explain lower growth expectations, equity issuance by Africa markets continues to show strong activity (PWC, 2015). Evidence of ownership is less dispersed, but remains concentrated with institutional ownership. There is

evidence of less importance of minority rights protection (Yartey, 2007a; Shleifer & Vishny, 1997; La Porta et al. 1999; Adjasi & Biekpe, 2006).

The IFRS adoption by listed firms' emphasis on compliance, disclosure and transparency of material matters to reduce material misstatement within account balances and class of transactions by the users of financial information. This has a more or less effect on the legal status, structure and governance mechanism to assimilate the new standards for effective adherence. The presence of strong regulatory enforcement helps boost the confidence of investors, especially for developed countries.

2.3 ROSC corporate governance of Ghana

The corporate governance laws and principles in Ghana are through the OECD Principles of Corporate Governance Frameworks. In view of this, corporate governance of Ghana focuses on the listed firms on the GSE, but both the state enterprises and private firms are also mandatory to recognize the principles as well. Prior to IFRS adoption in 2007, there has been tremendous improvement in areas such as legal and regulatory framework for capital markets and financial institutions, due to investor protection. The Securities Exchange Commissions (SECs) experience and reputation on corporate governance guidelines still bears the source of good practice for GSE firms and banks under BoG supervision and control. Firms on the GSE and SMEs are mandated to use IFRS and International Standards of Auditing (ISA). Corporate governance in Ghana has witnessed substantial change of law for companies, but securities markets have not. The confounding challenges faced securities markets include: outdated and conflict of interest provisions, compliance is purely by voluntary with limited awareness. The BoG corporate governance requirements are not explicated in any regulation or code.

This chapter gives a detail of key institutional settings in relation to frameworks underpinning national accounting and auditing practices in conformity with international standards and other good practices, institutional quality practices that shape capital markets and ROSC corporate governance mechanism of Ghana. The next chapter discusses the related literature reviews that heighten the three objectives of the study.

3. Literature review

3.1 Theoretical foundations

The literature review highlights on and examines the relevant theoretical and empirical foundations that underscore IFRS adoption by nations and describes why nations adopt IFRS. These considerations are recognised as capstone upon which country's IFRS adoption decision revolves. The literature review is divided into three main sections that are in line with objectives of this study. Section 3.2 discusses the determinants of IFRS adoption in relation with the network theory of IFRS adoption of developing countries. Section 3.3 reviews the IFRS adoption and accounting quality. It discusses in relation with the agency theory, efficient market hypothesis theory and residual income valuation model. These theories make attempts to support the phenomena of accounting quality for this study. Section 3.4 discusses the financial ratios and IFRS adoption in support with theory of accountability and corporate governance.

3.2 Determinants of IFRS adoption

According to Ramanna and Sletten (2009, 2011) and Hope, Jin and Kang (2006), network effects of motivating a buyer to adopt a product is used to explain a decision by countries to adopt IFRS. The theory explains that countries that have adopted IFRS serve to entice other developing countries to adopt IFRS as well. The theory stipulates that useful insight about why countries choose to adopt IFRS serves to appeal to other countries to have resemblance adoption. The explanation is attributed to two main factors: the intrinsic value of the product and the value of the products network (Katz & Shapiro, 1985). The country's decision to adopt IFRS can be attributed to the concept of autarky and synchronization values. The IFRS concept of autarky is the direct value to the adopting country from using the IFRS. The synchronization value concept of IFRS adoption is the value to gain from adopting a body of accounting standards that is widely applied by other countries. The IFRS adoption economic network theory supports IFRS adoption by both developed and emerging countries when the equation (1) becomes feasible:

$$\text{Adopt IFRS} \Rightarrow (\text{Autarky value of IFRS} + \text{Synchronization value of IFRS}) > \text{value of local GAAP} \quad (1)$$

Ramanna and Sletten (2009) divide autarky value of IFRS into economic and political factors, where economic factors are direct pecuniary benefits arising from adoption. Empirical studies assert that strong interactive processes within environmental factors are the results of a type of accounting choice of policies, standards, and the practices (Ritsumeikan, 2011; Judge, Li & Pinsker, 2010), especially in competing and improving for economic resources. Currently, several African countries require applying IFRS for corporate financial reporting. This is because Africa sees their growing strength in IFRS adoption for shaping economic development and better capital markets. This IFRS adoption paradigm shift by developing countries is a requirement for understanding of development of their accounting systems (Kolsi & Zehri, 2013). Therefore, in this thesis, I attempt to ascertain how IFRS adoption determinants fit into Ghana's decision to adopt new standards.

For a decade now, about 149 of both developed and developing countries have adopted the IFRS (IASB, 2016). For example, members of EU dominate. African countries represent 15.4% of the adoption. This reaffirms that debate about the adoption of IFRS in developing countries remains few in accounting literature. Prior accounting researchers (Zeghal & Mhedhbi, 2006; Sy & Tinker, 2013) posit that developing countries are still in doubt to trust IFRS and are of the view that improved in accounting numbers may comparatively benefit multinational corporations, and their Big4 accounting firms, but there might not be the same benefits to companies with primarily domestic operations (Sy & Tinker, 2013). The benefits of attracting foreign investors and foreign capital serve as footing platform to entice institutional investors and others multinational agencies in developing countries to adopt IFRS. Zeghal and Mhedhbi (2006) study find that adoption process is expected to improve the quality and credibility of accounting information and improve the flow of capital and investment, resulting in economic development.

Prior extant accounting studies on IFRS adoption have agreed to legitimate determinants of IFRS adoption by developing countries. However, these factors have categorized into two main divisions namely macroeconomic and microeconomic factors. Examples of macroeconomic

factors include culture factors, economic growth, capital market, openness to external world, legal system, political factors, and educational level. Those of micro-economic factors include size of the company, the firm performance, the debt level, and ownership structure of a firm (Kolsi & Zehri, 2012). I use macroeconomic factors or IFRS adoption determinants in this thesis. This thesis evaluates the extent of agreeing to IFRS adoption determinants using a questionnaire survey as a case study on Ghana's decision to switch from GNAS to IFRS in 2007. Prior studies on IFRS adoption determinants concern with costs and problems of IFRS adoption in the developed economies (Epstein & Mirza, 2006) as against the enthusiasms by developing countries to adopt IFRS.

Affes and Callimaci (2007) evaluate the motivations that encourage early IFRS adoption by the German and Australia listed firms. Their results reveal that the size of the listed-firms was a motivating factor for IFRS adoption as against little importance of firm's debt as adoption factor. Their study makes use of the logistic regression using sample of 106 German and Australian firms.

Dynamic business environment underpins nation's accounting systems changes. Al-Akra, Ali and Marashdeh (2009) study reveal that there is positive association between the development of accounting regulations and practices, political and economic factors in Jordan.

Ding, Jeanjean and Stolowy (2007) examine analytical differences between domestic accounting standards (DAS) and international accounting standards (IAS) in terms of measurement, determinants and implications. The study identifies five institutional factors – legal origin, ownership concentration, economic development, importance of accounting profession, and equity importance as main potential determinants that explained the differences between DAS and IAS, using a sample of 30 countries. The result reveals that DAS rules differ from the IAS in positive relationships in terms of economic development, importance of accounting profession and ownership concentration in *divergence* and *absence* respectively. Another dimension of the result reveals a negative relationship between importance of equity market and *absence* of DAS.

Global adoption of IFRS is a sign of making cross border investment and capital allocation easier (Zori, 2011). The more users understand the IFRS financial information, the more it gives reasonable assurance to investors for meaningful decision making. Such information protects their interests in the business and ultimately reduces information asymmetry. This new standard paradigm gives birth to the need for comprehensive disclosure as the IFRS requirements. Material accounting disclosures drive the basis for accounting quality that leads to reduction of uncertainties within account balances or class of transactions. This process enhances the interest of stakeholders who align with corporate governance to promote capital market growth trajectory.

Several empirical studies highlight the IFRS adoption determinants in 2 as predominantly used by previous researchers in examining the adoption of accounting standards of developing countries (Lasmin, 2011, 2012; Ding, Jeanjean & Stolowy, 2005). Table 2 identifies three main typologies upon which determinants of IFRS by developing countries are much influenced as given by Duarte, Saur-Amaral & Azevedo (2015). They are legal and political systems, financial reporting incentives and accounting standards. It is undoubtedly true that legal and political systems shape practices and disclosure of accounting systems. This reflects into the accounting quality directly or indirectly. The power and active enforcement of accounting systems is by strong governance and political support.

Firms' financial incentives are recognized to collaborate with the IFRS adoption (Leuz et al. 2003). This tends to give firms assurance of observing reporting quality. Developing countries render reporting incentives like capacity building and capital market information disclosure costs allowance to serve as incentive for adoption.

Accounting quality is much depending on the choice of accounting standard. IFRS is associated with quality and therefore it is expected that the users of the standards are assured of reliable and relevant value of information (Chen et al. 2010). It therefore causes to adhere to encourage more disclosure to heighten corporate reputations.

Table 2: Determinants of IFRS adoption for developing countries

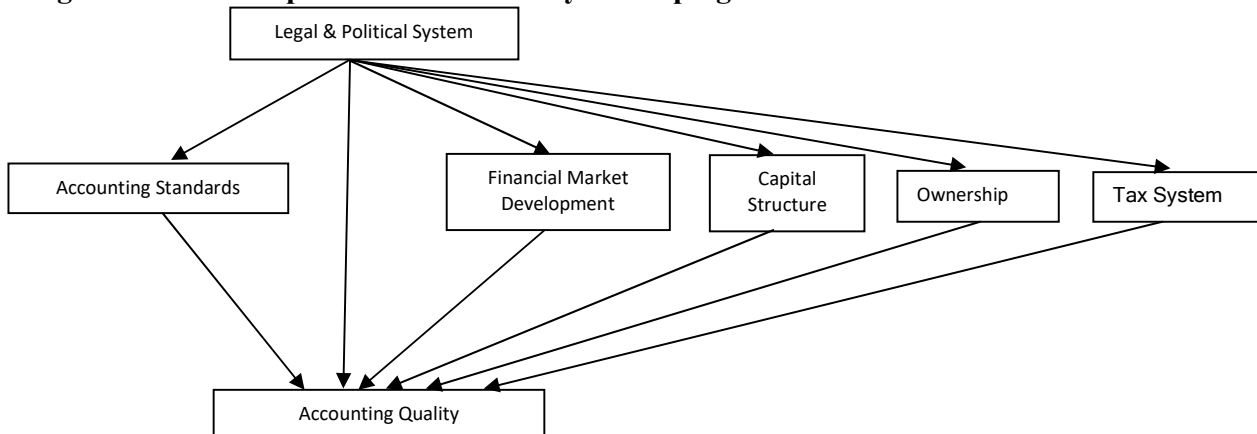
Determinants	Before IFRS adoption	IFRS introduction
1. Legal and political systems of the African countries	Accounting standards are individual country's GAAP/ IAS with passive enforcement.	IFRS operation but no statutory power for active enforcement.
	Governance is geared towards shareholder-oriented.	Stakeholder-oriented corporate governance model.
	Low investor protection	Medium investor protection
2. Financial reporting incentives of African listed firms	Small capital market comparatively, and enhances private communication.	Large and medium capital market due to cross-listing and the need for public information.
	Mostly bank-oriented financing type of capital structure.	Capital structure is market-oriented financing arising from public offering
	Commonly private ownership and shareholders are protected under shareholders model.	Private and institutional ownership, therefore financing poses the need for public disclosure.
	Tax accounting is independent from financial accounting so government involvement in tax accounting is underscored by strict rules.	Tax accounting is independent from financial accounting indicating low government involvement in accounting standard-setting.
3. Accounting standards	Disclosure requirements were under country's GAAP and many more under IFRS.	IFRS requirements demand more disclosure.
	There is more use of historic cost accounting and as a consequence less timely information.	The shift towards using more fair value accounting and encourage more timely and useful information.

Adapted from Duarte et al. (2015)

Figure 1 explains that determinants of accounting quality has correspondingly influenced by accounting standards, legal and political systems and information incentives in respective nations. In another division, legal and political systems have a direct influence on effectiveness of information incentives (Chouaibi & Zehri, 2013) which culminate to determine accounting

quality. The study adapts IFRS determinants of Soderstrom and Sun (2007) variables as acceptable model of accounting system development echoed by (Chouaibi & Zehri, 2013).

Figure 1: IFRS adoption determinants by developing countries



Adapted: Soderstrom and Sun (2007)

This study use Zeghal and Mhedhbi (2006), and Zehri and Chouaibi, (2013) widely accepted determinants of IFRS adoption of developing countries to apply on Ghana’s decision to adopt the standards. I use the following macroeconomic factors or IFRS adoption determinants in this study: economic growth, educational factor, anglo-saxon colonial cultural inheritance, legal systems, political factors, auditing and accounting standards, capital market development and financial legislation of Ghana.

3.3 Accounting quality and IFRS adoption

3.3.1 IFRS adoption

Gerakos (2012) confirms that the most widely researched areas in accounting literature is the quality of accounting information, but there has been little progress in advancing the measurement of accounting quality. Understanding accounting quality reveals the variance of cash flows, earnings, and accruals that are jointly determined by the following parameters: $\text{var}(y_t) = \sigma_y^2$, $\text{var}(w_t) = \sigma_w^2 = \sigma_w^2$, v and $\text{ar}(v_t) = \sigma_v^2$. The volatility of the underlying economic

performance is represented by σ_y^2 . The riskiness of the business operations can be systematic and it exhibits a link to market beta.

The variance of performance of accrual (σ_w^2) and the variance of the estimation error (σ_v^2) respectively and jointly determine accounting quality. Consistent with the definition of earnings quality, one way of constructing an overall measure of accounting quality would be as follows:

$$\text{Accounting quality} = \frac{\sigma_w^2 - \sigma_y^2}{\sigma_y^2} \quad (2)$$

The numerator of this ratio captures the net benefit of using accruals, which is lagged by the magnitude of the error introduced by accrual accounting.

The quality of accounting information cannot be easily observed directly and therefore become difficult to quantify. In most cases, the explanation is based on perception of the financial statements users. The definitions of accounting quality are seen to multidirectional as being analysed in both economics and accounting fields of study (Isidro & Raonic, 2012). Depending on the purpose financial statements seek to address, the definitions vary significantly in terms of individuals, project, companies and organizations (Achim & Chris, 2014; Pounder, 2013). Large bodies of papers have explained their findings that are appropriate to recognize the concept of accounting quality. Biddle, Hilary and Verdi (2009) explain the concept of accounting quality as:

'precision with which the financial reports convey information to equity investors about the firms expected cash-flows.'

In the same vein, Tang, Chen and Lin (2008) assert that the true and fair view of information that underlie performance and transparent financial information is prima facie in ensuring quality corporate reporting to its users, by way of avoiding to present any misleading information. Again, in a broader spectrum, Tasio and Bekiaris (2012) explain accounting quality to embrace comprehensive disclosure of financial and non-financial information for useful decision making.

According to IASB (2010), to understand the concept of accounting quality, financial statements should meet the fundamental qualitative characteristics of accounting information. These characteristics lead to the value and enhancement of quality of accounting information (Pounder, 2013).

International Financial Reporting Standards (IFRS) succeeds the International Accounting Standards (Soderstrom & Sun, 2007). The International Accounting Standards Committee (IASC) body comprises the Australia, France, Canada, Japan, Germany, Netherlands, UK, Mexico, Ireland and US. These countries constitute the accounting body as succeeded by the IASB, who is charged with issuing the IFRS (Aljifri & Khasharmeh, 2006). IFRS is perceived by prior accounting literatures to be acceptable global standards (Ball, 2006) since it promotes comparability in practice and perceived to be of higher quality standards. Christensen, Hail and Leuz (2013) assert that comparability is depending on the available financial reporting incentives and enforcement mechanisms within the IFRS reporting jurisdictions.

Ball (2006) affirms that IFRS reflects economic substance of transactions over legal form and are more timely in other respects than US GAAP (e.g. lower costs of processing) (Beneish & Yohn, 2008).

From January 2005 EU issued a statement that all companies with securities that are trading in the stock market of the European member states should apply the IFRS in preparing and presenting their consolidated financial statements to ensure harmonization of international financial accounting information so as to meet the needs and interests of economic systems in the global market (Armstrong, Barth, Jagolinzer & Riedl, 2010; Ball, 2006).

At least, based on the developed nations' trend of IFRS adoption, developing countries in all other continents prepare to adopt the IFRS alike. This inevitably heightens developing countries capital market integration to the world market. It is perceived that this could lead to lower cost of information processing and communication as echoed by Ball (2006).

The International Accounting Standards Committee (IASC) was renamed as the IASB in early 2001 to initiate the IFRS (Ball, 2006). International Financial Reporting Standards (IFRS) purports to be a set of high-quality accounting principles that could be applied consistently by listed companies globally to ensure its acceptability by the capital markets around the world (IASB, 2009). In addition, such accounting principles encourage firms to report accounting information that better reflects the economic substance over form and therefore promotes greater transparency. The IFRSs are more principles-based rather than rules-based, and therefore the standards focus on establishing general principles that serve as forefront for conceptual framework to support capital market consequences and financial reporting quality (Leuz & Verrecchia, 2007). International Financial Reporting Standards is based on the principle of fair value accounting (Ball, 2006; Deloitte, 2013) and are geared towards a market-oriented objective and therefore could lead to improvement in information quality (Armstrong et al. 2010).

Accounting quality determines the value of financial accounting information for meaningful decision-making by the users. Ponder (2013) posits that the central idea of accounting quality is what the accounting information is intended to achieve in communicating to all users. Chua et al. (2012) explain that IFRS are perceived to be high quality because they represent a collection of the world's best accounting practices and are purported to be more capital-market oriented than many domestic accounting standards. The general accepted fact is that IFRS is a higher quality accounting standards as opposed to most domestic accounting standards (Barth et al. 2007, 2008). However, a country's IFRS adoption is not a guarantee for producing high quality financial reporting, but a necessary condition for high quality information (Ball, 2006). In summary, there are evidences to assert that the IFRS adopted-firms have led to improve accounting quality around the world (e.g., Barth et al. 2007, 2008; Chua et al. 2012) on comparability and financial transparency. In view of this, the question this study poses is 'will the adoption of IFRS enhance accounting quality of listed firms in Ghana?'

There is recommendation by the International Organization of Securities Commissions (IOSCO) that the world securities regulators permit foreign issues to use IAS for cross-border offerings (IOSCO 2000). This compelled the EU Commission to require all EU-listed companies to

voluntarily report under IAS Regulation prior to 2005. There are several publications relating to the effect of IFRS in recent years in issues like cost of capital (Kim & Shi, 2007; Daske, 2006), analysts following (Hodgdon, Tondkar, Harless & Adhinkari, 2008), other comprehensive income (Goncharov & Hodgson, 2008), earnings quality (Barth et al. 2008; Zeghal et al. 2012), and institutional factors and disclosure (Soderstrom & Sun, 2007). Most of the previous articles on the effect of IFRS adoption and its relevancy recognize both voluntary and mandatory adoption, particularly under European context (Chen et al. 2010; Pascan, 2014).

Earlier empirical studies (Barth et al. 2008; Chua et al. 2012) have shown differences in accounting quality arising from comparison between the IFRS adoption and national GAAPs in respective countries as due to inconsistencies in IFRS applications across nations. Rationale expectations model (Ewert & Wagenhofer, 2005) explains that standards that limit opportunistic discretion exercised by managers could result in accounting earnings that are more reflective of improving accounting quality. Another school of thought asserts that changes in financial reporting that underscores with more rigorous enforcement could lead to accounting quality. Contrary, African economies exhibit little rigorous enforcement of laws, weak corporate governance mechanism and lack of integrity of those charged with governance; changes in financial reporting systems could result little strong under IFRS. Therefore, the prediction that, on average IFRS adoption results improve accounting quality still remains the same with developed nations due to more or less similar country's inherited colonial institutional factors.

Agency theory stipulates that the separation of ownership and management control distinction creates the potential conflicts of interests between agents and principals, which results in inherent costs associated with resolving these conflicts (Jensen & Meckling, 1996; Eisenhardt, 1989). Therefore, such differences between the desires of the principal and agent are addressed by this theory. The adoption of IFRS must give assurance to shareholders that their equity will not be unethically exposed to exploitation by the agents. The relevance of this theory within the IFRS adoption is that, it tends to reduce uncertainty associated within the problem of information asymmetry under agency theory (Kamaram & Manzural, 2012). More so, managers are expected to comply with IFRS and all the material issues surrounding its adoption. These issues should be disclosed to the members on a timely basis for enhancing information quality to reduce

reputation risk, and for improving efficiency of capital allocation (Bushman, Piotroski & Smith, 2006).

The efficient market hypothesis (EMH) is a dominant theory in the capital market research. This is because liquidity of a country's capital market and efficient resource allocation in an economy is depending on high quality financial reporting standards (Elbannan, 2011; Bae, Tan & Welker, 2008; Kothari, 2000). Therefore, such condition motivates both regulators and investors in predicting future financial performance of firms (Beaver, 1968). The IFRS adoption is noted for fundamental reliability, relevance and unbiased financial information quality. In addition, the residual income valuation model (RIVM) asserts that price is the present value of expected net cash flow that should be discounted. Three basic assumptions that focus on the understanding of the model are: (1) that the market value of equity is determined by the expected value of dividends, (2) that dividends payout in actual fact reduce the book value of equity without affecting current earnings and, (3) that a linear model depicts the stochastic time-series behaviour of abnormal returns (Barth, Beaver & Landsman, 2001; Beisland, 2008). Alfaraih (2009) posits that the model has a beneficial theoretical implication of liaising between accounting information quality of firm value under IFRS adoption.

This thesis focuses on accounting quality in terms of maximising shareholders wealth after IFRS adoption by listed firms in Ghana. This is because, I assume the position that a high quality accounting numbers could result to reflecting current operating performance; it is a strong signal for future operating performance, and finally intrinsic firm value can be converted into periodic income for effective payment (Dechow & Schrand, 2004). It is still a fact that without earnings manipulations, some natures of businesses depict low accounting quality, just as some high growth firms may not exhibits earnings that are good indicator for future cash flows (Dechow & Schrand, 2004). On this basis, this thesis examines IFRS adoption by listed firms in Ghana as to what extent this swift has improved accounting numbers or not. Accordingly, Barth et al. (2008) and Carmona and Trombetta (2008) support the view that adoption of IFRS is associated with high accounting quality. Recent empirical studies of accounting quality and IFRS adoption have both focused on developed and emerging markets, with few ones from Africa perspective (Chamisa, 2000). From developed nation's perspective, accounting quality and IFRS adoption is

always an anxiety to achieve relevant, reliable and complete accounting information, and academically is quite pronounced among publicly traded firms (Barth et al. 2008).

From developed nations' point of view, we have several extant literatures. More recently, Christensen et al. (2015) closely followed Barth et al. (2008) approach in Germany context. The study compares changes in accounting quality within IFRS adoption. The results reveal significantly lower earnings management, more timely loss recognition and greater value relevance for voluntary adopters. A notable finding is evidenced by the study of Clarkson, Hanna, Richardson and Thompson. (2011) as financial statements of code law countries under IFRS adoption achieve a greater impact in terms of increase in book value and earnings than financial statements of common law countries under local GAAP in Europe and Australia using 3488 firms. Their results support a conservative theory. In a related study by Beisland and Knivsfla (2015) of IFRS adoption on stock prices in association with earnings and book values of Norway listed companies in comparing with Norwegian GAAP, the result evidences that value relevance of book values increase while value relevance of earnings decrease under IFRS. The paper uses a structural shift between pre-and-post adoption research designs.

Consistent with previous findings, Liu, Yao, Hu and Liu (2011) paper aims to empirically examine the extent the rule-based US GAAP and the more principles-based IAS/IFRS provide different opportunities for earnings management using German listed firms' annual reports for the fiscal years 1999 – 2004, under German GAAP or US GAAP and/or IAS/IFRS as permitted by law. The result reveals that earnings management is significantly higher for the IAS/IFRS firms in research and development investment. Consistent with Barth et al. (2008) findings, less earnings management, more timely loss recognition, and more value relevance of earnings are evidenced under IFRS, though the study is done at voluntary adoption period. In addition, they find that firms applying IAS generally exhibit an improvement in accounting quality between the pre-adoption and post-adoption periods. These results confirm Chua et al (2012) findings that there is improvement in accounting quality under IFRS adoption in terms of less earnings management, early loss recognition and increased value relevance in Australia. In a similar result, Hung and Subramanyam (2007) findings conclude that IAS/IFRS numbers of total assets, equity book value, and income variability are significantly higher than under German GAAP.

Their study evidence that IAS/IFRS income exhibits greater conditional conservatism and lower earnings persistence than HGB (Handelsgesetzbuch, German Commercial Law) income. These conclusions confirm with Bartov, Goldberg and Kim (2005) result that earnings are more value relevant for German firms of high tax-aligned countries under IAS. From the literatures, developed countries IFRS adoption and accounting quality exhibit mixed results in income and equity book value. Consistent with IFRS positive effect on earnings and returns of value relevance, Barth, Landsman, Young and Zhuang (2014) study on financial instruments of IAS 39, their result reveal that amounts of net income and book value are value relevant for financial companies compared to non-financial firms. This finding supports Young and Zhung (2014) results. In the same way, IFRS adoption and accounting quality in French companies evidence a reduction in earnings management for improvement in accounting quality (Zeghal et al. 2011). Kabir, Laswad and Islam (2010) study in New Zealand companies on IFRS adoption on accounts adjustments also confirm that absolute discretionary accruals were significantly higher under IFRS evidencing lower accounting quality under IFRS than under local standards On the other hand; these adjustments caused decreases in employee benefits and share-based payments.

In contrast for higher accounting quality findings, Goncharov and Zimmermann (2007) examine the levels of earnings management on the consolidated accounts that are prepared under German GAAP and IAS/IFRS or U.S GAAP, as German Commercial Code law permits. The result reveals that earnings quality under German GAAP and IAS does not depict any difference. The results in addition reveal that, there are significantly lower levels of earnings management for the firms that report their financial statements under U.S GAAP. This result supports an interpretation that “a different amount of accounting choices embedded in different accounting standards influences the level of earnings management”. This result is consistent with Van Tendeloo and Vanstraelen (2005), when they study about German IFRS and German GAAP (HGB). In a similar conclusion, Lin, Riccardi and Wang (2012) reveal that accounting quality worsens after the swift to IFRS during their study on 150 samples of German high-tech firms that adopted IFRS in 2005. In a similar study by Ji and Lu (2014), they evidence that value relevance is higher in firms with more reliable information on intangible assets-goodwill. This study is done on sample of 6650 Australian listed firms. Schiebel’s (2007) study about German GAAP

and Chinese standards reveals conclusion that their local standards are significantly more value relevant than applying the IFRS.

Another approach this study resorts to examine IFRS adoption by GSE firms is the incidence of reporting small losses and small profits, herein refers to as small loss avoidance (SLA). Shen and Chih (2005) carry out empirical study about SLA across banks of 48 countries. Findings reveal that banks manage earnings in order to avoid reporting losses and earnings decreases. Similar results of Shen and Chih (2005) is established by Ebaid in 2012 for non-financial firms of the Egyptian Stock Exchange. Moreso, Leuz et al. (2003) study evidence that a greater incidence of earnings discretion significantly lower levels of earnings management in using SLA. Their design involves 31 cross-countries earnings management.

In another dimension of the empirical literatures, the study focuses on papers from developing economies that position the IFRS adoption to assess accounting quality. Generally, accounting for executive compensation explains internal performance evaluation in terms of CEO turnover. Hou, Jin and Wang (2014) evidence that mandatory IFRS adoption for contractual benefits to ascertain executive compensation in China is positive. The study uses a sample of 6787 firm-year observations from 2004 to 2009 to denote pre-and-post adoption periods. In addition, firm characteristics and corporate governance are used as control variables. Moreover, it reveals that IFRS adoption supports conservatism and therefore drives the use of performance in executive compensation. The study heightens our clear comprehension of the application of mandatory IFRS adoption and its positive effect on executive compensation in emerging markets.

In a concurrent study, Ismail et al. (2013) study's aims empirically to examine whether the adoption of IFRS for preparing and presenting consolidated accounts of Malaysia listed companies have achieved a higher accounting numbers than Malaysia Accounting Standard Board (MASB) in terms of earnings management and value relevance using a large sample of 4010 firms for three years period of pre and post adoption periods. The result evidences that earnings reported during the period after adoption of IFRS is associated with lower earnings management and higher value relevant. The same conclusion is evidenced by Berti and Moya (2013) that IFRS adoption improves the relevance and reliability of the corporate financial

reporting, using Chilean listed firms for the pre-IFRS and post-IFRS adoption periods. Mironiuc, Carp and Chersan (2015) investigate the imperative of value relevance of comprehensive income in relation to the net income of listed companies of Bucharest Stock Exchange using a sample of 65 companies on effect of IFRS adoption. The quality of audit and credible firms' accounting numbers aim to achieve reliable and accurate financial information. The study reveals that comprehensive income and net income show a significant association with the share price, and therefore has led to increased value relevance after IFRS adoption.

Comparing IFRS adoption of emerging economies of Africa and Asian regions, Chebaane and Othman (2014) examine the mandatory effect of IFRS adoption on the market-based measure of earnings quality in relation to value relevance of equity book value and earnings per share. The data for the study are listed companies from Africa and Asian emerging economies where the IFRS adoption is mandatory for the period between 1998 and 2012. The results reveal that value relevance of earnings per share and equity book value per share is positively associated with mandatory IFRS adoption. The overall explanatory power records a higher earnings quality under IFRS than under the local standards. Another extant literature by Zeghal and Mhedhbi's (2012) study about international accounting standards (IAS) effect on the development of emerging market (cited Naser, Al-Khatib & Karbhari, 2002; Rawashdeh, 2003) made a conclusion that IAS adoption has improved the quality of financial information for attracting foreign investors. Zeghal and Mhedhbi (2012) results are consistent with Ismail and Kamarudin (2013) study about Malaysia. The same conclusion is evidenced by Sellami and Slimi (2016) as IFRS adoption by listed firms in South Africa has reduced earnings management, thereby causing improvement in accounting quality. Overall, the evidence surrounding IFRS adoption of emerging markets provides the same outcome with that of developed countries. Perhaps, this might be due to non-difference in research design employed by both economies, and may be data coverage periods and usage of annual aggregated data are seemingly the same.

On average, several prior research studies of accounting quality and IFRS adoption effects support the view that there has been improvement in accounting information quality as a result of the switch to IFRS (Barth et al. 2008; Iatridis, 2010, Chua et al. 2012), but yet there are other

empirical evidence that support the claim of unimproved accounting quality (Lin, Riccardi, & Wang, 2012).

3.3.2 IFRS adoption and capital markets in Africa

Several accounting literatures stress important relationship between accounting information and capital markets (Ball & Brown, 1968). This is because accounting numbers are aimed at providing investors with relevant information for their investment decisions. African capital markets in recent years are slowly receiving foreign investors' attention (Chatterjee, 2013). This is due to liberalization of African capital market laws and assurance of liquidity growth associated with African markets. Poor liquidity trend initially deters international investors to African markets regardless of keen interest they desire to invest. The need for comparable and reliable financial information about liquidity is important because it is the lifeblood of capital markets participation. Besides, it gives investors absolute assurance and confidence about greater investment choices.

The capital markets in developing countries exhibit characteristics such as low liquidity, high trading costs of between 2.5% to 5%, lack of counters listed on the exchanges, lack of standardization in products and documentation, fragmented interest rate market, restrictive limits on short-selling, and the absence of retail investors from the markets (JSE, 2014; DB Research, 2013). Despite these problems faced with African markets, there some countries in Africa (e.g. South Africa, Nigeria, Kenya, Mauritius & Zimbabwe) that have chalked success as most active and liquid stock markets, and therefore command portfolio equity investment in Sub-Saharan Africa (SSA). Indeed, the Johannesburg Stock Exchange (JSE) continues to dominate the region. The JSE has a 38% market representations of all listed companies and 83% of total market capitalization in SSA in 2012. Historically, African markets have both institutional and family dominated markets (DB Research, 2013; Yartey, 2009; Chatterjee, 2013).

Ghana Stock Exchange is one of the SSA markets classified as emerging place for investment in West Africa. The Ghana Stock Exchange (GSE) was launched in July 1989 as private company limited by guarantee under Companies Code of 1963. It was to accept and secure the listing of

firms for public investment. The main aim of the Board of Directors of GSE is to facilitate the procedure of listing companies in GSE, in compliance with the policy of the capital market institutions to enhance the enabling investment climate in Ghana. This affords and provides the investment opportunities for dealers in securities to engage into buying and selling of shares at the market. Ghana Stock Exchange was credited by the World Bank/IMF in 1980 to take care of other financial arrangements of their other West African countries. Following this, the 'Most Innovative African Stock Exchange for 2010' award was given to GSE at the Ai Annual Index Series Awards held at the NYSE. In 2005, GSE recorded top performance of stock markets in the world achieving a yield of 154.7 per cent in dollar terms. Thereafter, the market share index had experienced fluctuations from time to time. Ghana Stock Exchange saw the number of companies increasing from 13 in 1991 to 32 in 2007. This increase has reflected in market capitalization that recorded a little high over US\$2.6 million in 2004 to about US\$11.5 billion in 2007.

The turnover of equities in volume of GSE's firms has been slowly increasing to attain a higher level. According to Bokpin and Isshaq (2009) foreign equity participation has increased to attain an average of 32 per cent. Ghana Stock Exchange was given recognition as an authorized stock exchange under the Stock Exchange Act of 1971 (Act 384) in October 1990 and commenced trading on the 12 November, 1990. It was then changed to a public company limited by guarantee in 1994.

The usefulness of accounting information from the capital markets context of adoption recognizes that principles-based IFRS improve financial transparency due to information disclosure and consequence of greater reliance on fair value accounting. This tends to promote transparency of country comparability analysis and could reduce estimation risk of firms due to quality corporate financial reporting (Lambert, Leuz & Verrecchia, 2007). This has an implication of providing capital market information to be free from bias, reduction of uncertainty and emphasize efficient and effective basis for prompt decision-making. It supports the idea that information content of earnings announcements should be on timely basis to achieve its significant in the market.

Capital market research about Africa is heightened as a result of African countries adoption of IFRS and economic pressures from International Finance Corporation (IFC), International Monetary Fund (IMF) and the World-Bank compelling African countries to adopt IFRS for ensuring greater accountability and transparency in the financial reporting process (Ozili, 2016). Even that, there are limited extant literatures about earnings management, value relevance and IFRS adoption effect in Africa context. Few existing ones have evidenced mixed results in consistent with developed and emerging markets findings (Onali, Lizam & Kaseri, 2014; Ozili, 2015). For instance, IFRS compliance and firm's information environment in Kenya (Bowa and Pereira, 2012), IFRS adoption and listed banks in Nigeria (Tanko, 2012), IFRS adoption of earnings management and Nigeria listed banks (Onalo et al. 2014), IFRS adoption of earnings management and JSE firms (Yeboah & Yeboah, 2015), and IFRS adoption and listed, cross-listed and unlisted firms in African capital markets (Rao & Warsame, 2014) have emphasized positive impact on accounting quality. On the other hand, the some authors have evidenced that there is no impact of IFRS adoption in Africa capital markets on accounting quality (Ames, 2013; Hessayri & Saihi, 2015). Besides, there are findings of other empirical studies that have revealed a mixed result in Africa (Outa, 2011; Elbannan, 2011).

It is evidenced that some findings about effect of IFRS adoption depict the same trend with developed nations and emerging markets, including Africa countries. This is perhaps, due to the same approach of research design employed in the study. But different nations have many differences across business environment, especially in terms of legal systems that strengthen IFRS applications, tax systems, compliance, and enforcement. To the best of my knowledge, there is no study of IFRS adoption and listed-firms of Ghana, hence the need for this study. Few empirical literature reviews about IFRS adoption and accounting quality about Africa is summarized in an abridged form of Table 3.

Table 3: Summary of Africa empirical studies about accounting quality

Study	Sample	Research design	Findings
Tanko (2012)	5 Nigerian banks between 2007 and 2010 at voluntary adoption.	Accrual measurement following Barth et al. (2008).	IFRS adoption period achieves decreased earnings variability and loss recognition is improved.
Outa (2011)	Mandatory adoption by Nairobi Stock Exchange listed firms between 1995 and 2004.	The study follows Barth et al. (2008) for IFRS adopted firms and non-IFRS adopted firms.	Post-IFRS period sees decreased earnings smoothing and discretionary accruals.
B. Yeboah & M. Yeboah (2015)	Mandatory IFRS adoption of 181 listed firms of South Africa between 1998 and 2012.	The study follows Barth et al. (2008) and Jones Model (1991), using linear regressions.	Post-IFRS period sees decreased earnings smoothing and discretionary accruals.
Onali et al. (2014)	Voluntary adoption of 8 Malaysia banks and 15 Nigerian banks between 2009 and 2012.	The study is based on Jones (1991) model. Findings reveal a positive accounting quality.	Findings reveal a positive accounting quality.
Ames (2013)	Mandatory adoption of JSE listed firms for a period of 2000-2011.	The study follows Barth et al. (2008) and Morai and Curto (2008) design.	Post-IFRS adoption sees informativeness of EPS being improved.
Rao and Warsame (2014)	Both mandatory and voluntary adoption of capital markets of Africa between 1995 and 2005.	Accrual measurement follows Kothari et al. (2005) and Barth et al. (2008).	Post-IFRS adoption sees informativeness of EPS being improved.
Hessayri and Warsame (2014)	The sample involves listed firms of UAE, Morrocco, South Africa, and Philippines for a	Accrual measurement follows Jones model to deal with earnings management.	Findings reveal that earnings management of post-IFRS decreased.

	period of 8 years.		
Ozili (2015)	Sample involves voluntary adoption of Nigeria listed firms between 2002 and 2013.	Using specific accrual approach (Ahmed et al. 1999).	Findings reveals increased in earnings management at post-IFRS period.
Fiador (2011)	Sample of non-financial firms listed on the GSE in Ghana.	Design approach is Ohlson valuation model using panel dataset with non-pooled regression analysis of random effect.	Findings reveal that net asset per share shows value relevant. Non-executive directors are relatively irrelevant in the market shares valuation.
Amidu et al. (2016)	Sample of non-financial listed and non-listed firms in Ghana.	Design approach is Jones discretionary accrual to measure earnings management, augment the design with GMM estimators.	Findings reveal that IFRS adoption increases earnings quality, leading to increase in profitability with low tax avoidance incidence under internal and debt funding sources.

Adapted: Ozili (2016)

3.3.3 Internationalization of Ghana financial reporting

Ghana is a country with a low-quality financial reporting environment. Since independence from British colony our Domestic Accounting Systems (DAS) had little been revised for taking cognizance of turbulent financial reporting environment. The financial reporting by listed firms under GNAS is switched to the IFRS. This new standards are issued by IASB for enhancing quality reporting of listed firms. Achievement of harmonization and convergence of accounting rules for efficiency and effectiveness in financial information is the stated goal of the IASB (Jarva & Lantto, 2012). The adoption of IFRS is a widespread idea and has been embraced by both developed and developing countries alike. The aim of IFRS is to facilitate growth in equity markets and to restore confidence of investors and companies as posited by Mhedhbi (2012).

This is because IFRS provides high-quality financial reports which serve to reduce uncertainties of their corporate image. It is evidenced that the adoption of IFRS by countries is supported by benefits such as capital market being more accessible for foreign investors (Kothari et al. 2010), improvements of investor protection, improved comparativeness, high international market accessibility, comprehensiveness and enhancing quality of financial information (Dunne et al. 2008). The IFRS adoption in Ghana serves to protect Ghanaian investors and brings them under the common regulation or control.

The harmonization of GNAS to the IASB IFRS has been underscored by numerous benefits such as comparability, decreased information asymmetry and demand by investors for high-quality information. Several empirical research studies have affirmed that IFRS adoption has brought about improved accounting information (Barth et al. 2008; Chua et al. 2012). Even though, there are other studies that contrary assert to this statement. Prior researchers (Daske et al. 2013) attribute the contrary to different economic environment and different jurisdictions that listed companies operate. Moreover, other prior researchers are still in contentious argument that the worldwide harmonization of financial reporting through the IFRS is an accounting response to the integration of world capital markets.

In view of many differences across countries, several accounting harmonization indices have been proposed to deal with the situation (e.g., H-index; C-index by Archer et al. 1995; T-index by Taplin, 2003; CIFAR Disclosure index by Ashbaugh & Picus, 2001; IFRS Conformity index by Ding et al. 2005). All these indices have certain economic arguments about the variables used. Currently the IFRS Adoption Index has proposed eight possible areas for which country's adoption to reflect these areas can be relevant as per the Deloitte and PriceWaterhouse's article (see Table 4). The measure of IFRS level uses a simple binary variable 1 if the IFRS are required, or 0 if not permitted.

Table 4: Areas of IFRS adoption Index: Ghana perspective

Deloitte and PwC IFRS adoption areas	IFRS required	IFRS not permitted
1. Consolidated financial statement of consolidating listed company	1	0
2. Separated financial statement of a consolidating listed company	1	0
3. Consolidated financial statement of a consolidating unlisted company	1	0
4. Separated financial statement of a consolidating unlisted company	1	0
5. Separated financial statement of a consolidated unlisted company	1	0
6. Separated financial statement of non-consolidated unlisted company	1	0
7. Financial statement of entities in certain industries	0	1
8. Taxation requirements	1	0
Index	7	1

Adapted from Deloitte and PwC data, 2011 www.iasplus.com/en/resources/use-of-ifs

Table 4 depicts the IFRS adoption level in the eight thematic areas using the IFRS Adoption Index proposed by Deloitte and PwC. Clearly, Table 4 shows seven out of eight (87.5%) areas Ghana's IFRS adoption is fully required to have adopted. Based on this index, the researcher may infer that Ghana's IFRS adoption level is high and therefore is a force to reckon within IFRS adoption issues in Africa, at least. Based on this, there is the need to ascertain the extent by which IFRS determinants of developing countries being influenced Ghana's level of agreement to these factors.

There are very few prior research papers about IFRS adoption in Ghana. Boateng, Arhin and Afful (2014) articulate the rationale, benefits and challenges faced with Ghana's adoption of IFRS. Using a questionnaire survey on 18 professional accountants from GSE listed firms; the study reveals that local companies under IFRS have improved their access to international markets. Furthermore, local firms are accorded with credibility, transparency and acceptance as a result of IFRS adoption. However, it is revealed from the study that accounting information systems, decreased information costs, and competitive edge are minimal benefits as a result of IFRS adoption. Though, their study is a survey approach, it is not under accounting quality of IFRS adoption as against the researcher's topic for the thesis.

Gyasi (2009) thesis is about the IFRS adoption factors of developing country of Ghana as a case study. Key areas the thesis addresses is to evaluate the factors that shape the adoption of IFRS by Ghana using a questionnaire survey approach. In addition, institutional variables like mimetic isomorphism, normative isomorphism and coercive are aligned to adoption factors. The findings depict that Ghanaian exhibits strong support for all the adoption variables the author used. This study's IFRS adoption factors are entirely differently from the widely accepted ones by prior authors of developing countries. The IFRS macro-economic determinants for developing countries are what this study use. On writing about IFRS in the African continent, Zori (2011) enumerates key issues that confront the swift to IFRS by Ghana to include: (1) whether a country adopts IFRS or not, capital market growth pace may be unrelated, (2) why Francophone African countries remain in using French domestic accounting rules, and (3) institutional arrangements in an economy shapes financial reporting but not accounting standards. Zori (2011) mentions that domestic business ownership and financing systems can influence the accounting standards in Ghana, hence the need to provide greater disclosure would be paramount. Furthermore, his article emphasizes that Ghana's legislative provisions may lead to significant departure from some IFRSs. Zori (2011) still emphasizes wholesome IFRS adoption regardless of thorough accounting reforms program may not yield to accounting quality.

Using a sample of 27 firms on the GSE for over 6 year period of 2003 – 2008, Bokpin (2013) examines the determinants and value relevance of corporate disclosure and transparency relating to firm level characteristics. The author revealed that there is statistically positive insignificant

relationship between corporate disclosure and firm value. The firm values are represented by market to book value ratio and stock price.

The Government of Ghana through the enactment of the Financial Administration Act adopted the IFRS in 2007. The government has not established the Financial Reporting Authority to charge with monitoring mechanism and effective application of the new standards. Therefore, it is likely that Ghana may not accrue the supposed benefits associated with IFRS. In collaboration with government, the technical directors of the ICA of Ghana iterate that the switch to IFRS can be a great opportunity to provide shareholders with higher quality information for meaningful decisions (Verriest, Gaeremynck & Thornton, 2013), but for low monitoring mechanism on the IFRS applications might lead to merely a 'label' as suggested by Sy and Tinker (2013). In another direction of earnings quality, Amidu, Yorke and Harvey (2016) analyze the effect of IFRS adoption on tax avoidance on firms that use internal funding and debt as sources of finance. The data source for the study is non-financial listed firms of GSE and non-listed firms from Ghana Revenue Authority database. Their paper evidence that IFRS reduces tax avoidance incidence as earnings quality increases under increase in applying internal funding to enhance profitability. In addition, their test reveals that IFRS adoption enhances high earnings quality, leading to low tax avoidance incidence among Ghana firms with debt finance source.

Environmental influence on accounting is a force to reckon with as posited by Alewine and Stone (2009). They evidenced that accounting objectives, standards, rules and policies are affected by environmental factors in each country and could determine the outcome of every economic activity. These accounting environmental factors include: political, legal, economic, and cultural (Choi & Meek, 2011, Clements, Neil & Stovall, 2010, Lasmin, 2011, 2012).

The Institute of Chartered Accountants of Ghana (ICA of Ghana) is governed by an Act of Parliament, Act 170 in 1963, and is solely responsible for accounting practice and statutory auditing in Ghana. For the purpose of recognition, the ICA of Ghana has attained affiliation with International Federation of Accountants Confederation (IFAC) that compels its members to adopt IFRS. Among other reasons, this is a force to reckon with in the case of Ghana's decision to embrace IFRS. There are currently 18(34%) African countries have adopted the new standards

successfully, out of 53 on the continent. The total African countries that have adopted the IFRS form about 3% of the total world IFRS-adopters. The countries are Ghana, South Africa, Botswana, Libya, Lesotho, Morocco, Mozambique, Kenya, Malawi, Namibia, Nigeria, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia, Mauritius, and Zimbabwe. In addition to local auditing firms in Ghana, there are some international auditing firms (e.g., Ernst and Young, KPMG, Price Waterhouse Coopers, etc) that are operating and regulated in the country.

Having had an inherent British Accounting systems in Ghana, Ghana Generally Accepted Accounting Principles (GGAAP), was changed to issue Ghana National Accounting Standards (GNAS). In addition, other financial legislations that regulated the accounting environment include: Companies Code of 1963, (ACT 179), Financial Administration Regulations, Financial Memoranda, and Banking Act of 2004, (Act 673) as amended to 2007, (Act 736).

Coupled with inadequate compliance adherence to GNAS and weak human resources capacity and monitoring practices, and accounting and auditing lapses the Report on the Observance of Standards and Codes (ROSC A and A) reveal in Ghana (WorldBank, 2004). Ghana joins the IFRS adoption on January 27, 2007. The mandatory adoption requests government corporations, listed firms, security-brokers, and pension funds to use the new standards. This eminent importance of IFRS is manifested in the capital markets of listed firms (Ismail, Adibah & Kamarudin, 2013; Chen et al. 2010; Ball & Brown, 1968) for investors to make rational investment decisions as IFRS requires more extensive disclosure.

There are currently over 120 countries worldwide that are using IFRS in financial reporting. Out of 57 countries in African continent, about 23 countries currently use IFRS as full scale adopters (IASB, 2016). The empirical evidence supports on IFRS adoption in Africa posit that the adoption is relatively low (Agca & Aktas, 2007). Prior studies about the IFRS adoption have revealed the positive effects of using new standards as opposed to domestic accounting standards (Barth et al. 2008; Chua et al. 2012; Jarva & Lantto, 2012). Besides, it is a mandatory requirement for GSE listed-firms to adopt IFRS to enable the users to understand the information their financial statements convene. Mandatory IFRS-adopters have several forms of incentives to assist their harmonization process so as to minimize difficulties that are anticipated. Such adoption

incentives include training and education of professional accountants to take full charge of implementation challenges, and permit some countries representatives on the IASB to discuss and seek for solution of their country's specific challenges faced in adoption process. Prior accounting studies about the IFRS adoption effect on accounting quality of many nations have been in favor of the adoption (Chua et al. 2012; Barth et al. 2008; Hung & Sabramanyam, 2007), other authors posit that consequences of swift to IFRS remain largely unclear (Chen et al. 2010; Daske, Hail, Leuz & Verdi, 2008). In general terms, the authors are of the view that the IFRS adoption enhances the accounting quality in terms of improved accounting numbers that are better reflected on the firm's performance. The transition to IFRS adoption serves to give usefulness to the accounting standard-setting and regulations (Larson & Street, 2011). It can be inferred that most IFRS user nations have integrity on the consolidated accounts and will be better benchmarking for measuring firm value as compare with the country's local standards.

South Africa is the first country in Africa to adopt IFRS in 2005, and is very good reference point for the other jurisdictions in Africa (Ames, 2013). The delay to Ghana IFRS adoption might be due to political gimmicks, low initiatives and preparedness by the ICA of Ghana, and inability to recognize the huge benefits associated with such mandatory adoption (IFRS, 2011). The launch of IFRS adoption enjoins all listed and unlisted corporations mandatory to apply the IFRS in preparing the financial statements in Ghana. The necessity for Ghana to adopt IFRS is primarily to enjoy benefits generally accrue to positive proponents of IFRS arguments (Tyrrall, Woodward & Rakhimbekova, 2007). So the question one may pose is "regardless to country's accounting reform program, will the adoption benefits accrue to listed African companies as underscores by European listed firms? This is because Africa business environment is tied with their local accounting standards and other financial enactments that make the listed firms difficult to digress to the application of new standards. In addition, accounting principles enforcement agencies are not strong, and more or less no capacity to see to IFRS application in the right frame of the principles. Therefore, the decision by Ghana to adopt IFRS was 'hot-and-cold. More than half of the 57 countries (especially Africa) are sitting on the fence about the IFRS adoption (Sy & Tinker, 2013; Editorial, 2011), for they are in doubt of accrued benefits associated with their adoptions.

3.4 Financial ratios and IFRS adoption

IASB has an inherent aim of creating one set of accounting standard globally with high-quality connotation for all accounting issues (IASB, 2017). Among the expected benefits include access to cross-listing in other international markets and lower transaction costs (Aharony, Barniv & Falk, 2010). IFRS are associated with shareholder oriented-market and therefore promote fair value method of presentation and preparation of financial statements to users of accounts (Dunne, Fifield, Finningham, Hannah, Power & Veneziani, 2008). The reduction of uncertainty of information accorded to the IFRS adoption assist users in making informed decisions, high certainty in predicting firm's future financial performance and therefore motivates transparency and reliability of accounting information quality. Users are longing to employ financial ratios under the IFRS to make meaningful business decisions. Financial ratios are among empirical studies that have received greater attention about measurement of firm performance over the past year. The efficacy of financial ratios under IFRS would be useful for financial statements interpretations. This is because financial ratios influence investors and credit analysts for decisions about investment opportunities in the business environment, and can influence firms to adopt IFRS (Aubert & Grudnitski, 2008; Jindrichovska, 2012).

There has not been much discussion on firm's performance using financial ratios after IFRS adoption in Ghana. With current deteriorating general economic situation in Ghana, couple with minor spilling over effect of 2008 financial crisis, it is more or less justified that financial ratios of listed firms of GSE under IFRS be investigated from both academic and industry point of view.

Accountability theory states that it beholds on those charge with governance to ensure proper monitoring, evaluation and control organizational officers to ethically behave well and in utmost good faith in the interest of shareholders and other stakeholders so as to reduce information asymmetry (Keasey & Wright, 1993). Financial ratios serve as tools for evaluating firm performance so as to give shareholders and stakeholders reasonable assurance in achievement of their corporate goals. Enforcement of IFRS tends to heighten financial ratios to add credibility to its application by firms. This leads to strengthen integrity of accounting numbers for effective comparability and understandability by users of the accounts. Moreover, corporate governance

arrangements enhance IFRS adoption by the way organizations account to shareholders and the general public (Verriest et al. 2013). The adoption of IFRS and good corporate governance practices tends to strengthen and empower those charged with governance, and to reduce agency-principal conflicts as quality accounting information is produced. Several authors pinpoint that the related-party transactions of companies are mostly associated with those charged with governance and widely used to manipulate earnings management for financial reporting (Wong, Alam, & Makur, 2015; Jian & Wong, 2010; Lo, Wong & Firth, 2010a). The Companies Code of 1963 of Ghana (Act 179) enjoins listed companies to be managed and controlled by directors. Directors are under immense pressure to adopt IFRS for assurance of material disclosure and compliance of publishing financial statements (Bokpon, 2013). IFRS adoption gives reasonable assurance of more likelihood of financial ratios to prove valuable in determining listed firms relative performance and in predicting future performance.

Many empirical research studies have been carried on the impact of IFRS on financial ratios, since its introduction in 2005, both EU member countries and other developed countries (e.g. Canada and Australia). Several studies have confirmed significant impact of IFRS's adoption on financial ratios, few ones has evidenced no discernible significant impact (Georgiou, 2010; Pazarskis, Alexandrakis, Notopoulos & Kydros, 2011).

The following studies of literature provide evidence with the IFRS adoption and financial ratios in the EU member countries. For instance, in Finland, Lantto and Sahlström (2009) conduct a study using 91 companies with principal objective of identifying major changes in financial ratios due to conversion from Finnish Accounting Standards (FAS) to IFRS for the same period and year 2004. The study used data from transition reports between 2004 and 2005 to measures changes in profitability, leverage and liquidity. The study concludes that FAS-based balance sheet and IFRS-balance sheet differ significantly at 5% level and that adoption of IFRS has significantly changed accounting ratios of Finland companies. The study reveals the considerable increase in profitability ratio, moderate increase in gearing ratio, considerably decrease in price earning (PE) ratio and slightly decrease in equity and quick ratios. In extended findings, liquidity ratios decrease under IFRS, while leverage and profitability ratios attain an increase. The study attributes the decrease as a result of lease accounting under IFRS (IAS 17) leases, employee

benefit obligations (IAS 19), and financial instruments (IAS 32 and 39) that brings additional liabilities. Profitability ratios depict an increase under IFRS. This is primarily due to business combinations (IFRS 3) and the combined effects of several other standards. Similar conclusion is evidenced in Gaston, Garcia, Jarne, Antonio and Gadea (2010) study on the UK and Spanish firms. Their study result suggests that the quantitative impact has been significant in both countries, though the UK financial ratios and accounting numbers achieve higher than the Spanish ones under IFRS adoption. The differences may be ascribed to opposite group of their traditional accounting systems, and different way each country may have applied the standards at first time. Another strand of study in financial ratios in UK by Latridis (2010) exhibits result that fair value IFRS adoption has significant effects on the financial performance of UK companies. In a related paper, Silva, Mendeiros do Couto and Cordeiro (2009) evidence that all items from the balance sheet and profit and loss statements statistically and significantly increased, resulting to both price-earnings ratio (PER) and earnings per share (EPS) ratios to be depreciated, using 39 public companies. Consistently, Georgakopoulous et al. (2010) and Pazarskis et al. (2011) empirical studies on impact of IFRS on financial ratios in Greece reveal significant impact on financial ratios, especially margin ratios and leverage ratios. In a similar study by Callao, Jarne and Laínez (2007), their results evidence that economic and financial positions of Spanish firms are different under IFRS and local accounting standards in terms of cash and cash equivalents, long-term and total liabilities, the cash ratios, indebtedness and return on equity. Their study further concludes that adoption of IFRS has significantly decreased debtors, equity, operating income and solvency ratio and return on assets (measured in terms of operating income). Their study sample 35 firms listed in Spanish National Securities Market Commission between first half of 2004 and 2005. Similarly, Stent, Bradbury and Hook (2010) findings posit that IFRS adoption has positive significant impact on return on equity, return on assets, and return on sales using New Zealand listed companies.

On the contrary to above findings, Bellas, Toudas and Papadatos (2007) survey 83 companies in Greece using financial data for 2004. They conclude that although, tangible fixed assets and total liabilities recorded considerable higher prices under IFRS than Greece Accounting Standards (GAS), IFRS does not significantly impact on financial ratios. This revelation motivates Attianos, Vazakidis and Nikolaos (2005) to conduct a similar study in Greece, using data from

2003 to 2004. Attianos et al. (2005) conclude that adoption of IFRS significantly improves the value of assets, equity book value, and variability of book value and net income than GAS. Attianos et al. (2005) however, found out that adoption of IFRS does not significantly impact on financial ratios, except return on assets ratio, and has similar findings with Balios, Nikolas, Konstantinos and Dimitrios (2013) on both margins and leverage ratios variables in Greece. Klimczak (2011) finds that IFRS financial does not change by more than 12%, mostly balance sheet items like tangible fixed assets, investments, and net earnings using 159 Polish listed companies. Consistently, Jindrichovska and Kubickova (2012) compare 16 financial ratios using IFRS and Czech Accounting Standards (CAS) conclude that there are no significant differences in the financial ratios resulting from the IFRS and CAS formats.

In Canada, Blanchette, Racicot and Girard (2011) compared 26 ratios computed from IFRS financial statements and Canadian GAAP financial statements, using univariate analysis and linear regression model. Nine firms are used and the data is extracted from the financial statements prepared for both Canadian GAAP and IFRS. Their findings show no significance difference between medians of the ratios under application of fair value (IFRS) consolidation accounting and pre-changeover Canadian GAAP. Differences between IFRS and pre-changeover Canadian GAAP do not affect cash flows. Moreover, most of the financial ratios under IFRS present a significantly higher volatility than those computed under pre-changeover Canadian GAAP. McConnel (2012) employs Blanchette et al (2011) for similar study about Canadian mining firms, using Leven's and Wilcoxon signed rank tests as variables do not exhibit normal distribution. He evidences no statistically significant differences in the central tendency of quick ratios, return on assets and comprehensive return on assets.

A study by Ibiamke, Adzor and Ateboh-Briggs (2014) find evidence for listed companies that IFRS adoption in Nigeria has caused a negative, but insignificant impact on financial ratios. This study employs an innovative design known as "same firm-year" research design to examine how IFRS adoption changes key financial ratios of Nigerian listed firms. Using a filter scale and Grey index to ascertain the impact of IFRS adoption on financial ratios, the study sampled 60 companies. Paired sample t-test and Levene's F were used to test the statistical significance of the differences in mean and variances between financial ratios under IFRS and Nigerian

Generally Accepted Accounting Principles (NGAAP) respectively. The study concludes that profitability ratios such as earnings per share (EPS), return on assets (ROA) and return on equity (ROE); liquidity ratios (current ratio, net cash flow) and leverage ratios (total debt to equity ratio and total debt ratio) do not differ significantly after IFRS adoption. The equality of variance test in the study reveals that the data does not support any significant change in the variability of profitability ratios, liquidity ratios and leverage ratios upon adoption of IFRS. The conclusion therefore is that, IFRS adoption does not significantly impact profitability ratios, liquidity ratios and leverage ratios of Nigerian listed firms. On a similar study by Zayyad, Ahmad and Mubaraq (2014), the results evidence a mixed outcome. The study evidences that short and long term solvency ratios were insignificantly higher for GAAP denominated financial statement than the IFRS. The investment ratios present a mixed result as the NGAAP has higher EPS than the IFRS, whereas the dividend per share (DPS) and the dividend payout ratios are higher under IFRS than the Nigerian GAAP. In a similar study on activity-based ratios by Surajit (2014), the finding indicates that IFRS adoption has a negative effect on activity-based ratios of most Indian firms. But it is statistically insignificant.

The extant empirical literatures in developed nations show a significant impact of IFRS adoption (Aubert & Grudnitski, 2008; Jindrichovska, 2012); few literatures conclude no evidence of visible changes. Extant literatures are attributing the differences in financial ratios under IFRS to be valuation policy differences that affect balance sheet figures and eventually on the income statement (Lynch, 2007; Lantto & Sahlstrom, 2009).

It is true that there are similarities that exist between the local standards and IFRS in some areas, yet the differences between them still emerge in terms of guidance and application of the new standards. The theory that under financial ratios there are no differences may not hold in Ghana perspective because it uses to be lower alignment of GNAS with IAS prior to the mandatory swift to IFRS. The major differences between the GNAS and IFRS are given in Table 5. Table 5 tells us that in comparison to the GNAS, IFRS requires or permits biological assets (IAS 41), intangible assets acquired in business combination (IFRS 3), to be measured at initial recognition of fair value. Moreso, IFRS allows investment property (IAS 40) and property, plant and equipment (IAS 16) to be measured at fair value after initial recognition and requires goodwill to

be annually assessed for impairment (IFRS 3). Some financial assets and liabilities are still recognized at fair value through profit or loss. GNAS does not promote rules to be followed. Moreover, while IAS 12 requires deferred tax liability to be recognized for all taxable temporary differences, GNAS permits these treatments but does not require them.

Table 5: Summary of differences in accounting standards between GNAS and IFRS

Accounting treatment (IFRS standards)	GNAS	IFRS
Financial statements (IAS 1)	This framework omits several issues such as the qualitative characteristics of financial statements.	Require detail framework for the preparation of financial statements, which include statement of changes in equity.
Accounting estimates (IAS 8)	Changes in accounting policies should be included in the extraordinary items in the current period.	
Consolidated financial statements (IFRS 10)	Disclosure of minority interest is omitted on the face of income statement	Requires disclosure of non-controlling interest for subsidiary on the face of the income statement and the statement of financial position
Income taxes (IAS 12)	Deferred tax assets and liabilities to be created only for timing differences relating to depreciation as per income statement liability method.	Recognition of deferred tax assets and liabilities for all temporary differences as per balance sheet liability method.
Borrowing costs (IAS 23)	Disclosure for borrowing costs and the capitalization rate was absent	Requires full disclosure of borrowing costs and recognizes capitalization rate
Agriculture (IAS 41)	GNAS does not have a substantive standard on accounting for agriculture.	Requires fair value for biological assets in extensive explanation.

Intangible assets (IAS 38)	GNAS does not have substantive accounting standard for intangibles. There was requirement for disclosure for Goodwill, patent, trademarks, and similar assets.	Stipulate that assets can be recognized when it will probably entail future benefits and when the cost of the asset can be reliably measured. The recognition, and measurement of intangibles depends on whether- it is purchased, -acquired through business combination, -are internally generated.
Non-current assets held for sale and discontinued operations (IFRS 5)	GNAS has no substantive standard that provides detailed treatment of discontinued operations.	Requires separate disclosures for non-current assets held for sale and discontinued operations.
Investment property (IAS 40)	GNAS has no substantive guide for investment, but investment property be accounted for as long term investments or as PPE.	Allows investment property to be measured at fair value. Requires to be measured at cost, but to disclose the fair value.
Property, plant and equipment (IAS 16)		
Business combinations (IFRS 3)	Allows the pooling of interest method to be used.	Requires the purchase method to be used. Assets and liabilities are measured at their acquisition date fair value.

Gray's (1980) conservative index has been applied by several authors in the area of comparing national GAAPs with IFRS financial statements. For instance Bertoni & De Rosa (2006) for Italian listed firms, Silva and Couto (2007) for Portuguese firms, Bellas et al. 2007 and, Tsalavoutas and Evans (2007) for Greece listed firms, and Abd-Elsalam and Weetman (2003) for Egyptian listed firms. These studies pinpoint the fact that the mandatory swift to IFRS marks a very significant event to examine the difference between the national accounting and the IFRS. Their results evidence differences in degree of accounting conservatism of both balance sheet items and income items following the swift to IFRS. Such differences are attributed to each countries national accounting rules and as to whether it is a code law or a common law country before open to the IFRS (Istrate, 2013; Nobes, 2011). Gray (1980) conservative index is

important for addressing the differences between the GNAS and IFRS as the former recognizes conservatism measurement approach and therefore swift to IFRS is a higher deviations from it. Braun and Rodriguez (2014) states that accounting standards of nations are shown to be more conservative and therefore having inherent uncertainties than arguments about IFRS. Gray (1980) model examines the extent of differences in profit and equity reported (Hossfeld Ch. 2011) in using different standards.

4. Research methodology

4.1 Research philosophy

Philosophical perspective is important in accounting research it serves as guide in defining the research questions and research methods. Different research problems could be explained by employing different appropriate philosophical ideas (Chua, 1986). There are two categories of philosophical research, namely ontology and epistemology (Mason, 2002). Researcher's view on 'the nature and essence of things in the social world' refers to us ontological perspective, whilst epistemological perspective considers philosophical issues that include the model explanation used in the research (Mason, 2002). The positivistic approach and the interpretive approach are two commonly used models that are fundamental for explaining research problems. Positivists hold the view that researcher's statement is true when their statement matches exactly with reality (Watts & Zimmerman, 1978, 1990). Positivistic approach researchers adopt this perspective for predefining dependent and independent variables under the methodology. It is usually most appropriate for testing theory in a research. Positivistic approach is associated with the following elements: propositions, quantifiable measure of dependent and independent variables, hypotheses testing and the conclusion on a phenomenon from a certain sample to a given population (Orlikowski & Baroundi, 1991). For instance, positivistic approach (e.g., positive accounting theory) is mostly employed by managers to select accounting methods in measuring a true and fair representation of firms's performance (Watts & Zimmerman, 1978). This theory is relevance to this thesis in that IFRS adoption heightens firm's performance to reflect the true image for informed meaningful investment opportunities (Ahmed & Duellman, 2007).

Interpretive research explains that there is an intimate relationship between phenomena in the world and the researcher who studies these (Rowlands, 2005) in a mix of the situational constraints. They believe that some conceptions of researchers match their understanding as a matter of truth. This approach does not aim to test a theory but to understand a social phenomenon like language, consciousness and shared meanings (Klein & Myers, 1999; Scapens, 1990). So, it is practically applied in management accounting research than in the financial

accounting. The interpretative approach has inherent difficulties in its use (Chua, 1968). For instance, questionnaire survey dynamics of this research adheres to interpretative approach, since the behavior of people about IFRS adoption situation in Ghana is heightened. Therefore, the generalization that positivistic approach tends to recognize unique situation is applicable in this research view (Saunders, Lewis & Thornhill, 2003).

4.2 Data collection process

The data for the study are obtained from two main sources (primary and secondary sources) as these sources are explained to be better in exploring the study objectives (Creswell, 2009). The questionnaire is used for collecting data of the first objective. Secondary data is obtained from the financial statements of the selected listed companies' websites and from the DataStream to fulfill second and third objectives.

The questionnaire is designed on a 5-point ordered Likert scale, which is from 'strongly disagree to strongly agree' (Lubke & Muthen, 2004). I use the IFRS determinants for developing economies to form the thematic areas of the content of questionnaire designed. Each of this pillars addresses specific issues that is pertinent and might have a strong influence on Ghana's IFRS adoption decisions on a factor basis (see Appendix A) as discussed in the section 3.2.

Respondents for the questionnaire are the Institute of Chartered Accountants (ICA) of Ghana technical directors, examiners, and the ICA course-teachers under ICA supervision in Ghana. By virtue of sensitive nature of their role as examiners, 120 questionnaires are received, out of 144. These categories of person are selected for the purpose of achieving objective one, because the ICA of Ghana is a body by law government has charged them with responsibility to see to all financial and auditing administration matters (e.g. standard setting, standard acceptance, application and guidelines) of the nation. Moreover, they handle all the issues and knowledge about the adoption of IFRS in Ghana. Data survey procedure involves detailed the researcher to spend time to administer questionnaire on the respondents in their workplaces. I employ face-to-face questionnaire administration and it is consisted of invitation letter, and personal follow-up for collection. Ethical clearance letter (Appendix B) is obtained from the ISCTE-Business School, as a matter of research protocol to observe along with the administration of

questionnaire. Table 6 shows that out of 144 questionnaires that are sent out, 124 questionnaires are received, but those that are in good condition are 120 questionnaires in number. The reason assigned to unused 4 questionnaires is due to dual response given to some questions. In total, the accepted questionnaire achieves a response rate of 83.33%.

Table 6: Questionnaire response rate

Recipients	Sent	Received	Accepted	Response rate (%)
CEO	9	9	9	100
Tech director	9	9	9	100
Accountants	86	76	74	86
Director of finance	40	30	28	70
Total	144	124	120	83.33

I also use secondary data source of audited financial statements of listed firms to deal with both objective 2 and 3. The initial sample for this study is selected from listed companies traded on the GSE between 2003 and 2013 periods. The number of initial sample is 34 companies (see Table 7). Categories of manufacturing firms include soap/detergents, sale and servicing of cars, production of dairy products, importing of papers and commercial rolls, dealers of aluminum based products, financial institutions, mining and processing of agriculture products. Financial institutions, insurance firms and those firms with missing data are excluded. Financial institutions and insurance firms exclusion is due to the different reporting requirements outlined by GNAS. My final sample consists of 16 GSE listed-firms, representing 47.06%. The sample derivation is shown in Table 7. Some data is hand-collected and others are obtained from DataStream database. The sample firms have December fiscal year end (Alali & Foote, 2012). The justification for this data source is that it addresses specific accounting data that require for computing accounting quality proxies and key financial ratios. The selected listed companies are those their reporting standards comply with both the GNAS and the IFRS, indicating pre-IFRS adoption period of 2003-2006, and post-adoption period of 2007-2013. The study merges this data with stock return data of selected firms. I include 2007 in the post-adoption, as in most cases exclusion results show minimal differences (Suh & Byard, 2015; Castillo-Merino, Menendez-Plans & Orgaz-Guerrero, 2014).

Table 7: Sample of GSE listed firms

	Number of firms	%
Listed-firms at GES	34	100
Less: Banks	9	-26.50
Less: Insurance firms	4	-11.76
Less: firms with missing data	5	-14.71
Final sample	16	47.06

Table 8 brief provides an overview of the methods for data collection that are essential in respect of each objective. It also highlights the issues involved in choosing and using methods for achieving the study outcome. In order to ensure quality in data collection, questionnaire administration, hand-collecting and DataStream sources are employed. Undoubtedly, each data type source has its strengths and limitations.

Table 8: Objectives and method of data sources

Research objective	Data collection method
1. To what extent Ghana's IFRS adoption is influenced by IFRS determinants.	Questionnaire administration.
2. To examine the effect of IFRS adoption on accounting quality using GSE listed firms.	Hand-collecting data and DataStream.
3. To examine effects of IFRS adoption on financial ratios of GSE listed firms.	Hand-collecting data.

4.3 Hypotheses

4.3.1 IFRS adoption determinants

The IFRS adoption determinants theories (e.g., networks theory, positive accounting theory) postulate that, given that developing countries colonized nations have adopted IFRS; it serves to

appeal to developing nations economic conscience to follow their colonized nations and therefore have a strong aversion to adopt the IFRS (Bush & Maltby, 2004; Davie, 2000). I examine the extent the macroeconomic factors influence the IFRS adoption decision by Ghana using questionnaire survey. Even though, some African countries are skeptical about the perceived benefits and in doubts about achieving positive effects of changes in underlying business performance, they still adopt the new standards (Jones & Higgins, 2006). The study therefore makes various hypotheses for each determinant of IFRS adoption as follows.

Empirical evidences affirm relationship between economic development and accounting (Cooke & Wallace, 1990; Larson & Kenny, 1995). Zeghal and Mhedhbi (2006), Shima and Yang (2012), Zehri and Chouaibi (2013), and Arpan and Radebaugh (1985) confirm that the development of country's accounting system and practices have a positive effect on the country's level of economic growth due to mandatory more public disclosure requirements, but shows a relatively small negative relations between them under the study of developing countries. Countries that exhibit a relatively high economic growth depict accountancy and communication as medium of measurement that recognized high-quality accounting system and standards. High economic growth countries of sound business environment with strong resource based may adopt IFRS as a signaling mechanism to attract foreign resources to ensure economic growth, as opposed to relatively low economic growth countries with limited internal resources. Economic development of Ghana experiences a marginal increasing trend but there are evidences of fiscal consolidation programs that demand requirement to adopt the new standards (WorldBank, 2016). Following this, the study hypothesizes as:

H1: Ghana's economic growth significantly increased the likelihood to adopt IFRS.

Economic openness has been the rationale behind the formation of regional trading groups. For instance, we have EU and African Union (AU) and others. From the economic perspective, higher degree a country's economy opens to the external world, the greater the country should comply with external regulations. Such external pressures influence the IFRS adoption and development, as across border transactions involves financial analysis, which will be more easily handled under one common accounting standards. Examples of external bodies include foreign

investors, internal accounting firms, and world financial institutions. They are also the main forces behind the demand for development and IFRS adoption. Most developing countries have adopted IFRS based on the influence of economic openness (Shima & Yang, 2012; Ramanna & Sletten, 2009), and Cooke and Wallace (1990). However, Zeghal and Mhedhbi (2006) conclude that both economic openness and growth do not influence IFRS adoption of developing economies. The study then draws hypothesis that:

H2: Ghana's access to external market significantly increased the likelihood to adopt IFRS.

According to Shima and Yang (2012) a more elite population will require complex accounting systems to take account for financial information (Ding et al. 2007). Several prior authors (Archambault, 2009; Zeghal & Mhedhbi, 2006) have suggested that the success of IFRS adoption of countries is heavily depending on a quality level of education and competence of professional accountants (Zehri & Chouaibi, 2013; IFRS, 2011). It requires highly qualified accountants, who are well-trained to be able to understand, interpret and use these standards (Kolsi & Zehri, 2013; Judge et al. 2010) for both developed and developing economies. Ghana's education remains high as our curricula are still matched with British Colonial Administration (WorldBank, 2010). Educational reform level of Ghana is relatively far advanced and may therefore have a positive relationship to IFRS adoption (WorldBank, 2014). Thus, I hypothesize that:

H3: Ghana's educational system significantly increased the likelihood to adopt IFRS.

Cieslewicz (2014) posits that at national level, culture and accounting have indirect relationship, especially through a mediating factor of institutions. Colonial cultural values and norms shapes accounting environment of a country, because culture is tested in the form of religion, human behavior pattern, and language (Hofstede, 1980; Stulz & Williamson, 2003). Prior empirical research about culture and accounting system development depict a mixed results (Jaggi & Low, 2000), but uncertainty avoidance appears to be most relevant of cultural values to explain IFRS adoption's decision (Salter & Niswander, 1989). The four dimensions of Hofstede (1980) cultural model are power distance, masculinity versus femininity, individualism versus

collectivism, and uncertainty avoidance. Gray (1988) was the first to use Hofstede (1980) cultural model in accounting in terms of professionalism, conservatism, uniformity, and discretion. Gray (1988) ascertains an association matrix that established the correlation between the theoretical framework of Hofstede (1980) accounting concepts, accounting practices and cultural dimensions. Professional judgments in accounting and practices can be influenced by culture values. Table 9 tells us the relationship between cultural and accounting values as established by Gray (1988).

Table 9: Expected signs of relationship between cultural and accounting values by Gray (1988)

Cultural values	Professionalism	Uniformity	Conservatism	Secrecy
Power distance	–	+	?	+
Uncertainty	–	+	+	+
Individualism	+	–	–	–
Masculinity	?	?	–	–

The choice of accounting system a country belongs to is a major factor. Cultural affiliated countries could be inspired by countries of the same culture as cited by Nobes (1995) in Mhedhi's (2006) paper. Some reasons prior researchers assigned to this include familiarity and language (Clements et al. 2010; Lasmin, 2011), and therefore is easier for developing countries to adopt the same standards of a developed country of the same culture (Mhedhi, 2006). The colonial culture affiliation of Ghana is Anglo-Saxon of British and could be potentially inclined to Ghana culture. Therefore, I hypothesize that:

H4: Ghana's association with Anglo-Saxon colonial culture significantly increased the likelihood to adopt IFRS.

According to La Porta, Lopez-de-Slanes, Shleifer and Vishny (1997, 1998), there is direct synergy exist within the legal system, investor protection level, and capital market development (Shima & Yang, 2012). The two main legal systems in accounting are common law and code law systems. Legal systems of developing countries could potentially drive the development and

adoption of IFRS. There is a great likelihood for common law nations to adopt IFRS than those of code law nations, as common law enhances better disclosures to shareholders (Li, 2009) and has more or less common features with IFRS (Nobes, 1998). Ghana is a common law country and therefore there is great likely to adopt IFRS to provide quality information for effective decision making. This is because the Company Act1963 is based on UK legislation (ROSC, 2010) and IFRS may be similar to accounting standard of common law nations. Consistent with this argument, I can hypothesize as:

H5: Ghana's legal system significantly increased the likelihood to adopt IFRS.

Political actions can make accounting product to achieve success. Political factors of developing nations drive the acceptance and success of accounting standards they pursued. For example, the donor countries require developing countries to submit returns of their financial accounts to them on perhaps monthly basis. The external loan application requirement demands this condition to be met. There is a penalty to pay if a country is unable to comply with this condition. Submission of accounts requirements could potentially have to adhere to IFRS principles, especially where the level of political freedom is high (Zehri & Chouaibi, 2013). Ghana is experiencing stable political environment for about three and half decades now, and besides the political ties of colonial U.K. has strong influence on Ghana's IFRS adoption (Joshi, 1998). In view of this, the study hypothesizes as:

H6: Ghana's political system significantly increased the likelihood to adopt IFRS.

Auditing and accounting activities pursued by country re-enforce integrity of accounting numbers that are often rely on by the credit and investment analysts. It is likely that this reduces agency problems between managers and shareholders as insider information is disclosed (Samaha & Khlif, 2016). Although high-quality accounting standards and auditing alone are not sufficient for high-quality financial reporting (Chua et al. 2012; Barth et al. 2008), investor protection law and enforcement mechanisms are equally important of a country (Piot & Janin, 2007). Ghana's auditing market is partly dominated by small number of foreign auditing firms,

and there is high propensity to ensure IFRS auditing in line with their parent firms (Ocansey & Enahoro, 2014). I expect this hypothesize to be:

H7: Ghana's auditing and accounting system significantly increased the likelihood to adopt IFRS.

Levine (2005) evidences that capital market development is an ingredient for sound financial system that helps to cause economic growth (WorldBank, 2007; Larson & Kenny, 1995; Zeghal & Mhedhbi, 2011). The availability of capital market tends to interest investors since their eagerness to look for best opportunities to invest their scarce economic resources become their optimum decision. Jemakowich and Gornik-Tomaszewski (2006) assert that IFRS adoption by developing countries promotes economic globalization and capital markets integration under internal accounting harmonization. Accounting harmonization platform serves to meet investment needs (e.g. return, risk, and liquidity) of investors regardless of national boundaries (Prochazka & Pelak, 2015). Such investment information is crucial for investment decisions. The adoption of IFRS enhances and facilitates information comparability, reliability and above all compels listed firms to disclose all material information to decision-makers, thereby reducing the costs of accessing such information. Zori (2011) evidences GSE to be top five in Africa markets on the need for quality accounting information. Thus, I can hypothesis that:

H8: Ghana's capital market development significantly increased the likelihood to adopt IFRS.

Ghana has several operational financial legislations in use to regulate the financial administration to ensure sanity and financial discipline in both private and public organizations. The adherence of such legislations tends to minimize financial malfeasance within the account balances and class of transactions. But for the global markets integration to pave way for facilitating capital mobilization and assurance of investor confidence, Ghana's financial legislations are less consistent with international best practices, mainly due to un-update (UN, 2008; WorldBank, 2014). A typical example is in the area of corporate financial reporting. This facilitates less convergence GNAS to IFRS. Corporate firms under IFRS should comply with local financial

legislations to strengthen the internal controls and to give reasonable assurance to stakeholders for achievement of corporate objectives. The study therefore hypothesizes as:

H9: The existence of Ghana's financial legislations significantly decreased the likelihood to adopt IFRS.

4.3.2. IFRS adoption and accounting quality

Undoubtedly, accounting quality appears to have increased after IFRS adoption by most of the extant empirical studies, on average, (Barth et al. 2007, 2008; Chua et al. 2012; Zeghal et al. 2012). These outcomes are consistent with the main intended objective of creating IFRS. Although, there are few studies that are evidencing mixed finding of their results (Paananen & Lin, 2009), recent research show an improvement in accounting quality, hence tend to support the harmonization of accounting standards across nations (Chua et al. 2012). Some attribute the reasons for mixed results to the poor compliance (Street & Gray, 2001) and inadequate reporting incentives in few countries (Ball, Robin & Wu, 2003).

Ghana financial reporting environment achieves a competitive advantage arising from more or less early IFRS adoption over other African countries, apart from South Africa. In addition, there is existence of little high-quality national accounting regime that is well-regarded before transition to IFRS. Despite this, prior empirical studies about the IFRS adoption in Africa and accounting quality confirm higher improvement in accounting quality (Bova & Pereira, 2012; Chamisa, 2000; Outa, 2001), few ones result in mixed findings (Zeghal et al. 2012; Chen et al. 2010). Some research work attributes to the fact that Africa has low IFRS enforcement and weaker reporting incentives, and therefore its effect is negligible. Examples of such reporting incentives include the financial market development, the capital structure and the tax systems (Christensen et al. 2008; Daske et al. 2008). This makes the current IFRS adoption effect to be still uncertain in Africa (Byard & Yu, 2011). Reporting incentives and weaker enforcement among others are sufficiently limiting the benefits Ghana expects as associated with the new standards adoption.

Taken together the general affirmative conclusions of IFRS adoption and mixed findings of accounting quality by developing countries, the study proposes this hypothesis:

H10: The adoption of IFRS by GSE listed firms will lead to higher accounting quality.

4.3.3 Financial ratios and IFRS adoption

The main aim of this objective is to assess IFRS adoption's influence on financial ratios of GSE listed firms in relation to significant impact thereon after the transition to IFRS. Financial analysts employ financial ratios in their assessment of value relevance and credit decisions (Altman, 1968) and other contracting agreement (Stent et al. 2010). As required by GSE listed firms to apply IFRS in preparation and presentation of financial statements to ensure among other things to achieve high quality reporting standards by listed firms, to ascertain the efficient and cost-effective operation of capital market to arouse the investors' confidence and protection, and as a cutting edge for global competitiveness (Zeghal et al. 2012). Prior empirical studies predict that financial ratios under IFRS tend to improve and enhance firms' performance and contractual activities, comparatively (Sovbetov, 2015; Agca & Aktas, 2007; Blanchette et al. 2011). This, in effect protects investors and other stakeholders who vehemently rely on financial ratios for financial decisions as underscore stewardship theory. This is motivated in the provision of decision-useful information enshrine in the Conceptual Framework of the IASB. My thesis estimates this test using three estimation models: Wilcoxon signed rank test, OLS, and Gray conservative test. I therefore hypothesis that:

H11: There is likelihood that after IFRS adoption by GSE firms, financial ratios will improve than under local standards adoption period.

4.4 Research design

4.4.1 IFRS adoption determinants

It is undoubtedly true that IFRS adoption determinants influence the outcome of accounting information and public confidence in global capital markets place (Ritsumeikan, 2011). But effective workability of these determinants of a given country is not the same due to inconsistencies within its application across African countries. This would have a consequence implication of reducing comparability and transparency. The ultimate effect is that the proponents of IFRS arguments of giving assurance of higher accounting quality objective may be compromised and therefore would lose its predictive power. Despite this argument, there are still many empirical studies (Devalle, Onali & Magarini, 2010; Iatridis, 2010) which reiterate that the quality of accounting information, on average has improved under IFRS determinants operating environment, especially in cognisance of importance of firms' reporting incentives (Hail, Leuz & Wysocki, 2009; Leuz et al. 2003). I envisage broad effects on economic outcome arising from the IFRS adoption determinants in Ghana. This is because, local standards has vast difference from the IFRS for reporting accounting numbers. Given that large number of sub-items (36) that explain the IFRS determinants, the most suitable analytical method for testing this hypothesis would have been the structural equation model (SEM). However, this study has a small sample size (120 observations), so the study could not use SEM (Na Fu, 2010). logit estimation model is employed. This estimation method examines the likelihood that IFRS determinants influence Ghana's decision to adopt IFRS. This approach accommodates the binomial-discrete dependent variables. Given that the aim is to evaluate the extent these factors influence Ghana's decision to adopt IFRS, the applicable model is explained in equation (3):

$$\text{Log} \left(\frac{P_i}{(1-P_i)} \right) = \beta_0 + \beta_1 \text{ANGS}_i + \beta_2 \text{ECOG}_i + \beta_3 \text{CAMD}_i + \beta_4 \text{EDUC}_i + \beta_5 \text{ECOC}_i + \beta_6 \text{LEGS}_i + \beta_7 \text{POLLS}_i + \beta_8 \text{AAGQ}_i + \beta_9 \text{FLGS}_i + \varepsilon_i \quad (3)$$

In addition, the dependent variable ($\text{Log} (P_i/(1-P_i))$, levels of measurement (strongly disagree, disagree, unsure, agree and strongly agree) is classified to recognize the summary interpretation of binary outcome of 'agree (1) and not agree (0). In view of this, the study uses the logistic

regression model to run statistical tests for each factor and its associated items that explain the adoption circumstances (Lasmin, 2011, 2012; Zeghal & Mhedhbi, 2006; Ole Kristain, Jin & Kang, 2006). The response for each respondent for dependent variable is found in question 9 of appendix A. I use mean values of items under each determinants of questionnaire (see Appendix A) to calculate to run for obtaining independent variables. This is to measure the extent of agree or disagree to the IFRS adoption decision, given the correspondent macroeconomic factors or IFRS determinants as independent variables. In addition, the study anticipates the likelihood of non-linear relationship between dependent and independent variables; hence objective one employs a logistic regression (Lasmin, 2011, 2012; Zehri & Chouaibi, 2013). The basis of this regression model is based on Greene (2012) multiple logistic regression. Non-linear relationships between dependent variable and independent variables are supported by a logistic regression model. According to Lasmin (2011) this approach tends to increase robustness of the model and therefore seeks to take care of the binomial-discrete dependent variables.

Validity and reliability tests as psychometric properties are used in considerations of test evaluation (Michell, 2003), and are characteristics of behavioral measure of tests (Guilford, 1954; Winer, Brown & Michels, 1991). Questionnaire design using likert-type scales enhances accuracy, and credibility of the thesis objective to underscore validity and reliability. This design renders to receive expert responses to strengthen the expected results (Davies & Dodds, 2002). Reliability and validity threats are minimized by: (a) selecting appropriate time scale (2003-2013) for the study, given that Ghana adopts IFRS in 2007, and (b) employing suitable research design method taking into accounts the study characteristics (Oliver, 2010). This saves errors and free from bias. For instance, I subject the questionnaire into computing the Cronbach's Alpha values of IFRS determinants. The relevancy of such tests assures stability and similarity of the measurements for a given time (Golafshani, 2003). Reliability tests between 0.6 and 0.7 may be acceptable on condition that other indicators of a model's construct validity are good. Internal consistency prevails where there is high construct reliability.

Panel A and B of Table 10 describes and gives the full explanations of the determinant variables used equation 3 and the expected signs. The dependent variable uses the five likert-scales

(strongly agreed to strongly disagree). Panel B of Table 10 depicts the adoption determinants that serve as the independent variables with explanations.

Table 10: Descriptions of IFRS adoption determinants

Panel A: Dependent variable

Variable	Dependent variable	Description
IFRS adoption decision	IFRS	Ghana's decision to adopt IFRS in five Likert scale (from strongly agree to strongly disagree). (see Appendix A, Q9)

Panel B: Independent variable

Variable	Adoption determinants	Descriptions	Expected signs
ANGS	Anglo-Saxon factors	Social systems and values, sharing colonial masters regime. Ghanaian culture incorporates to IFRS adoption.	+
CAMD	Capital market development	Cross listing, GSE openness to foreign investors, GSE integration into external exchanges.	+
EGOC	Economic growth	Facilitate borrowings, encourage foreign direct investment.	+
ECOC	External economic openness	Pressure from World Bank, IMF, IFAC and ADB to adopt the standards to access external financial	+

		support, engage in trade partners demand.	
EDUC	Educational level	Understanding of IFRS and incorporate into accounting education for flexibility usage.	+
LEGS	Legal system	Practicing of common laws, tax legislation resemblance of UK's; UK's member in IASB board.	+
POLS	Political factors	Stable government and economic system structure.	+
AAGQ	Audit and financial factors of Ghana	Need for accurate financial reporting systems for giving reasonable assurance.	+
FGLS	Financial legislations of Ghana	Ghana's financial legislation is similar to UK ones.	-

4.4.2 IFRS adoption and accounting quality

Francis, LaFond, Olsson and Schipper (2004) and Dechow et al. (2010) considered several empirical earnings quality attributes to measure accounting quality. They are accrual quality, persistence, predictability, smoothness, value relevance, timeliness, and conservatism. The measures make use of both accounting data and market data to measure accounting quality. In this study, I select Francis et al. (2004) and Dechow et al. (2010) accounting quality constructs. This is because their constructs are widely applied in accounting literature and will help to evaluate differences in the accounting standards in analyzing accounting numbers and their properties (Zeghal et al. 2012; Chua et al. 2012; Van der Meulen, Gaeremynck & Willekens, 2007; Irina-Doina Pascan, 2015; Chen, Tang, Jiang & Lin, 2010). In the study of accounting

quality, I apply accruals-based earnings concept and market-based concept for the purpose of evaluating firms' reported economic performance (Healy & Wahlen, 1998) after IFRS adoption in Ghana. This is because the intended objectives of accruals are to reflect the true performance of firms, and yet can be used to detect and quantify earnings manipulation. The real earnings manipulation concept is not used because; it has lower application due to higher degree of monitoring. The decomposition of accruals gives rise to both unobservable and non-discretionary and discretionary accruals (i.e. referred as normal and abnormal accruals respectively) (Gunny, 2010). For accounting quality proxy of value relevance, I adapt market-based measures (Zeghal et al. 2012; Francis et al. 2004).

Dechow et al.'s (2010) category 1 and 2 design estimation approaches are used in selecting accounting quality constructs. Dechow et al. (2010) category 1 and 2 accounting quality proxies include earnings persistence, earnings smoothness, asymmetric timeliness and timely loss recognition, price-earnings model, and return-earnings model. This is more or less in consistent with Zeghal et al. (2010). Therefore, I select the construct from two groups: (see Table 11): the earnings properties--based metric (Table 11 Panel A), and the market based metric in Table 11 of Panel B (Herly, 2015). Table 11 shows design estimations in three broad classifications to compute accounting quality.

Table 11: Overview of earnings quality proxies

Model and citation	Design model	Context
Panel A: Earnings properties-based		
Jones (1991)	$TA_{i,t} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \Delta REV_{i,t} + \beta_2 PPE_{i,t} + \varepsilon_{i,t}$	Separate discretionary and non-discretionary accruals.
Modified Jones (1991) (Dechow et al. 1995)	$TA_{i,t} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 (\Delta REV_{i,t} - \Delta REC) + \beta_2 PPE_{i,t} + \varepsilon_{i,t}$	Addition of controls for managed revenue.
Performed-matched Jones model (Kothari, Leone &	$TA_{i,t} / A_{i,t-1} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \Delta REV_{i,t} + \beta_2 PPE_{i,t} + \beta_3 ROA_{i,t} + \varepsilon_{i,t}$	Addition of controls for firm performance.

Wasley, 2005)		
Dechow and Dichev (2002)	$\Delta WC_{i,t} = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t} + \varepsilon_{i,t}$	Working capital serves as base for past, current and future cash flows.
Modified Dechow-Dichev model (McNichola, 2002)	$\Delta WC_{i,t} = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t}$	Same as Dechow-Dichev Model but controls for PPE and revenue that influence accruals.
Magnitude of Accruals (Bhattacharya et al. 2003; Leuz et al. 2003)	$\frac{TA_{i,t}}{A_{i,t}}$	Earnings aggressiveness due to high levels of accruals as a measure of earnings quality.
Variability of earnings to cash flows (Leuz et al. 2003; Francis et al. 2004; Lang et al. 2003)	$\frac{\sigma(NI_{i,t} / A_{i,t-1})}{\sigma(CFO_{i,t} / A_{i,t-1})}$	Earnings or operating income variability should be lower than cash flow for firms to use accruals to manage earnings. Higher values leads to higher accounting quality.
Small loss avoidance (Hayn, 1995; Leuz et al. 2003)	$\frac{SPNI_{i,t}}{SNNI_{i,t}}$	Earnings are managed to avoid earnings decreases and to avoid losses. Earnings that fall below 0 motivate earnings manipulation.
Persistence (Francis et al. 2004)	$NI_{i,t} = \phi_0 + \phi_1 NI_{i,t-1} + \varepsilon_{i,t}$	Persistent earnings.
Predictability (Dichev & Tang, 2009)	$NI_{i,t} = \phi_0 + \phi_1 NI_{i,t-1} + \varepsilon_{i,t}$	Earnings predictions.
Panel B Market-based		
Value relevance (Alford, Leftwich, Zmijewski, Bushman et al. 2004; Ohlson, 1995)	$R_{i,t} = \beta_0 + \beta_1 Earnings_{i,t}$ $+ \beta_2 \Delta earnings_{i,t} + \varepsilon_{i,t}$ $P_{i,t} = \beta_0 + \beta_1 BVE_{i,t}$ $+ \beta_2 earnings_{i,t} + \varepsilon_{i,t}$	Earnings that explains stock returns and share price are of high quality.

Conservatism (Basu, 1997)	$earnings_{i,t} = \beta_0 + \beta_1 DR_{i,t} + \beta_2 RET_{i,t} + \beta_3 DR * RET_{i,t} + \varepsilon_{i,t}$	Losses are recognized more timely than gains indicating high quality.
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Adapted: Marie Herly (2015)

The design for the study employs Zeghal et al. (2012) and Dechow et al. (2010) accounting quality proxies such as earnings smoothness, accrual quality, value relevance, predictive ability, earnings persistence and cash flow predictability, and conservatism (see Table 11). By having two separate samples for both pre-adoption period and post-adoption period, I compare the same firms' accounting quality using each firm as its own control (Zeghal et al. 2012). The justification is that, this method is able to evaluate differences in the accounting standards that show up in the accounting numbers and their properties (Van der Meulen et al. 2007). Francis et al. (2004) and Leuz et al. (2003) pooled design estimation for earnings quality is not followed due to the data for this study lacks a firm and year specific basis of preceding rolling ten-year windows, and the fact that the data in use is not a time-series, and will not support autoregressive lag one order. Accrual-based earnings designs are as follows:

4.4.2.1 Discretionary accrual

The fundamental of discretionary accruals estimation is based on calculations of the value of total accruals. Measuring total accruals become necessary to compute and estimate discretionary accruals. Total accruals are defined as the difference between cash from operating activities and the net income before extraordinary items (Keung & Shih, 2014; DeAngelo 1986; Healy, 1985). Accruals computation makes use of cash flow approach due to its efficiency being more than balance sheet method (Collins & Hribar, 2002). In addition, the data for its computation is available. As IFRS intended aim is to increase reporting quality, it is necessary that earnings management decreases. This situation is so marked when earnings consists of cash flow from operations and accruals that has an inverse relationship (Dechow & Skinner, 2000, p. 237). Several empirical studies show that accrual-based accounting earnings are more informative with respect to stock returns than cash flows (e.g. Dechow, 1994).

Earnings management construct measurement has a variety of approaches. The fundamental accrual-based design for discretionary accrual of this study is the original Jones (1991) model, as modified by Kothari et al. (2005). This approach has been widely accepted for computation of discretionary accrual which is deemed to be proxy for earnings management. The Jones (1991) model recognizes normal accruals, gross property, plant and equipment, total assets and change in revenue. The amounts of accruals that are not being explained within the model could represent earnings management, which affects accounting quality. The computation of the discretionary accrual is based on performance-matched Jones (1991) modified model (Kothari et al. 2005). Performance-matched Jones (1991) modified of accruals stipulates that firms with extreme performance are likely to pursue earnings management. Performance-matched discretionary accruals approach recognizes return on assets or net income as additional regressors apart from sales and gross property, plant and equipment (PPE), but controls for firm performance as posited by Kothari et al. (2005). This model is used to compute the discretionary accruals that are represented by residuals obtained from estimation of the model (residuals serve as difference between total accruals and non-discretionary accruals). Notwithstanding, there are criticisms associated with Kothari et al. (2005) suggestion of the Jones Model, as many studies still show misspecifications and low predictive ability (Francis et al. 2006). They still have unanswered questions as to whether separation in abnormal and normal accruals depicts the true difference between discretionary and non-discretionary accruals. In view of that Jones (1991) developed the accrual estimate model that recognizes information about the firm's characteristics as a basis for accrual estimation. Kothari et al.'s (2005) performance matching on return on assets (ROA) has become acceptable for computing discretionary accruals in the area of accounting research to control for firm performance. Discretionary accruals will be recognized as the earnings management (Francis et al. 2005) of equation (4).

$$TA_{i,t} / A_{i,t} = \beta_0 \Delta A_{i,t-1} + \beta_1 \Delta REV_{i,t} / A_{i,t-1} + \beta_2 PPE_{i,t} / A_{i,t-1} + \beta_3 ROA_{i,t} + \varepsilon_{i,t} \quad (4)$$

Where:

t Period of 2003 to 2013.

i Company of 16.

TA Total accruals are income before extraordinary items minus cash flow from

	operations.
ΔREV	Change in revenues as revenue of period t less revenue of the period t-1.
ROA	Return on assets measured by the quotient of net income and total assets.
PPE	Gross value of property, plant and equipment.
Ai_{t-1}	Total asset as deflator of all the variables.
$\varepsilon_{i,t}$	Error term.

The prediction error from the above regression is $\varepsilon_{i,t}$, which is the estimate of the residuals from the regressions are to be used as a proxy for discretionary accruals (DA) or abnormal accruals. The lagged total asset scale is for the purpose of mitigating heteroscedasticity of the regression residuals (Kothari et al. 2005). Kothari et al. (2005) explain that there are non-linear relationships that exist between accruals and performance. The justification for Kothari et al. (2005) is that this model recognizes firm performance to cause reduction in misspecification issues under discretionary accrual (DA) computation.

In testing objective two hypothesis, I estimate the following regression identified in equation (5) that addresses the discretionary accruals (DA) with the IFRS as the interest variable. The other variables serve as control ones that have an influence on discretionary accruals. I employ the residuals of DA as dependent variable (Morais & Curto, 2009; Sam, Kang, Salter & Yoo, 2010). The study expects a positive influence of adoption. The model then is of the equation (5):

$$|DA|_{i,t} = \beta_0 + \beta_1 IFRS_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 GRTH_{i,t} + \beta_5 CFO_{i,t} + \beta_6 ROA_{i,t} + \beta_7 AQ_{i,t} + \varepsilon_{i,t} \quad (5)$$

Where:

$ DA $	Absolute discretionary accruals scaled by lagged total assets.
t	Period.
i	Company.
$IFRS$	IFRS adoption periods that takes a value of 1, otherwise 0.
$SIZE$	Company size measured as log of total assets.
LEV	Leverage is measured as total liabilities lagged by total assets.

<i>GRTH</i>	Change in sales measured as growth.
<i>CFO</i>	Cash flow from operations measured by lagged of total assets.
<i>ROA</i>	Return on assets measured by the quotient of net income and total assets.
<i>AQ</i>	Audit quality, foreign audit firm as part of Big 4 that takes a value of 1, otherwise 0.
ε	Error term.

The variable of interest is IFRS that I expect a negative relationship with discretionary accruals in adoption period. I use residuals of *DA* (dependent variable) as a proxy for earnings management to estimate multivariate regression using the *CFO* (cash flow operations) as expectation of firm performance is reflected in changes in cash flow (Sellami & Slimi, 2016), *GRTH* (growth) which aims to control for growth as firm's performance (Penman & Zhang, 2002), *LEV* (leverage) is included as highly geared firms may have incentive to reduce earnings management (Watts & Zimmerman, 1986), *ROA* (return on assets) as variables included for controlling firm growth, *SIZE* (size) in controlling for firms size effect on *DA* (DeFond & Park, 1997) as large firms might have more earnings to affect IFRS applications (Nagy & Neal, 2001), and audit quality as control variables. The justification for selecting these independent variables is that they provide evidence of firm operating characteristics that are associated with measuring accounting quality and therefore tend to correlate, hence the need to control them. This reduces biasness and serves to reduce misspecifications in specific control variables that explain differences in firm behavior.

4.4.2.2 Accrual quality

Francis et al. (2004) conclude that accrual quality metric of measuring accounting quality tends to recognize both the cost of debt and equity capital. This proxy pinpoints that accruals have direct influence on past, present and future earnings and cash flows. This phenomenon is much felt when identified timing periods could change as to when to recognize the cash flows and earnings on the financial statements for meaningful decisions (Dechow et al. 2010). This literature makes use of total accruals and change in total accruals as measures management exercise discretion over earnings. Consistent with Dechow and Dichev (2002), I explain accrual

quality as the standard deviation of natural logarithms of the absolute value of residuals from the regression of future year, current year, and previous year's cash flow from operations. Francis et al. (2004) express the view that low variance firms achieve high accounting quality financial reporting due to low measurement errors. McNicholas (2002) further posits to include fundamental controlling factors of change in revenue and PPE that influence accruals to reduce measurement errors in the Dechow and Dichev (2002) original model. These additional explanatory variables are said to be important in forming expectations about current accruals. Some associated limitations of the model include: (1) whether the Dechow and Dichev (2002) model recognizes unintentional errors or earnings management; (2) estimation errors are within earnings management as dependent variable and therefore the model appropriately measures accrual quality (McNicholas, 2002); (3) Dechow and Dichev (2002) model also recognizes the inherent uncertainty in accruals (Francis et al. 2005); (4) the model is suffered from correlated omitted variables bias that drive fundamental performance; and (5) the model does not recognize the perception of investors and analysts.

As modified by McNicholas (2002) of Dechow and Dichev (2002), the model for the regression estimation is given by equation (6) for computing the accrual quality:

$$Accrual_{i,t} = \beta_0 + \beta_1 CFO_{i,t+1} + \beta_2 CFO_{i,t-1} + \beta_3 CFO_{i,t} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t} \quad (6)$$

Where:

<i>ACCRUALS</i>	Net income minus cash from operations.
<i>t</i>	Period of 2003-2006 for pre-period, and 2010-2013 for post.
<i>i</i>	Company of 16.
<i>CFO_{i,t+1}</i>	Cash flows from operation of leap year deflated by total assets.
<i>CFO_{i,t-1}</i>	Cash flows from operation of last year deflated by total assets.
<i>CFO_{i,t}</i>	Cash flows from operation of current year deflated by total assets.
<i>ΔREV</i>	Change in sales deflated by total assets of last year.
<i>PPE</i>	Gross property, plant and equipment deflated by total assets of last year.

I include both ΔREV, as change in sales and PPE as gross property, plant and equipment to explain the firms' opportunity for growth due to sales expansion. I expect lower standard

deviation, which is the variable of interest under post-adoption period to represent improve accrual quality. For convenience in interpretation, the result of equation 6 is multiplied by negative one, so that higher value of the standard deviation indicates higher accrual quality.

4.4.2.3 Smoothness

Smoothing transitory accruals improve earnings persistence and earnings informativeness depending on time interval earnings are realised (Dechow, Grraham, Harvey & Rajgopa, 2010; Leuz et al. 2003). Two metrics employ by empirical studies to measure earnings smoothness in accounting are standard deviations, or the correlation of net income or accruals and the cash flow from operations. Leuz et al. (2003) posit that managers can use both real operating activities and accounting choices to conceal changes in the firm's economic performance. They may alter accruals earnings to cause reduction variability in earnings. I employ the ratio of the standard deviation of net income over the ratio of standard deviation of cash flows from operations as contemporaneously all lagged by total assets (Ewert & Wagenhofer, 2011). This measure is the 'median ratio of the firm-level standard deviation of operating earnings scaled by the firm-level standard deviation of cash flow from operations (i.e. ratio of income variability to cash flow variability)' (Leuz et al. 2003. p. 509) as a given model of equation (7):

$$SR_{i,t} = \frac{\delta Netincome_{i,t}}{\delta CFO_{i,t}} \quad (7)$$

Where:

<i>SR</i>	Smoothness ratio of firm.
<i>t</i>	Period of 2003-2006 for pre-period, and 2010-2013 for post.
<i>i</i>	Company of 16.
$\delta NETINCOME$	Standard deviation of net income scaled by lagged total assets.
δCFO	Standard deviation of cash flow from operation scaled by lagged total assets.

The variable of interest of this metric is the ratio value of the regression outcome (SR). This refers as variability of change. A higher smoothing ratio implies less earnings smoothing, which

explains improved earnings quality (Leuz et al. 2003; Zeghal et al. 2012), and the reverse is true, where the *SR* is low. The study deems to expect higher *SR*.

4.4.2.4 Persistence

Persistence and sustainability theories stipulate that firms that are more embedded with earnings resources tend to enjoy sustainable cash flow stream which gives them competitive advantage that gives assurance of sound discounted cash flow-based equity valuations. They are as well proxies of measuring accounting quality (Dechow et al. 2010; Chan, Chan, Jegadeesh, and Lakonishok, 2006). This proxy reaffirm that constant earnings are the basis for sound future growth of firms in terms of competitive share price and returns to both existing and potential investors (Dechow et al. 2010). Earnings persistence is recognized by accounting researchers, analysts and standard-setters as another important proxy for accounting quality. The two main reasons that explain this basis are: (1) earnings serve as more useful basis for measuring a firm performance; and (2) an annuity of current earnings in a firm gives smaller valuation error than annuity in current earnings in another firm. This means that higher earnings persistence is of higher quality when the earnings measure is value relevant. It therefore establishes that current year earnings could have a higher predictive ability for future earnings, and therefore attain quality value relevance. The study follows Dechow et al (2010) model specification (equation (8)) to estimate earnings persistence as:

$$earnings_{i,t} = \beta_0 + \beta_1 earnings_{i,t-1} + \varepsilon_{i,t} \quad (8)$$

Where:

<i>t</i>	Period of 2003-2006 for pre-period, and 2010-2013 for post.
<i>i</i>	Company.
<i>EARNINGS</i>	Net income scaled by lagged total assets.

The usage of total assets as the scale is in line with Francis and Schipper (1999) and Bushman et al. (2004). A higher coefficient (β_i), which is an interest variable indicates a more persistence

earnings and significant. Large coefficient (small) values of predictability suggest more (less) predictable earnings. I expect large coefficient and significant under IFRS adoption period.

4.4.2.5 Cash flow predictability

Cash flow predictability asserts that earnings in the form of cash flow are of higher quality (Dichev et al. 2013). In view of that investors view future cash flows performance measures as useful and desirable to be predicted by future current year earnings (FASB, 2002; Barton et al. 2010). The study follows Dechow et al. (2010) and Dichev et al. (2013) earnings ability to predict future cash flows as the adjusted R-squared from the regression (equation (9) as follows:

$$CFO_{i,t} = \beta_0 + \beta_1 earnings_{i,t-1} + \varepsilon_{i,t} \quad (9)$$

Where:

<i>t</i>	Period of 2003-2006 for pre-period, and 2010-2013 for post.
<i>i</i>	Company of 16.
<i>CFO</i>	Cash flow from operation in the current year scaled by lagged total assets.
<i>EARNINGS</i>	Net income for last year scaled by lagged total assets.

The interest variable of this regression estimation is the outcome R-squared. It is expected that higher R-squared value is achieved under post-adoption period.

4.4.2.6 Small losses avoidance

Small loss avoidance is another proxy for measuring earnings management of accounting quality. It is based on definition of small losses and small earnings decreases as posited by Hayn (1995). This approach posits that earnings are unevenly clustered around decreased small earnings and small positive profits and would reflect in the form of unusually low frequencies of small losses and unusually high frequencies of small positive earnings. In persistence form this therefore could cause earnings management. There is high incentive on the part of managers to report small profits in the presence of large losses (Burgstahler & Dichev, 1997) for growth in earnings. Burgstahler and Dichev (1997) defined small losses to be in the range (-0.01, 0.00) and

small profits to be in the range (0.00, 0.01). Hayn (1995) reveals that the overall distribution of earnings has the same as the normal distribution (Leuz et al. 2003). According to Coppens and Peeks (2005), managers have high motivation to reduce earnings for paying lower taxes. This activity motivates managers to engage into earnings management. I use the distribution of the level of earnings to determine small losses avoidance to proxy for earnings management as opposed to discretionary accrual method of the Jones Model (1991). This normally occurs when a firm is having small loss or decreased earnings (Burgstahler & Dichev, 1997). Some managers tend to manage their earnings so as to avoid reporting losses and earnings decline, and besides for the purpose of paying small amount of tax (Coppens & Peek, 2005). In this model, small losses avoidance is used as the dependent variable instead of discretionary accruals as a proxy for earnings management. Small losses avoidance is computed as dummy variable coded as 1, where the firm's earnings (net profit) level scaled by lagged total assets in the first positive interval (0, 0.01) in a given year and, 0 otherwise. In this circumstance, the estimate to use is the pooled logistic regression as equation (10):

$$SLA_{it} = \beta_0 + \beta_1 DA_{it} + \beta_2 DAO_{it} + \beta_3 IFRS_{it} + \beta_4 ROA_{it} + \beta_5 GRTH_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 CFO_{it} + \beta_9 AQ_{it} + \varepsilon_{it} \quad (10)$$

Where:

<i>t</i>	Period of 2003-2013.
<i>i</i>	Company of 16.
<i>SLA_L</i>	Dummy variable coded as 1, if the firms have earnings level scaled by lagged total assets in the first positive interval (0, 0.01) in a given year and 0 otherwise.
<i> DA </i>	Absolute discretionary accruals scaled by lagged total assets, with outliers.
<i> DAO </i>	Absolute discretionary accruals scaled by lagged total assets, without outliers.
<i>IFRS</i>	Dummy variable denoted as 1 IFRS adoption period, and otherwise 0.
<i>ROA</i>	Net income scaled by lagged total assets.
<i>GRTH</i>	Growth as change in sales.
<i>SIZE</i>	Natural logarithm of total assets.
<i>LEV</i>	Total assets scaled by lagged total assets.
<i>CFO</i>	Cash flow from operations scaled by lagged total assets.
<i>AQ</i>	Audit quality as BIG4 firms denote as 1, and otherwise 1.

Within the regression model is included *DA*, representing discretionary accrual which is quantifying earnings management, both *ROA* as return on assets and *GRTN* as change in sales to exhibit firms' growth and performance opportunities in future. Small losses avoidance (*SLA*) measures the distribution of earnings before extraordinary items scaled by the lagged total assets in relation to IFRS (interest test variable) adoption period. IFRS is equals 1 for firms reporting under IFRS regime, and equals 0 the same firms reporting under GNAS period. I expect that small losses avoidance and IFRS adoption to depict a positive significant relationship (Leuz et al. 2003).

4.4.2.7 Value relevance

Barth, Beaver and Landsman (2001) explain that accounting amount become value relevant if it has a predicted association with equity market values. Firm valuation theory tends to heighten the theoretical predictions and empirical evidence on the key relationships between financial accounting numbers and how they influence capital market performance. In the context of IFRS adoption, there is an increased commitment to transparency and understandability of information. Such mandatory disclosure could lead to lower information asymmetries in capital markets (Dechow et al. 2010; De George et al. 2015). The value relevance of earnings design for measuring accounting quality serves as a direct proxy. However, I do not use return-earnings value relevance as both earnings and change in earnings do not test favorable. The return-earnings situation is inconsistent with Ball and Beaver (1968) study conclusion. Share price of value relevance model is used for measuring accounting quality. Share price model is controlled by lagged the number of shares outstanding in a sense of scale effects (Bushman et al. 2004). I apply the natural logarithm on GSE share price to solve the scale problem of share price biasness and noise, and also to achieve homogenous in variance to establish normality (Liang et al. 2014). I measure price-earnings model using estimated regression in equation (11):

$$P_{i,t} = \beta_0 + \beta_1 BVE_{i,t} + \beta_2 earnings_{i,t} + \varepsilon_{i,t} \quad (11)$$

Where:

<i>t</i>	Period of 2003 and 2013.
<i>i</i>	Company of 16.
<i>P</i>	Share price logarithm at the end of fiscal year of December.
<i>BE</i>	Equity book value scaled by lagged the number of shares.
<i>EARNINGS</i>	Net income scaled by lagged the number of shares.

The study included *BVE* (equity book value) and *EARNINGS* (earnings before extraordinary items) in equation 11 as in support of Ohlson (1995) model. Following Dechow et al. (2010), the study employs adjusted R-squared of the price-earnings model of Ohlson (1995) as the interest variable of the regression estimation to be higher under post-adoption period. The logarithm transformation of share price leads it to become homogenous in variance for achieving normality (Liang et al. 2014) and to meet statistical test assumptions. The dataset for pooled price-earnings regressions of IFRS adoption computation recognizes both year and industry dummy variables in the regression to control for time and fixed-industry effects to minimize the presence of correlated omitted variables that are time-invariant (Gow, Ormazabal & Taylor, 2010; Atwood et al. 2011). I choose not to include the control variables within price-earnings computations so as to minimize possibility of potential multicollinearity problems (Greenberg & Robert, 1997). Moreover, the number of shares outstanding is used as deflator to minimize coefficient bias and heteroscedasticity effects (Barth & Kallapur, 1996), and to depict valuation relevance and growth opportunities (Hann et al. 2007) that are not reflected in equity book value and earnings (Derek et al. 2008; Akbar & Stark, 2003; Hirschey, 1985).

4.4.2.8 Conservatism

Conservatism concept is the ‘differential ability of accounting earnings to reflect economic losses as compared to economic gains’ in a timely manner (Francis et al. 2004; Zeghal et al. 2012). Both return-earnings regression and earnings growth persistence models are provided by Basu (1997) to measure accounting quality. This thesis employs return-earnings approach. Basu (1997) posits that the extent to which current year earnings asymmetrically embrace losses as opposed to gains that affect firm earnings. Mercer (2004) asserts that investors deem conservative accounting to be more credible since it is in consistent with corporate managers’ compensations and incentives like bonus, and shares options. This gives room for conservative

accounting to be more informative and may trigger overstating of earnings by managers'. Alternatively, conservatism could reduce information content of financial statements, for it contains bias in the accounting system. Investors are likely to be conservative as this belief is in consistent with managers' incentives to overstate earnings on presumption that conservative makes accounting more informative (Dechow et al. 2010; LaFond & Watts, 2008). In support, Francis et al. (2004) stress that conservatism heightens an element of bias into the accounting system and therefore could lead to reduction of information content of financial statements. I follow Basu (1997) metric design as a proxy to measure conservatism for which the coefficient of $DR*RET$ (interactive interest variable to test earnings quality) from the regression of the net income serve a proxy for good and bad news. I expect a positive sign of this model. This has a regression mode of equation (12) using cross-sectional data (Zeghal et al. 2012; Barth et al. 2008):

$$earnings_{i,t} = \beta_0 + \beta_1 DR_{i,t} + \beta_2 RET_{i,t} + \beta_3 DR*RET_{i,t} + \varepsilon_{i,t} \quad (12)$$

Where:

t	Period of 2003-2006 for pre-period, 2010-2013 for post-period.
i	Company of 16.
DR	Indicator that is equal to 1 if return is less than 0, and 0 otherwise.
RET	Stock return for firm's fiscal year.
$DR*RET$	The interaction that capture good or bad news on timely manner.

Large values of β_3 indicate that the income capture bad news regarding the firm in a timely manner. I compare accounting quality for IFRS numbers of adopted period with accounting quality of the GNAS numbers of the same period. A higher coefficient of interaction term, which denotes (B_3) implies more timely recognition of incur losses. In this case, earnings tend to have higher sensitivity to bad news compared to good news (Givoly & Hayn, 2000).

Some limitations associated with Basu (1997) conservatism model of accounting quality include: (1) there is high potency of creating incorrect inferences only one measure is employed to assess conservatism (Givoly, Hayn & Katz, 2007); (2) both economic event and disclosure policy

influence the measure of conservatism, but they were ignored in the measurement; (3) the model focus on only share price movements to identify both good news and bad news; and (4) Dietrich, Muller and Riedl (2007) had criticized the econometric validity of the Basu model, as return plays endogenous role in the reverse regression. In spite of these limitations, the model is widely in use in the accounting and finance literatures.

4.4.3 Financial ratios and IFRS adoption

I employ three main design estimation techniques to deal with this objective. They are Wilcoxon signed rank test estimations, ordinary least squares, and the Gray (1980) conservative index. Following Lantto and Sahlström (2009), I use the following financial ratios: profitability ratios, leverage ratios, liquidity ratios and investment ratios. The justification for selection of these ratios is that; they are commonly used in practice by financial and credit analysts (Trewavas, Redmayne & Laswad, 2012). For instance, situations where one wants to establish the relationship between financial data and shares performance (Beaver, Kettler, & Scholes, 1970), and during prediction of bankruptcy of firms (Beaver, 1966; Altman, 1968), when analyzing to understand and predict financial health of listed-firms (Iatridis, 2010) for meaningful investment decisions, and when analyzing a short-term credit facilities. In addition, the selected ratios tend to recognize the health of listed firms in order to make accounting information reported become meaningful and useful for investors (Beaver, 1966). Financial ratios and performance estimation methodology measure the extent of financial ratios influence on quantitative decisions by investors, financial analysts and other users of financial statements under the IFRS comparing with the local standards accounting ratios of listed-firms. The basic fundamentals and understanding of financial ratios by users under the local standards is appreciated. This is because ratios are easily to compute and do not involve many complications. Theory of test of differences stipulates that two or more groups differ with respect to measures of variables. This objective examines the influence of financial ratios of GSE listed-firms into before and after IFRS adoption using test of differences. The study performs test of mean and median differences of the selected ratios as to whether they are significant or not. The test is done on financial statements items under GNAS and IFRS figures.

The general theory about the study of financial ratios posits that financial ratios are not normally distributed. This implies that they have large dispersions with either a positive or negative skew. The pronounced factors used to explain the absence of normality distribution about financial ratios included differences in accounting methods, and size of firms (Horrigan, 1965). The general estimation method mostly used in application of financial ratios is based on Baltagi (2005) test estimator. The justification to follow this model is to investigate the existence of empirical relationships of various GNAS ratios in comparison to IFRS transition's accounting numbers using cross-sectional data.

Wilcoxon signed rank test estimation design is applied to investigate the differences between GNAS-based financial ratios and IFRS-based financial ratios as sample size is more or less reasonable, and on assumption that data follows is not a normal distribution of the null hypothesis (Argyrous, 2006). In this view, I perform Wilcoxon rank test to establish test of statistical significance difference that exist between these two periods. To evaluate the difference, the study uses the Wilcoxon test on mean, median and standard deviation difference. The justification for this test is due to the reasonable sample size the study uses (Pallant, 2005). Wilcoxon rank test is a two sample test of null hypothesis which stipulate that means of two normally distributed populations are not equal. According to Lantto and Sahlstron (2009), the impact of IFRS ratios may vary since financial ratios are traditionally not normally distributed.

The second design for objective three follows Gibrat, (1931) and Deakin (1976) financial ratios design estimations. Their study evidence that median of the industry ratio distribution is mostly used as standard for ratio evaluation, as it approximates lognormal distribution. Moreso, they evidence that distributions of various financial variables (e.g., corporate profits, bank deposits) exhibit log normally distributed, and therefore data test do not exhibit a normal distribution; hence resort to equation (13). In addition, according to Lev and Sunder (1979), if the relationship between y and x is approximately linear, homogenous (i.e., 0 intercept) but not exact, then linear regression can be applied as equation (13). I run regression of the effect of GNAS financial ratios on IFRS financial ratios. Least-square regressions are employed to ascertain the extent to which the IFRS ratios can be explained by the corresponding GNAS ratios and to examine the degree of

correlation between the variables. The study runs the test statistics of regression (equation (13)) per ratio as followed by Deloitte (2008) study:

$$IFRS_{i,t} = \alpha_0 + \beta_1 GNAS_{i,t} + \varepsilon_i \quad (13)$$

where

t	Period of 2003 to 2013.
i	Company of 16.
$IFRS$	Ratios computed under IFRS adoption period.
$GNAS$	Ratios computed under Ghana local standards.
α_0	Intercept.
$\varepsilon_{i,t}$	Error term.

The IFRS, being the interest variable assumes to measure how strong GNAS ratios predict the IFRS ratios. Strong and significant relationship will display no difference in ratios under IFRS adoption, and therefore tend to cause reduction of uncertainty within account balances and classes of transaction as posited by the financial ratios theory.

The Gray (1980) conservative index is the third design estimation model. It is also used to measure the effect of financial ratios on the IFRS adoption based on differences. The index explains that the conservative accounting is less optimistic than accrual accounting. This is because, it depicts book value of assets, which is in the economic unit lower than usual or real value for more assurance of future corporate profits. The conservative index is very useful in examining whether there are material quantitative differences in profits and equity reported under IFRS as compared to those reported in accordance with local standards (Dunne et al. 2008). For instance, British Airways reported a decline in the equity of their shareholders due to recognition of pension liabilities on the financial position under IFRS, but achieved a positive equity results because pension liabilities were treated as footnote to the consolidation (George et al. 2015). Gray (1980) index conservatism is as to ascertain the extent accounting numbers under IFRS explain financial performance of GSE listed firms. Following Hellman (1993), Whittington (2000), Tsalavoutas and Evans (2007) and Bertoni and De Rosa (2006) I test for differences in

reported net income, equity, total assets and total liabilities using GNAS and IFRS financial statements items. The reported formula for computing them is given by equation (14) as:

$$1 - ((IFRSNUMBERS - GNASNUMBERS)/IFRSNUMBERS) \quad (14)$$

Where:

IFRSNUMBERS Accounting numbers computed under IFRS.

GNASNUMBERS Accounting numbers computed under GNAS.

Gray interprets that where the index value is greater than 1, it means that GNAS earnings are less conservative than earnings under IFRS and therefore signify that IFRS adoption has a significant impact on the earnings. Ratio of less than 0.95 exhibits highly conservative. Studies on difference among nations accounting standards tend to recognize Gray (1980) index, at times with few modifications (Haller et al. 2009; Tsalavoutas & Evans, 2010; Hellman, 2011).

Specifically, Table 12 recognizes financial ratios I use for achieving design objective three of the study. The selection classification of the ratios is based on function that includes: profitability (*GPM, ROA*), liquidity (*CR, LEV*), financial leverage (*NW, DW*), and valuation ratios (*CF, DIY*).

Table 12: Explanations of financial ratios

Variable	Name	Measure
GPM	Gross profit margin	Gross income divided by turnover.
ROA	Return on assets	Net income divided by total assets.
CF	Cash flow from operations	Cash flow from operations divided by total current liabilities.
NW	Net worth	Ratio of fixed assets divided by total liabilities plus equity.
DW	Debt worth	Total liabilities divided by shareholders equity.
DIY	Dividend payout	Dividend payable divided by the net income.
CR	Current ratio	Total current assets divided by total

LEV	Leverage	current liabilities.
IFRS RATIOS	IFRS ratios	Total liabilities divided by total assets. Ratios computed by using financial statement prepared under IFRS.
GNAS RATIOS	GNAS ratios	Ratios computed by using financial statements prepared under local standards.

The chapter describes the source of data and data descriptions. In addition, it presents the research hypotheses and designs, theoretical and econometric models used to address the objectives along with the descriptions of the variables in each case. The following chapter seeks to analyze findings and discussions of results that are based on each objective of the study.

5. Results

5.1 Framework

The study makes use of combination of the SPSS 16 and STATA 12 to analyse the data. The analysis of the data recognizes descriptive statistics by comparing means of the measures, the correlation matrix, bivariate and multivariate regressions including logit, after recognizing in the model other factors that may have affected the variation of this variable. Descriptive statistics explains variable descriptions in a given set of each model. This includes the means, median, standard deviations, minimum, maximum, kurtosis and skewness. The correlation matrix presents spearman rank correlation of a set of variables. In addition, variance inflation factor (VIF) of the independent variables is performed. Forward stepwise logit regression is used to select the best grouping IFRS adoption determinants in the basis of exploratory test. Moreso, the study makes use of the OLS regression estimator to deal with measurement of accounting quality proxies. Other control variables that are firm characteristics (e.g., size, leverage, growth, audit quality) with strong association with company performance are used. Where there is large fluctuation of measurement level, the study employs logarithms functions to minimize such volatility.

The remaining sections of chapter five are organized as follows: Section 5.2 presents the descriptive statistics and univariate test for each objective. Section 5.3 describes the results of the correlation matrixes. Finally, Section 5.4 enunciates the findings of the multivariate regressions for each model.

5.2 Descriptive statistics

5.2.1 Determinants of IFRS adoption

Two groups of characteristics of respondents considered are demographic and job characteristics. Demographic characteristics include sex, age, academic and professional qualifications whiles job characteristics are employment status, position, functional areas and years of practices as

depicted in Table 12. Table 12 shows that males (85.0%) dominated over females (15.0%) by 70.0%, indicating the number of males accounting professionals far outweighs their female counterparts and this is statistically significant at 10% (p-value of 0.084). This is consistent with Loughlin's (1999) notion that there are fewer females in the top accounting professional position than males. Similarly, Ramdhony, Oogarah-Hanuman and Somir (2012) noted that there are fewer females accounting professionals in senior positions. Bruce-Twum (2013) indicated that the number of females entering into membership of Institute of Chartered Accountants of Ghana has increased rapidly in the recent times but this has not translated into more females occupying top accounting positions like Technical Director, CEO and Senior accountants. This is because females accounting professionals play dual roles as accounting professionals and housekeepers. Females in Africa and Ghana in particular are expected to be primarily responsible to their homes than any other thing. Therefore, females with families are most often not committed to accounting profession which is more timing consuming and stressful.

The age distribution of respondents as indicated in Table 12 shows that 43.3% were between 30-39 years, 42.5% were between 40-49 years and 14.2% were between 50-59 years. In general, 56.7% of the accounting professionals were at most 40 years, suggesting that most of the professionals are adults with more experiences in the accounting field. The chi-square test shows that age significantly influence accounting professions (p-value of 0.044). Age was more significant because of the categories of respondents considered. The study considers respondents who are examiners, auditors, directors and teachers and these are professionals with long service in the accounting professions.

The study is interested in both academic and professional qualifications and with respect to academic qualifications, respondents had degree (24.1%), masters (67.5%) and PhD (8.3%). Respondents had professional qualifications as ICA (79.7%), ACCA (16.7%) and CPA (6.7%). This implies that each respondent had professional qualification in addition to academic qualification and dominant accounting professional qualification is ICA of Ghana. Academic qualification (p-value of 0.620) did not significantly influence accounting professional to be at top position but professional qualification (p-value of 0.034) however, it significantly influence accounting professionals at that position. The dominance of ICA is not surprising since it is the

traditionally recognized accounting professional qualification awarded in Ghana by Institute of Chartered Accountants, Ghana. Long serving accounting professional with high academic qualification like PhD or masters coupled with ICA qualifications and others are more likely to be examiners and teachers of professional accounting in Ghana.

The respondents are on full time (82.5%) work and part time work (17.5%), working as CEO (7.5%), technical directors (7.5%) and others (85.0%). The other positions include lecturers, accountant, budget analyst and auditors. The respondents had worked for 2 years (1.0%), 2-5 years (27.5%), 5-10 years (35.8%), 10-15 years (20.0%) and above 20 years (6.7%), indicating that most of the respondents (73.3%) had in the profession not more than 10 years. Number of years worked (p-value of 0.420) and employment status (p-value of 0.136) did not significantly impact of accounting profession position in Ghana.

Table 12: Descriptive statistic of respondents' demographic information of questionnaire

		% within degree of respondents		Chi-square
Sex	Male	102	85	0.084
	Female	18	15	
Age group	20-39	52	43.3	0.044
	40-49	51	42.5	
	50-59	17	14.2	
Employment status	FT	99	82.5	0.136
	PT	21	17.5	
Job position	CEO	9	7.5	0.056
	Technical director	9	7.5	
	Others	102	85	
Functional Area	Exam markings	18	18	0.038
	Teaching ICA course	69	57.5	
	Examiner	14	11.7	
	Others	19	15.8	
Qualification	Degree	41	3.3	0.62
	Masters	81	67.5	
	Professional	25	20.8	
	PhD	10	8.3	
Prof Accounting Qualification	ICA (GH)	92	76.7	0.034
	ACCA	20	16.7	
Practicing firms	CPA	8	6.7	0.42
	2 years	12	10	
	2-5 years	33	27.5	
	5-10 years	43	35.8	
	10-15 years	24	20	
	Above 15 years	8	6.7	

Table 13 shows reliability test result and some variables are reliable while others are not. A variable is reliable when Cronbach's Alpha is more than 0.7. The reliable variables are Anglo-Saxon (5 items, α of 0.724), capital market development (3 items, α of 0.821), educational level

(4 items, α of 0.778), economic openness (5 items, α of 0.755), legal system (3 items, α of 0.899), political system (2 items, α of 0.718) and Ghana legislation (3 items, α of 0.748) and they are accepted variables for further analysis in the study. However, economic growth (4 items, α of -0.032) and auditing and accounting (4 items, α of 0.679) are not reliable; hence are excluded in the test.

Table 13: Reliability tests of IFRS adoption determinants

IFRS determinants	Means	Std. dev.	Items	Cronbach's Alpha	Decision
Anglo-Saxon cultural	16.125	3.516	5	0.724	Accepted
Economic growth	13.675	5.095	4	-0.032	Deleted
Capital market development	12.441	2.686	3	0.821	Accepted
Educational level	14.952	8.451	4	0.778	Accepted
Economic openness	17.464	15.697	5	0.755	Accepted
Legal systems	9.832	9.199	3	0.899	Accepted
Political factors	7.192	2.324	2	0.718	Accepted
Auditing and accounting	14.554	4.989	4	0.679	Deleted
Ghana legislations	9.544	6.536	3	0.748	Accepted

5.2.2 Accounting quality proxies

Table 14 displays industry classification of the sample firms for the study. The classification is based on SIC industrial classification. The results portrays that out of 176 firms, 143 (81.25%) firms are from manufacturing sector, 22 (12.5%) and 11(6.25%) firms are within wholesale and retail trade respectively. The period of IFRS application achieves 112 observations, as against 64 observations under the local standard application period. Manufacturing industry in Ghana is predominantly dominated by foreign firms such as Nestle Ltd, Sam Woode Ltd, Fan Milk Ltd, and Mechanical Lloyd Ltd.

Table 14: Industry classifications

Sector	Freq.	Percent	Cum	GNAS(0)	IFRS(1)	Total
Manufacturing	143	81.25	81.25	52	91	143
Wholesale/retail trade	22	12.50	93.75	8	14	22
Services	11	6.25	100.00	4	7	11
Total	176	100.00		64	112	176

The descriptive statistics relating to the test and control variables of the sample are shown in Table 15 of Panel A and B for pooled regression of discretionary accruals. Observations about discretionary accrual without outliers (*DAO*) depict 162 firm-year observations, whereas those with outliers (*DA*) reveal 176 (see Panel A of Table 15). Discretionary accruals with outliers reveal negative mean amounts of 0.036 as against lower positive mean value (0.011) of *DAO*. The mean values of IFRS and *SLA* show higher values in relationship with *DA* and *DAO*. This suggests that most of the firms might experience positive minimal earnings under the small loss avoidance proxy. This is inconsistent with the intended objective of introducing IFRS. Moreover, the control variables (e, g, GROWTH, CFO, LEV, SIZE, ROA, and AQ of Table 15, Panel B) showing the firm's characteristics reveal positive means to signify a better association with the adoption indicator.

Table 15: Descriptive statistics: discretionary accruals and small loss avoidance (SLA)**Panel A: Interest variable**

Variable	Obs	Mean	Std. Dev.
<i>SLA</i>	176	0.778	0.417
<i>IFRS</i>	176	0.636	0.482
<i>DA</i>	176	-0.036	0.298
<i>DAO</i>	162	0.011	0.229

Panel B: Control variable

Variable	Obs	Mean	Std. Dev.
<i>GRTH</i>	176	0.403	1.878
<i>LEV</i>	176	2.281	21.177
<i>CFO</i>	176	0.064	0.576
<i>SIZE</i>	176	10.094	1.260
<i>ROA</i>	176	0.647	6.000
<i>AQ</i>	176	0.750	0.434

SLA is small loss avoidance; IFRS is International Financial Reporting Standards; DA is discretionary accrual with outlier; DAO is discretionary accrual without outlier; CFO is cash flow from operation; GRTH is growth; AQ is audit quality; SIZE is size; ROA is return on asset; LEV is leverage.

The descriptive statistics in Table 16 relates to variables used in addressing pooled price-earnings of accounting quality. There are relatively large positive stable mean and standard deviation figures for all the variables, except share price that shows negative mean amount. The negative share price mean could a sign of minimal performance of GSE capital market under IFRS. Furthermore, the mean value for net income depicts smaller amount after IFRS adoption, suggesting that net income has a minimal contribution to the share price. The smaller value of net income measures may also explain that GSE investors' reaction to IFRS adoption accounting information is enhanced, but it does not explain the share price of the capital market. Share price is the only variable that evidences a higher standard deviation figure of 1.734, suggesting more or less an extreme spread, even after natural log transformation. This supports the fact that share price figures depict biasness. The IFRS adoption achieves mean value of 0.624, suggesting a higher average value of the sample.

Table 16: Descriptive statistics

Variables	Obs	Mean	Std. Dev.
<i>LNPRICE</i>	173	-1.126	1.734
<i>NET INCOME</i>	173	0.028	0.158
<i>BVE</i>	173	0.250	0.283
<i>IFRS</i>	173	0.624	0.485

LNPRICE is natural log of share price; NET INCOME is net income; IFRS is International Financial Reporting Standards; BVE is book value of equity.

Table 17 shows descriptive statistics for accrual quality, smoothness, persistence, cash flow predictability and conservatism. Table depicts pre-adoption and post-adoption mean and standard deviations of the variables used in analysis for the sample firms. As shown in Table 17, the mean values of the net income (NI), accruals (ACR), property, plant and equipment (PPE) and cash flow from operations (CFO) are significantly smaller after the mandatory adoption of IFRS. This serves as a sign of lower growth in business operations after IFRS adoption.

Table 17: Descriptive statistics of accrual quality, smoothness, persistence, predictability and conservatism

Variable	Pre-IFRS			Post-IFRS		
	Obs.	Mean	Std. Dev	Obs.	Mean	Std. Dev
<i>NI</i>	64	0.140	0.577	64	0.058	0.134
<i>DR</i>	64	0.265	0.445	64	0.343	0.478
<i>DRRET</i>	64	-0.046	0.110	64	-0.119	0.226
<i>ACR</i>	64	0.741	4.582	64	0.016	0.331
<i>CREV</i>	64	1.795	11.098	64	0.249	1.037
<i>PPE</i>	64	5.825	39.647	64	0.038	0.180
<i>CFO</i>	64	0.096	0.907	64	0.067	0.271
<i>Nit-1</i>	64	3.748	13.730	64	1.895	6.483
<i>CFO_{t+1}</i>	64	0.096	0.907	64	0.067	0.271
<i>CFO_{t-1}</i>	64	0.284	2.280	64	0.069	0.259

NI is net income; *DR* denote 1 if return is greater than 0, otherwise 0; *DRRET* is interaction effect of returns and net income; *ACR* is accruals; *CREV* is change in revenue; *PPE* is property, plant and equipment; *CFO* is cash flow; *Nit-1* is net income lagged prior year; *CFO_{t+1}* is cash flow scaled leap year total assets; *CFO_{t-1}* is cash flow scaled last year total assets.

5.2.3 Financial ratios and IFRS adoption

The descriptive statistics summary of financial ratios as shown in Table 18 is divided into two periods namely the GNAS periods and the IFRS period. The tests compare the respective means (standard deviation) of cash flows (*CF*), gross profit margin (*GPM*), return on assets (*ROA*) and net-worth under the GNAS period and the IFRS adoption periods. The test reveals that the financial ratios of above-mentioned indicators (*CF* of 0.096, *GPM* of 0.327, *ROA* of 1.710, *net-*

worth of 1.862) of Panel A of Table 16 are better-off under the GNAS period than under the IFRS period.

The evidence from the Panel A of Table 18 suggesting that more firms might experience sound cash flows, consistent with the fact that earnings seems to increase in the pre-adoption period. This is because managers are of liberty to manipulate accounting numbers to increase earnings. This could be a signal for more accounting information indicators at pre-adoption era, hence can suggest improved financial ratios in earnings. Similarly, mean scores for debt-worth (1.166), and leverage (0.731) declined throughout the sample period in support of pre-adoption period. The IFRS period reveals high borrowings as restrictions are not monitored. Besides, the test on dividend payment (0.632) reveal increase cash distribution to shareholders under the GNAS period.

The normality test of probability for both skewness and kurtosis are not normally distributed, as most financial ratios achieve p-values of less than alpha value of 0.05, except debtworth ratio and current ratio under GNAS and IFRS periods respectively (see Panel A and B of Table 18). I use Wilcoxon signed-rank test under linear regression to estimate coefficients, as the financial ratio data do not follow a normal distribution by applying Kolmogorov-Smirnov non-parametric test of normality (Sovbetov, 2015). The aim of this test is to assess the difference in financial ratios of the same listed firms under the GNAS and IFRS treatments. This behavior is contrary to the theory of financial ratios which stipulates that financial ratios do not depict a normal distribution whether under IFRS or the local accounting standards (i.e., p-values are smaller than alpha value of 0.05).

Table 18: Descriptive statistics of financial ratios**Panel A: Pre-adoption periods**

GNAS Ratios (Obs=64)	Means	Std dev	Min	Max	Tests of normality	
					Pr (skew)	Pr (kurt)
Cash flow (cf)	0.096	0.907	-1.298	6.841	0.000	0.000
Networth (nw)	1.862	8.506	0.083	68.272	0.000	0.000
Div. payment (div)	0.632	3.087	0.000	19.912	0.000	0.000
Current ratio (cr)	2.363	2.886	0.010	15.213	0.000	0.000
Gross profit margin (gpm)	0.327	0.506	-0.037	3.145	0.000	0.000
Debtworth (dw)	1.166	0.123	0.024	4.127	0.000	0.045
Leverage (Lev)	0.731	1.140	0.044	7.044	0.000	0.000
Return on assets (roa)	1.710	9.556	-0.167	75.702	0.000	0.000

Panel B: Post-adoption periods

IFRS Ratios (Obs=64)	Means	Std dev	Min	Max	Tests of normality	
					Pr(skew)	Pr(kurt)
Cash flow (cf)	0.064	0.271	-0.282	1.538	0.000	0.000
Networth (nw)	0.393	0.352	-1.318	1.391	0.011	0.000
Div. payment (div)	0.267	0.781	-1.318	3.546	0.000	0.000
Current ratio (cr)	1.236	1.475	0.008	7.685	0.500	0.917
Gross profit margin (gpm)	0.255	0.219	-0.828	0.828	0.000	0.000
Debtworth (dw)	29.079	20.911	0.024	4.127	0.000	0.000
Leverage (Lev)	5.058	35.099	0.049	281.445	0.000	0.000
Return on assets (roa)	0.147	2.486	-9.978	16.839	0.000	0.000

N is number of values, *std dev.* is the standard deviation, *Pr(skew)* is the probability of skewness, *Pr(kurt)* is the probability of kurtosis, *IFRS* is the International Financial Reporting Standards, *GNAS* is the Ghana National Accounting Standards.

5.3 Correlation matrix

Bivariate data analysis of two variables is the basis for correlation. As Spearman correlation evaluates the monotonic relationship that exist between two continuous or ordinal variables, Pearson correlation recognizes continuous variables.

Environmental factors of a country could have influence on the development of accounting standards (Shima et al., 2012), as perceived by other authors that accounting regulations, policies, and bases are social products that are being influenced by the institutional environment (Zehri & Chouaibi, 2013). The reliability test I performed confirms removal of economic growth, and accounting and auditing from the model as their alphas are below 0.7. Table 19 shows Pearson's correlation matrix for the remaining variables (Anglo-Saxon cultural inheritance, legal system, external economic openness, capital market development, education, political factor and financial legislation) for IFRS adoption determinants. There is likelihood that IFRS adoption has significant positive correlation with Anglo-Saxon cultural inheritance (ANGS), external economic openness (ECOC) and legal system (LEGS) at 1% but it has no significant correlation with financial legislation (FLGS). This implies that as Ghana increases its association with Anglo-Saxon culture, more externally open and improves legal systems, there is therefore greater likelihood to adopt IFRS improves. Multicollinearity does not seem to pose any problem as none of the figure is above 0.8 (Judge, Hill, Griffiths, Lutkepohl & Lee, 1988). Most correlation matrix result is statistically significant at 1% with the expected signs of the IFRS adoption determinants, with exception of financial legislation of Ghana (*FLGS*). The result is more or less consistent with the empirical literature.

Table 19: Pearson's correlation for determinants

	Degofifrsadopt	Angs	Ecoc	Pols	Flgs
degofifrsadopt	1.000				
Angs	0.421**	1.000			
Ecoc	0.251**	0.655**	1.000		
Pols	0.451**	0.044	0.291**	1.000	
Flgs	0.155	0.595**	0.703**	0.22*	1.000

***, **, * significant variable to 1%, 5% and 10% level

Degofifrsadopt is likelihood of IFRS adoption in Ghana; angs is anglo-saxon (English) cultural inheritance; ecoc is external economic openness and flgs is financial legislation.

Table 20 shows the spearman correlation matrix of the variables employed to measure discretionary accruals and small loss avoidance under pooled regression. The test result of small loss avoidance has a negative correlation with leverage and IFRS adoption at coefficients of -0.330 and -0.190 respectively. This implies that leverage and IFRS adoption by GSE listed firms achieve a decrease in small loss avoidance, leading to improvement in accounting quality. In addition, small loss avoidance has a positive association with growth; cash flow, size, and audit quality (see Table 20). This relationship may mean that growth, cash flow, size, and audit quality tend to assume affirmative association with IFRS adoption. The IFRS adoption reveals positive correlation with size (0.249), and leverage (0.226) at 5% significant level. It may imply that large amounts of total assets (size) and high intensity to utilize total assets to meet short-term obligations (leverage) cause improvement in IFRS amounts, but the strengths of relationships (R^2 of 6.2% and R^2 of 5.1%) are not strong.

In a similar result, discretionary accruals without outliers (*DAO*) reveal a test result of 5% significant coefficient of -0.179 with IFRS adoption period as shown in Table 20). The strength of this relationship is small (Cohen, 1988). The coefficient of determination (R^2) is 3.2%, suggesting that IFRS adoption under *DAO* is not much explained. This result suggests that the adoption of IFRS leads to decrease earnings management practices managers might pursue. This has the ultimate effect of improving accounting quality, all things being equal. In the same way, that of *DA* reveals the coefficient of determination of 2.9%, which is very minimal to IFRS adoption by GSE listed firms.

Table 20: Spearman correlation matrix for determinants

	SLA	IFRS	DA	DAO	GRTH	LEV	CFO	SIZE	ROA	AQ
SLA	1.000									
IFRS	-0.190 ^{***}	1.000								
DA	0.219 ^{***}	-0.169 ^{**}	1.000							
DAO	0.206 ^{***}	-0.179 ^{**}	0.940 ^{***}	1.000						
GRTH	0.178 ^{**}	0.088	0.006	-0.057	1.000					
LEV	-0.330 ^{***}	0.226 ^{***}	-0.044	0.021	0.035	1.000				
CFO	0.402 ^{***}	0.041	-0.333 ^{***}	-0.417 ^{***}	0.144	-0.245 ^{***}	1.000			
SIZE	0.270 ^{***}	0.249 ^{***}	0.195 ^{***}	0.181 ^{**}	0.212 ^{***}	-0.176 ^{**}	0.202 ^{***}	1.000		
ROA	0.097	-0.086	0.259 ^{***}	0.267 ^{***}	0.016	-0.107	-0.184 ^{***}	0.096	1.000	
AQ	0.278 ^{***}	-0.048	0.086	0.118	0.031	-0.305 ^{***}	0.244 ^{***}	0.161 ^{**}	-0.079	1.000

^{***} 1% significant level, ^{**} 5% significant level, and ^{*} 10% significant level.

SLA is small loss avoidance; IFRS is International Financial Reporting Standards; DA is discretionary accruals with outliers; DAO is discretionary accruals without outliers; GRTH is growth; LEV is leverage; CFO is cash flow from operations; SIZE is size; ROA is return on assets; AQ is audit quality

Table 21 reports spearman correlation matrix on pooled price-earnings regression. It shows that the degree of linear association between IFRS adoption and BVE (0.170) is quite reasonable, but achieves low association with share price (0.044), suggesting a reduced multicollinearity in the regression model. Again, there is moderate strength of association between the equity book value, net income and share price at 5% significance level.

Table 21: Spearman /Pearson’s (below/above diagonal) correlation matrix for price-earnings

	LNPRICE	NET INCOME	BVE	IFRS
LNPRICE	1.000	0.403	0.522	0.044
NET INCOME	0.403	1.000	0.306	0.118
BVE	0.522	0.306	1.000	0.169
IFRS	0.044	0.118	0.169	1.000

BVE is book value of equity; IFRS is International Financial Reporting Standards.

Panel A of Table 22 shows the spearman correlation results of variables included in accrual quality’s simultaneous equation for both pre-adoption and post-adoption periods. As expected, high correlations exist between the CFO_{t+1}, CFO_{t-1} and CFO in the both periods, suggesting that accrual quality is being manipulated to manage earnings. The negative correlation between accruals (ACR) and CFO_{t+1}, CFO_{t-1} and CFO for both periods confirms findings that cash flow from operations could predict accruals, suggesting improvement in accounting information after IFRS adoption at 5% significant level.

Panel B of Table 22 further presents the correlation of conservatism results for both pre-and-post-adoption periods. There is high correlations exist between DR, R and DRRET at 5% significant level for both periods of IFRS adoption. There is a positive correlation between DRRET and NI at both periods. The high positive correlation between DRRET and NI at IFRS adoption period achieves a 5% significant level explains quality accounting information for combined effect of returns and net income for the period under study. This evidence is consistent with the intended aim of IFRS introduction on accounting information.

Table 22: Spearman's correlation for accrual quality and conservatism

Panel A: Accrual quality

	ACR	CFO _{t+1}	CFO _{t-1}	CFO	CREV	PPE
Pre-adoption						
ACR	1.000					
CFO _{t+1}	-0.392*	1.000				
CFO _{t-1}	-0.390*	0.928*	1.000			
CFO	-0.392*	1.000*	0.928*	1.000		
CREV	-0.200	0.058	0.081	0.058	1.000	
PPE	0.065	0.301*	0.338*	0.301*	0.097	1.000
Post-adoption						
ACR	1.000					
CFO _{t+1}	-0.259*	1.000				
CFO _{t-1}	-0.301*	0.956	1.000			
CFO	-0.259*	1.000*	0.956*	1.000		
CREV	0.232	-0.001	0.018	-0.001	1.000	
PPE	0.275*	0.173	0.173	0.168	0.032	1.000

Panel B: Conservatism

	NI	DR	R	DRRET
Pre-adoption				
NI	1.000			
DR	-0.033	1.000		
R	-0.025	-0.765*	1.000	
DRRET	0.046	-0.984*	0.777*	1.000
Post-adoption				
NI	1.000			
DR	-0.281*	1.000		
R	0.477*	-0.827*	1.000	
DRRET	0.287*	0-0.971*	0.851*	1.000

***, **, * significant variable to 1%, 5% and 10% level.

ACR is accrual quality; CFO is current year cash flow; CFO_{t+1} is future cash flow; CFO_{t-1} is last year cash flow; CREV is change in revenue; PPE is property, plant and equipment; NI is net income; R is returns; DR is dummy variable denote 1 if returns is greater than 0, and otherwise 0; DRRET is returns and net income interactions for good and bad news.

Table 23 presents key statistics about tests comparison of means, medians and variance of financial ratios data. Tests of equality examines the likelihood that two or more samples could come from populations with the same means, median and standard deviation (Perkins, 1998) under the assumption of paired t-tests. Tests of equality assume that the normal distribution theory of financial ratios is not different between IFRS estimates and that of local standards, as consistent with Jindrichovska et al. (2012) findings. Specifically, the study run paired t-test to examine whether the differences in performance of selected listed firms in 2003 to 2006 under GNAS is statistically different from the period 2010 to 2013 under IFRS adoption. T-test of equality of the means result reveal that all variables have p-value greater than 0.05 except current ratio (p-value of 0.0062). This result suggests that equality of means of ratios cannot be rejected, except for current ratio at 1% significance level. It can be inferred that financial ratios computed under IFRS have inherent positive effect on accounting performance of firms, except current ratio that has a reducing effect. On average, the equality of means supports the view that financial ratios are not much influenced by IFRS adoption.

It is also found that equality of medians is not rejected throughout the sample period (i.e. gross profit margin, cash flows from operation and dividend payment ratio). This confirms Kubíčková (2011a) findings that financial reporting information for shareholders and investors in making economic decisions under both GNAS and IFRS periods may depict the same trend of conclusions.

Their p-value tests are not greater than 0.05, suggesting that the values or ratios are more influenced by both the IFRS and GNAS estimates. This implies that the combined effects of variability differences do change significantly on investors' investment decision-making (Leug et al. 2014).

Tests of equality of means, medians and variances seem to produce mixed results for the two periods under study as reported in Table 23. The view that means, medians and variances are equal under GNAS and IFRS is contestable and premature, as this can only be supported with certain financial ratios (e.g. gross profit margin, cash flows). The study infers that investors and

other users of financial ratios rely on the reliability and relevance of underlying normal distribution theory to continue and as a signal to invest (Ernst & Young, 2004; Stent et al. 2010).

On the other hand, findings reveal that there are differences in ratios both under the GNAS and the IFRS periods. For instance, equality of variances tests support this notion (see Table 23). Tests results under equality of variance show a p-value of less than alpha (0.05), and cannot accept that the IFRS and GNAS financial ratios are the same. This phenomenon is contrary to lay down normal distribution theory of financial ratios. The differences in ratios support the view that accounting procedures and reporting are not the same, as there are different intended purposes of each standard and, different reporting frameworks of each standard as well (Da-Hsien Bao, Lee, Leuz & Verdi, 2010). Under such condition, it may be necessary for the users of financial ratios to critically study the trend of ratios under two different standards as far as firms' financial health is concerned, and to form opinion as to whether to invest into the company or to sell its investment. The capital market of Ghana is more involved by the institutional investors. For instance, they include: Social Security National Insurance Trust (SSNIT), banks, and mutual funds. In view of institutional investors' high knowledge in finance and economics, all efforts to restrain managerial opportunism are adhered to and therefore will be looking forward to comply with the IFRS principles. They are prepared to take judicious decisions that tend to reduce their current returns to pave a way for more sustain future returns. The balanced view they hold is that financial ratios are the same under the IFRS and local standards and therefore should depict a normal distribution curve. In view of that they may be better-off if minimum returns are paid to them consistently. They prefer that current ratio and debt ratio achieve lower results, but higher profit margins to cover fixed costs at all times.

Institutional investors support the view that the following three ratios of equality of medians are not rejected: gross profit margin, cash flows from operation and dividend payment ratio as depicted in Table 23 and echoed in Amidu and Abor, 2006 article. This is because the results of the ratios are in compliance with the theory of normal distribution.

The alternative view from individual investors is that they expect equity returns and assurance of dividend payment to increase, all things being equal. They follow the theory that financial ratios under the IFRS and local standards are different.

Table 23: Tests of equality of financial ratios under GNAS and IFRS

Financial ratios	Equality of means			Equality of medians			Equality of variance (SD)		
	IFRS	GNAS	t-test	IFRS	GNAS	Wilcoxon	IFRS	GNAS	F-test
CR	1.236	2.363	0.006***	0.908	1.32	0.001***	1.474	2.886	0.000***
ROA	0.147	1.710	0.207	0.104	0.072	0.014***	2.486	9.556	0.000***
GPM	0.255	0.328	0.295	0.239	0.223	0.973	0.219	0.506	0.000***
CF	0.068	0.096	0.808	0.032	0.018	0.114	0.271	0.907	0.000***
NW	0.393	1.862	0.170	0.384	0.530	0.005***	0.352	0.506	0.000***
DIY	0.267	0.632	0.360	0.037	0.035	0.678	0.781	3.087	0.000***
LEV	5.058	0.731	0.326	0.472	0.472	0.012***	35.098	1.140	0.000***
DW	29.079	1.166	1.184	1.103	0.934	0.004***	167.29	0.986	0.000***

***, **, * significant variable to 1%, 5% and 10% level.

Null hypothesis: mean/median/variances are equal both under GNAS and IFRS periods; n.s.: null hypothesis not rejected significantly.

5.4 Ordinary least squares regression

5.4.1 IFRS adoption determinants logit linear regression

The study's first objective is to examine the extent Ghana's decision to adopt IFRS is influenced by the IFRS adoption determinants.

The R-squared Cox and Snell measure the extent to which variation of dependent variable is explained by the independent variables. Table 24 reveals that the adoption determinants together explain 57.9% variation in the degree of adoption decision by Ghana. It implies that the adoption determinants are the key variables that prompted IFRS adoption in Ghana. In a similar way, the Wald test statistics assess the degree of prediction by individual variables on the dependent variable. The results show that ANGS, ECOC, LEGS, and FLGS depict strong predictive power to have motivated the adoption of new standards in Ghana. Multicollinearity is not a problem as the variance inflation factors are below 5 (see Table 24). The model achieves a chi-square of 103.84, which infers to be statistically fit for predictions and forecasting decisions.

The results in Table 24 show that Anglo-Saxon cultural inheritance (ANGS) has significant positive effect on Ghana's decision to adopt IFRS (coefficient of 10.779 and p-value of 0.001). The study rejects H4 for alternative, which states that Ghana's association with Anglo-Saxon significantly increases the IFRS adoption decision. This implies that with a country's cultural resemblance with colonized nation, there is a high possibility to follow its colonized nation on IFRS adoption. Ghana is colonized by Britain hence share some resemblance with Britain, and therefore adopt IFRS just like them. The finding is consistent with the notion of Samuels et al. (2000) that countries with the same or similar cultural, political and social characteristics with UK have the ease of adopting IFRS. Ghana is a former colony of Britain, hence has some political and cultural resemblance with Britain and this significantly motivated adoption of IFRS in Ghana. This notion has been supported by Gernon and Meek (2000) that colonialism plays important role in adoption of accounting standards. They cited that Britain has been exporting accounting professionals to its former colonies such as Ghana; hence it was possible for Britain's IFRS adoption to have positive influence on Ghana's decision to IFRS as well. This tends to

facilitate the standards adoption harmonization. Therefore, since IFRS to be similar to UK's accounting system, Ghana's decision to adopt and implement the new would not be problematic.

Moreover, Ghana was searching for new accounting standards especially after 2004, since the domestic GAAP (e.g. GNAS) had challenges (ROSC, 2004). In 2004 the World Bank assessed the strength and weakness of Ghana's GAAP using IFRS as a benchmark. The World Bank survey recommended accounting reforms in Ghana to have a positive and increase investor's confidence in order to achieve consistency with international accounting trend. Ghana therefore sees IFRS as best alternative since it wants to follow its colonial master and international bodies in terms of financial statements reporting.

The existence of legal system (LEGS) has a significant positive impact on Ghana's decision to adopt IFRS (coefficient of 6.745 and p-value of 0.001). This test rejects null hypothesis for alternative, which states that legal factors significantly increase the decision to adopt IFRS in 2007. Ghana's legal system resemblance with the UK has a positive impact to adopt IFRS. Ghana has been practicing common law and has some tax legislations resemblance to UK's and other English-membership on IASB. This appreciates and together has been contributing to formidable legal system in Ghana, and therefore enhances the decision to adopt IFRS. This finding is consistent with notion of Jaggi and Low (2000) that legal system has direct association with disclosure practice. Li (2009) noted that IFRS can generate greater benefits in a country where there is greater incentive for disclosure. Countries practicing common laws have high information disclosure than code law countries; hence accounting standards in common law countries may be similar to IFRS, making IFRS in common law countries easier and more implementable.

Financial legislation (FLGS) variable has a positive and significant association with IFRS adoption in Ghana ($\beta=2.057$; $p=0.025$, see Figure 3). Therefore, I accept the null hypothesis, which says that FLGS factor has not significantly decreased the decision to adopt IFRS. This shows that an improvement in Ghana's financial legislation increase the IFRS adoption. Drawing from ineffective independent body for strong supervision and monitoring, there is still inherent weak financial legislation of Ghana, despite this conclusion. Ghana believes that

adopting IFRS would help strengthening financial legislation because of full compliance and mandatory disclosure IFRS application requires.

Economic openness (ECOC) test reveals that there is significant negative impact on Ghana's decision to adopt IFRS ($\beta = -6.203$; $p = 0.008$). This implies that the state of external economic openness discourage the decision to adopt IFRS in Ghana. The study accepts H2, meaning that Ghana's access to external market does not encourage the decision for adopting IFRS. Though, Ghana has a high economic openness through pressure from international financial bodies like World Bank and International Monetary Fund (IMF), external financial support from other countries and access to external market, this variable aggregate contribution to IFRS is negative. Ghana has relations with the IMF and World Bank and has been implementing IMF/ World Bank programme(s) from time to time. Ghana was under World Bank-IMF programmes like Structural Adjustment Programmes (SAP) and Economic Recovery Programme (ERP) in 1980s and Highly Indebted-Poor Countries (HIPC) in 2000s. World Bank Report (2004) revealed weaknesses in Ghana's GAAP (e.g. GNAS) and coupled with implementation of various IMF-World programmes could have contributed to increased likelihood of Ghana's IFRS adoption. Though, the results reveal inconsistencies with the extant literatures, these international institutions are partly significant factors behind IFRS adoption in Ghana. According to Cooke and Wallace (1990), the more a country is open externally, the more likely it adopts IFRS.

Table 24: Forward stepwise logistic regression results

$$\text{Log}\left(\frac{P_i}{(1-P_i)}\right) = \beta_0 + \beta_1 \text{ANGS}_i + \beta_2 \text{ECOC}_i + \beta_3 \text{CAMD}_i + \beta_4 \text{EDUC}_i + \beta_5 \text{ECOC}_i + \beta_6 \text{LEGS}_i + \beta_7 \text{POLLS}_i + \beta_8 \text{AAGQ}_i + \beta_9 \text{FLGS}_i + \varepsilon_i$$

Variable	Expected sign	Coefficient	Wald statistic	VIF
Angs	+	10.779***	10.354	1.870
Ecoc	+	-6.203***	7.033	2.550
Legs	+	6.745***	13.698	1.115
Flgs	-	2.057**	5.039	2.139
Constant		-38.168		
-2 log probability		47.496		
R ² of Cox and Snell		0.579		
Model Chi-square		103.844***		
% of correctly classification		88.3		
N		120		

***, **, * significant variable to 1%, 5% and 10% level.

angs, ecoc, legs and flgs are as already defined. Dependent Variable is degofifrsadopt (likelihood of IFRS Adoption in Ghana).

5.4.2 Accounting quality of IFRS adoption multivariate regressions

5.4.2.1 Discretionary accruals

This objective examines the extent IFRS adoption by GSE firms has influenced accounting numbers. The stated hypothesis: (H10) “H10: The adoption of IFRS by GSE listed firms will lead to higher accounting quality in the post-adoption period”. The study applies the general linear model to meet discretionary accruals proxy of accounting quality.

Table 25 depicts the test results of pooled discretionary accruals with outliers (*DA*) and without outliers (*DAO*) estimations by using ordinary least square (OLS) method under IFRS adoption. The *DA* and *DAO* results in Table 25 have an explanatory power (Adjusted R²) of 4.44% and 3.58% respectively. The results explain the IFRS adoption negative coefficients (-0.090 and -0.064) at 10% significant levels respectively in association with *DA* and *DAO* as dependent

variables. The negative coefficient values signify that IFRS adoption by GSE listed firms has a decrease relationship with the level of *DA* and *DAO*, which explains a decreased earnings management. A decreased in earnings management practices by managers tends to give reasonable assurance for quality financial information of GSE firms after adoption. This information could be relied on by investors for meaningful investment decisions. This result is consistent with Barth et al. (2008), Chua et al. (2012), Zeghal et al. (2012) and Gassen and Selhorn (2006), but inconsistent with Van Tendeloo and Vanstrealen (2005), and De Besten et al. (2015). Findings from *DA* and *DAO* results pinpoint that the adoption of IFRS has decreased earnings management, suggesting an increase in accounting quality of a GSE listed firms for increasing value relevance after IFRS adoption in Ghana.

Moreover, the result about cash flow from operations (*CFO*) reveals a negative coefficient (-0.106 and -0.068) at 5% and 1% levels of significant in relation to *DA* and *DAO* as dependent variables. This relationship implies that the decreased discretionary accruals tend to cause an increase in cash flow amounts under IFRS adoption. There is an evidence of marginal growth in *SIZE* under IFRS adoption by GSE listed firms at 10% significant levels of *DA* and *DAO* respectively. This is consistent with the theory that downward discretionary accrual results in a contemporaneous increase in the amount of total assets, especially where firms manage their incomes through acquisition of assets (Penman, 2001; Sweeney, 1994). This result is within the expectation as large difference between the GNAS and the IFRS. This brings about huge impact in actual cash stream and investment in assets. This may imply that the IFRS adoption by GSE listed firms perhaps face less implementation difficulties, hence effective adherence to new standards. Contrary to expectation, Table 25 shows that *GRTH* depicts negative coefficient, but *AQ*, *ROA* and *LEV* reveal positive coefficients but not significant in explaining the IFRS adoption, except *AQ* under *DAO* that reveals 10% level of significant. There is inverse significant relationship between *CFO* and *DA*, suggesting improvement in cash flow amount under IFRS adoption (Dechow & Skinner, 2000). It is argued that a firm with lower growth hesitates to adopt IFRS; hence strong motivation by GSE listed firms to adopt IFRS. The results of audit quality (*AQ*) evidence positive relationships with discretionary accruals without outliers at 10% significance levels. The mandatory IFRS adoption compels listed firms to have their financial accounts audited, but the results evidence that most firms engage the local auditing

firms as opposed to the BIG4 firms. This is, perhaps due to high audit fee that are charged by BIG4 audit firms comparatively.

Table 25: Discretionary accruals pooled results using OLS

$$DA / DAO = \alpha_0 + \beta_1 IFRS_{i,t} + \beta_2 ROA_{i,t} + \beta_3 GRTH_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 CFO_{i,t} + \beta_7 AQ_{i,t} + \varepsilon_{i,t}$$

Variable	Sign	OLS with outliers (DA)			OLS without outliers (DAO)		
		Coeff	T-test	P-value	Coeff	T-test	P-value
<i>Intercept</i>		-0.354	-1.95	0.053**	-0.276	-1.91	0.058**
<i>IFRS</i>	+	-0.090	-1.87	0.063*	-0.064	-1.63	0.105*
<i>GRTH</i>	+	-0.013	-1.16	0.246	-0.006	-0.61	0.542
<i>SIZE</i>	+	0.033	1.80	0.074*	0.027	1.86	0.065*
<i>LEV</i>	-	0.000	0.42	0.677	0.000	0.16	0.871
<i>CFO</i>	+	-0.106	-2.70	0.008***	-0.068	-2.20	0.029**
<i>AQ</i>	+	0.061	1.18	0.239	0.076	1.78	0.078*
<i>ROA</i>	+	0.000	0.14	0.887	0.000	0.20	0.839
N		176			162		
R ²		0.0826			0.0777		
Adj. R ²		0.0444			0.0358		
Prob>F		0.0401			0.0807		

***, **, * coefficients significant at the 1%, 5%, 10% level of confidence respectively.

IFRS is International Financial Reporting Standards; *GRTH* is growth; *SIZE* is size; *LEV* is Leverage; *CFO* is cash flow from operation; *AQ* is audit quality; *ROA* is return on Asset; *DA* is discretionary accruals with outliers; *DAO* is discretionary accruals without outliers.

5.4.2.2 Accrual quality

The results reveal that accrual quality for pre-adoption period measures a standard deviation of 41.433 higher than the post-adoption period's standard deviation of 0.918 (see Table 26). The results are multiply by -1 so that increase in accrual quality reflects decrease in cash flows. Findings reveals that IFRS period yields more predicting ability about future earnings as it depicts low variance with associated high accrual quality. The pre-adoption period has a low fit between accruals and operational cash flows, due to a high variance estimator of accrual quality as compared to post-adoption period. Post-adoption period accruals are more relevant for predicting cash flow in the future and are likely leading to high accounting quality financial

information of GSE listed firms (Francis et al. 2006). Other researchers are of the view that high variance is a signal that the accounting standards are operating in the volatile business environment, therefore could be inimical to earnings (Dechow & Dichev, 2002).

Table 26: Tests for accrual quality on accounting quality of IFRS adoption

Accrual quality	Pre-adoption	Post-adoption	Pred.	Diff
Accrual quality (std. dev.)	41.433	0.918	+	-0.515

Accruals quality is the standard deviation of the residuals from the regression of accruals on future year, current year, and previous year's cash flows from operations multiplied by - (Accrual= $\beta_0 + \beta_1CFO_{t+1} + \beta_2CFO_{t-1} + \beta_3CFO_{i,t} + \beta_4\Delta REV_{i,t} + \beta_5PPE_{i,t} + \varepsilon_{i,t}$).

5.4.2.3 Smoothness

Earnings smoothness proxy of accounting quality measures the ratio of the standard deviation of net income over the ratio of standard deviation of cash flows from operations as contemporaneously all lagged by total assets (Ewert & Wagenhofer, 2011; Leuz et al. 2003; Barth et al. 2008). Smoothness is an acceptable proxy. Managers use this proxy to manipulate their private information on future income to smooth out fluctuations to enhance usefulness of reported accounting numbers.

Earnings smoothness results of Table 27 show lower pre-adoption ratio of 0.959, as compared to post-IFRS ratio of 1.095. This means that variability of change in earnings increases significantly after IFRS adoption. A higher ratio of 1.095 under IFRS indicates less smoothing of earnings stream as compare to cash flows, and therefore could discourage earnings management incentives by managers (Dechow et al. 2010) after IFRS adoption. This test suggests that IFRS adoption period exhibits higher earnings to cash flow variability of GSE listed-firms and therefore may give assurance of improved accounting quality of financial reporting information (Leuz et al. 2003). This enables investors and other users to make meaningful investment decisions.

5.4.2.4 Earnings persistence

Earnings persistence establishes that current year earnings could have a higher predictive ability for future earnings, and therefore attain quality value relevance. The results suggest that pre-IFRS adoption earnings achieve coefficient of 0.851 at 1% significance level (see Table 27) as compared to post adoption coefficient of 0.951 at 1% significance level. The IFRS application period depicts a relatively high significant coefficient and therefore could yield more persistence of earnings to equity investors for valuation purposes (Soo Young Kwon, Kyunga Na & Jongil Park, 2017). It may imply that, relatively there were favorable economic conditions like sound operations of financial and non-financial firms in the post-IFRS period. The usefulness of earnings under IFRS is more persistent to sustain future earnings for valuation purposes. This result is consistent to Zeghal et al. (2012) study.

5.4.2.5 Cash flow predictability

Cash flow predictability results as reported in Table 27 shows a lower R-squared of 0.0568, as compare to R-squared of 0.1375 (see Table 27) at IFRS adoption period. This result suggests that current year cash flow tends to predict and sustain cash flows as the basis to determine the value of the firm with IFRS than cash flows amounts under GNAS. The result suggests that current year cash flows under IFRS tend to predict future cash flow of GSE listed firms, and more value relevant than those reported under GNAS. This result confirms Daske et al. (2013) assertion that economic consequences stress that current cash flows serve as management reporting incentives to motivate firms to adopt IFRS. The current cash flows from of IFRS support value relevant of cash flow predictability.

Against this discussion, it could be argued that IFRS adoption effect on accounting quality varies with current cash flows in predicting future cash flow. This implies that GSE listed-firms adopt IFRS to marry material changes to their reporting policies (Ball, 2006). Cash flow amounts under the IFRS are more value relevant and could improve accounting quality as compared to the GNAS reporting period. This is to conclude that cash flow predictability under IFRS bears strong consequences on accounting quality as compared to GNAS reporting period.

5.4.2.6 Conservatism

Conservatism states that it is more prudent to recognize losses in more a timely manner than to recognize gains (Dechow et al. 2010). The result indicates in Table 27 that IFRS period depicts a higher coefficient value of 0.098 at 10% significant level. The post-adoption period reveals the likelihood of reporting large losses frequently (see Table 27). This implies that the post-adoption period firms recognize large losses more frequently and timely manner than they do in the pre-adoption. This manner makes earnings to reflect economic losses as against economic gains (Givoly & Hayn, 2000). The decision to recognize such losses as they occur in the related period give credibility to the financial information and therefore improve accounting numbers for firm performance and valuation purposes (LaFond & Watts, 2008).

Table 27: Tests for earnings sustainability on accounting quality of IFRS adoption

Measures of earnings sustainability	Pre-adoption	Post-adoption	Pred.	Diff
Earnings persistence (coeff.)	0.851	0.951	+	0.100
Cash flow predictability (R-Square)	0.057	0.137	+	0.080
Earnings smoothness (SR)	0.959	1.095	+/-	0.136
Conservatism (coeff) DRRET	-0.174	0.098	+/-	0.272

All measures are constructed in a way that higher values are indicative of better earnings quality. Earnings predictability is the adjusted R^2 from the persistence regression ($Earnings_{t+1} = \beta_0 + \beta_1 Earnings_t + \epsilon_t$). Cash flow predictability is the adjusted R^2 from the regression of future cash flow from operation against current earnings (before extraordinary items) ($CFO_{t+1} = \beta_0 + \beta_1 Earnings_t + \epsilon_t$). Earnings smoothness is the ratio of the standard deviation of net income before extraordinary items (scaled by assets) to the standard deviation of cash flows from operations (scaled by assets) multiplied by -1. Conservatism is the estimated coefficient (β_3) of the interaction variable (drret) from the timeliness regression of annual earnings (before extraordinary items) on an indicator variable equaling one if the company's annual return is negative and zero otherwise, the company's annual return, and the interaction of the annual return and the indicator variable.

Table 28 reveals pooled summary results of price regression (with and without outliers) of value relevance within IFRS adoption of GSE listed firms. Summary results of Table 28 reveal that the interaction effects of NI*IFRS and BVE*IFRS of the model depict both positive and negative coefficients in respect of outliers and without outliers respectively. The NI*IFRS reveals positive coefficients (6.586 and 4.385) under 1% significant levels. This implies that net income and IFRS adoption combined to significantly explain the share price of GSE listed firms, and are

value relevance after the IFRS adoption. Consistently, $BVE*IFRS$ achieve negative coefficients (-0.778 and -0.970) at 1% significant levels in consistent with Zeghal et al. (2012). This means that the combined effect of book value of equity and IFRS adoption may lead to reduce share price of GSE listed firms after IFRS adoption.

The IFRS adoption of pooled price regression model depicts negative coefficients (-0.683 and -0.785) at insignificant and 10% significant levels respectively (see Table 28). Finding of price regression with outliers is contrary to Zeghal et al. (2012), Chua et al. (2012), and Iatridis (2010) results, as GSE firms behave differently to the effect of IFRS adoption. This finding confirms the IFRS adoption implementation problems such as under-development of accounting profession and regulation, and insufficient control mechanism like security commission to supervise IFRS adherence, hence low enforcement by firms. Other culminating reasons may be lower income per capita, fragile and high volatile political and economic issues and perhaps high institutional GSE shares ownership. The IFRS adoption seems to have minimal impact on the share price of GSE listed firms for the period of the study. The result of negative relationship between IFRS adoption and share price means that adoption does not motivate share price. The result is consistent with Morck et al. (2000), Verloop (2007) and Brochet et al. (2012), but contrary to Daske et al. (2007). On the other hand, the coefficients of NI and BVE of the model reveal positive values at 1% significant levels. This implies that net income and book value of equity explain the share price of GSE listed firms of IFRS adoption. Share price of GSE firms reveal informative as accounting reporting quality increases (Iatridis & Rouvolis, 2010) in relation to NI, and BVE. Therefore NI, BVE and $NI*IFRS$ are value-relevant in performance assessment of GSE listed firms after IFRS adoption in support for the hypothesis 10. The values of adjusted R-squared under without outliers achieve an increasing figure by 16.78% (58.24% - 41.46%).

Table 28: Pooled price regression of IFRS adoption (with and without outliers)

$$Inp_{i,t} = \alpha_o + \beta_1 IFRS_{i,t} + \beta_2 NI_{i,t} + \beta_3 BVE_{i,t} + \beta_4 NI * IFRS_{i,t} + \beta_5 BVE * IFRS_{i,t} + IND_{i,t} + YR_{i,t} + \varepsilon_{i,t}$$

Variable	Sign	With outliers			Without outliers		
		Coeff.	T.test	P-value	Coeff.	T-test	P-value
<i>IFRS</i>	+	-0.683	-1.40	0.163	-0.785	-1.83	0.069*
<i>NI</i>	+	1.799	2.23	0.027**	2.405	3.48	0.000***
<i>BVE</i>	+	2.419	5.12	0.000***	4.242	8.80	0.000***
<i>NI*IFRS</i>	+	6.586	4.08	0.000***	4.385	2.90	0.004***
<i>BVE*IFRS</i>	+	-0.778	-3.67	0.000***	-0.970	-5.27	0.000***
<i>CONS.</i>	?	-2.277	-4.48	0.000	-2.208	-5.03	0.000
<i>IND EFFECT</i>		YES	YES	YES	YES	YES	YES
<i>YR EFFECT</i>		YES	YES	YES	YES	YES	YES
N		173			165		
Prob>F		0.0000***			0.0000***		
R ²		0.4707			0.6232		
Adj. R ²		0.4146			0.5824		

***, **, * coefficients significant at the 1%, 5%, 10% level of confidence respectively.

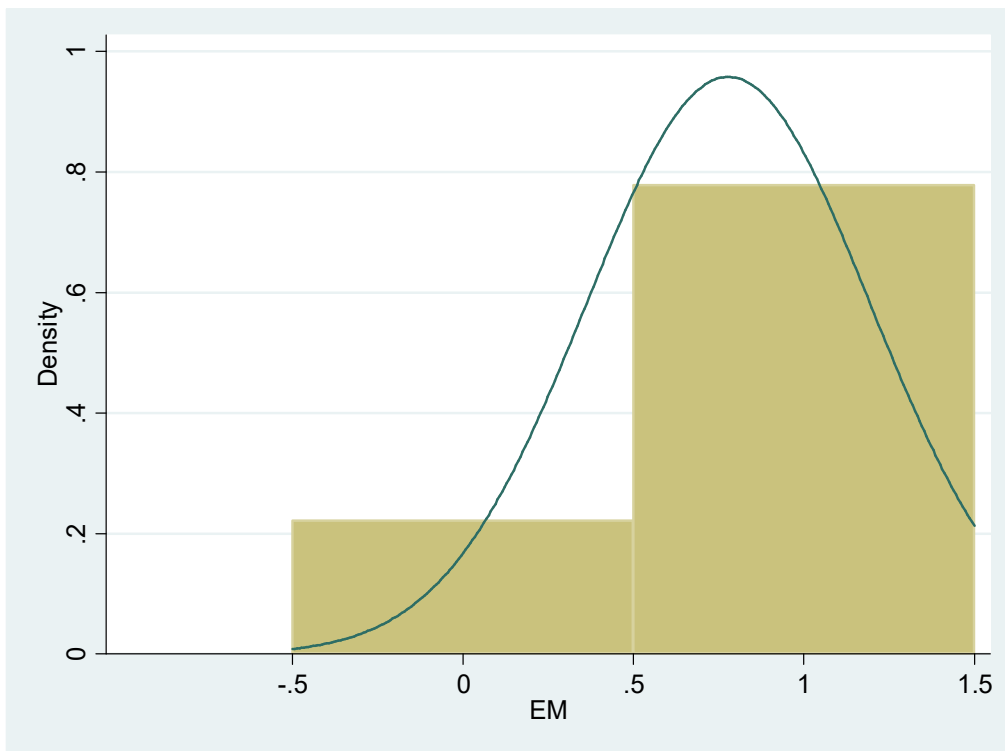
LNP is natural logarithm of share price; *IFRS* is International Financial Reporting Standards; *NI* is net income lagged by shares outstanding; *BVE* is book value of equity lagged by shares outstanding; *NI*IFRS* is interaction effect of IFRS adoption and net income; *BVE*IFRS* is interaction effect of IFRS adoption and book value of equity; *IND* is dummy industry effect; *YR* is dummy year effect.

5.4.3.6 Small loss avoidance

The graphical presentation (see Figure 2) for the earnings smooth distribution level of small loss avoidance confirms the interval to the immediate right of zero. Figure 2 depicts that earnings that are greater than zero occur slightly more frequently. Earnings management hypothesis to achieve small positive profits is contrary to earnings smooth distribution graph (see Figure 2). In other words, the graph reveals that firms with slightly positive earnings portray higher expected

frequency as against firms with slightly negative earnings with associated lower expected frequency (Burgstahler & Dichev, 1997). The graph (figure 2) of the earnings distribution suggests that when earnings are managed well, it paves a way for meeting earnings targets.

Figure 2: Distribution of earnings for detection of earnings management



The large peak shown by the graph is a sign of the requirement of earnings management. It shows the earnings interval of the distribution of the sample firms. This finding provides evidence in consistent with the result of Leuz et al. (2003), as also concludes that the graph evidences a decline in earnings management under the IFRS adoption.

Table 29 shows the logit results of earnings distribution approach for detecting earnings management is consistent with Burgstahler and Dichev (1997) and Leuz et al. (2003). The result reveals that IFRS adoption achieves a negative coefficient of -2.666 at a 1% significant level. This may imply that the adoption of IFRS cause reduction in earnings management, thereby enhancing earnings of GSE listed-firms. In other words, there is less small avoidance, indicating

improved accounting quality after IFRS adoption. This result support prior findings by Tanko (2012) of Nigeria, Ozili (2015) of Nigeria, and Outa (2011) of Kenya. The p-value for IFRS adoption is 0.001, which is less than alpha value of 0.05. This implies that IFRS adoption has a pronounced explanation in GSE firms' earnings. This finding is in support by most developed countries studies (Chua et al. 2012; Barth et al. 2008; Leuz et al. 2003). Contrary, the relationship between earnings management and *CFO*, and *GROWTH*, depict a positive relationship at both 1% and 10% level of significant respectively, except *ROA*, *SIZE*, and *AQ* that are statistically insignificant. The results suggest that large losses are recognized after the swift to IFRS. This signifies that the change has positive improvement on earnings of firms, thereby giving assurance of high-quality earnings information after IFRS (Sloan, 1996).

In addition, the results indicate that there are negative coefficients relationships between the *DA*, and small loss avoidance at a range of 5% levels of significant, with the exception of *LEV*. This relationship suggests that *DA* decreases due to adoption of IFRS; it has a negative reduction effect on earnings management to pave way to increase financial performance, thereby improving accounting numbers. Audit quality (*AQ*) has a positive relationship with earnings management, but statistically insignificant, suggesting an inverse relationship with IFRS adoption. This implies that IFRS adoption by GSE listed firms reduces earnings management practices that are pursued by managers, but no effect on accounting quality. The Pseudo R-squared explains 50.66% of the model, which is better fitting the outcome of the estimation. The model further achieves a high likelihood ratio chi-square test of 90.59, with 9 degrees of freedom of the chi-square distribution. Overall, small loss avoidance metric reveals that IFRS recognizes more losses after the swift to IFRS.

Table 29: Pooled logistic result of small loss avoidance

$$SLA = \alpha_0 + \beta_1 DA_{i,t} + \beta_2 DAO_{i,t} + \beta_3 IFRS_{i,t} + \beta_4 ROA_{i,t} + \beta_5 GRTH_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 LEV_{i,t} + \beta_8 CFO_{i,t} + \beta_9 AQ_{i,t} + \varepsilon_{i,t}$$

Log Likelihood = -44.117298					
Variable	Sign	Coeff.	Z	P-value	Odds ratio
<i>Intercept</i>	?	2.636	1.11	0.265	13.968
<i>IFRS</i>	+	-2.666	-3.18	0.001***	0.069
<i>DA</i>	+	-10.578	-1.92	0.054**	0.000
<i>DAO</i>	+	21.996	3.09	0.002***	0.000
<i>GRTH</i>	+	0.736	1.69	0.091*	2.087
<i>LEV</i>	-	-0.076	-1.50	0.134	0.926
<i>CFO</i>	+	17.473	4.97	0.000***	0.000
<i>SIZE</i>	+	0.019	0.09	0.929	1.019
<i>ROA</i>	+	0.021	0.27	0.789	1.021
<i>AQ</i>	+	0.400	0.66	0.510	1.492
N		162			
LR Chi2(9)		90.59			
Prob>chi2		0.000			
Pseudo R ²		0.5066			

***, **, * coefficients significant at the 1%, 5%, 10% level of confidence respectively.

IFRS is dummy variable denoted as 1 for IFRS adoption period between 2008-2013, and otherwise 0, *DA* is discretionary accrual with outliers; *DAO* is discretionary accrual without outliers; *GRTH* is growth as change in sales; *SIZE* is size as natural log of total assets; *LEV* is leverage; *CFO* is cash flow from operation; *AQ* is audit quality as BIG4 firms denote as 1, and otherwise 0; *ROA* is return on Asset; dependent variable *SLA* is dummy variable denoted as 1, if the firms earnings level has a positive (0, 0.01) interval in a given year, and 0 otherwise.

5.4.3 Financial ratios multivariate regression

The third objective of the study assesses how financial ratios explain the firm performance under IFRS adoption of GSE listed firms. The theory of financial ratios stipulate that the ratios should

be identical in relative terms if there is no difference between IFRS and GNAS. Prior studies hold the view that in practice, IFRS adoption alters accounting numbers and therefore the associated financial ratios could change as well (Leug et al. 2014; Stent et al. 2010). The study follows Blanchette et al. (2011) procedure of running one regression per ratio of the variables employed (see Table 30).

Bivariate results of regression (see Table 30) reveal that there is a strong relationship for debt-worth, gross profit margin and dividend payout. This implies that the interplay between the IFRS and the GNAS depict a strong relationship. Therefore the predictions from such relationships are likely to be reliable (Kabir et al. 2010). These ratios reveal a probability value of less than 0.05%, and therefore the null hypotheses are rejected. The IFRS being dependent variable, there is likely that GNAS financial ratio of debt-worth, gross profit margin and dividend payout could likely be significant in predicting the IFRS financial ratios. The results moreover show that the coefficients of the ratios are significant at the 1% confidence level with positive adjusted R-square, except for the gross profit margin ratio (Pazarskis et al. 2011). The debt-worth ratio coefficient is negative under IFRS as opposed to positive under GNAS as shown in Table 30.

The predictive power of these three ratios (debt-worth, and dividend payout) could go a long way to reduce any uncertainty within their accounting numbers, thereby rendering them more reliable for quality investment decisions (Leug et al. 2014). Under the regressions, all other financial ratios show weak relationships between the IFRS and GNAS. The results again depict that all coefficients are not significant. The results of some adjusted R-square are nil.

Under the regression model, three financial ratios (debt-worth, gross profit margin, dividend payout) reveal strong relationships between the IFRS and GNAS. Their coefficients are significant at 1% confidence level with positive adjusted R-squared. I could infer that, generally these ratios display almost no difference (Jindrichovska et al. 2012). This may suggest that the GNAS ratios predict IFRS at the same levels of prudence and conservatism. In view of that the likely effect of the accounting ratios of IFRS have achieved a reduction of uncertainty and therefore could give reasonable assurance of financial reporting quality for meaningful investment decisions in the capital market activities.

The results on Table 30 reveal that there exist strong relationships for gross profit margin, dividend payout and debt-worth ratios under GNAS ratios and IFRS ratios. This means that the ability to predict from the relationships is likely to be reliable. Therefore, GNAS financial ratios debt-worth and dividend payout have strong predictive power for the IFRS financial ratios. This finding is consistent with Bellas et al. 2007, but contrary to Georgakopoulous et al. 2010 studies. Both dividend payout and debt-worth ratios depict significant levels of 1% and 10%. In addition, the results show that acceptable R-square ranges from 0.011 to 0.234

. The R-square of the model explains a percentage change in the IFRS which has resulted from the changes in the GNAS variables. In conclusion, gross profit margin and debt-worth are significant in predicting the IFRS financial ratios (Bellas et al. 2007). I run the test statistics of regression per financial ratio.

Table 30: Regression of IFRS financial ratios with GNAS ratios (obs=64)

Dependent var (IFRS)	Intercept	β GNAS	Adjusted R
CR: coefficient	1.154	0.035	Neg
t-test	4.80	0.53	
std error	0.240 ***	0.064 n.s	
ROA: coefficient	0.067	-0.005	Neg
t-test	0.49	-0.16	
std error	0.318 n.s	0.330 n.s	
CF: coefficient	0.067	0.003	Neg
t-test	1.96	0.07	
std error	0.034	0.038	
NW: coefficient	0.398	-0.003	Neg
t-test	8.77	-0.51	
std error	0.045 ***	0.005 n.s	
DPY: coefficient	0.203	0.092	0.145
t-test	0.20	3.42	
std error	0.092 **	0.029 ***	
GPM: coefficient	0.232	0.070	0.011
t-test	7.10	1.29	
std error	0.033 ***	0.054 n.s	
LEV: coefficient	4.905	0.209	Neg
t-test	0.93	0.05	
std error	5.265 n.s	3.909 n.s	
DW: coefficient	-16.137	84.225	0.234
t-test	-2.43	4.50	
std error	28.484 **	18.717 ***	

***, **, * significant variable to 1%, 5% and 10% level.

n.s.: coefficient not significant; neg.: negligible

The aim of Gray Conservative index is to assesses whether the differences in financial statement items under both IFRS and local standards (e.g. GNAS) are quantitatively material (Dunne et al. 2008). The results of Gray conservative index in Table 31 indicates that on average, net income under IFRS adopted-firms are higher than the GNAS (less conservative), because the index value is less than 1 (that is 0.293). This may imply that IFRS has remarkable significant impact on the reported profits (Goncharov & Hodgson, 2011) of listed-firms of Ghana. This is because the net income achieves an increment after the conversion to IFRS. Equity book value in Table 31

reveals a mean ratio of 0.287 and of a standard deviation ratio of 0.535. Equity mean ratio is lower than 1. The lower equity mean under the IFRS implementation portrays more prudent than GNAS. In a consistent manner, total assets and total liabilities reveal lower mean ratios, as they are below 1. This implies that IFRS adoption by GSE firms' total assets is more prudent and therefore more conservative, as against less to that of total liabilities under IFRS. In relation to information asymmetry (Armstrong et al. 2010; Li, 2010), more prudent of IFRS is effective to reduce agency conflict between the principal and management and higher comparability (Lu & Trabelsi, 2013).

In conclusion, findings reveal that conservative index under IFRS net income, equity and total assets seem to be more prudent as compare with GNAS accounting numbers. This result is consistent with Istrate (2014) findings. The IFRS adoption confirms more prudent and acceptable favorable effects on GSE listed-firms equity worth, except total liabilities. In general, the result of this is consistent with the intended ultimate objective of IFRS in reducing information asymmetry and cost of capital. For instance, financial analysts and investors are keen for accounting system that produces higher earnings prudentially, and therefore may be interesting for IFRS consolidated financial statements comparatively that seeks to address this objective. Under the IFRS adoption of financial statements of GSE firms, the recognition of bad news decreases.

Table 31: Gray index of conservatism

Financial statement item	Mean	Standard deviation	Conservatism
Net income	0.293	0.541	More
Equity	0.287	0.535	More
Total assets	0.425	0.621	More
Total liabilities	0.272	0.522	Less

This chapter examines the data analysis of the three main objectives of the thesis in line with descriptive statistics, correlation matrix, and multivariate regressions. The analyses of study

objectives draw findings and conclusions thereon. The next chapter deals with the summary of findings, limitations and further direction for research areas.

6. Findings and conclusions

There has been an increasing trend by global listed firms to apply IFRS, as is perceived to be a high quality accounting standards for corporate reporting, as compared to national ones. This common language is deemed to be understood by investors around all continents for examining and making informed investment decisions. Currently, more than 120 countries (including African) around the continents require or permit IFRS reporting mandatorily.

This study examines the determinants of IFRS adoption and accounting quality of listed firms in Ghana, and the extent adoption influences financial ratios for the purpose of firm performance. This is based on a sample of GSE listed-firms for period between 2003 and 2013, recognizing the Ghana's IFRS adoption year of 2007. The motivational decision about IFRS adoption by most African countries is the fact that there are a lot of weaknesses of their old and out-dated standards and therefore questionable for measuring underlying firm's performance. It is perceived that IFRS adoption by listed firms in Africa achieve transparency, accountability and efficiency in accounting numbers and stock information for meaningful investment. Despite this, capital markets of Africa still experience thin and illiquid cash flows for ensuring growth. Indeed, few empirical studies of IFRS adoption in Africa have been recognized. To my knowledge there is no research about IFRS adoption determinants and accounting quality of listed firms in Ghana. Therefore, this culminates such study to ascertain whether performance measurement can be increased after IFRS adoption so as to form the basis for investors' investment decisions. The first objective of the study is to examine if Ghana's decision to adopt IFRS fit into the IFRS determinants using the questionnaire survey based on macro-economic factors. The study finds that Ghana's association with Anglo-Saxon member countries significantly increased the likelihood to adopt IFRS in favor of alternative hypothesis. This resemblance feature likely facilitates Ghana's decision to adopt IFRS.

The main conclusions are that; Ghana's access to economic openness such as external market does not significantly increase her likelihood to adopt IFRS. Even though, there is intense influence from Ghana's trading partners to swift to IFRS.

The second objective is to find the effect on accounting quality of the IFRS adoption. I employ eight proxies of accounting quality to examine the effect of IFRS adoption on accounting numbers. These proxies are made up of accounting-based and market-based measures. This is based on the premise that IFRS is a quality one, so the adoption will lead to positive improvement in accounting numbers, all things being equal. The regression results are consistent with the general hypothesis that 'adoption of IFRS by GSE firms' leads to higher accounting quality' as most performance variables of interest employed for each proxy depict positive, suggesting an improvement in accounting quality after the swift to IFRS. Finding from the pooled discretionary accruals results evidences that the adoption of IFRS has decreased earnings management, suggesting an increase in accounting quality at significant levels. Furthermore, decreased discretionary accruals cause an increase in CFO at 1% significant level under IFRS adoption. Pooled results of the price-earnings regression of interaction effect of net income and IFRS (NI*IFRS) reveal positive coefficients (6.5867 and 4.3852) under 1% significant levels. This implies that net income and IFRS adoption combined to significantly explain the share price of GSE listed firms, and are value relevance after the adoption. Small loss avoidance pooled test result reveals that as more firms are likely to adopt the IFRS, earnings management practice experience decreased trend, suggesting an increase in earnings capacity of the firms, which in turn can lead to improve accounting numbers. The results of earnings smoothness confirms that IFRS adoption by GSE firms under post-period achieves higher accounting quality of information as in support of intended aim of IFRS. In a similar conclusion, conservatism result reveals that IFRS period improves accounting numbers for firm performance and valuation (LaFond & Watts, 2008). Cash flow predictability test concludes that the IFRS amount is more value relevant and improves accounting quality in post-adoption period than the GNAS period. In similar manner, findings reveals that IFRS period yields more predicting ability for future earnings as it is associated with low variance under accrual quality test of post-adoption period. Consistently, earnings persistent test result evidence more persistent under IIFRS period than the local accounting period.

Regarding the third objective, the aim is to examine the effect of IFRS adoption on financial ratios. My findings reveal the following results: Wilcoxon tests of means and standard deviation indicate that financial ratios under IFRS have an inherent positive effect on financial

performance of the GSE firms (Attianos et al. 2007; Silva et al. 2009), except IFRS current ratio (Balios et al. 2013). Wilcoxon test results support the idea that, except current ratio, all other financial ratios are less under the IFRS principles and estimates. This suggests that the combined effects of IFRS do not change means scores significantly (Jindrichovska et al. 2012).

Bivariate OLS analysis of financial ratios reveals that GNAS financial ratio of debt-worth, gross profit margin and dividend payout are likely significant in predicting the IFRS financial ratios (Kabir et al. 2010), suggesting that financial ratios of IFRS achieve a reduction of uncertainty in account balances, and therefore could give reasonable assurance of financial reporting quality for meaningful investment decisions by both financial and credit analysts. The IFRS adoption is associated with a greater positive effect on accounting information of financial ratios under IFRS numbers.

On a similar direction, the results of Gray conservative index indicates that on average, profits, equity book value and total assets under IFRS adopted-firms are higher (more conservative) than the GNAS. This implies that IFRS has remarkable significant impact on the reported profits, equity book value and total assets of listed-firms of Ghana.

The findings of this study should be of great interest to academics, which include researchers, practice, which include standard setters. From academics point of view, scant research on IFRS in Ghana is underscored by the fact that IFRS teaching is not fully integrated into Ghana's universities accounting education curricula. This study has fostered the need for a paradigm shift to recognize fundamental framework in teaching of IFRS for creating more awareness to enhance students in Ghanaian universities in application of the new standards. This should be done with available guidance and resources to help the students. This approach enhances the development of skills and principles that are appropriate to future accounting and business practice.

Both the accounting-based and market-based measures complement financial ratios to evaluate managerial financial performance. This help to minimize the problems of multicollinearity and heteroskedasticity in making meaningful investment decisions. The study recommends that

accounting-based, market-based measures and financial ratios are to be used together to enable practitioners to evaluate detail performance analysis for informed investment decisions. Standard-setters, investment and credit analysts, and banks will be interested in the new view of information environment on IFRS adoption.

The study offers recommendations that tend to heighten issues about the IFRS adoption in Ghana. The recommendations are revealed to relate to academics, research and to the practice alike. From research view point, this study is based on Ghana; therefore I recommend future study to include more African capital markets to help standardized conclusions drawn from the studies. Furthermore, studies on earnings management and value relevance contend that improved accounting quality reduces information asymmetry and agency conflict resulting in enhanced capital market performance and firm value. Given that, reporting incentives are not included in earnings estimation under accounting quality, I recommend that future research on IFRS adoption and accounting quality to include reporting incentives. On the basis that OLS is affected by unobserved omitted variable bias and does not control for possible orthogonality conditions, I recommend future research to employ dynamic panel estimations to minimize these problems in examining the IFRS adoption and accounting quality.

In academia perspective, the National Accreditation Board (NAB) and National Council for Tertiary Education (NCTE) should impress on institution of higher learning in Ghana to include practiced-based IFRS teaching into accounting education curricula to foster the teaching and learning of the new standards.

From practice point of view, it is recommended that practitioners evaluate financial performance to include accounting-based measures, market-based measures and financial reporting incentives contemporaneously, to augment and give a balance and holistic perspective of corporate firms' performance after IFRS adoption.

International Financial Reporting Standards by African countries is not a 'label' as prior other researchers purported. This is because this study asserts that adoption has evidenced a positive impact on accounting numbers. However, there is the need for policy guidelines from Ghana

government in collaboration with the ICA of Ghana to set up monitoring agent to charge the responsibility for IFRS compliance and correct applications. Such policy guideline will bring sanity in IFRS applications in terms of correct, complete and clear applications and understanding of the new standards. When this policy is enforced, it will place more trust on reported accounting numbers for investment decisions to ultimately protect investors interest.

Moreover, there is the need for mutual recognition among Ghana government, ICA of Ghana, professional regulatory authorities, academia, and employers to meet occasionally to deliberate on current IFRS contentious issues for appropriate applications, especially sharing of best practices. This may yield to better outcome on accounting numbers

There are several limitations of the study and can be summarized as follows. First, this study has a limited cross-sectional time series data which hinder extensive data exploration analysis that would have carried out for more revelation about the topic. Secondly, this study is focused on the Ghanaian context, which ignores comparison with other emerging countries, hence leads to limit the generalization of the findings to other nations or environments. Another limitation is associated with questionnaire technique for data collection of objective one. The questionnaire is hindered by degree of bias and subjectivity which has effect on the findings credibility (Rahahleh & Sam, 2009). Fourth limitation of this study is accounting quality of IFRS recognizes both accounting-based and market-based attributes but ignores other reporting incentives that have influence on accounting quality. Another limitation is the choice of financial indicators this study employed (accrual quality, value relevance, earnings management and financial ratios indicators), are based on assumptions and value-judgment. This makes the results be subjective and unreliable for useful decision making. Just like many several studies, this study has limitation of small sample size as commonly associated with emerging markets approach (Filip & Raffournier, 2010; Sami & Zhou, 2004). Capital market research study limitations of weak explanatory power remain insufficient, and its inability to take care of unobserved omitted variable bias and orthogonality conditions still pose robust problems for this study. This has a limitation on the scope of this research test estimations. Again, this study does not take cognizance implications of reporting incentives as they control accounting standards in ascertaining accounting quality of IFRS adoption.

Findings and limitations render several possible areas for further research. The limitations of this study can be taken care of by employing future research studies. For example, this study's scope is focused on only GSE listed firms. Future studies should include more African listed firms to reveal more analytical results to draw conclusions thereon. It will be interesting to compare GSE listed firms with other listed firms of Africa on the basis of parameters used in this study. In addition, due to data limitations, further research should have dataset be extended to recognize more cross-sectional and time series dimensions to withstand robust data tests results, especially, in longitudinal data analysis. In addition to accounting-based and market-based measures for computing accounting quality, further research studies should recognize other reporting incentives in a bid to clearly understand accounting quality measurement. In view of capital market research limitations, further research should focus on using dynamic panel techniques to address both heterogeneity and orthogonality conditions. This tends to assist capital market research tests to stand the test of time for reliable conclusions to be drawn thereon.

Since 2007 GSE listed firms and other government institutions are given mandate to report their financial information using IFRS. This study examines the IFRS adoption determinants and accounting quality in relation to earnings informativeness in GSE listed firms. Specifically, the topic addresses three thematic objectives: (1) IFRS adoption determinants of Ghana, (2) IFRS adoption and accounting quality of GSE firms, and (3) IFRS adoption and financial ratios of listed firms. My research extends light on both on the outcomes of IFRS adoption in Ghana and on the unique nature of GSE listed firms. It contributes to literature in areas of using questionnaire survey to examine Ghana's decision to adopt IFRS. On the other hand, it contributes to literature on Ghana GSE firms by examining the accounting quality nature on firm performance and valuation. Findings on objective one is consistent with those of developed nations' studies at limited scale. My findings on objective two are consistent with developed nations mostly, but in support to emerging markets studies on this topic (Cupic et al. 2013; Christos, 2013; Collins, Maydew & Weiss, 1977) of value relevance. Finding on discretionary accruals evidence improved in accounting quality. This is important as it spells out difference between developing markets and developed capital markets. Financial ratios and IFRS adoption results reveal that performance and valuation under IFRS depict higher amounts. Nonetheless,

the test also reveals that there are no difference of performance and valuation under both IFRS and GNAS. I run pooled regressions that use natural logarithm of share price and discretionary accruals as dependent variables as against earnings, and book value of equity as independent variables deflated by number of shares, market capitalizations and total assets. Prevalent control variables are considered in running discretionary accruals. In all situations IFRS adoption serves as treatment variable. My results reveal statistically significant positive coefficients for the interaction of IFRS and earnings (NII*IFRS). This asserts earnings informativeness of GSE firms after IFRS adoption. The results have implications for Ghana investors and standard-setters and for regulators in Africa countries that are considering adopting IFRS. This study serves as platform to inform the standard setters and regulators to demand additional rigorous measure to augment transparency. The results evidence that accounting quality of GSE listed firms, on average, improves after the swift to IFRS in comparing the pre-adoption and post-adoption sample periods, using r-squared as explanatory power. These results complement previous analyses of IFRS adoption by other authors (Chua et al. 2012; Zeghal et al. 2012). The main limitations of this study rest on the sample selection, as it is heavily depending on the availability of data for all the interest variables in use.

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Appendices

Appendix A: Questionnaire for determinants

INFORMED CONSENT FORM FOR QUESTIONNAIRE



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INVITATION LETTER

Topic:

Determinants of IFRS Adoption and Accounting Quality of Listed-firms

Dear Participants,

I write to request your advance support for a major study of the IFRS adoption of listed-firms in Ghana. The purpose of this study is to examine the determinants and the effect of IFRS adoption of Ghana on accounting quality. The results will have implications for policy-makers, academics and business community.

The survey is a part of my PhD research study, undertaken at the Department of Accounting, Faculty of Management, University Institute of Lisbon, Portugal. The thesis is supervised by Professor Claudio Pais whose contact email is: Claudio.pais@iscte.pt

All the information supplied during the data gathering will be kept strictly confidential and only aggregated information will be reported in the thesis as to ensure your anonymity.

If you have any questions about this survey, please contact:

Benjamin Yeboah

Ghana

Telephone: 0207661888

Email: benjabinyeboah@yahoo.com

Yours sincerely,

Benjamin Yeboah

University Institute of Lisbon (ISCTE-IUL)
Faculty of Management
Department of Accounting

SURVEY OF IFRS ADOPTION, GHANA

GENERAL INSTRUCTIONS

What is the purpose of the thesis?

The purpose of this study is to examine the ‘**Determinants Dynamics and the IFRS Adoption effects on Accounting Quality of GSE Listed-firms**’.

Why should I participate?

The study will benefit the Institute of Chartered Accountant of Ghana, professional auditing firms, practicing Accountants, listed-firms, and other academicians.

What are the questions about?

The questions relate to the extent the ICA of Ghana Technical Board Members and their teachers examine accepted developing countries IFRS adoption determinants during Ghana’s adoption. There are no trick questions and we think that you will find this questionnaire both stimulating and interesting.

How long will it take?

The survey will take about 10 to 15 minutes to complete. The researcher will do a follow-up to collect the questionnaire.

Who will read the results?

We assure you that this is a strictly confidential survey. Under no circumstances individual responses will be made available to anyone in your organization or other organizations.

Who should I contact?

If you have any questions, please contact Professor Claudio Pais and Benjamin Yeboah on these emails respectively: Claudio.pais@iscte.pt , and benjabinyeboah@yahoo.com

We would like to thank you in advance for your time and effort.

A BACKGROUND INFORMATION

1. What is your gender? female 2 male

2. Could you indicate your age group? under 29 30-39 3 40- 49 4 50-59

3. What is your employment status as a professional accounting practitioner?

1 Full-time 2 Part-time

4. What is your title or position at your working place?

1 CEO 2 Technical Director 3 Other (please specify) -----

5. What functional area do you perform for the ICA (GH)?

1 Exam Marking 2 Teach ICA course 3 Examiner 4 Other(pl. specify)----

6. Highest academic qualification you have obtained

1 Degree 2 Masters 3 Professional 4 Phd 5 Other (pl. specify) -----

7. Which professional accounting qualification relates to you?

1 ICA (GH) 2 ACCA 3 CPA 4 Accounting degt 5 Other (pl. specify)-

8. How long have been working as an Accounting practioner at this level?

1 1st yr 2 1-2yrs 3 3-5yrs 4 6-10yrs 5 11-15yrs 6 16-20yrs >20yrs

9. Ghana's IFRS adoption is influenced by IFRS determinants as in section B. To what extent do you share view under the following?

1 Strong disagree 2 Disagree 3 unsure 4 Agree 5 strongly agree

B. IFRS ADOPTION DETERMINANTS

Prior accounting researchers have identified and accepted the following factors as the IFRS adoption determinants of developing countries. To what extent each issue is being influenced on the respondents responses?

	Strongly Disagree	Unsure	Strongly Agree		
	←————— —————→				
	1	2	3	4	5
A. Anglo-Saxon (English) cultural inheritance					
1. Adhering to social system standards and values	1	2	3	4	5
2. Ghana searching for new accounting standards	1	2	3	4	5
3. Sharing colonial masters regimes	1	2	3	4	5
4. Relevancy of our culture is incorporated to standards setting	1	2	3	4	5
5. Following 120 countries on IFRS adoption	1	2	3	4	5
B. Economic growth					
6. Improving national accounts presentation	1	2	3	4	5
7. Introducing IFRS in Ghana encourage borrowing	1	2	3	4	5
8. Adopting IFRS never been associated with economic growth	1	2	3	4	5
9. Attracting Foreign Direct Investment	1	2	3	4	5
C. Capital Market Development					
10. Financial information quality heightens capital market efficiency	1	2	3	4	5
11. GSE openness to foreign investors listing					
12. Comparability and GSE integration to other external exchanges	1	2	3	4	5
D. Educational Level					
13. Clear understanding of application of IFRS	1	2	3	4	5
14. Ghana National Accounting education address the IFRS	1	2	3	4	5
15. IFRS is flexible to apply by professional accountants	1	2	3	4	5
16. CPD in IFRS by ICA (GH) is appreciating	1	2	3	4	5
E. Economic openness to outside countries					
17. External pressures (World-Bank, IMF, IFAC,ADB)	1	2	3	4	5
18. External financial support by/from other countries	1	2	3	4	5
19. Access by Ghana listed firm to external markets	1	2	3	4	5
20. Enhancing monetary stability	1	2	3	4	5
21. National economic reputation	1	2	3	4	5
Legal Systems					
22. Practicing of the common law	1	2	3	4	5
23. Practicing of tax legislation that resembles the UK	1	2	3	4	5
24. Appreciating English-member majority in IASB Board	1	2	3	4	5
25. Ghana law enjoins the ICA(GH) to promulgate standards	1	2	3	4	5
Political Factors					
26. Key trading partners demands	1	2	3	4	5
27. Ghana government enthusiasm	1	2	3	4	5
28. Stable government and political freedom	1	2	3	4	5
29. External loan application requirements	1	2	3	4	5
Auditing and Accounting					
30. IFRS adoption is more tolerating by the developing countries	1	2	3	4	5

31. Avoiding disclaimer/adverse audit opinion	1	2	3	4	5
32. enforcing proper books of accounts to be kept	1	2	3	4	5
33. Accuracy of financial forecast	1	2	3	4	5
Financial Legislations					
34. Having implementation guide	1	2	3	4	5
35. Addressing all major issues (Agricultural, Financial Instruments)	1	2	3	4	5
36. Having independent enforcing agent other than ICA(GH)	1	2	3	4	5

That was the final set of questions for the survey. If you wish to share any additional comments please use the following space. We appreciate your time and effort in answering these questions.

ADDITIONAL COMMENTS FOR THE RESEARCHERS:

We certainly welcome any comment that you may have about how your organization motivates researchers to obtain data and share information and knowledge with each other in order to increase your organization's ability to solve financial accounting problems. Thank you once again for helping us to increase our understanding of Ghana's IFRS adoption.

- 1.....
- 2.....
- 3.....

Would you like to take part in a follow-up study, please? Yes No

If 'yes', please provide name and address or attach a business card:

Name _____
Address: _____

Email: _____

Thank you again for your help!

Appendix B: Ethical clearance letter

Request for collaboration

I am the adviser of Benjamin Yeboah and he is preparing his PhD thesis in the specialization of Accounting of the Management PhD programme at ISCTE-IUL a Portuguese University. He is developing a PhD thesis about the adoption of the IFRS (Determinants of IFRS adoption and accounting quality in Ghana of listed-firms) in Ghana environment and he is enrolled on the PhD programme mentioned. This is a very important and interesting topic because it is the first one that was undertaken in Ghana and has both practical and research important implications as an initial research learning platform for financial accounting research in Ghana.

To Benjamin to be successful in doing his PhD thesis he needs to have a sufficient data and so, the responses to the questionnaires are very important.

All the information given is strictly for academic purposes and is confidential and so will not be divulged.

My thanks in advance for being available to give the necessary information requested.

Claudio Pais (Assistant Professor of the Accounting Department of the ISCTE-IUL)

Lisbon, 15 October 2015

(Claudio Pais)

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