

Three essays on earnings management in frontier countries

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

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DECLARATION

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

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15 March 2021

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DEDICATION

I dedicate this work to my father, Henry, and mother, Mary. I am thankful for their prayers, patience, and support throughout this journey. If not for their support, I genuinely believe this labour would have been more challenging. This study is a testimony that their sacrifices were not in vain.

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ABSTRACT

Earnings management () is the manipulation of a firm's financial performance and stock returns by its management (Wei & Li 2020). In most cases identified by the Securities and Exchange Commission (), the underlying motivation to manage earnings was to artificially alter financial market expectations (Cyril et al. 2020). Motivations to manage earnings may also be based on self-interest, and not that of the firm (Chen & Huang 2020). EM research is often premised on the assumption that managers behave opportunistically at the expense of their shareholder (Safari et al. 2016), yet studies have identified instances where the management of earnings improves the ability to predict reported earnings and consequently firm value (Subramanyam 1996a), or as an effective way to communicate private information (Louis & Robinson 2005).

By virtue of three studies, this thesis makes three distinct research contributions to the study of . The first study examines institutional settings and its ability to constrain accruals-based earnings management. The second study examines financial statement comparability as it relates to accrual and real earnings management. The third study examines the impact of on bank performance. All studies are interrelated but can be read independently.

The first of three contributions of this thesis begins with an examination of accrual-based earnings management () and institutional settings (Study One). It is hypothesised that AEM is more constrained in countries with stricter investor regulation. This study's examination uses two residual based and one non-residual based EM detection methods on data from 22 frontier countries spanning from 2000 to 2017. The results show that is inversely correlated with financial disclosure, legal enforcement, and the number of analysts followings. Contrary to developed market studies and novel to this study, higher levels of societal trust failed to show statistical significance in their ability to constrain practices. Additionally, firms in wealthier countries and those operating in countries with greater GDP growth exhibited less propensity to manage earnings. Larger firms and those audited by Big-4 auditors were also less apt to manage earnings. Through multiple detection models (discretionary and non-discretionary), findings

from this study extend the current AEM literature, in regard to the social norm theory, as well as extending current views on the effectiveness of minority investors' rights.

Implications of this first study are fourfold. First, the social norm theory, which suggests that individuals are driven to match what they perceive to be the social norm (Festinger 1954), failed to play a role in reducing AEM. Thus, the decision to engage or abstain from AEM for fear of negative outcomes was not a motivating factor. Second, formal control monitors of management behaviour are influential in providing oversight and discipline on management, resulting in abridged AEM activity as the number of analysts following a firm increases. Third, factors that moderate are not universally applicable, justifying standalone frontier market studies. Fourth, increased economic growth brings about financial development and naturally limits AEM, suggesting that the need to conceal poor economic performance is greater in times of low economic growth.

The second contribution (Study Two) begins with an examination of the comparability of financial statements. It is hypothesised that enhanced financial statement comparability constrains managers from engaging in opportunistic AEM and real earnings management () behaviour. Using a large sample of 19 frontier market countries, and an accounting comparability method that maps comparability across several accounting standards, the results show that enhanced financial comparability constrains AEM. Contrary to developed markets and novel to this study, a significant relationship between financial comparability and REM was not found. For greater robustness, AEM and REM proxies were also tested on countries that have adopted International Financial Reporting Standards () and those that have not. The results suggest IFRS adoption constrains AEM, yet exhibited no impact on curbing REM. Additionally, the use of *BigN* auditors failed to show an ability to moderate EM conclusively. When combined, the results suggest that frontier markets engage in less REM than expected. It is also noted that the legal roots (civil versus common law) play a significant role in constraining EM. Common law countries exhibited lower AEM when comparability increased; this significance was not found in countries that were rooted in civil law. Findings from this study extend the growing stream of comparability research by casting more light on the relationship between comparability and EM, and by providing evidence on the divergent impact of comparability on and in the markets examined.

Implications of this second study are threefold. First, the conduct divergence of frontier markets from what is commonly found in developed markets suggests that values and norms differ.

Findings from other markets may not be universally applicable to frontier markets. Second, convergence to a single or harmonised accounting system is an ideal to be supported, as noted by the increased comparability score across IFRS adhering countries. Third, increased comparability facilitates transnational information transfer, the result of which is stimulated enterprise competitiveness.

The third contribution (Study Three) is an examination of EM on bank performance as examined via technical efficiency using Stochastic Frontier Analysis. The study focuses on income smoothing via loan loss provision () and loan loss reserves () as a form of EM. The findings of this study confirm that efficiency is negatively correlated with EM. Also tested was efficiency disparities between large and small banks across five geographic regions, from which Americas, Europe, and the Middle East large banks exhibited greater efficiency, yet no significant relationship was found between bank size and efficiency. This suggests large banks do not gain from economies of scale. These findings are notable as this study supports prior evidence and illuminates the impact of income smoothing on a bank's technical performance. This study further contributes to the literature by deepening the understanding of 's impact on the technical efficiency of frontier market banks. Additionally, through its examination of geographic and size differentials, new understanding is gained into the proclivity of frontier market banks to smooth earnings and its impact on efficiency.

Implications from this third study suggest that banks review the use of income smoothing and credit provisioning vehicles as they impact efficiency, and consequently, competitiveness. Efficiency and competitiveness are critical success factors and associated with the improvement of the managerial process. The prioritisation of efficiency to enhance competitiveness while working with limited resources is core to business success. Further, the adoption of a dynamic provisioning system should be considered as a capital buffer mechanism to smooth credit cycles as it increases the effectiveness of macro-prudential policies, and maintains the temerity of the financial system and financial reports.

Chapter 1

Introduction

1.1 Introduction

The issue of earnings management (), its detection and consequence have jointly stimulated research by scholars and practitioners. EM occurs when managers use discretion in financial reporting and or structuring transactions to alter financial reports to mislead stakeholders or influence contractual outcomes that depend on accounting figures (Owolabi et al. 2019). Following a variety of accounting scandals, the issue of EM has garnered increased attention (see table 7.31 in Appendix for a list of scandals). Research devoted to EM on markets outside the US and European Union () is scant. When emerging or frontier economies are studied, concentration typically centres around single-country analyses, making the widespread application of the findings unclear. As the success of business arrangements and deals depend on the quality of financial information (Li 2012), further study of opportunistic in frontier markets is a worthy investigation. Frontier markets are the least developed global equity markets, offering opportunities for uncorrelated trade for global investors (Stereńczak et al. 2020, Ahmed & Fang 1999). Accordingly, this study examines three separate, yet interrelated EM issues in frontier markets.

Prior research has shown that national culture and institutional structure are influential factors of earnings manipulation practices around the world. Institutional factors cause countries to diverge on views and treatment of acceptable accounting practices (Boyacigiller & Adler 1991, Han et al. 2010). In view of unique national cultures, as well as institutional and legal structure of the frontier markets, lies the decision to apply this research to frontier markets. Using a large cross-country sample, the first study in this thesis adds to the body of knowledge by examining EM and the ability of institutional factors to reducing opportunistic accruals earnings management (). This study is unique in that its particular focus is on frontier markets and the application of various examination approaches and robustness tests.

Previous research has highlighted the importance of financial comparability and called for studies to better understand global variations (Lewellyn et al. 2017, Chen, Gotti, Kang & Wolfe 2018). The construct behind comparability,¹ suggests that firms will report similar accounting figures when presented with similar economic circumstances. Support for accounting standard convergence² stems from its enhanced financial reporting quality and comparability. Other touted benefits for comparability include improved global reporting comparability and reduced costs for both users and preparers of financial statements. Additionally, comparability facilitates cross-border capital flow (Hail et al. 2010, DeFond et al. 2011, Aggarwal & Goodell 2014). Motivated by the benefits of financial reporting comparability, the second study quantifies comparability's association with AEM and real earnings management (REM) of publicly listed frontier market companies. Following the constraints, is an examination of how managers in frontier markets make trade-off decisions based on levels of comparability. Unique to this study is the examination of comparability using a method applicable across international accounting standards.

The subject of technical efficiency has also attracted considerable attention worldwide. Prior literature calls for the study of diverse influential factors impacting the technical efficiencies of the banking industry (Gaganis et al. 2016, Osma et al. 2019, Doan et al. 2019). This third study annexes technical efficiency literature and banking industry specific income smoothing approaches; the result of which broadens the literature in both disciplines. This study calculates each firm's efficiency using Stochastic Frontier Analysis () and then examines the relation of efficiency to income smoothing via loan loss provisions and loan loss reserves. Unique to this study is the analysis of frontier markets and the identification of income smoothing vehicles preferred by geographic regions and firm size.

1.2 Frontier Markets

International Finance Corporation () introduced the 'frontier markets' concept for emerging markets in less developed countries with established stock exchanges (Moss et al. 2007, Chan-Lau 2014). Though these markets are smaller than the traditional emerging or developed markets, they can provide high return opportunities for investors (Chan-Lau 2014).

¹Comparability is an accounting principle supported by the Securities and Exchange Commission (), the International Accounting Standards Board () and the Financial Accounting Standards Board ()

²The convergence of accounting standards refers to the goal of establishing a single set of accounting standards that will be used internationally

Frontier markets' potential lies in its rapid economic growth, abundance of natural resources, and favourable demographics (Howell & Gratsova 2011, Speidell 2011). Citi Research estimates that gross domestic product (GDP) of the frontier markets will accelerate from 2.9 per cent in 2018 to 4.1 per cent in 2020 (CitiBank 2020). Citi also forecasts that earnings per share (EPS) growth to be a double-digit rate for the same time period³ (Anon. 2019a).⁴

Table 7.29 in Appendix 1 presents GDP growth for the studied frontier market countries from 2000 to 2017, inclusive. The time-frame selected represents all available data this dissertation's commencement. Croatia had the lowest mean change in GDP (1.95 per cent), whereas Kazakhstan had the highest (6.77 per cent). Figure 1.1 illustrates economic growth⁵ from 2000 to 2017. Analysis of Figure 1.1 reveals that the economic growth of frontier market countries exceeds that of developed markets when outliers are omitted.

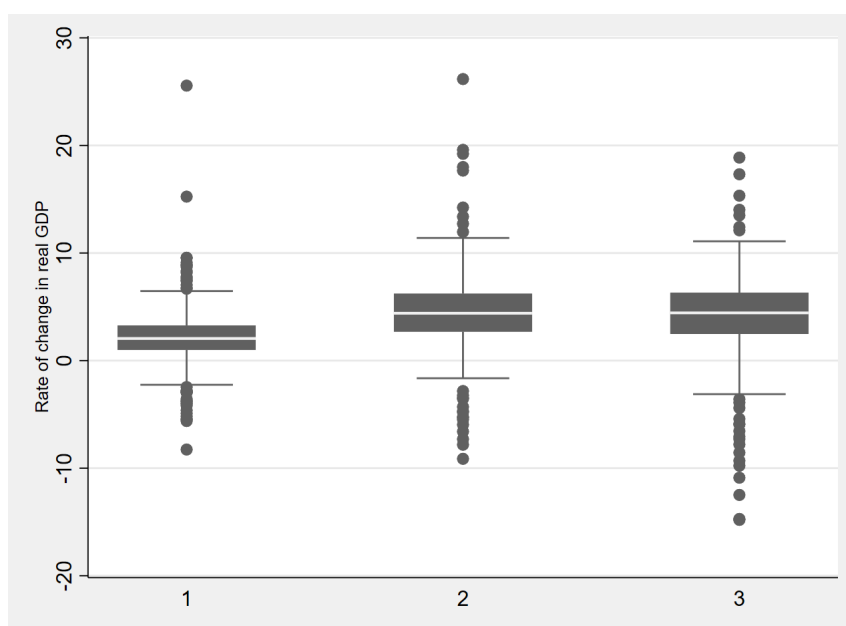


Figure 1.1: Economic growth by the level of country development, 2000 - 2017

1 = Developed, 2 = Emerging, 3 = Frontier

Source: The Global Economy, 2017

The equity performance of frontier markets during the 2007 - 2008 Global Financial Crisis was higher than that of emerging markets (Chan-Lau 2014), an indication of the markets' potential, even after adjusting for risk and portfolio profiles (Crockett et al. 2008). Notable, however, is the low level of market liquidity often exhibited in a frontier market; illiquidity poses major

³Excluding Morocco and Sri Lanka, where only single-digit growth rates are forecasted

⁴These figures were provided before the global pandemic of 2019, but serve to show the growth potential of this market

⁵As measured by the rate of change in real GDP for developed, emerging, and frontier markets

challenges for investors (Živković & Minović 2010, Lesmond 2005, Lundblad 2007). Figure 1.2 illustrates the stock market return and volatility for the three levels of country development. Much like the economic growth illustration shown in Figure 1.1, the risk and return variation shown in Figure 1.2 for frontier markets is higher than that of developed markets. In developed markets, stock market returns and stock price volatility are more concentrated, thus providing greater predictability of returns. The less-developed emerging and frontier markets exhibit a greater number of outliers in both the risk and return categories. Figure 1.3 illustrates the re-based market performance of frontier markets against developing and emerging markets to demonstrate the divergences between frontier markets versus emerging and developed markets. The co-movement of frontier and developed markets show significant divergence after 2014, whereas the co-movement between frontier and emerging markets presents a similar illustration with occasionally divergent views. Research from Blackburn & Cakici (2017a) presents similar findings; the authors also note that obstacles that restrict investments, such as illiquidity, short selling, and transaction costs impede integration and value returns.

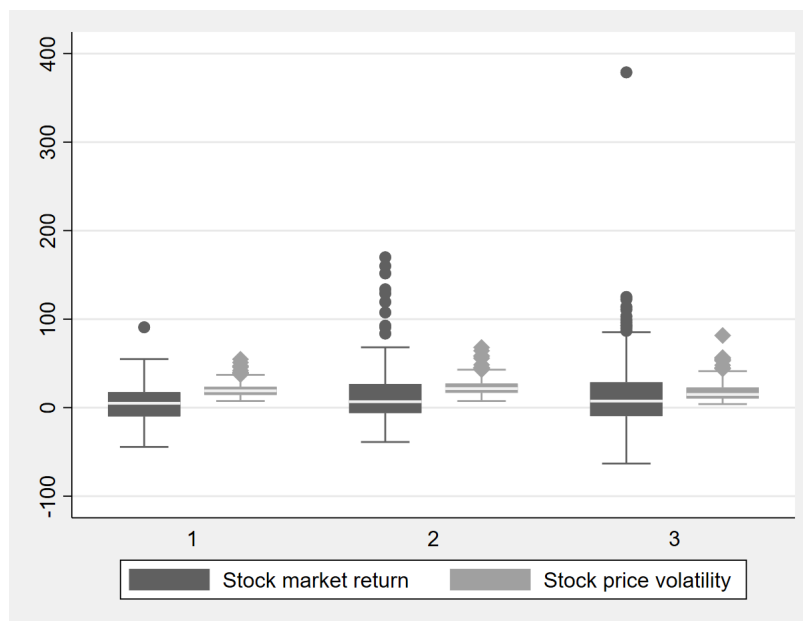


Figure 1.2: Stock market return and risk by country level of development, 2000 - 2017

1 = Developed, 2 = Emerging, 3 = Frontier

Source: The Global Economy, 2017

The diversification potential of frontier markets appeals to some investors (Speidell & Krohne 2007, Goetzmann et al. 2001). However, Schoenholz (2010) and Speidell (2011) caution that these benefits are not without certain risks. These risks include, ownership restrictions, custody rules, domestic registration requirements, volatile stock exchanges, heavy selling during market stress, social unrest, terrorism, corruption, disease, fragile regulatory environments, higher



Figure 1.3: Re-based market performance, 2012 - 2020

Top= Frontier vs developed markets

Bottom = Frontier vs emerging markets

Source: Thomson Reuters Eikon

foreign exchange conversion charges, and a need to use domestic brokers (Anon. 2019p). These risks are further magnified when combined with the possibility of capital controls, erroneous and weak settlement systems, weak corporate governance rules and standards, as well as an unstable political system (Chan-Lau 2014).

According to Crittenden & Crittenden (2014), the political instability of international markets has long been recognised. The history of foreign markets has an abundance of examples pertaining to political and legal unease, including Argentina, Ecuador, and Venezuela⁶ (Crittenden et al. 2011, Bekaert et al. 2014, Crittenden & Crittenden 2014). Despite the shortfalls of foreign markets, investors expanding their portfolios into frontier markets benefit from greater diversification

⁶Argentina faces mounting debt, sharp swings between government and a volatile currency. Ecuador's legal system is opaque and vulnerable to political influence. Venezuela faces declining oil production, hyperinflation, and severe loss of confidence in its depreciating currency.

(Goetzmann & Rouwenhorst 2005, Berger 2007). Historic returns show that frontier markets have made prudent fiscal and monetary policy decisions to foster macroeconomic stability and decrease inflation rates (Bems et al. 2018).⁷ Frontier markets exhibit lower correlation with emerging, and developed markets, offering the potential of higher returns (Chan-Lau 2014). According to Speidell & Krohne (2007), the correlation of frontier market returns with the world markets was less than 0.3 since 2002. The low correlation suggests the potential benefits of market diversification (Berger et al. 2011). In 2017, Morgan Stanley Capital Market International (MSCI)'s Frontier Market index exhibited a correlation of 0.54 with the S&P 500, while MSCI's Emerging Market index exhibited a correlation of 0.64 (Shum 2017). Table 1.1 presents a complete correlation matrix of frontier market returns with selected world markets. Frontier markets exhibit the least correlation with Japanese, Russian, and Chinese markets (correlation of 0.12, 0.06, and 0.26 respectively), and the greatest correlation with MSCI Emerging Market index (correlation of 0.81).

Table 1.1: Correlation Matrix - Frontier market index with major world markets

Stock Indices	S&P 500	Dow Jones	Nasdaq	Canada	Europe	UK	Aust.	Japan	Hong Kong	Brazil	China	India	Russia	South Africa	MSCI EM
Dow Jones	0.96	1.00													
Nasdaq	0.92	0.83	1.00												
Canada	0.65	0.56	0.59	1.00											
Europe	0.67	0.61	0.68	0.57	1.00										
UK	0.65	0.59	0.58	0.62	0.67	1.00									
Australia	0.62	0.56	0.60	0.62	0.60	0.56	1.00								
Japan	0.59	0.60	0.65	0.31	0.64	0.30	0.38	1.00							
Hong Kong	0.60	0.53	0.64	0.55	0.41	0.56	0.53	0.44	1.00						
Brazil	0.44	0.42	0.37	0.64	0.23	0.37	0.33	0.15	0.57	1.00					
China	0.36	0.39	0.37	0.28	0.26	0.22	0.26	0.46	0.63	0.32	1.00				
India	0.53	0.42	0.52	0.39	0.44	0.41	0.41	0.37	0.46	0.33	0.10	1.00			
Russia	0.15	0.12	0.18	0.23	0.33	0.23	0.16	0.20	0.16	0.13	(0.14)	0.18	1.00		
South Africa	0.57	0.46	0.59	0.61	0.53	0.45	0.56	0.32	0.65	0.38	0.31	0.42	0.29	1.00	
MSCI EM	0.64	0.58	0.60	0.64	0.43	0.57	0.45	0.31	0.85	0.78	0.44	0.61	0.18	0.63	1.00
MSCI FM	0.54	0.47	0.47	0.60	0.39	0.56	0.41	0.12	0.65	0.62	0.26	0.52	0.06	0.69	0.81

Source: Shum (2017) based on 36 months of rolling market returns.

In an examination on the risk reduction benefits of diversification in the Gulf Cooperation Council () frontier markets,⁸ Demirer (2013) finds a strong link between market volatility and diversification measures. Demirer (2013) also suggests that the risks in frontier markets are highlighted when domestic portfolios are positioned against developed markets. The author adds that the use of foreign traded assets can favourably adjust investor risk. In the same context, Chan-Lau (2014), finds that by over-weighting portfolios in frontier markets, portfolio managers can benefit from risk parity allocations and thus increase the odds of outperforming

⁷Macroeconomic stability is also an indicator of the soundness of any frontier market (Oshikoya & Durosini-Etti 2019)

⁸An economic union consisting of all Arab states of the Persian Gulf except Iraq

their benchmarks without incurring additional firm risk. Demirer (2013), expressed similar views by suggesting that foreign traded assets in domestic portfolios increase yields in risk-return trade-offs. The above analysis emphasises the importance of financial liberalisation,⁹ and the importance of frontier markets to global investors.

1.3 Research Objective & Hypothesis Development

Early accounting research was primarily narrative and descriptive, open to evaluation, and based on general criteria; few researchers went beyond a mere description of business activities, procedures, or an assessment of best prevailing practices (Phelps 1947, Gordon & Howell 1959, Leoni & Florio 2015). Since DeAngelo (1981)'s seminal EM work, a significant volume of literature has followed. Expanding on previous EM studies, which mainly focuses on developed markets or overlaid frontier countries into their data, this study is distinct with an overarching objective of analysing EM in frontier markets exclusively. This section details this thesis's research objectives and outlines the hypotheses, allowing for appropriate determination of research methodologies.

Study One in this thesis examines the association between AEM and institutional settings as well as the cultural variable of societal trust. The specific research objectives of this topic and the corresponding hypotheses follows.

Shen & Chih (2005) demonstrate that countries with stronger institutional settings exhibit lower proclivity to EM. As regulatory bodies impose various restrictions on management behaviour, activities are theoretically constrained. The degree of constraint varies with country institutional factors. This study applies several detection methods to examine the constraints afforded by outside investor rights. This AEM study is particularly important as it examines theories developed for developed markets and their suitability in the seemingly inefficient frontier markets (Roberts et al. 2015, Istrate et al. 2015, Sharma et al. 2018).

In addition to an examination of investor protection variables, the cultural variable of societal trust is also examined for its ability to limit AEM activity. In frontier markets where financial disclosure may be weak, and the validity of reported items in financial statements may be

⁹Financial liberalisation is a topic of much debate in frontier markets, which generally includes measures such as removing foreign entry barriers (Wang & Luo 2019)

questionable, the level of societal trust is of greater importance. From the arguments above, Study One's hypotheses are noted below.

Ceteris paribus:

- H1.** *Greater minority investor rights is associated with decreased AEM.*
- H2.** *Greater legal enforcement is associated with decreased AEM.*
- H3.** *Greater disclosure requirements is associated with decreased AEM.*
- H4.** *Greater number of analyst following is associated with decreased AEM.*
- H5.** *Greater societal trust is associated with decreased AEM.*

Study Two examines the relationship between AEM and REM with respect to financial statement comparability. The specific research objectives for this topic are outlined below.

The body of EM literature has provided evidence of firms alternating between REM and AEM. REM differs from AEM in that REM manipulates real business activities and directly impacts cash flow (Susanto et al. 2017, Jones & Sharma 2001). Conversely, AEM has no direct cash flows consequence. Because firms will choose the least costly EM method (Ipino & Parbonetti 2017), this study examines whether firms with greater comparability engage in less AEM. This study also provides evidence on whether increased transparency (as a result of increased comparability) results in higher REM. Below are the stated hypotheses for Study Two.

Ceteris paribus:

- H1** *Firms audited by a high-quality auditor (BigN) are associated with lower earnings management activity*
- H2** *Increased comparability is associated with decreased accruals earnings management*
- H3** *Decreased accruals earnings management is associated with increased real earnings management*

Study Three of this thesis examines the impact of on the performance of frontier market banks. Specifically, this study examines how income smoothing (a form of) impacts a bank's technical efficiency (a measure of performance) (Adusei 2016). The research objectives concerning this topic are outlined below.

Commercial banks operate in a highly regulated industry where regulators and accounting

standard setters scrutinise non-performing loan and capital adequacy ratios. When efforts to avoid regulations give rise to incentives, loan loss provision is a vehicle often used to manipulate earnings (Kanagaretnam et al. 2009, Beneish & Press 1993). This third study examines the relationship between loan loss provision (), loan loss reserves (), and the efficiency of banks. Increases in and result in decreased net income and consequently reduced book value of equity. From the above, a significantly negative relationship with technical efficiency is expected if a bank engages in EM.

This study also examines the efficiency differences between large and small banks. Economies of scale is expected with large banks as costs are averaged over higher operational scales and scope. Research (Noulas et al. 1990, Mertens & Urga 2001, Chuanchen et al. 2002, Beccalli et al. 2015) shows that large banks often exhibit dis-economies of scale as banks consolidate, and or operate in highly concentrated industries. Study Three also investigates whether dis-economies occur in frontier markets where the regulatory environment is often less judiciously enforced. Below are the stated hypotheses for Study Three.

Ceteris paribus:

H1 *Use of loan loss reserves as an earnings management vehicle negatively impacts bank efficiency.*

H2 *Use of loan loss provisions as an earnings management vehicle negatively impacts bank efficiency.*

1.4 Conceptual Framework

Figure 1.4 presents a conceptual framework, developed to outline the objectives of the three separate, yet interrelated EM studies that comprise this thesis. The centre of the framework consists of a box noted *Earnings Management*, as is a focal point of all three studies. Two lines are drawn from Institutional Settings and Financial Statement Comparability toward *Earnings Management* to illustrate their respective topics and their impact on EM. A single line is drawn from *Earnings Management* to Bank Efficiency to show that the effects of EM are also examined.

Institutional settings and their impact on EM draws a direct line to *Earnings Management*. This first study analyses institutional settings' ability to reduce EM activity on non-financial frontier

market companies. This study draws from Leuz et al. (2003) and Shen & Chih (2005) in the development of its research. This study is the core of Chapter 3 and is fundamentally rooted in agency theory,¹⁰ suggesting that there is a misalignment of incentives for managers and shareholders. Low agency costs afford managers more opportunities to report income opportunistically, thereby creating distortions in the reported earnings and inhibiting stakeholders from making optimal decisions (Davidson III et al. 2004, Jiraporn et al. 2008, Toumeh & Yahya 2017).

Financial statement comparability and its ability to constrain EM is positioned towards the bottom left of the framework. This box is directly linked to *Earnings Management*, as the focus of this research examines how comparability impacts EM in non-financial frontier market companies. This study draws on work from Gross & Perotti (2017) and Lemma et al. (2019) in the development of its research. Study Two is the core of Chapter Four and is fundamentally rooted in social norm theory, whereby positive social norms help restrain unethical managerial behaviour. Comparability is an important social norm and commonly considered as necessary in telling ‘the truth’ about the economic activities of any organisation (Macintosh 2009, Durocher & Gendron 2011)

Bank technical efficiency is positioned toward the frame’s right edge. A line from *Earnings Management* is drawn out towards *Bank technical efficiency* to show this study examines how EM impacts bank efficiency in frontier markets. This study is a turnabout from the previous two studies as the influence of EM is examined, drawing from Ding & Sickles (2018)’s research. Bank efficiency is the core of Chapter 5 and is implicitly rooted in prospect theory, which suggests that an individual’s value functions are concave in gains and convex in losses (Kahneman & Tversky 1979b) from which researchers (Burgstahler & Dichev 1997, Degeorge et al. 1999) infer as a possible motivation for EM. An asymmetric risk-return relationship may empirically suggest prospect theory is: a) strong justification for managing earnings, b) a major driver of efficiency gaps, and c) that the utility curve for risk-taking behaviour is steeper than risk-averting behaviour.

¹⁰The theory of agency seeks to understand the problems created when one party, the *agent*, is acting for another, the *principal* (Mitnick 2015)

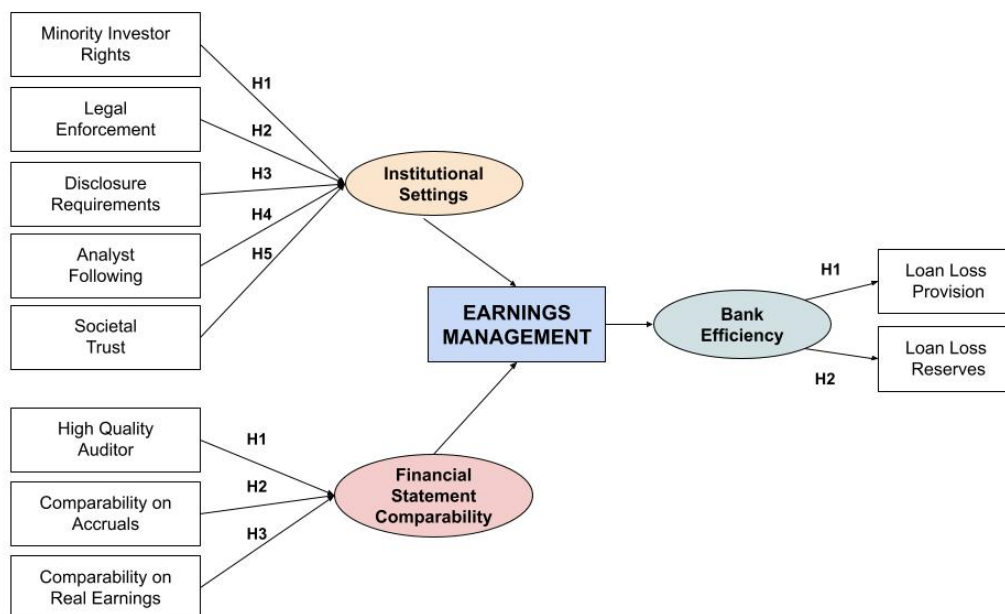


Figure 1.4: Conceptual framework of three interrelated research topics

1.5 Research Methodology

This thesis takes a quantitative research approach employing several regression estimation techniques. In Chapter Three (Study One), three AEM detection methods are applied. The first and second methods decompose accruals into discretionary and non-discretionary as per Kothari (2005) and Yoon et al. (2006). The third method follows Leuz et al. (2003) and Enomoto et al. (2015) and measures the absolute value of accruals as an earnings discretion measure. This third method is calculated by dividing the absolute value of accruals by the absolute value of operating cash flow. Discretionary accruals are measured for each firm and fiscal year combination. Once each detection method is calculated, results are then regressed individually and collectively against investor protection variables, as well as the cultural variable of societal trust. Two-stage least squares () and rank regression are additionally utilised for greater robustness.

In Chapter Four (Study Two), the method of calculating financial statement comparability is drawn from Conaway (2017), who adapts from De Franco et al. (2011)'s method. Calculating a comparability score requires five steps. Step one calculates a relationship estimate between economic outcomes¹¹ and earnings within each country-industry-year. Step two estimates a firm's fitted stock return. Step three calculates the fitted stock return under each counter-sample model for each firm. Step four calculates the absolute value of the difference between the

¹¹As measured by stock return

within-sample and counter-sample fitted stock prices for each firm. Step five multiplies the median absolute difference between the within-sample and counter-samples' fitted stock prices by the negative natural log. The final value represents the firm's comparability measure to those of the counter-sample. To calculate Δ , the Leuz et al. (2003) model is used. As per previous research (Cohen et al. 2008, Cohen & Zarowin 2010), a single comprehensive measure of Δ is calculated as a sum of the three individual REM measures. In the end, the mean value of the target firms' firm-pair comparability score is regressed on the Δ value from both the AEM and REM detection methods.

Chapter Five (Study Three) applies stochastic frontier analysis (SFA) in the measurement of a bank's technical efficiency. Using a translog function following Altunbas et al. (2007) and Ding & Sickles (2018), a two-output and three-input cost frontier model is specified. The mean technical efficiency score is calculated by country, year, size, and region. Following Adams et al. (2009) and Wu et al. (2016), this study argues that EM in banks commonly occurs through loan loss provisions and loan loss reserves due to their discretionary nature. To examine the relationship between Δ and technical efficiency, random effects panel-regression model, and truncated regression methods are applied.

1.6 Research Significance

This thesis's primary significance lies in the results it offers to different stakeholders. Specifically, findings from Chapter Three (Study One) provide insight into factors that curtail Δ and thus provides guidance to investors considering diversification into frontier markets. Through its multiple AEM detection methods, this study also elucidates the similarities and differences between frontier and more developed markets. From the findings, this study contributes to the extant AEM literature, literature on agency theory, findings on the strength of minority investors' rights, and contributes to knowledge on frontier markets. Knowing behavioural differences across countries will guide investors and regulators against unseen risks in frontier markets.

Chapter Four (Study Two), focuses on the contemporary topic of comparability of financial statements. The findings of this study informs scholars and investors to the extent that a managements' opportunistic EM is influenced by accounting comparability. Specifically, this study contributes to the EM literature by showing Δ is muted as comparability increases, yet

increased comparability exhibited no impact on . With this insight, stakeholders can construct portfolios with due consideration of inherent market risks, and insight into potential management responses to increased financial comparability. This study also contributes social norm literature and provides insight on the restraint social norms offers on unethical management behaviour in frontier markets.

Findings from Chapter Five (Study Three) extends on prior literature on earnings smoothing and bank efficiency. Findings herein show which geographical region banks operate at the highest and lowest technical efficiency. This chapter also contributes to the literature by casting light on vehicles employed by large and small banks, while deepening insights on frontier markets. With this information, investors are better informed of banks' efficiency when selecting geographical regions. In examining the relationship between and and banking efficiency, income smoothing influences on efficiency will enable investors to make informed decisions.

1.7 Thesis structure

The remainder of the thesis is structured into an additional five chapters. Chapter Two provides an expanded literature review of research topics addressed in this thesis while identifying research gaps. Chapter Three examines the relationship between and institutional settings. Chapter Four examines the impact of financial statement comparability on AEM and REM. Chapter Five examines the effects of income smoothing on a bank's technical efficiency. Chapter Six concludes by summarising key findings, providing study implications, limitations and recommendations for future research.

Chapters Three, Four, and Five are divided into separate subsections, whereby the first section introduces the research. A review of the literature follows the introduction. Thereafter, the data sources and methodology utilised in the studies are outlined, and empirical results described. Summation, limitations, and implications of the findings conclude each chapter.

Chapter 2

Literature Review, Related Theories, and Research Contributions

2.1 Introduction

Every June, Morgan Stanley Capital International (), an investment research firm that provides indices and performance analytics to investors, announces its equity market evaluation report for countries around the world. MSCI classifies countries as one of the following, Developed, Emerging, Frontier, or as a standalone market¹² (MSCI 2019). MSCI's classifications are determined by investors' market accessibility experience and reflects international institutional investors' views. Market categorisation through a comprehensive and consistent approach enables global views and meaningful cross-regional comparisons across all markets, by size,¹³ sectors, and style segments. Figure 2.5 summarises the classification framework. Classification criterion have three components a) economic development, b) size and liquidity requirements, and c) market accessibility criteria. Each of these categories has subcategories supporting market classification.

Chapter Two introduces key literature areas that will be addressed in Chapters Three, Four, and Five. Specifically, this chapter reviews of the literature pertaining to corporate governance, a key area examined in Chapter Three. Financial comparability is also reviewed as it is a focal point of analysis in Chapter Four. Bank efficiency literature is reviewed in Chapter Five. Concluding this chapter is a discussion of gaps in the literature.

¹²At time of writing, 23 countries are included in MSCI's Frontier Markets Index

¹³As measured by capitalisation

Criteria	Frontier	Emerging	Developed
A Economic Development A.1 Sustainability of economic development	No requirement	No requirement	Country GNI per capita 25% above the World Bank high income threshold* for 3 consecutive years
B Size and Liquidity Requirements B.1 Number of companies meeting the following Standard Index criteria Company size (full market cap)** Security size (float market cap)** Security liquidity	2 USD 776 mm USD 61 mm 2.5% ATVR	3 USD 1,551 mm USD 776 mm 15% ATVR	5 USD 3,102 mm USD 1,551 mm 20% ATVR
C Market Accessibility Criteria C.1 Openness to foreign ownership C.2 Ease of capital inflows / outflows C.3 Efficiency of operational framework C.4 Availability of Investment Instrument C.5 Stability of the institutional framework	At least some At least partial Modest High Modest	Significant Significant Good and tested High Modest	Very high Very high Very high Unrestricted Very high

* High income threshold for 2018: GNI per capita of USD 12,056 (World Bank, Atlas method)

** Minimum in use for the May 2019 Semi-Annual Index Review, updated on a semi-annual basis

Figure 2.5: MSCI Market Classification Framework

Source: MSCI Classification Framework, 2019

2.2 Earnings Management

Finance scholars regard EM as a representation of reporting quality (Al-Absy et al. 2019). The management of earnings has been defined several ways, such as: as an attempt to reduce capital (Biao Xie 2003); a managers' discretionary behaviour for maximising company value (Watts & Zimmerman 1978); or a purposeful intervention for private gains (Schipper 1989). EM has also been described as using judgement in considering the substance of business transactions to alter financial reports to mislead stakeholders about the underlying performance of a company (Healy & Wahlen 1999), to secure dividends (Dale A 2001); or purposed to meet specific earning objectives (Lee & Yeh 2004, Goel 2017). According to Ceccobelli & Giosi (2019), EM is the smoothing of income to signal private information or to raise capital to meet regulatory requirements. For Roychowdhury (2006), EM is management's deviation from standard business practices. An earlier definition by Beneish (1999) offers a more liberal definition as the author suggests EM occurs each time management violates the Generally Accepted Accounting Principles () in representing the financial performance of a firm.

Literature typically classifies EM into two main types: real earnings management () and accrual-based earnings management () (Ceccobelli & Giosi 2019). The survey evidence from the UK and the US have shown that to meet their financial targets, managers consider both REM and AEM (Graham et al. 2005, Cho & Chun 2016). Managers may also decide between REM, AEM, and classification shifting (misclassification) strategies to report a company's financial strength

(Graham et al. 2005, McVay 2006, Athanasakou et al. 2011, Cho & Chun 2016).

REM has varying definitions in the literature. Schipper (1989) states that REM is changing the timing of spending and/or investing to manipulate earning figures. According to Xu et al. (2007), REM is a practice used to affect earnings reports. Roychowdhury (2006) perceives it as a departure from its ordinary operational course, which may not add value to a firms' performance. Gunny (2010) states EM is an adjustment by managers to achieve targets. Several researchers regard REM as a manipulation method through normal activities of sales, production, overproduction, and expenditures to produce a desired outcome in reported earnings (Graham et al. 2005, Zang 2012), whereas Malik (2015) states firms use REM to avoid reporting losses.

Because meeting or exceeding a critical benchmark is rewarded in the industry, managers may take real economic actions to meet or exceed benchmarks (Burgstahler & Dichev 1997, Degeorge et al. 1999, Graham et al. 2005, Athanasakou et al. 2011). Firms may also manage earnings to avoid increased regulatory scrutiny and specific regulations that result from missed earnings benchmarks (Bartov & Cohen 2009, Osma & Young 2009). Dechow et al. (2012), however, suggests that EM may not always be related to incentives, but rather a matter of firm characteristics. Roychowdhury (2006) delineates REM into three types of abnormal activities: abnormal discretionary spending, abnormal production, and abnormal operating cash flow. The literature further classifies REM into operating (increasing sales and production, and decreasing expenses), investing (sale of long term assets, and investment in research and development) and financing decisions (stock repurchase and stock options) (Burnett et al. 2012, Sellami 2015).

To study AEM, it is important first to define "accruals". Accruals are the difference between net income and cash flow (Richardson 2003). Ceccobelli & Giosi (2019) state that is the management of future cash transactions without impacting the actual flow of money, reflecting only future profit and loss () statements. Together, these practices have prompted researchers to study the causes and consequences of AEM (Healy & Wahlen 1999, Kothari 2001, Walker 2013). Typically, researchers seek to differentiate normal accruals from abnormal accruals. Abnormal accruals are seen as deviations from normal earnings practices (Roychowdhury 2006, Athanasakou et al. 2011). In examining the choices firms make between AEM and , Abernathy et al. (2014) suggest firms generally make trade-off decisions based on their respective costs.

While EM strategies have long received the attention of scholars, a perfect EM detection technique has not been found (Callao et al. 2017), however, many methods of detecting earnings

manipulation have been put forth (Dechow et al. 2010, Cohen et al. 2014). Christensen et al. (2017), argues that not all detection methods are practical nor suitable for all situations, as some fail to consider the impact of different cultural and environmental factors in their models (Dechow et al. 2011). Despite limitations, these models continue to be applied (Dechow et al. 2012). It is estimated that around 60 per cent of the research on detecting EM is performed using models introduced in the following five publications: Jones (1991), Dechow et al. (1995), Teoh et al. (1998), Kasznik (1999), Kothari (2005) and Callao et al. (2017). Callao et al. (2017) suggest that the Jones (1991) model, the Shivakumar (1996) model, and the Yoon & Miller (2002) model, are the most effective models to detect EM. More recently, Chen, Hribar & Melessa (2018) provided evidence that models that rely on residuals provide incorrect inferences and suggest estimating coefficients in a single-step (rather than two-step) regression.

The management of earnings is not without consequences. Gunny (2005) finds that firms that decrease prices to boost sales, and or overproduce to reduce average cost, experience significant economic impacts on subsequent performance. These consequences may also include a lower return on assets () and lower future cash flow. In subsequent research, Gunny (2010) points out that firms engaging in REM show inferior future stock returns than those of controlled firms. Conversely, Pappas (2016) finds that REM and income smoothing (a method of), give a positive indication of future share prices. Customers, investors, suppliers, unions, regulators, and bankers also suffer when firms practice (Lo 2008), because EM practices disguises true financial positions (Sellami 2015), and may signal worsening future financial performance (Tabassum et al. 2015). The costs of REM are reported to be greater than those of AEM because REM has more negative consequences on the cash flow, and future company valuations (Roychowdhury 2006, Cohen et al. 2008, Chi et al. 2011). Kim & Sohn (2013) note a positive correlation between REM and the cost of equity, which negatively effects future . Taylor & Xu (2010) however, found that REM is innocuous and does not affect future operating performance.

The above provides a review the literature on two EM variants, AEM and REM. The consequences associated with managing earnings was also reviewed. Knowledge from past studies provides a starting point for future EM studies.

2.3 Corporate Governance

Fama & Jensen (1983) state that 'corporate governance' refers to the laws of the State complied and executed for a particular corporate context. Corporate governance is also considered a system comprised of people, processes, and policies, designed to serve the interests of the stakeholders (La Porta et al. 2000a, Cioffi 2000, La Porta et al. 2002, O'Donovan 2003, Bebchuk & Weisbach 2010). The importance of corporate governance has emerged as a critical factor affecting , which encompasses a wide range of leadership and management perspectives (Man & Wong n.d.). Berle & Means (1991) argue that an ownership-control separation was the hallmark of large American corporations. Their work proved that ownership impacts a firm's financial performance (Oswald & Jahera Jr 1991).

Academic literature differentiates between three major theories of corporate governance: the principal-agency theory (Band 1992), stewardship theory (Clarke 2004), and stakeholder theory (Davis et al. 1997, Pepper 2019). Principal-agency theory seeks to reduce conflict between shareholders and corporate governing bodies. Stewardship theory examines management behaviour and posits that management works in a company's best interest. Stakeholder theory addresses morals and values in managing an organisation and assumes that values are necessarily and explicitly part of business (Nix 2012). Research in corporate governance has emerged as a critical business issue fuelled by high profile corporate scandals – the negative outcome of which erodes investor confidence (Holt & DeZoort 2009, Jain & Rezaee 2006).

Research has found various types of corporate governance mechanisms (Man & Wong n.d.). One may classify the governing mechanisms into internal and external mechanisms. Internal mechanisms address internal factors such as board composition and characteristics, ownership structure, and different committees. Factors affecting the external mechanisms include investor type, legal origins, regulatory systems, and the number of financial analysts that follow (Hart 1995, Agrawal & Knoeber 1996, La Porta et al. 2002, Choi et al. 2012).

The above provides a review of corporate governance literature and theories pertaining to it. The review also addresses types of corporate governance mechanisms. As corporate governance seeks to protect the interest of shareholders, its relation with EM becomes especially meaningful.

2.3.1 Analyst coverage

Analyst coverage is an external factor in corporate governance (Yu 2008). Researchers find that analysts are an essential group that can affect a corporation's share price (Jensen & Meckling 1976a, Healy & Palepu 2001, Graham et al. 2005, Dyck et al. 2010), and helps detect expropriation by managers (Healy & Palepu 2001). Kaldor (1966) and Chung & Jo (1996) report a positive relationship between analyst coverage and Tobin's Q.¹⁴ Analyst coverage is also seen as having a positive affect on a firm's liquidity (Irvine 2003). Yu (2008) further observes that firms with greater analyst coverage have lower discretionary accruals and are less likely to participate in EM. Financial development and analyst monitoring are also considered complementary (Beck et al. 2005, Beck & Levine 2004, Degeorge et al. 2013). Sohn (2016) finds that enhanced monitoring by analysts mitigates REM activities, conversely, Sun & Liu (2016) documents that REM is significantly higher when more analysts follow a firm. They go on to suggest that analyst coverage is better at restricting AEM than REM.

While Lel (2019) finds analysts may substitute for monitors in countries with weak investor protection, analysts' influence as external monitors is not limited to corporations. Degeorge et al. (2013) note that analyst coverage is positively associated with a country's economic development. The authors argue that countries with high economic development have increased analyst coverage and decreased EM, whereas low-development countries have low analyst coverage and high EM. In contrast, it was suggested that analyst coverage increases, for managers must strive to achieve ever-elusive targets (Levitt Jr 1998, Fuller & Jensen 2002). Graham et al. (2005) expand on this argument by suggesting that executives may approve net present value (NPV)¹⁵ projects for the sole purpose of achieving or beating analysts' targets. Brown & Higgins (2005) have also suggested that the management of earnings forecasts can be treated as EM in circumstances where earnings forecasts spike.

The above has reviewed the literature on analyst coverage and its association with EM. Analyst coverage influences EM through the firm and management monitoring and has benefits that extend beyond the immediate firm in question. Analyst coverage has also been shown to positively impact on a country's economic performance.

¹⁴The ratio between an asset's market and replacement value

¹⁵NPV is the difference between the present value of cash inflows and cash outflows over a period of time

2.3.2 Investor protection

Investor protection is an important consideration in EM studies as minority shareholders'¹⁶ voices may be drowned out by those of controlling shareholders (La Porta et al. 2000*a,b*). According to Shleifer & Vishny (1997), investor protection ensures that suppliers of firm financing get an appropriate return on their investment. The protection provided by the legal systems of different countries helps to better understand the nature of corporate governance in these countries. Firms in nations with greater investor protection have higher market valuations (La Porta et al. 2002, Ball et al. 2003), indicating that firm-level governance and country-level investor protection are complementary (Haw et al. 2004). Investor protection can only be ensured through effective enforcement of rules and laws, which may be lacking in frontier markets (Millstein et al. 2005). Klapper (2004) suggests that firms with good corporate governance and strong investor protection can compensate for ineffective laws. Several countries ¹⁷ have the proviso that firms can choose to adopt investor protection laws introduced by the country of operation or choose their own, whichever is greater (Black & Gilson 1998). However, Klapper & Love (2004) suggest that good corporate governance cannot replace a country's weak legal infrastructure. Corporations may opt to improve their investor protection policies to safeguard the rights of minority stakeholders for this reason. Leuz et al. (2003) find an inverse relationship with and investor protection. Higher EM is a sign of weak investor protection policies within a country (DeFond et al. 2007) and results in practices such as; managerial entrenchment,¹⁸ cash holding,¹⁹ and dividend pay-outs²⁰ (Stulz 1990, Bebchuk et al. 2008, Harford et al. 2008, Hassan 2011). Dittmar & Mahrt-Smith (2007) note that strong investor protection results in low cash holdings, whereas Mitton (2004) and Choy et al. (2011) find a positive relationship between higher dividend pay-outs and stronger corporate governance.

While a supportive legal system adds value to the financial sector and a firm's performance (Mehl & Winkler 2003), not all corporations and countries have an optimal legal system (Castrillo et al. 2010). Corporate governance cannot independently replace a country's weak legal framework (Shleifer & Wolfenzon 2002, Roe 2005, Denis & McConnell 2003). Researchers have advised policymakers to reform investor protection laws and improve the quality of their legal environ-

¹⁶Shareholders that do not exert control

¹⁷For example: Thailand, Cameroon, and Togo (Casale & Arrigo 2017)

¹⁸Protection against removal or its consequences

¹⁹Managers' discretion over free cash flow

²⁰Offering lower pay-outs by increasing management benefits and offering high pay-outs to compensate lower investor protection

ment (Hasan et al. 2014), as the business environment is determined by the elements of law and its enforcement (Berglöf & Claessens 2006). DeFond & Hung (2003) find that the enforcement of laws is more important than the quality of the laws. This view is reinforced by Beck et al. (2003), who suggest that the quality of the enforcement environment affects the legal mechanism related to investor protection. Similarly, Chen, Chou & Wei (2020) suggest that lawsuit threats and investor monitoring are effective mechanisms to reduce earnings manipulation.

The literature review on investor protection has shown it to be inversely related to EM. As higher EM is associated with lower investor protection, many additional positive associations were highlighted. Positive associations were noted for both the firm and its stakeholders.

2.3.3 Corporate disclosure

Corporate disclosure systems provide stakeholders with reliable and relevant information for decision making via a fair business picture and true operational results of its (Varghese 2010). The association of audit quality with corporate disclosure is well documented (Garas & ElMassah 2018). According to Lin & Hwang (2010), audit quality, auditor tenure, auditor size, and specialisation have an inverse relationship with EM. Kilgore (2007) notes the importance of audit quality in the operation of capital markets, and Memis & Cetenak (2012) identify that stronger legal environments improve audit quality effectiveness. Corporate disclosure has also been extensively researched (Simon S.M Ho 2001, Haniffa & Cooke 2002, L.L. Eng 2003, Barako et al. 2006, Li & Qi 2008) for it provides information about a firms' performance to current and potential stakeholders (Hassan 2013). Corporate disclosures may result in information asymmetry due to multiple channels of information (Khelif & Souissi 2010). Huafang & Jianguo (2007) maintain that foreign share listings and higher block holder ownership increases opportunities for voluntary corporate disclosure, whereas managerial and State ownership often result in a lower voluntary disclosure. The authors add that firms with the duality of the Chief Executive Officer () and those with fewer independent directors exhibit a lower likelihood of voluntary disclosure. Tsamenyi et al. (2007) find that firm size, shareholding distribution, and ownership structure affect the corporate disclosure significantly. Cunha et al. (2017) report positive correlations between corporate disclosure, firm size, growth opportunities, and negative correlations with financial leverage.

The literature above highlights the need for information symmetry between investors and man-

agers. Higher corporate disclosure support reduced EM activity. Also suggested in the literature is that policymakers set minimum requirements for disclosure.

2.3.4 Culture

Hofstede (2001) views culture as the 'software of the mind' that distinguishes one group of people from another. The culture of a nation has its influence on accounting practices and standards, for corporate governance does not occur in isolation (Cieslewicz 2014). Market development involves with several social elements such as norms, laws, politics, and religion (Weber & Hallerberg 2001). Collectively, these social elements shape the culture of a country and its region. Corporate governance literature maintains that governance is embedded in culture (Jackson & Hoepner 2001) and that cross-national differences in societal values affects capital markets (Gray et al. 1988, Salter & Niswander 1995, Zarzeski 1996, Chui et al. 2002, Hope 2003, Douppnik & Tsakumis 2004, Kwok & Tadesse 2006, Radebaugh et al. 2006). In a multi country study, Zhang et al. (2013), argue that culture, legal rules, and their enforcement plays a critical role in shaping the economic behaviour of a country.

Hofstede (1984) noted that organisations are culture-bound. His dimensional paradigm provided literature with four work-related cultural dimensions to understand national cultures; *power distance* (), *uncertainty avoidance* (), *individualism* (), and *masculinity* (). Subsequent research added two more cultural dimensions; *long-term orientation* and *indulgence* (Starosta & Chen 2005, Arasaratnam & Haykin 2011, Dainton & Zelley n.d.). Gray et al. (1988) were the first to introduce Hofstede's theory of cultural influence in corporate governance, arguing that these cultural dimensions influence a country's accounting system (Bao & Bao 2004, Callen et al. 2011).

The leading literature promotes as the acceptance of the masses of the unequal power distribution in the organisations and institutions. Lubetsky (2008) defines it as a tool to measure the illegitimate distribution of power, wealth, and prestige in society. Hofstede (1984) distinguishes people based on low-power and high-power-distance, where differentiation among people based on sex, age, generation and status is observed in the former (Starosta & Chen 2005). In high PD cultures, status and rank determine power centralisation (Dainton & Zelley n.d.). Countries with high PD justifies the actions of the power holders, causing and to become positively correlated (Hofstede 1984). Kanagaretnam, Lobo, Ma & Zhou (2016) state PD is associated with internal

control weakness. Gray et al. (1988) and Bao & Bao (2004) suggest that accounting values are derived from cultural values, influencing the culture- relationship.

For Hofstede (1984), is the society's comfortability with ambiguity and uncertainty. For Starosta & Chen (2005), is the acceptability and tolerance of a culture of future uncertainty. Arasaratnam (2011) states that traditional cultures resist change, preferring stability. He et al. (2017) report a significantly positive UA- relationship.

IND refers to a societal state where individual achievements, thoughts, and actions are recognised, and self-concept is highly acceptable. This is in contrast to cultures with an embedded sense of collectivism (Starosta & Chen 2005, Arasaratnam & Haykin 2011). Li et al. (2013), associate individualism with risk-taking. Kanagaretnam et al. (2014) find that IND is negatively associated with conservatism and positively associated with methods of increasing income via discretionary accruals. Conversely, managers in countries having a low level of individualism, prefer not to engage in to avoid long-term difficulties for a company and their stakeholders; thus IND is inversely related to EM (He et al. 2017). Gray et al. (1988) note that individualism-dominant societies have flexible self-governance and measurements. Due to individualism's positive association with disclosure, Hope (2003) sees individualism and uncertainty avoidance as having the most direct impact on accounting behaviour. Kanagaretnam, Lobo, Ma & Zhou (2016) find a positive IND-PD relationship, relating IND positively with internal control weaknesses and negatively with Halabi et al. (2019) note that IND does not seem to play a significant role in explaining EM when considering formal institutions simultaneously.

is commonly associated with the presence of stereotypically masculine traits where men are assertive and ambitious, and women are deferent and supportive (Starosta & Chen 2005, Dainton & Zelley n.d.). MAS is one of the more controversial cultural dimensions in the sense that the label is based on ideology or prejudice (Ashkanasy et al. 2000). Where MAS measures the assertiveness, status, and materialism associated with maleness, femininity measures the harmony, care, and modesty in society (Hofstede 1984). Hofstede (1984), however, warns not to take femininity as an indication of the individual, as any individual may display the feminine traits of harmony and care.²¹ Kim et al. (2017) state that firms in countries with higher levels of masculinity engage in more EM, however, Pacheco Paredes & Wheatley (2017) find a negative association between MAS and REM.

²¹Country-wise Australia, the UK, Venezuela are considered masculine cultures whereas Denmark, Norway, Portugal, Sweden and Thailand are considered feminine cultures (Starosta & Chen 2005)

The above traits of are meant to educate those involved in corporate governance, including directors, managers, shareholders, and auditors (Okike & Adegbite 2012). Sir Adrian Cadbury²² reinforces this by suggesting that corporate governance is not a state, but a process adapting to changing business and technological environments (Claessens 2003). In consideration of recent corporate failures (see Appendices 7.31 for list of corporate failures), Higgs (2003) and Imhoff Jr. (2003) suggest continuous education for all corporate board members to stay abreast of the ever-changing business environment.

Hofstede (1984)'s work is not without criticism. In reply to Hofstede (1984)'s national cultural dimensions, McSweeney (2002) argues against the validity of attitude-survey questionnaires as a means of inferring values, while Myers & Tan (2002) questions Hofstede (1984)'s static view of culture. Myers & Tan (2002) continue by defining culture as an attitude that is contested, temporal, emergent, and interpreted. Dimitrov (2018) regard the intensive testing of Hofstede (1984)'s framework as a prerequisite for the model's lasting life and affirms the framework's need to qualify interesting societal and business-related phenomena.

The preceding literature review reveals cultural dimensions as supported by Hofstede (1984)'s framework. Of note is that measures of investor protection are influenced by culture. Also outlined was an inverse association between IND, MAS and UA, and EM.

2.3.5 Religiosity

Research has shown that social elements influence economic behaviour and business environment, including norms, values, law, politics, and religion (Altonji & Blank 1999, Weber 2001, Levitt & Schiller 2004). Clarke & Byrne (1993) describe religion as a coherent system of values derived from divine authority that shapes human values and perceptions. People develop social and economic interactions with these values and beliefs, influencing the economic behaviours (McGuire 2008, Iannaccone & Bainbridge 2010). Research shows that religion influences economic activities and growth (Barro & McCleary 2003). Hilary & Hui (2009) suggest that the level of religiosity impacts risk aversion and investment rates in some countries. Religiosity also influences people to develop intellectual capital and social network density (Anderson 1988, Glaeser & Sacerdote 2008, Lim & Putnam 2010). The influence of religion is also

²²Known to many as a global governance pioneer having chaired the development of the world's first 'corporate' governance code (*Sir Adrian Cadbury* | ICGN n.d.)

seen in economic interactions, investor protection, board structure, and marketing activities (Stulz & Williamson 2003, Fam et al. 2004, Volonté 2015). However, Nakpodia et al. (2018) find that religiosity is inconsistent with good corporate governance in the presence of rational ordering, Callen et al. (2011) indicate that EM is unrelated to religious affiliation and religiosity. However, Kanagaretnam et al. (2015)'s analysis indicates that religiosity is negatively related to income-increasing EM.

The above literature on religiosity illustrates its relationship on values and culture. Also outlined were studies that show that religiosity is inversely related to income increasing EM, and studies that find that such a correlation does not hold. Religiosity's use in this study is justified to tease out religiosity's impact in the context of frontier markets.

2.3.6 Legal System

A country's legal system influences a society's financial situation (Ball et al. 2000, Leuz et al. 2003, Haw et al. 2004, Francis & Wang 2008, Fung 2013). Leuz et al. (2003) claims that countries with strong legal systems have less . Francis et al. (2016) reinforce this view by suggesting more robust legal systems discourages AEM. Scholars (La Porta et al. 1999, Evans & Rauch 1999, Fligstein 2001, Djankov et al. 2003, Glaeser et al. 2004) established that stable laws and peaceful governments are necessary conditions for business development. Coffee (1999) suggests that legislation is dictated by business practices and not the other way around.

Presently, two highly influential legal traditions exist: civil law and common law (Tetley 1999). This grouping of legal tradition into two legal families simplifies presentation and facilitates understanding of contemporary laws worldwide. Since most legal systems duplicate laws administered in other jurisdictions (*e.g.* former British colonies duplicated British law), major legal traditions tend to be associated with the original legal system as it once existed rather than as it exists today (Binavince 1970). The civil law tradition has its origin in Roman law and is highly systematised and structured. It also relies on declarations of broad, general principles, and often ignores the details (Quebe et al. 2003). Common law is the legal tradition which evolved in England from the eleventh century onward. Its principles appear for the most part, in the reported judgements of the higher courts, regarding specific fact situations arising from disputes which lower courts have previously adjudicated. Common law is usually much more detailed in its prescriptions than civil law (Tetley 1999).

The law and finance literature shows that corporate governance is stronger in common law countries as opposed to civil law countries (Laporta et al. 1999, Aggarwal & Goodell 2014). Kim, Miller, Wan & Wang (2016) finds foreign institutions to be effective at monitoring opportunistic financial reporting in civil law countries than in common law countries. In a separate foreign institution and EM study, Lel (2019) notes a standard deviation increase in the per centage of independent foreign institutional investors, represents an improvement of 4.78 per cent in the magnitude of EM in civil law countries when compared to a 0.36 per cent improvement in common law countries. An et al. (2016) asserts it is more difficult for managers to expropriate investments from investors in common law countries, making the common law legal system a superior control mechanism than civil law. An et al. (2016) continues by stating that common law environments reduce the demand for costly debt in mitigating agency conflicts.

The literature reviewed above addresses the role of a country's legal system on EM behaviour. Legal systems are commonly divided into common and civil code systems. Evidence in the literature points to the common law systems as a stronger protector of investors rights and consequently, exhibiting lower EM behaviour.

2.4 Financial Comparability

Globalisation has appreciably increased the economic interaction among countries (Perraton et al. 1997). Increased interaction increases demand for more internationally comparable accounting information (Yip & Young 2012). Chung (2017) defines accounting comparability in terms of how managers translate economic events into accounting numbers. Possessing qualitative characteristics, comparability enables users to find similarities and differences among financial items (DeFond et al. 2011), and assess the amount, timing, and uncertainty of future net cash flows (Kim et al. 2013). The Financial Accounting Standards Boards (FASB) considers comparability a quality enhancing characteristic of the financial reporting system. Providing further elaboration, FASB (n.d.) states that comparability is not making unlike things look alike and like things look different, but instead improving financial accounting and reporting to provide useful information to users of financial reports.

Research has well accepted the economic consequences of comparability (Islam n.d.). Comparability adds to the value of financial information with several advantages including: lowering

uncertainty among equity investors (Bradshaw 2009, De Franco et al. 2011), reducing stock crash and credit risk (Kim, Li, Lu & Yu 2016), and improving valuation outcomes and acquisition performance (Young & Zeng 2015, Chen et al. 2017). According to Henry et al. (2018), two main perspectives follow accounting comparability: the formal harmonisation perspective,²³ and the material harmonisation perspective (van der Tas 1992).²⁴ The adoptions of International Financial Reporting Standards (IFRS) in ethnic heterogeneity, and changes in accounting standards and choices, juxtapose the two perspectives (Kvaal & Nobes 2012, Daske et al. 2013).

Beechy (2009) suggests that the standardisation of accounting systems alone does not produce meaningful comparability. The scarcity of comparability research can be attributed to the lack of a standard comparability measures. Comparability and uniformity cannot be taken as equal (Islam n.d.). Meaningful comparability means unearthing the underlying firm performance using quantity or ratio measures. These measures, however, should represent the characteristics of the item under comparison (FASB n.d.). In this scenario, research should adopt accounting methods specific to a firm's circumstances. The one-size-fits-all approach may produce superficial comparability (Zeff 2007). Research by De Franco et al. (2011) and Kim et al. (2013), Kim, Li, Lu & Yu (2016) helped define and understand financial statement comparability. Research by De Franco et al. (2011) gave researchers ways to explore the development of financial statement comparability. In response to Schipper & Vincent (2003)'s concerns, research adopted two streams. The authors suggest that limited guidance and detailed comparability standards may not yield desired results of increased comparability, *e.g.* the effect of events such as the adoption of IFRS, and the effect of financial comparability on EM (Barth et al. 2012).

DeFond et al. (2011) and Bradshaw (2009) expanded comparability research by measuring the differences in accounting comparability (accounting choices) among different firms. Henry et al. (2018) point out that research has classified comparability measures into input-based and output-based measures. The input-based measures depend on qualitative inputs of business activities and or accounting methods.

Peterson et al. (2015) consider comparability through a different approach – by comparing text strings like variables (linguistic computing) in the financial statements to similarities in accounting policy disclosures (Brown & Tucker 2011, Hoberg & Phillips 2016). De Franco

²³Exhibiting similarities of accounting regulations and standards

²⁴The application of rules and standards

et al. (2011) developed two input-based measures: heterogeneity²⁵ and GAAP peer measures.²⁶ Conversely, other researchers took a quantitative approach by drawing their results from output-based metrics, using earnings as the proxy for the accounting systems of the firms. Their measure hinges on the idea that if two firms go through similar economic events, they will produce similar financial statements. Taking stock returns as the economic event and earnings as the financial statement output, they compared the firms and found an association between earnings and stock returns. They also use earnings co-movement as a measure to find the degree to which a firm's earnings varies within a sectors and found that when inter-sector earnings move with its peers, the firm has more comparable earnings. Yip & Young (2012), taking cognisance from De Franco et al. (2011), developed a measure in order to gauge the degree of information transfer and similarity in the information content of earnings (E) and information content of equity book value (BV). While the former measures the degree of information transferred between announcing and non-announcing firms, the latter measures the regression of value of equity on net income. Yip & Young (2012) suggest that firms in different countries and industries may have the same ICE and ICBV and are subsequently considered highly comparable. An earlier output-based method introduced by Bhojraj et al. (2003), compares firms on the bases of price to book ratio and the enterprise value to sale ratio. Applying these ratios, Young & Zeng (2015) also found that improved selection of peer firms led to their accurate valuation of the firms at international levels. In a separate comparability study, Kim et al. (2013) used debt market participation as a measure of firm comparison.

Researchers have sought to identify the benefits of comparability to users (De Franco et al. 2011, Barth et al. 2012, Yip & Young 2012, Horton et al. 2013, Wang 2014), such as aiding relative performance evaluation (Ng et al. 2011), improving liquidity (Horton et al. 2013), and enhancing analysts' information environments (De Franco et al. 2011). Brochet et al. (2013) and (Wang 2014) find that comparability decreases the chances of private information misuse and increases the transfer of transnational information. According to Kim (2012) and Fang et al. (2016), comparability benefits public debt and private loan markets and that comparability is negatively associated with forecast dispersion and positively associated with forecast accuracy. The above is accomplished by decreasing the cost of acquiring information while simultaneously increasing the quantity and quality of information.

²⁵Measuring accounting heterogeneity in a sector

²⁶Measuring the adoption ratio of firms previously practising local GAAP

Despite the benefits of comparability, Campbell & Yeung (2017) suggest that investors do not react to comparability signals adequately. Large investors read through these signals and react timely, triggering an adverse price reaction. Small investors go for herding-driven delayed trades, which also negatively impacts prices. Collins et al. (1994), Gelb & Zarowin (2002), and Haw et al. (2012) suggest that a firm's current stock price is a reflection of its future price. Orpurt & Zang (2009) have also indicated that the quality of information helps investors set the current stock price and predict future performance. Haw et al. (2012) and Choi et al. (2014) further suggest that value-related information adds to the value of stock prices, as future earnings response coefficient (β)²⁷ of firms with high-quality information is higher and helps increase earning response coefficients (β).²⁸ Financial statement comparability influences FERC in two ways; by expanding the set of available information, and lowering the uncertainty level about the future performance of the firm (Choi et al. 2014). This point of view was earlier noted by Haw et al. (2012) in that more information about transactions guides investors in actions pertaining to future firm performance. Chen & Yu (2012) and Choi et al. (2014) have also suggested that comparability of financial statements helps investors make meaningful comparisons and more informed decisions. However, researchers (Bloomfield et al. 2003, Hirshleifer & Teoh 2003, Campbell & Yeung 2017) find evidence that investors under-react to the comparability information, particularly after a restatement. This is contrary to Griffin & Tversky (1992)'s findings that asserts that investors overreact to the comparability news.

The above reviews the literature on financial statement comparability. It should be noted that increased cross-border transactions over the past decades have placed greater emphases on the need for greater understanding of financial reports. With increased comparability, users are able to identify similarities and differences for more useful information.

2.4.1 International Financial Reporting Standards (IFRS) Adoption and Comparability

is an international accounting framework that exists to guide an organisation's reporting of financial information accurately (IFRS.org 2020). Lin et al. (2012) suggest that global adoption will increase firm comparability. In examining benefits of adoption, Brown (2013) states that eliminates international investment barriers, enhances comparability, transparency, and reliability

²⁷The relation between current stock returns and future earnings is the future earnings response coefficient

²⁸Earnings Response Coefficient: The magnitude of current returns to reflect current earnings

of financial reports, as well as increases market liquidity, and decreases capital costs. Despite efforts, global IFRS adoption and convergence remains imperfect, with differences in its practice remaining and giving rise to national standards (Sarquis & Luccas 2015). The goal of adoption and convergence aligns with its benefits, a single set of global accounting standards (Lin et al. 2012) from which cross-country financial statement comparability is facilitated (Ashbaugh & Pincus 2001, Barth 2008, Yip & Young 2012, Cascino & Gassen 2016). A general improvement in the quality of information and foreign funds flow was observed in firms that adopted IFRS (Daske et al. 2008), as was decreased information asymmetry and increased commitment to quality implementation (Li 2010). According to Horton et al. (2013), mandatory adoption of IFRS improves analysts' forecast accuracy and eliminates differences between countries in which firms operate, and the country of the analyst. Mandatory adoption has also resulted in increased foreign mutual fund ownership (DeFond et al. 2011). Lin et al. (2012), however, argues that the adoption of IFRS alone does not provide a significant increase in comparability. As such, the following paragraph reviews studies on IFRS, its adoption, and ensuring developments.

In analysing the impact of adoption on EM in Brazil, Lourenço et al. (2015) find EM decreased after IFRS adoption, especially after full IFRS adoption. Nakasone (2015) finds that Peruvian small and medium enterprises (s) use IFRS for tax preparation, but disregard IFRS statements for decision-making. In Europe, investors positively anticipated the adoption of IFRS (Armstrong et al. 2010). Lantto & Sahlström (2009) assert that IFRS adoption had positively influenced the key accounting ratios in Finish markets. Punda (2011) finds similar results in the UK market, adding that the UK-based firms showed a significant change in the key performance ratios after IFRS adoption. Blanchette et al. (2011) in the examination of Canada's transition to , find that post-IFRS financial ratios were higher, particularly true of the profitability, leverage, and liquidity ratios. In Nigeria, Tanko (2012) finds that post-IFRS adoption, firms reported higher figures. Sarquis & Luccas (2015) note that Latin American countries have harmonised accounting practices given their similar accounting systems. This harmonisation as resulted in a 'national' version of IFRS, despite efforts towards a global standard. Joshi et al. (2016) find that Singapore, Malaysia, and Indonesia benefited economically from harmonisation with global accounting standards. Gray (1988) conclude that differences in accounting systems of different countries could be traced back to their respective cultures, as such the adoption of IFRS in itself does not suffice for financial statement comparability as cultural values also impact accounting judgements. Hu et al. (2013) assert that to have the perceived benefits of financial statement

comparability, internationalisation of accounting education is vital.

IFRS adoption literature reviewed above finds that the harmonisation of accounting standards via the adoption of IFRS to be beneficial. Of the numerous benefits of IFRS adoption, increased comparability is primary. Comparability was shown to increase the usefulness of financial reports.

2.4.2 Auditor's Role

Previous research highlights some of the advantages of IFRS adoption and the role of the auditor (Cascino & Gassen 2010). A large body of research has also examined the association between auditors and financial statements, the following provides some key findings on this association. Non-Big 4 clients have more abnormal accruals than Big-4 clients (Francis et al. 1999), auditors play key roles in a firm's accounting practices, financial statement comparability is inversely associated with audit hours, and that financial statement comparability facilitates audit efficiency (Kang et al. 2015). Further research finds that client size, auditor tenure, and the presence of audit alumni in executive posts in the firms, positively influence financial statement comparability (Reichelt & Wang 2010). Auditors also play a role in a firm's ability to beat an analysts' earnings targets (Frankel et al. 2002). Pong et al. (2007) indicate that Big-4 auditors significantly constrain EM of the firms they audit. These findings are supported by Li et al. (2019), who find that REM is positively associated with auditor-client distance. The authors suggest that geographical proximity facilitate auditors' supervision over their client firms' REM.

In emerging market focused research on the role of auditors, Yapa et al. (2017) note that international auditing standards creates opportunities for international audit firms in Sri Lanka to capture a broader market, negatively impacting the local audit market. In an eight nation East Asian study, Fan & Wong (2005) find that firms with problems embedded in the ownership structures are more likely to employ Big-4 auditors. In Malaysia, Big-4 auditors qualify earnings reports more frequently than their non-Big 4 counterparts when high levels of abnormal accruals are present (Johl et al. 2007). In Jordan, auditor size and audit fees have no significant effect on EM (Almarayeh et al. 2020). In Saudi Arabia, auditor size, industry specialisation, auditor change, and timeliness of auditor report were not influential (Habbash & Alghamdi 2017).

The above provides a review of the literature on the role of the auditor. In many instances, the

role of the auditor is influential in upholding proper accounting practices of the firm they oversee. The auditor alone, however, is not a panacea for all EM behaviour.

2.5 Bank Efficiency

The issue of bank efficiency has gained considerable importance in the wake of deregulation and economic reforms (Berger 2007), as increased scholarly interest focuses on its measurement and its determinants (Wheelock & Wilson 2000, Hughes & Mester 2013). The 2007 Global Financial Crisis () significantly impacted the performance and stability of financial institutions. The crisis revealed that financial markets are interdependent and not immune from a spillover effect. From a management's perspective, such conditions require an understanding of the factors affecting a firm's performance, so that management can also avoid such risks in the future and improve the financial sector's performance (Ding & Sickles 2018).

Empirical bank studies primarily focus on economies of scale and scope, assuming that the bank outputs operate efficiently (Fukuyama 1993). Theoretically, a bank is fully efficient if it produces the output level and mix that maximises profits and minimises possible costs (Chen 2001). Efficiency is the ability to produce maximum outputs by utilising the minimum inputs (Sarmiento & Galán 2017), and its use as a performance measure can be traced back to Delboeuf (1881) and Pareto et al. (1927), with its rising popularity stemming from Debreu (1951)'s study on the coefficient of resource utilisation and Koopmans (1951)'s technical efficiency concept. Given the importance of efficiency in banking, this section considers the reasons for measuring efficiency, types of bank efficiency measurements, need for increased efficiency, and differences between conventional and Islamic bank efficiency. The section also reviews the results of past bank efficiency studies conducted in different countries and regions.

Shareholders in the financial services markets expect increasing profits, causing them to experience extensive and ongoing competition in this pursuit (Fenichel et al. 2019). As a result, banks require information that aids in evaluating their operations (Wozniowska 2008). The basic idea behind measuring a bank's performance is to know the extent to which inputs are utilised for optimal outputs (Ding & Sickles 2018). Researchers and practitioners have widely used traditional ratios in evaluating a bank, such as Return on Assets () and Return on Equity (), balance sheet structure, liquidity, capital adequacy, and cost (Said & Tumin 2011), yet struggle

with comparability owing to the complexity of size and specialisation (Maradin et al. 2018).

Traditional methods of measuring efficiency based on balance sheets and financial indexes have monopolised banking practices (Wozniowska 2008), but other approaches have emerged, such as parametric and non-parametric methods (Gavurová et al. 2017). The parametric approach is dependent on the specification and estimation of cost or production functions. The non-parametric approach takes the path of the linear programming technique for enveloping the points observed of the ratios of weighted inputs and outputs (Karimzadeh 2012).

The above literature attempts to bridge the gap between bank efficiency and EM. As efficiency is a measure of performance, different methods of measuring performance outlined in the literature were reviewed. The review provides relevance to future bank efficiency studies in relation to EM. Information outlining the parametric and non-parametric approaches follows.

2.5.0.1 Parametric approach

Parametric approaches construct an efficiency frontier based on economic models in the form of Cobb-Douglas (log-linear) production function (Arsinova 2009). The parametric approach separates inefficiency from error terms, thereby specifying the functional form of the frontier. Three common parametric approaches include stochastic frontier analysis (SFA), deterministic frontier analysis (DFA), and thick frontier approach (TFA).

Introduced by Aigner et al. (1977) and Meeusen & Van Den Broeck (1977), SFA is a widely used parametric technique which considers the input prices and output factors to estimate the minimum cost and efficiency frontiers. In the SFA approach, deviations from production take into account random errors and inefficiency, assuming a two-sided distribution of the error term and one-sided distribution of non-negative inefficiency (Bezaf 2009, Havránek & Irsová 2010). More simply, SFA takes an error term as a random variation (Phan 2015). One part of the model denotes statistical noise, whereas the other portion denotes inefficiency (Ding & Sickles 2018). In the SFA approach, the availability of panel data makes it easier to use the standard models of random and fixed effects, as it voids distribution assumptions for inefficiency (Schmidt & Sickles 1984).

The DFA approach is often used in panel data as it relaxes the composite error term of distribution assumptions, distinguishing the core inefficiency from random error. DFA also assumes that the

inefficiency term is different in the highest and lowest efficiency quartile of the decision-making units and that the random errors fall within these quartiles, as it does not impose restrictions on the composite error term (Iršová & Havránek 2013). Both of these approaches suffer potential specification errors as the specific cost is an approximation of the true counterpart (Wang & Huang 2008).

Parametric tests are considered more robust than non-parametric tests because they require less data than non-parametric to reach a firmer conclusion (Neideen & Brasel 2007). Parametric tests need at least three data parameters to be true (or assumed true): normally distributed, equal variance and same standard deviation, and be continuous. Other commonly used parametric tests are; Pearson Product Correlation Coefficient,²⁹ Student t-Test,³⁰ the z-Test,³¹ and the analysis of variance (³²).

Advantages of the parametric approach of efficiency analysis include the ability to use panel data, ability to distinguish random noise from inefficiency, and the ability to calculate the standard error of efficiency (Huang & Wang 2002, Arsinova 2009). Parametric methods can also allow random errors in efficiency estimation (Wang & Huang 2008), while providing a meaningful estimation of the measurement error by flexibly measuring the frontier production function (Gempesaw 1992). The parametric frontier analysis supports hypothesis testing related to the fit of the model, without the imposition of axiomatic properties in estimating the frontiers (Ajibefun 2008, Kuosmanen et al. 2015).

Parametric approaches also possess limitations, such as requiring technology specification, which is sometimes restrictive (Ajibefun 2008). The literature also cautions against the use of due to the possibility of overestimating the inefficiency due to a misspecified functional form (Hauner & Peiris 2005). Additionally, as the distributional assumptions are arbitrary when the inefficiency score is not constrained, they are going to follow the systematic normal distributions instead of half-normal distributions.

The paragraphs above provide insight into various parametric models focusing on efficiency. The

²⁹The Pearson Product Correlation Coefficient is the value that the same subject how well two continuous variables correlate to each other

³⁰Student t-Test establish the difference between mean between two similar data sets

³¹The z-Test is used to find the variance of the population using standard deviation. It tells us what per centage of the standard population is outside of the mean of the sample group (Neideen & Brasel 2007)

³²Analysis of variance (ANOVA) test takes into account the variances and means to determine the test statistics for finding whether the groups of data are the same or different (Neideen & Brasel 2007)

SFA model applied in this study (see Chapter 5) makes use of a parametric technique to measure technical efficiency. Discussions on the advantages and determinants of the model were equally considered.

2.5.0.2 Non-parametric approach

Two non-parametric efficiency measurement are the Data Envelopment Analysis (DEA) and Free Disposal Hull (FDH) methods (Arshinova 2011). DEA, initially introduced by Charnes et al. (1978), is a commonly used method in the research field, especially in banking. Mantri (2008) and Maradin et al. (2018) state it is a reliable, simple, and flexible mathematical approach that uses quantitative data to construct the frontiers and measures efficiency against these constructed frontiers. It takes into account a set of comparable decision-making units (DMUs) to evaluate the relative efficiency of the sets. The method is purely deterministic as it takes virtual units as benchmarks to measure the DMUs' comparative efficiency (Ding & Sickles 2018). The method does not require economic model specification, as it envelopes an efficient frontier into a set of 'best practices' (Porcelli 2009).

The DEA method was developed to assist non-profit organisations (NPOs) such as medical and educational institutions, in complex measurements of multiple inputs and outputs relationship, and accounting for non-comparable factors (Roman & Gotiu Lucaciu). Technical efficiency is commonplace for measuring performance (Kuosmanen et al. 2015). The application of the efficiency measurement approach was expanded to include for-profit organisations in both the public and private sectors (Roman & Gotiu Lucaciu). Arshinova (2011) suggests that unlike parametric approaches, non-parametric approaches assume that efficiency frontiers are generated from the most efficient DMU results. The popularity of non-parametric approaches is attributed to its computational ease, non-requirement for quantitative data measurement, placement of data in ordinal ranking, and avoidance of restrictive assumptions needed for parametric approaches. If the data do not meet the parametric testing criteria, non-parametric tests are used to analyse data (Neideen & Brasel 2007). The most commonly used non-parametric tests are Chi-Squared,³³ Spearman Rank Coefficient,³⁴ Mann-Whitney U Test,³⁵ and Kruskal-Wallis Test.³⁶

³³The chi-squared test compares multiple groups taking into consideration the binary input and output variables

³⁴Used to determine how well two variables of individual data points predict each other for non-linear data (Neideen & Brasel 2007)

³⁵Mann-Whitney U Test uses ordinal data for continuous variables to determine the difference between 2 independent groups of population (Neideen & Brasel 2007)

³⁶Kruskal-Wallis Test uses ordinal data for analysing variances in order to determine whether multiple groups are

Non-parametric approaches also have their drawbacks. They are not backed by a solid statistical foundation and are sensitive to outliers (Ahmed et al. 2011). Non-parametric efficiency is influenced by several factors, including input and output prices and firm sizes which restrain ratios that genuinely reflect the manager's performance (Wang & Huang 2008). Non-parametric approaches consider real-world uncertainty (Toma et al. 2017). The non-parametric method's assumption of the absence of noise considers any deviation from frontiers as inefficiency (Wang & Huang 2008, Dai & Kuosmanen 2014). These methods do not distinguish between statistical noise effects and inefficiency; therefore, the full distance of the efficiency frontiers is considered inefficiency (Murillo-Zamorano & Vega-Cervera 2001, Chen et al. 2015). The non-parametric approaches are seen as deficient in encompassing all the sample information and thus considered less efficient than parametric approaches (Gempesaw 1992).

Literature on non-parametric approaches to efficiency was reviewed in preceding paragraphs. Particular focus was devoted to the DEA model, the non-parametric approach to measuring efficiency. Much like in the section of the parametric approach, advantage and determinants of the model were outlined.

2.5.1 CAMEL model

Another widely used performance measurement model is the framework.³⁷ In the CAMEL framework, efficiency ratios are dependent variables, whereas CAMEL's five components serve as independent variables (Muhmad & Hashim 2015). The CAMEL framework is considered a comprehensive model for evaluating bank performance (Uyen 2011, Kongiri 2012). Despite its utility, the CAMEL framework needs to be complemented by a parametric and non-parametric tool. In the use of the CAMEL model, DEA method (for example), helps in finding the optimal points of liquidity and capital adequacy. The deviation from these points leads to inefficiencies, higher capital adequacy ratios, and equates to bank inefficiency (Pessarossi & Weill 2015). The framework shows a bank's performance through its historical earning trends, peer group comparison, and income quality (Sundararajan & Errico 2002). Good earnings policies will contribute to a bank's efficiency (Cleary & Hebb 2016).

The preceding paragraphs provide a brief CAMEL framework review. The CAMEL approach

similar to each other (Armitage 1955)

³⁷CAMEL is an acronym for five components of bank safety and soundness: a. Capital adequacy b. Asset quality c. Management quality d. Earning ability e. Liquidity

plays an important role in banking supervision and consequently, EM. It was also identified that the CAMEL approach is complementary to parametric and non-parametric approaches.

2.5.2 Conventional vs Islamic Bank Efficiency

The business approach of Islamic banks has become a point of interest for many researchers. Johnes et al. (2014) note that during the , Islamic banks, commonly synonymous with ‘interest-free’ banking, braved the crisis to a more considerable extent than that of conventional banks, and thus its model of profit and loss sharing was examined to determine its relative efficiency (Smolo & Mirakhor 2010, Farooq & Zaheer 2015). The interest and uncertain business practices adopted by conventional and Islamic banks vary; Islamic banks are prohibited from dealing in interest and uncertainty, while conventional banks embed these in their business practices.

Opinions differ on the efficiency and stability between conventional and Islamic banks (Miah & Uddin 2017). In an examination of the difference between the two banking styles, Drake et al. (2006) opine that because Islamic banks are often smaller, they are consequently less technically efficient. Secondly, Islamic banks are typically domestically owned and hence less technically advanced as their foreign counterparts (Matthews & Ismail 2006). It was further found that Islamic banks were not charging a loan rate higher than the deposited rate for profit-seeking (Lahrech et al. 2014). Research suggests that the technical efficiency of Islamic banks tends to be lower than those of conventional banks.

A study conducted in the Organisation of Islamic Cooperation () countries³⁸ finds that Islamic banks are less efficient than conventional banks (Hassan & Sanchez 2009). A Gulf Cooperation Council () study arrived at similar conclusions (Srairi 2010). These conclusions are also supported by results found in a 141-country study (Beck et al. 2010, Abdul-majid et al. 2010). Earlier, a study by Brown (2003), with findings supported by Pradiknas & Faturohman (2015), assert that Islamic banks have higher cost efficiency³⁹ than conventional banks. Not all scholars are united in these findings, however. Several researchers suggest there is a significant difference between the efficiency of conventional and Islamic banks (Metwally 1997, Bader et al. 2008, Hassan & Sanchez 2009, Hisham Yahya et al. 2012). Al-Muharrami (2008)’s note that while Islamic banks were more cost-efficient during the GFC, they suffered more than conventional banks in terms of

³⁸An international organisation that works to protect the interests of the Muslim world

³⁹The difference between actual costs and an estimated minimum cost (Robst 2001)

profit efficiency

2.5.2.1 Studies on developed country bank efficiency

While many early studies have examined the efficiency difference between bank sizes, results are divergent. Berger (2007) notes that econometric analyses do not control well for the differences in economic environments across nations. This section, however, attempts to review the literature of banks in developed countries.

Feng & Zhang (2012) while examining the productivity and efficiency of larger community banks in the United States, observed that large banks experienced more productivity growth and a higher level of returns than that of community banks. They further observed a downward trend in productivity growth in both bank types and attributed this trend to technical change. Bayeh et al. (2018), in a longitudinal study of US banks, found that higher competition among the banks decreases efficiency, whereas securitisation has a positive effect on bank efficiency. Al Masud & Kutlu (2017) examined the relationship between the Federal Reserve System (FRS)⁴⁰ activity level and cost efficiency of US banks and confirm that FED actions have a positive effect on cost efficiency. U-Din et al. (2017) compared the impact of market concentration and power on bank efficiency of US and Canadian banks and observed that the GFC had a significant impact on bank efficiency. They further state that Canadian banks exhibited greater efficiency than their US counterparts. In studying “too-big-to-fail”⁴¹ banks in the US, Inanoglu et al. (2015) find that despite rapid growth over the last 20 years, these banks have shown decreased efficiency over time and that a negative correlation between efficiency and bank size exists.

Cross-country studies provide useful insights into the banking system of different countries. Goldberg & Rai (1996) measured the X-efficiency⁴² of eleven European countries and found that banks in Belgium, Germany and Spain were most competitive, whereas banks in France and Spain were least competitive. Pastor et al. (1997) analysed differences in the technical efficiency of US and European banks and found that Belgium, France and Spain had the most efficient banking systems whereas Austria, German and the United Kingdom had the least. The authors conjecture, that different levels of efficiency may contain a bias due to the measurement differences of wages and density demand, which stem from differing regulations between countries. Studying

⁴⁰The Federal Reserve System is the central banking system of the United States of America

⁴¹“Too big to fail” describes a business or business sector deemed to be so deeply ingrained in a financial system or economy that its failure would be disastrous to the economy

⁴²X-efficiency measures the extent to which a bank’s costs approximate those of the “best practice” or least cost bank, producing an identical output bundle under the same conditions (Xiaoqing Maggie & Heffernan 2007)

European, American and Japanese banks, Maudos & Pastor (2001) found that the pressure of competition led to gains in profit efficiency in the USA and Europe, but not in Japan.

Lozano-Vivas et al. (2001) while analysing the performance of ten EU countries, found Italian banks to be least efficient, whereas banks in Denmark, Portugal and Spain showed the highest levels of efficiency. Casu & Molyneux (2003) examined banks in France, Italy, Germany, UK and Spain and found that after the implementation of Single Market Program (),⁴³ the banks showed little improvement in their bank efficiency and further found that determinants of efficiency differences among these countries are country-specific. More recently, Mohsni & Otchere (2017) found that the more competitive, less concentrated US banking structure was associated with higher bank risk-taking and increased the likelihood of requiring a bailout in the wake of the GFC. The authors continue by asserting that the less competitive and more restrictive Canadian banks did not face similar concerns.

The literature reviewed above provides insight into efficiency studies on conventional and Islamic banks. Studies show that differences exist between the two banking styles, specifically concerning efficiency. With many studies sampling banks from different markets, conclusive evidence of one style exhibiting superior efficiency still requires further study.

2.5.2.2 Studies on bank efficiency in mixed and developing market studies

The banking industry is the main channel for monetary transmission, and the primary source of funds for businesses in the developing countries (Fase & Abma 2003) and an efficient banking system is key for overall financial development for economic growth (Andersen & Tarp 2003). The following outlines bank efficiency studies in developing countries.

Karray & Chichti (2013) examined banks in fifteen developing countries for their technical efficiency in relation to bank size and found that banks of all sizes were facing serious technical efficiency issues. In an examination of interest-free banks, Coskun & Balci (2018) found Egypt, Malaysia and Qatar had the highest technical efficiency, whereas banks in Kuwait, the UAE, Qatar, and Turkey displayed the highest scale efficiency. Hassan & Sanchez (2007), in an earlier study, examined the efficiency of Latin American countries and found that bank inefficiencies in these countries can be attributed to regulatory rather than technological factors. In a Nigerian

⁴³An EU program with the aim of elimination or reduction of trade barriers to increase efficiency, intensifying competition, and reducing cost margins. The SMP created the largest and most open banking market in the world (Allen et al. 1998)

bank study, Obafemi (2012) found that financial liberalisation has improved bank efficiency.

In a mixed market study of both developed and developing countries of 300 Asia Pacific bank, Singh et al. (2008) found a wide dispersion in the technical and scale efficiencies of these banks. The authors note that the New Zealand and Australia group (developed markets) possessed greater efficiency than banks in the Philippines (developing market) and noted that Singaporean banks (developed market) possessed the lowest technical efficiency, but the fullest scale efficiency. In a study of twenty-one transition economies, Djalilov & Piesse (2019) found that regulations have greatly affected the efficiency of banks in Central and Eastern Europe () and Southeastern Europe () region.

Single-country studies of the banking sector in developing economies have also been researched for technical and scale efficiencies. For example, Taylor et al. (1997) examined Mexican banks and found that profit efficiency to be weakly correlated with technical efficiency. Studying the issue of efficiency in the post-communist countries, Kristo et al. (2013) found that banks have shown decreased efficiency and productivity after network extension of various banks and the provision of a wider variety of services and products. In an Ethiopian bank study, Zenebe Lema (2017) found that capitalisation, return on assets, liquidity risk and market share impact technical efficiency positively. In a Ghanaian bank study, Alhassan et al. (2016) found that technical efficiency was positively correlated with profitability.

In a study of transition economies, Philippatos & Yildirim (2002) found that banks in Central and Eastern European Countries () showed higher cost efficiency than profit efficiency, Zajc (2006) found similar results in a separate study. In a more recent CEECS study, Horvatova (2018) found that banks belonging to Visegrád Four countries (V4)⁴⁴ to be more efficient than other Balkan countries banks. Yildirim & Philippatos (2007) note that competition positively affects efficiency, whereas concentration has negative effects on bank efficiency in CEECS banks.

In an Association of Southeast Asian Nations () study, Wai & Deng (2016) assert that risk is a significant factor in efficiency. In a Bahrain, Egypt, Jordan and Saudi Arabia based study, Al-Jarrah et al. (2017) found that banks utilising around 50 to 70 per cent of their current resources would have been operating at their full efficient frontiers. In examining Bangladesh, India, Indonesia, Malaysia, the Philippines, and Vietnam, Phan (2015) finds that market concentration effects X-efficiency positively, whereas competition effects X-efficiency negatively.

⁴⁴the Czech Republic, Hungary, Poland and Slovakia

In Turkey, (Özdağoğlu et al. 2017) showed that bank efficiency is most dependent of operational style than any other factor. A study on Lithuanian and Latvian banks showed no significant relationship between financial ratios and efficiency scores (Titko & Jureviciene 2014). In Nigeria, it was found that as competition increased, excessive risk-taking decreased, and efficiency increased (Zhao & Murinde 2011) and that technical efficiency leads to more significant customer satisfaction (Worimegbe et al. 2018).

Bank efficiency literature was reviewed in the preceding paragraphs with a particular emphasis on developing market studies. Regulatory efficiency was found to be influenced by environments, bank networks, and competition, however. Knowledge gaps remain on drivers of efficiency in developing markets.

2.5.3 Size Effect

Larger banks are thought to possess the advantage of scale, thus the following outline studies examining efficiency and size. Allen & Rai (1996) studied fifteen developed countries for cost efficiency⁴⁵ and found larger banks to be more efficient. Altunbaş et al. (2001) examined the X-inefficiency, scale economy and technical change in large European banks and found that while large banks possess advantages from technical progress, smaller banks had broader scale economies. Berg et al. (1993) in developing a comparative analysis of bank efficiency in Scandinavia, found that large Swedish banks were the most efficient and best positioned to brace Common Nordic banking system⁴⁶ in future. Also noted, was that large Nordic banks were more likely to operate outside their national markets. Wai & Deng (2016) find similar results in their review of the relative efficiency of banks in ASEAN. More recently, Nguyen et al. (2018) showed that large and very large Vietnamese banks are more efficient than small and medium-sized banks. In a China-based study, Fungáčová et al. (2018) found that China's 'Big Five' banks had the lowest average cost efficiency.

Banks in the Middle East and North Africa (), though below the optimal size, were found well ahead from the world in profit efficiency. It was, however, found that cost efficiency had minimal impact on profit efficiency (Olson & Zoubi 2017). Another study in countries found that smaller banks have more technical efficiency than larger banks in the region (Jemric & Vujcic 2002).

⁴⁵Banks include Australia, Canada, Germany, Spain, France, UK, Austria, Switzerland, Denmark, Finland, Italy, Sweden, Belgium, Japan and the US

⁴⁶A single payment system that makes payments across Nordic countries easier as Sweden moves away from cash

While re-examining the technical and scale efficiency of Australian banks, Moradi-Motlagh & Saleh (2014) found that small Australian banks faced both technical and scale inefficiencies. The authors further found that ‘too big to fail’ argument was applicable in the case of two major Australian banks that were facing scale inefficiency. Cuesta & Orea (2002), in a study comparing merged and non-merged firms in Spain, found that merged firms were technically more efficient than non-merged firms.

The cited literature regarding banks size, examined whether larger banks exhibit greater efficiency than small banks. Results are mixed, and are heavily dependent on geographic region studied. The findings open opportunities for further studies, particularly in frontier markets.

2.5.4 Local versus Foreign Banks

The following is a review of studies that examine the differences between local and foreign banks. The adage of ‘home field advantage’, indicates that locality confers several advantages to the home party and or to be disadvantageous to the visiting party (Mayfield et al. 1998). Sathye (2003) and Shanmugam & Das (2004) have found that foreign banks in India are more technically efficient than local banks. Sturm & Williams (2004) studied the impact of deregulation in Australian banks and found that foreign banks were more efficient than domestic banks but did not give superior profits. A Malaysian commercial bank study found domestic banks to be more efficient than their foreign counterparts (Tahir et al. 2008). In several Bulgarian based studies, it was found that domestic banks were far behind the foreign banks in efficiency (Bonin et al. 2005, Nenovski et al. 2008, Tochkov & Nenovsky 2011). Kamarudin et al. (2017) examined the technical efficiency of domestic and foreign Islamic banks in South East Asian Countries of Malaysia, Indonesia and Brunei Darussalam. They found that domestic foreign banks have higher efficiency than foreign Islamic banks, consistent with home-field theory.

2.5.5 Private versus Public Banks

The extent to which the ownership structure of a bank influences performance has been examined across a variety of countries. The following highlight a few of those studies. Cull et al. (2018) found that in developing countries, foreign-owned banks are more efficient than domestic banks and suggested that the presence of foreign-owned banks increases competition in the host country. These findings are also in line with the findings of Claessens & Lee (2002), Adolfo Barajas

(2000), Denizer et al. (2000) and Clarke et al. (2000). Baten & Kamil (2013) while studying the efficiency of Bangladeshi online banks, found that domestic government banks were more efficient than those of foreign, Islamic and private banks. In a Brazilian banking study, Marcochi (2006) found that public banks were more efficient than private banks. A Kenyan-focused study showed that commercial banks had a volatile performance efficiency, whereas public sector banks displayed greater efficiency (Miencha et al. 2015). In a Tunisian bank study, Ayadi (2014) found that capitalisation positively affected technical efficiency, suggesting private banks were more efficient than public banks, consistent with Iimi (2004)'s earlier study in Pakistan. Kraft et al. (2006), however, have found that privatisation showed no effect on efficiency in Croatian banks.

Literature on bank ownership (local versus foreign) was reviewed in the preceding two sections. The expression of 'home field advantage' was mixed, showing instances where local banks showed greater efficiency. Literature also found instances where foreign banks were found to have greater efficiency. Also reviewed in the preceding sections were different ownership structures (private versus public). Again, the literature showed instances where each ownership structure exhibited greater efficiency.

2.5.6 Market Concentration of Banks

Extending on bank efficiency studies on regions, countries, ownership, and size, a review of the literature on the effect of market concentration on bank efficiency follows. The impact of market concentration on the banking sector is of interest among researchers and policymakers (Phan 2015). Market competition has forced governments to deregulate its financial sector to make the sector more competitive, and foster efficiency, quality, and competitiveness (Claessens & Laeven 2004, U-Din et al. 2017). Studies that have examined the relationship between market concentration and its impact on bank efficiency find that market power positively influences the banking sector (Berger & Humphrey 1997, Delis & Tsionas 2009, Färe et al. 2015), whereas market concentration harms performance. Interestingly, the research finds that both market power and market concentration positively impact on cost efficiency (U-Din et al. 2017). In an region study, Ferreira (2012) finds a negative causal relationship between market concentration and efficiency. The author suggests that market power contributes to bank inefficiency. In an emerging Asian economy study, results show a positive relationship in bank efficiency and

market concentration but a negative relationship between competition and concentration (Phan 2015). In an Indonesian study, Al Arif & Awwaliyah (2019) find that market share and market concentration did not affect the profitability of Islamic banks. In Sri Lankan-based studies, (Seelanatha 2010) and Gishkori & Ullah (2013) find that bank efficiency was not dependent on market concentration nor power, but rather on the level of efficiency of each banking unit.

Above is the reviewed literature on market concentration and its impact on bank efficiency. Studies find that market concentration negatively influences bank efficiency. In competitive markets, more resources are required to monitor borrowers, thereby reducing efficiency.

2.6 Research Related Theories

2.6.1 Agency Theory

Agency theory has become a dominant paradigm in the financial economics literature (Jensen & Meckling 1976b, Ross 1973). In the literature, agency theory has been primarily concerned with the relationship between managers and stockholders, yet the implications have expanded to the disciplines of organisational behaviour, and strategic management (Hill & Jones 1992, Eisenhardt 1989, Kosnik 1987). The central idea behind an agency relationship is where one or more person (the principal(s)) engages another person (the agent) to perform some service on their behalf. The service involves delegating some decision-making authority to the agent (Jensen & Meckling 1976a). The foundation of agency theory is the supposition that the interests of principles and agents diverge (Hill & Jones 1992). The implicit contract between stockholders and managers is just one of the types of contracts that form the legal function known as the modern corporation (Jensen & Meckling 1976a).

Several studies have viewed EM to be beneficial (for example Chandren (2016), Healy & Palepu (1993)), others have viewed it to be harmful (for example Alhadab et al. (2017), but agency theory can be offered as a framework between the two theorems. Jiraporn et al. (2008) state that if EM is primarily used opportunistically by managers, then a firm with greater agency costs should exhibit a higher degree of EM. They continue by suggesting that EM conveys private information and consequently provides greater information to shareholders, which in turn will result in higher agency costs will ensue, and managers will tend not to manage earnings to maximise private benefits. In an international data analysis study, García-Sánchez et al. (2020)

support the philosophy that when the agency costs are low, the managers have the opportunity invest more in corporate social responsibility related facades to mask their unethical reporting behaviour.

2.6.2 Prospect Theory

Formalised by Kahneman et al. (1979), prospect theory has emerged as a leading alternative to expected utility ⁴⁷ as a theory of decision under risk (Levy 1992). The theory is best known for its hypothesis that individuals are risk-averse with respect to gains and risk-acceptance to losses and for its emphasis on the importance of the actor's framing of decisions around a reference point. Researchers in the field of behavioural economics have put much thought into how prospect theory should be applied in economic settings. A growing body of empirical literature tests prospect theory in new theories (Barberis 2013). Prospect theory's formulation includes four elements: a) reference dependence, b) loss aversion, c) diminishing sensitivity, and d) probability weighting. The first element of reference dependence, suggests people are more attuned to changes in attributes than their absolute magnitudes (Barberis 2013). The second element of loss aversion suggests people interpret outcomes as gains and losses relative to a reference point and are more sensitive to losses than to absolutely commensurate gains (Abdellaoui et al. 2007). Diminishing sensitivity, the third element, contends that for both positive and negative deviations, the magnitude of the distance from the reference point also determines the marginal impacts resulting from a particular deviation (Sharma et al. 2020). The fourth element of probability weighting suggests that people do not weigh outcomes by their objective probabilities but rather by the transformed probabilities or decision weights (Barberis 2013).

The application of prospect theory to the topic of EM follows that a firm will manage earnings to show positive earnings (albeit small), should the actual firm earnings be (small) negative earnings. Managing earnings can be accomplished by adapting a variety of estimation models for differing variables (Subekti 2013). In a test that examines a decision-makers use of EM, Fiegenbaum (1990) find that an asymmetric risk-return association exists as firms below the industry target are risk-seekers and those above it are risk-averse. McVay (2006) furthers this point by suggesting that the asymmetric relation supports prospect theory as an explanation for EM.

⁴⁷Expected Utility Theory states that the decision-maker chooses between risky or uncertain prospects by comparing their expected utility values, i.e., the weighted sums obtained by adding the utility values of outcomes multiplied by their respective probabilities (Mongin 1997)

2.6.3 Social Norm Theory

Psychologists have identified norms and the role they play in social influence. One such distinction draws between two norms: one norm describes what people in a group do, the other norm describes what people in a group should do (McDonald & Crandall 2015, Deutsch & Gerard 1955). Social norms are fundamental to human behaviour (Rost et al. 2016, Güth & Napel 2006, Elster 1989). For a norm to be characterised as social, it must be shared by others and sustained or enforced by their approval and disapproval (Elster 1989). The emergence and shifting of norms depend on the cost-benefit conditions or group composition (Rost et al. 2016, Ellickson 1999). Bobek et al. (2013) introduce Cialdini et al. (1998)'s social norm taxonomy to the literature in their study of ethical decision making related to compliance. Blay et al. (2018) expand on prior studies by stating the social norm theory is particularly useful for empirical research in business ethics as it gives both organisational and individual factors a role in motivating norm-based behaviour.

Grougiou et al. (2014) state that according to social norm theory, is inversely associated with corporate social responsibility. As corporate social responsibility considers that business participants may internalise the prevailing code of endorsed corporate attitudes (Chen et al. 2008) that conformity is seen as a moral or ethical obligation that overrides the profit motive (Grougiou et al. 2014, Sunder 2005). Chen et al. (2019) state that a high density of social trust enhances a positive social norm and helps alleviate unethical managerial practices like ,

2.7 Research Gaps

Upon critical examination of the extant literature, this thesis has identified three distinct knowledge gaps from which separate, yet intertwined, studies are formed. It is from these gaps the current situation can be analysed and research gaps be addressed. Below the research gaps of the three studies in this paper are outlined.

The first study of this thesis examines the role of institutional settings in restraining AEM. Past research has primarily examined developed markets, emerging markets and on occasion, has sampled select frontier markets. Frontier markets are not integrated with developed markets, and posit unique cultural, institutional, and legal settings Berger et al. (2011), Guesmi & Nguyen (2011), Lin & Wu (2014), which influence management behaviours differently. As a result,

frontier markets provide a unique setting for comparative studies. As frontier markets are not yet emerging, they are still contributors to the changing global economy, their presence increasingly shapes global economic and development dynamics (Andreasson 2011). As the mutuality of frontier markets with more developed markets is uncertain, further understanding and new knowledge of this market is required. Herein lies the justification for further examination through the lens of multiple AEM detection methods on the entire set of publicly listed frontier market firms.

Study two of this thesis extends the previous research in the area of comparability. Chauhan & Kumar (2019) states that comparability in financial reporting increases materiality. From materiality, investor decision making is facilitated. Existing literature has widely examined the benefits and consequences of comparability (or the lack thereof). Despite this, research has largely shied away from an examination of comparability and opportunistic EM. This study extends on existing literature by looking at the linkages between AEM, REM, and comparability across geographically dispersed firms and diverse regulatory environments. To accomplish this, a firm-level comparability measure⁴⁸ incorporating firms using US , , or local GAAP is utilised. This adaptation allows a firm to have multiple counter-samples based on country-industry, with each having distinct accounting system models. Adding to the contribution of this study, this capability was not demonstrated in previous comparability studies by Bradshaw et al. (2009), De Franco et al. (2011), Barth et al. (2012) and Yip & Young (2012).

Study three of this thesis extends prior literature by providing the first examination of earnings smoothing (an EM practice) and bank efficiency in frontier markets. Further, this study extends previous frontier market bank efficiency studies with its use of a significantly larger, cross-country data set. Prior literature examines various cultural and economic contexts, yet an examination of a large sample of frontier market countries is absent. Through the use of a large, 22 cross-country data set, this study provides evidence on bank efficiency in frontier markets. Findings herein expand on Wu et al. (2016)'s earlier dynamic network DEA (DN-DEA), nine Association of Southeast Asian Nations (ASEAN) country study by applying the translog form of SFA, using three inputs and two outputs. When combined, the study is uniquely positioned and provides several novel contributions to the body of knowledge.

⁴⁸Initially developed by Barth (2008), later adapted by Conaway (2017)

Chapter 3

Earnings management in frontier market: Do institutional settings matter?

Abstract

This study analyses whether differences in earnings management (EM) practices in frontier countries can be explained by institutional settings, considering their diverse corporate governance environments, legal regimes, and accounting standards. Across 22 frontier market countries from 2000 - 2017, results show that financial disclosure, legal environments, and the number of analysts following to be correlated with reduced levels of accruals earnings management (). The impact of wealth, GDP growth, firm size, and the use of Big-4 auditors were also shown to be associated with reduced EM. Contrary to developed markets and novel to this study, are the findings that higher levels of societal trust failed to show significance with reduced , suggesting informal institutions are less influential as control monitors. Findings herein verify that the factors that moderate are not universally applicable, and help highlight international differences in the management of earnings.

3.1 Introduction

The extent to which managers alter reported earnings is a significant concern for the accounting profession (Mostafa 2017). Although extensive academic research in the earnings manipulation arena exists, empirical work focusing on a wide spectrum of frontier markets and the constraint provided by institutional factors is limited. Frontier market countries have unique earnings management (EM) dynamics due to their developmental infancy, relative illiquidity, weak fiscal monitoring, and low correlation with developed markets.⁴⁹⁵⁰ Lin & Wu (2014) note that the degree to which firms manipulate earnings is higher in frontier markets than in developed markets as managers are less constrained by corporate governance. This study proposed to reduce the literature in-balance and illuminate institutional settings' constraints on accruals earnings management (), an earning management technique customarily practised in frontier market countries. This study predicts that information asymmetry between managers and investors is exacerbated by weak institutional fiscal monitoring. The significant variation of institutional settings between and within frontier market countries and firms and the need to understand the appropriateness of EM constraint factors, provide sufficient justification for a dedicated frontier market study. The paragraphs that follow outlines why institutional factors are expected to differ in their ability to constrain in frontier markets.

In frontier markets, firm insiders often have a greater opportunity to expropriate investors' benefits (Tang 2013), hence the need to examine constraint factors. Studies have demonstrated that well-structured institutional settings limit (Shen & Chih 2005, Boonlert-U-Thai et al. 2006, Enomoto et al. 2015). Prior research has also identified that good corporate governance mechanisms may reduce or eliminate (Bekiris & Doukakis 2011, Man & Wong n.d.). The lower levels of governance and disclosure in emerging and frontier markets (Odell & Ali 2016) provide a unique setting for EM practices and is an avenue that has been under-examined. The application of to manage earnings is significantly lower in firms exhibiting superior fiscal governance environments and normative transparency (Zhu et al. 2015). As an inverse relationship between EM and investor returns ultimately places EM's cost on a firm's shareholders (Wu et al. 2012, Kim & Sohn 2011), managers shift between and other EM techniques, depending upon each techniques' respective costs and constraints (Kim & Sohn 2011, Sohn 2016). A clear understanding of

⁴⁹Frontier market median correlation with US and EU markets are 0.54 and 0.39, respectively (InvestmentFrontier 2017)

⁵⁰Table 3.8 provides a breakdown of this study's respective countries' correlation figures with US and European (markets.

whether institutional settings influences is crucial to broadening the literature and aiding proper policy gap identification and assisting firm development.

The empirical results of this study extend current literature in several significant and innovative ways. First, this study applies both discretionary accruals and non-discretionary accruals detection models. Second, this study is first to examine the institutional setting's ability to influence in frontier market countries exclusively. Third, contrary to expectations, this study finds that societal trust was not influential in curbing the level of in frontier markets. Fourth, the ability of minority investors' rights to curb was mixed when examined with macro and firm-level control variables.

The remainder of this paper is organised as follows: Section 3.2 reviews related literature and develops this study's hypotheses. Section 3.3 describes the research design and methodology. Section 3.4 presents the empirical results. Section 3.5 presents the findings of additional robustness tests. Section 3.6 concludes with a discussion of the study's implications and recommendations for future research.

3.2 Related Literature and Hypothesis Development

3.2.1 Accruals Earnings Management

Manipulation of operating accruals is the oft favoured EM method due to its conceal-ability and the absence of direct cash flow consequences (Wang et al. 2018). Many researchers view the accrual component of income as a greater measure of current and future performance⁵¹ and as a measure of earnings quality (Sloan 1996, Biao Xie 2003, Ma & Ma 2017). The accrual component of earnings is closely related to sales growth, is less persistent than cash flow (Jones 1991, Sloan 1996), and is negatively associated with future stock prices (Pincus et al. 2007). Given the importance of accruals, researchers often decompose total accruals into normal (expected or non-discretionary) and abnormal (unexpected or discretionary) to examine its information content. Subramanyam (1996b) provides evidence that abnormal accrual income provides more information than the cash-based components.

The Jones (1991) detection model has played a significant role in studies. Many studies employ this method (or variants thereof) to determine abnormal accruals. In examining the model's

⁵¹As opposed to the cash component of income

detection power via the occurrence of Type I and Type II errors, Dechow et al. (1995) concluded that the Jones model outperformed other models in detecting . All models, however, are subject to significant measurement errors (Pae 2005). Chen, Hribar & Melessa (2018) report that models that rely on residuals can lead to incorrect inferences. To avoid reliance on a single method, this study applies three detection methods.

3.2.2 Characteristics of Frontier Markets

Morgan Stanley Capital International () separates markets into three categories of development based on size and liquidity: Developed, Emerging, and Frontier. Differentiating frontier markets from other markets is their degree of corporate governance, regulatory environment, level of investor protection, education, and accessibility - for which they obtain a score of 'modest' (MSCI 2019b). Underscoring the characteristics and uniqueness of frontier markets, Lang & Maffett (2011) find inconsistent legal regimes and low transparency levels to be a significant hurdle for foreign investors and cultivates an environment in which earnings are more easily managed. Chen et al. (2014) state that frontier markets require the most private capital for development and often present the most problems. Despite problems, Bley & Saad (2012) find that frontier markets possess a significantly positive relationship between returns and volatility – a relationship not explained by risk factors. Berger et al. (2011) and Guesmi & Nguyen (2011) note frontier markets' low integration with other markets provide greater return and diversification benefits (Girard & Sinha 2008). More recently, the linkages between markets have increased over time (Baumöhl & Lyócsa 2014), causing them to experience greater contagion impacts from global turmoil (Mohti et al. 2019).

3.2.3 Institutional Setting Variables

Prior studies document that institutional settings variables⁵² restrict EM when investor protection is more robust (Leuz et al. 2003, La Porta et al. 2002, Williams et al. 2017). Larelle et al. (2018) find that corporate governance influences EM by requiring more frequent and accurate earnings guidance. Although the constraint provided by institutional setting is greater in developed markets with greater governance (Leuz et al. 2003), questions remain on the level of constraint provided in frontier markets where oversight and governance is lower. To extend earlier studies,

⁵²examples include: investor protection, political risks, firm and, management factors, laws, market mechanisms, and regulations

this study examines the following four institutional settings variables: (1) minority (outside) investor rights, (2) legal enforcement, (3) disclosure regulations, and (4) number of analysts following.

3.2.3.1 Minority Investor Rights

Strong *Minority Investor Rights* limits firm insiders' ability to acquire private control benefits (Leuz et al. 2003, Enomoto et al. 2015). El-Helaly et al. (2018) state that minority investor rights are significant determinants of EM on a country level. Atwi et al. (2017) note that investor rights are a significant concern for investors in developing markets as unchecked controlling shareholders' power can lead to the expropriation of minority investor rights. Strong minority investor rights consequently reduce incentives to engage in . Researchers highlight the role of governance as a factor associated with the rights of minority investors and results in higher quality financial reporting with a lower likelihood of qualified audit reports (Pucheta-Martínez & García-Meca 2014)

Following Haidar (2009), *Minority Investor Rights* data are sourced from the World Economic Forum's Global Competitiveness Index on the 'Strength of Investor Protection' index. From the above, the first hypothesis (H1) is formalised as follows:

Hypothesis 1 (H1): *Greater minority investor rights is associated with decreased accruals earnings management.*

3.2.3.2 Legal Enforcement

Legal Enforcement is often associated with the efficacy of a country's judicial system and the enforcement of laws (Ippoliti et al. 2015). In environments with strong legal enforcement, firm audit quality is notably higher (Persakis & Iatridis 2016) and can substitute for weak rules as active and well-functioning courts provide recourse for investors abused by management (Hutchison 2002). Esty & Megginson (2003) note that in countries with weaker legal enforcement, legal risks increase, and governance's focus shifts to deterring defaults. The degree of protection that investors receive in various jurisdictions depends on the characteristics of the legal rules themselves and the quality of legal enforcement (La Porta et al. 1997, Kothari et al. 2012). Due to weak legal enforcement around shareholder interests, emerging and frontier markets may not sufficiently protect shareholder interests (Ma et al. 2009, Ahmed et al. 2018). In a separate legal

enforcement study, La Porta et al. (2002) and Chen, Chou & Wei (2020) note that countries governed by civil laws provide investors with weaker legal rights,⁵³ as civil law tends to be associated with lower financial development.

Following Leuz et al. (2003) and Enomoto et al. (2015), this study calculates the degree of *Legal Enforcement* as the mean score across three legal variables: (1) the efficiency of the judicial system, (2) an assessment of the rule of law, and (3) the corruption index. World Bank's Worldwide Governance Indicators is the source for the first two variables; Transparency International provides the third. From the above, the second hypothesis (H2) is formalised:

Hypothesis 2 (H2): *Greater legal enforcement is associated with decreased accruals earnings management.*

3.2.3.3 Disclosure Requirements

Corporate disclosure pertains to information asymmetry between investors and managers (Lobo & Zhou 2001); higher disclosure quality is negatively associated with EM. (Alzoubi Ebraheem 2016). Lobo & Zhou (2001) hypothesised that it was more challenging to implement EM in countries with stricter disclosure regulations. Poor disclosure and financial opacity are common among companies in emerging markets (Fan et al. 2011). While Patel et al. (2002) find that transparency and disclosure in selective emerging markets have increased over time, Crittenden & Crittenden (2014) suggest poor disclosure may be even more pervasive within frontier markets.

Data are drawn from the World Bank's 'Doing Business' survey, which reports an Investor Protection Index. The index measures minority shareholders' strength against a director's misuse of corporate assets for personal gain. From the above, the third hypothesis (H3) is formalised:

Hypothesis 3 (H3): *Greater disclosure requirements is associated with decreased accruals earnings management.*

3.2.3.4 Analysts Following

Analysts significantly influence investor and management behaviour, as analysts' forecast impact corporate share price (Hsiao et al. 2016, Graham et al. 2005). To compose forecasts, analysts

⁵³relative to those governed by common law

regularly track corporate financial statements, interact with managers directly, and raise questions on earnings data periodically (Yu 2008). Firms that fail to perform as analysts predict often experience stock price declines (Bozanic et al. 2019, Yu 2008). Chan et al. (2014) find a negative correlation between analysts following and Δ , indicating increased number of analysts following reduces Δ . Financial analysts may also play a role in expanding Δ because the pressure to meet or beat analysts' forecasts may drive managers to manipulate earnings (Hong et al. 2014, Coën & Desfleurs 2016).

Due to the role analysts play in influencing management behaviour, an analyst's role in influencing Δ in frontier markets is also assessed. *Analysts Following* data are drawn from Datastream and calculated as the mean number of analysts following per firm-year in each country. From the above, the fourth hypothesis (H4) is formalised:

Hypothesis 4 (H4): *Greater analyst following is associated with decreased accruals earnings management.*

3.2.4 Culture Effect

There has been much scholarly interest in how national culture explains individual behaviour and the systemic differences across nations (Hofstede 1980, Chui et al. 2002, Dounnik & Tsakumis 2004, Kwok & Tadesse 2006, Zhang 2018). These studies show that culture shapes individual values and influences behaviour. Further, the studies reveal that when the perceived risk of negative repercussions is low, systemic exploitation of existing legal voids may spur illegal or immoral behaviours.

Khanna (2015) argues against the uniform application of management practices across geographies, markets, and cultures, as conditions⁵⁴ differ enormously from place to place – particularly in heterogeneous frontier markets. Lessons garnered in one market do not necessarily transfer to other markets (Kutz & Bamford-Wade 2014); therefore, localisation or contextualised intelligence is required before lessons can be applied to unique settings (Arnold & Quelch 1998, Wiprächtiger et al. 2019). Consequently, cultural differences cannot be ignored when examining investors' protection across countries (Stulz & Williamson 2003). Bao & Bao (2004) suggest that culture might contribute to the variation in earnings smoothing across countries. Motivated by the literature, this study investigates how the cultural variable of societal trust shapes how

⁵⁴institutional character, physical geography, market dynamics, infrastructure, and educational norms

management prepares and reports financial information.

3.2.4.1 Societal Trust

In frontier markets where financial statement quality is questionable (Alfraih 2016), trust serves to connect information in an unbiased manner informally. Countries possessing relatively high trust levels tend to possess relatively low levels of corruption (Lin & Wu 2014). Guan et al. (2020) find a stronger relationship between firm-level commitment to credible disclosure and earnings forecasts in low-trust countries, suggesting that country-level societal trust relates to the effectiveness of firm-level credibility. Investors in high trust countries view these voluntary disclosures as more credible information. Insufficient societal trust may exacerbate moral hazards because of low social costs (Ho et al. 2020).

Following Papanastasopoulos & Tsiritakis (2015), data are obtained from the World Values Survey and based on the theory underpinning and culture. Trust scores obtained are re-scaled from 0-10 in line with institutional variables. From the literature, the fifth hypothesis (H5) is introduced:

Hypothesis 5 (H5): *Greater societal trust is associated with accruals earnings management.*

Table 3.8 provides descriptive statistics of institutional setting variables and the cultural variable of societal trust for each country in the study.

3.3 Research Design and Hypothesis Development

3.3.1 Sample and Data Selection

This study's firm-level data are taken from Datastream from 2000 to 2017.⁵⁵ Publicly listed (and delisted) firms were included to avoid survivorship bias. Financial institutions and utilities are excluded due to their unique regulatory environments. Countries experiencing hyperinflation were also removed.⁵⁶ Eligible firms for the analysis must have at least three consecutive years of income statement and balance sheet data. As displayed in Table 3.2, the final sample consists of 22 frontier countries, 2,509 firms, and 30,969 observations. The study uses an unbalanced data

⁵⁵Data was taken in USD for all years and countries

⁵⁶Serbia, a frontier market country, was excluded due to periods of hyperinflation

set due to differences in capital market development, country size, and firm entrances or exits. Vietnam has the most firm-year observations (3,530), while Lebanon has the least (94). During the study period, firm-year observation increased annually, except for 2017, due to limited data availability. The industry segments in the study, manufacturing, and food products, were the most numerous (8,551 and 6,296 observations, respectively). Retail was the smallest segment in the study, with 302 firm-year observations.

Table 3.2: Composition of Sample by Calendar Year, by Country, and by Industry

Sample by Calendar Year			Sample by Country of Listing				Sample by Industry		
Year	n	%	Country	n	Observations	%	Industry	Observations	%
2000	332	1.07	Argentina	85	1,348	4.35	Chemical Products	3,176	10.26
2001	570	1.84	Bahrain	30	459	1.48	Communications	1,773	5.73
2002	759	2.45	Bangladesh	96	704	2.27	Durable goods	1,237	3.99
2003	1,116	3.60	Bulgaria	255	3,116	10.06	Electric, gas and sanitary services	385	1.25
2004	1,421	4.59	Croatia	90	1,185	3.83	Electronic Equipment	468	1.51
2005	1,605	5.18	Estonia	15	214	0.69	Entertainment Services	605	1.95
2006	1,739	5.62	Jordan	177	2,305	7.44	Food Products	6,236	20.00
2007	1,847	5.96	Kazakhstan	57	566	1.83	Health	942	3.04
2008	1,941	6.27	Kenya	41	630	2.03	Manufacturing	8,551	27.61
2009	2,017	6.51	Kuwait	165	2,299	7.42	Oil & Gas	2,237	7.22
2010	2,084	6.73	Lebanon	6	94	0.30	Paper and paper products	3,359	10.85
2011	2,166	6.99	Lithuania	19	247	0.80	Retail	302	0.98
2012	2,274	7.34	Mauritius	73	728	2.35	Scientific instruments	739	2.39
2013	2,339	7.55	Morocco	67	961	3.10	Transportation	959	3.10
2014	2,367	7.64	Nigeria	147	1,481	4.78			
2015	2,362	7.63	Oman	108	1,634	5.28			
2016	2,377	7.68	Pakistan	221	2,910	9.40			
2017	1,653	5.34	Romania	148	1,803	5.82			
			Slovenia	38	501	1.62			
			Sri Lanka	258	3,462	11.18			
			Tunisia	68	792	2.56			
			Vietnam	345	3,530	11.40			
Total	30,969	100	Total	2,509	30,969	100		30,969	100

Hayn (1995) was the first to evaluate earnings distribution as an assessment of evidence. Similarly, in Figure 3.6, this study includes a display of the distribution of mean net income scaled by total assets for each country in the study. The results show that the distribution of earnings near or below zero and, thus, left-skewed. Burgstahler & Dichev (1997) interpret a discontinuity at zero in the cross-sectional earnings distribution as evidence of misreported earnings. In examining the earnings distribution after the passage of the Sarbanes-Oxley Act of 2002 (SOX), Gilliam et al. (2015) suggest that the lack of zero-earnings after SOX does not necessarily mean that earnings manipulation does not exist. The distribution displayed is consistent with organisations managing their taxable income by shifting income out of their taxable activities.

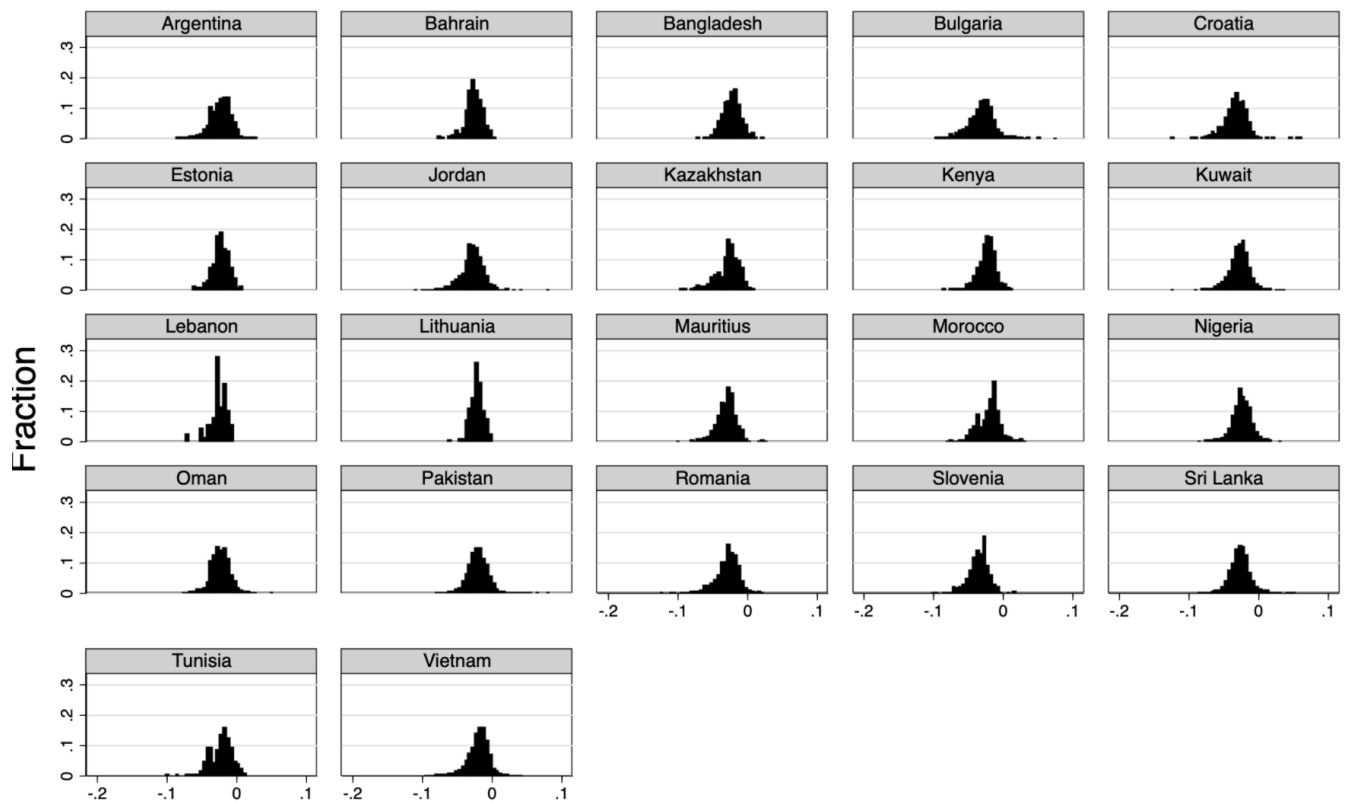


Figure 3.6: Distribution of Net Income scaled by Assets by Country

3.3.2 Accrual Earnings Management Detection Methods

As stated, to avoid reliance on a single detection method, this study applies three. The first measure follows Leuz et al. (2003). The second and third methods are adaptations of Yoon et al. (2006) and Kothari (2005)'s methods. An outline of each method follows.

3.3.2.1 Leuz et al. (2003)

Leuz et al. (2003)'s detection method comprises of three separate measures (AEM1, AEM2, and AEM3), which combine to form this study's first detection method. The three measures combined form a single composite measure of an average of a firm's scaled rank score per country per year by N , as per Lemma et al. (2019).⁵⁷ The individual values are calculated as per Eq 3.1, 3.3, and 3.4. The composite score is denoted as AEM_L .

AEMI is the first measure of the composite score and is a measure of income smoothing. Firms engaged in income smoothing exhibit a lower standard deviation of earnings than a standard deviation of cash flow. A higher *AEMI* value indicates a lower degree of EM. *AEMI* is outlined

⁵⁷scaling the score neutralises the effect of country size on the aggregate measure of AEM

as per Equation 3.1.

$$AEM1 = \frac{\sigma(OperInc)}{\sigma(CFO)} \quad (3.1)$$

where *AEM1* is the ratio of the standard deviations of Operating Income (OperInc) to cash flow from operations (). Lagged total assets scale both values.

AEM2 measures the extent to which firms conceal shocks to their operating performances using accruals and is calculated as the correlation between change in accruals and change in CFO. Greater negative correlation between inputs indicates greater EM. The accrual input is calculated as per Equation. 3.2, while Equation. 3.3 outlines *AEM2*.

$$Accruals (ACC) = (\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta STD_{it} - \Delta TP_{it}) - Dep_{it} \quad (3.2)$$

$$AEM2 = \rho(\Delta ACC, \Delta CFO) \quad (3.3)$$

where *ACC* is accruals, *CA* is total current assets, *Cash* is cash and cash equivalents, *CL* is total current liabilities, *STD* is the debt in the current portion of liabilities, *TP* is income tax payable, *Dep* is depreciation and amortisation. and Δ is the change operator. Following Leuz et al. (2003), Lemma et al. (2019), *AEM2* is the Spearman correlation between *ACC* and *CFO*. Lagged total assets scale both values.

AEM3 measures the extent to which firms mask their economic performance using accruals. This measure is calculated as the ratio of the absolute accruals to absolute CFO. Larger *AEM3* values signify greater levels of EM. *AEM3* is shown via Equation 3.4.

$$AEM_3 = \frac{|ACC|}{|CFO|} \quad (3.4)$$

where $|ACC|$ and $|CFO|$ are the absolute values of accruals and cash flow from operations.

3.3.2.2 Yoon et al. (2006)

This study's second detection model follows Yoon et al. (2006) and is denoted as *AEM_Y*. *AEM_Y* has been shown to outperform other residual dependent models in developing markets (Yoon et al. 2006, Islam et al. 2011, Alareeni & Aljuaidi 2014). This model estimates total accruals

(TA) as per Equation 3.5. AEM_Y is calculated by subtracting the fitted accrual values from total accruals, as expressed by Equation 3.6.

$$\frac{TA_i}{REV_{it}} = \beta_1 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{REV_{it}} \right) + \beta_2 \left(\frac{\Delta EXP_{it} - \Delta PAY_{it}}{REV_{it}} \right) + \beta_3 \left(\frac{DEP_{it} + PEN_{it}}{REV_{it}} \right) + \varepsilon \quad (3.5)$$

$$AEM_{it} \equiv \varepsilon_{it} = \frac{TA_{it}}{REV_{it-1}} - \left[NA_{it} \equiv \hat{\beta}_1 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{REV_{it}} \right) + \hat{\beta}_2 \left(\frac{\Delta EXP_{it} - \Delta PAY_{it}}{REV_{it}} \right) + \hat{\beta}_3 \left(\frac{DEP_{it} + PEN_{it}}{REV_{it}} \right) \right] \quad (3.6)$$

where REV , REC , EXP , PAY , and PEN are net sales revenue, trade receivables, expenses,⁵⁸ trade payable, and retirement benefits expense, respectively. Much like Sloan (1996) and Lee & Lee (2015), this study ranks accruals per country per year by N.

3.3.2.3 Kothari (2005)

The third detection method follows Kothari (2005)'s performance-matched approach and is denoted AEM_K . This method is both well-specified and powerful at estimating discretionary accruals (Cai et al. 2020), as it considers a company's past and present economic performance. To begin, each year and every two-digit industry is estimated as per Equation 3.7, then the coefficients from Equation 3.8 are used to calculate the non-discretionary accruals (NDA). NDA is subtracted from total accruals (TA) to arrive at discretionary accruals.

$$\frac{TA_{it}}{A_{it-1}} = \beta_1 \left[\frac{1}{A_{it-1}} \right] + \beta_2 \left[\frac{(\Delta REV_{it} - \Delta AR_{it})}{A_{it-1}} \right] + \beta_3 \left[\frac{PPE_{it}}{A_{it-1}} \right] + \beta_4 ROA_{it-1} + \varepsilon_{it} \quad (3.7)$$

$$AEM_{it} \equiv \varepsilon_{it} = \frac{TA_{it}}{REV_{it-1}} - \left[NDA_{i,t} = \hat{\beta}_0 + \hat{\beta}_1 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\beta}_2 (\Delta REV_{i,t}) + \hat{\beta}_3 (PPE_{i,t}) + \hat{\beta}_4 (ROA_{i,t}) \right] \quad (3.8)$$

where A is total assets (used to proxy for firm size), AR is accounts receivable, PPE is property, plant, and equipment, and ROA is the return on assets. Subscripts i and t refer to firm i and year t , respectively. Additionally, this study ranks accruals per country per year by N, to arrive at AEM_K .

⁵⁸The sum of cost of goods sold and selling and general administrative expenses, excluding non-cash expenses

3.3.3 Regression Models

To test the hypotheses, firm-level data are used to analyse the link between , institutional setting variables, and societal trust. Equations 3.12 - 3.14 outline the regressions models used to examine AEM relationship to the study's variables.

$$AEM_L, AEM_Y, AEM_K = \beta_0 + \beta_1(Analyst\ Following) + \varepsilon \quad (3.9)$$

$$AEM_L, AEM_Y, AEM_K = \beta_0 + \beta_1(Disclosure\ Index) + \varepsilon \quad (3.10)$$

$$AEM_L, AEM_Y, AEM_K = \beta_0 + \beta_1(Legal\ Enforcement) + \varepsilon \quad (3.11)$$

$$AEM_L, AEM_Y, AEM_K = \beta_0 + \beta_1(Minority\ Investor\ Rights) + \varepsilon \quad (3.12)$$

$$AEM_L, AEM_Y, AEM_K = \beta_0 + \beta_1(Societal\ Trust) + \varepsilon \quad (3.13)$$

$$\begin{aligned} AEM_L, AEM_Y, AEM_K = & \beta_0 + \beta_1(Analyst\ Following) + \beta_2(Disclosure\ Index) \\ & + \beta_3(Legal\ Enforcement) + \beta_4(Minority\ Investor\ Rights) + \beta_5(Societal\ Trust) + \varepsilon \end{aligned} \quad (3.14)$$

Equations 3.12 - 3.13 are single regression models, whereas Equation 3.14 is a multiple regression model inclusive of variables from the earlier regressions.

3.4 Empirical Results

3.4.1 Descriptive Statistics

Table 3.3 presents the summary statistics of key variables. Mean scores for AEM_L , AEM_Y , and AEM_K , variables are fairly similar, yet their standard deviation exhibits greater dispersion at .17671, .2890, and .2891, respectively. Mean scores for the four investor protection variables of *Analysts Following*, *Disclosure Index*, *Legal Enforcement*, and *Minority Investor Rights* are 5.17, 6.45, 4.69, and 5.70, respectively. The stability of the four anterior variables (as noted by their low standard deviation compared to the mean) is a common property in survey-based data (Callen et al. 2011). The cultural variable of *Societal Trust* has a mean score of 3.4, with a standard deviation of 2.03.

Table 3.3: Descriptive Statistics of Key Variables

Variable	Mean	Std. Dev	Q1	Median	Q3	Min	Max
AEM_L	0.5101	0.1671	0.3948	0.5086	0.6250	0.0230	1.0000
AEM_Y	0.5100	0.2890	0.2600	0.5088	0.7600	0.0030	1.0000
AEM_K	0.5101	0.2891	0.2602	0.5091	0.7610	0.0030	1.0000
Analyst Following	5.1785	8.4176	1.3665	1.9720	4.9270	0.2930	47.7660
Disclosure Requirements	6.4587	2.0042	5.0000	6.0000	8.0000	3.0000	10.0000
Legal Enforcement	4.6966	0.9561	4.0660	4.7710	5.4060	2.8830	7.8720
Minority Investors Rights	5.7057	1.0496	4.7000	5.8000	6.7000	3.7000	7.5000
Societal Trust	3.4013	2.0364	2.0000	3.9000	4.8000	0.0000	8.1000
Big-4 Auditor Following	0.5166	0.2769	0.2800	0.4718	0.6320	0.0050	1.0000
GDP Per Capita (log)	113.9067	100.2616	46.7000	74.8000	154.5000	6.6000	464.3000
GDP Growth (%)	4.2564	3.4025	2.5900	4.7400	6.4200	-14.8100	17.3200
Trade Openness	91.2884	42.1611	55.9500	88.8600	120.5100	20.7200	200.3100

Table 3.4: Correlation of key variables in the study

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) AEM_L	1							
(2) AEM_Y	0.485***	1						
(3) AEM_K	0.476***	0.758***	1					
(4) Analysts Following	-0.0198*	-0.0339***	-0.0359***	1				
(5) Disclosure Index	-0.268***	-0.251***	-0.249***	0.0920***	1			
(6) Legal Enforcement	-0.160***	-0.166***	-0.168***	0.203***	0.0843***	1		
(7) Minority Investor Rights	-0.0483***	-0.0832***	-0.0863***	0.245***	0.310***	-0.0907***	1	
(8) Societal Trust	0.160***	0.138***	0.137***	0.209***	0.137***	-0.308***	0.390***	1

Significance is denoted $p \leq 0.05$ level for * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5.22 presents the correlation table of key metrics. Consistent with expectations, *Disclosure Index*, *Legal Environment*, *Analysts Following*, and *Minority Investor Rights* are negatively correlated with all detection proxies. The level of *Societal Trust* shows a positive relationship with the proxies. To further understand the relationship between the proxies and the institutional settings variables, these variables are regressed in the following section.

3.4.2 Regression Results

This study hypothesises that the effects of are moderated by investor protection variables and greater societal trust. Negative coefficients are expected when variables provide constraint. Panels A, B, and C of Table 3.5 display the results of the AEM_L, AEM_Y, and AEM_K models, respectively, via Pooled OLS regression. Coefficient signs for the individual regressions tests are mostly analogous to the multiple regression test; thus, only the latter results are described.

As predicted, the coefficients for *Disclosure Index*, *Legal Enforcement*, and *Minority Investor Rights* are negative and support the hypothesis that is less prevalent when these variables increase. *Analysts Following* failed to show significance when tested collectively, suggesting

it is not associated with decreased . Similar to the results from Table 5.22, the *Societal Trust* coefficient is positive, indicating it is not instrumental in reducing activity. The statistical significance of the coefficients in the regression outputs with the AEM detection proxies point to the variables' appropriateness for further analysis.

Table 3.5: Pooled OLS Regression Results of AEM, Institutional Settings, and Trust**Panel A - AEM_L**

Constant	57.4878*** (38.4411)	3.6038 (.8789)	98.1515*** (16.0532)	79.3471*** (12.0074)	44.3968*** (17.4969)	108.4712*** (11.7814)
Analyst Following	-.308** (-2.152)					-0.0753 (-.5474)
Disclosure Index		-7.7137*** (-12.978)				9.7555** (-16.0529)
Legal Enforcement			-9.3783** (-7.2708)			-11.1189*** (-8.6184)
Minority Investor Rights				-4.3545*** (-3.8141)		-13.4551*** (-11.364)
Societal Trust					.2945*** (4.5797)	.3196*** (4.8845)
Number of observations	17,136	17,136	17,136	17,136	17,136	17,136
R2 (or adjusted R2)	0.0026	0.084	0.028	0.0079	0.0113	0.1825

Panel B - AEM_Y

Constant	57.2011*** (46.8657)	5.8752 (1.7765)	96.3802*** (19.3719)	89.1008*** (16.5167)	47.198*** (22.7636)	118.3319*** (16.3301)
Analyst Following	-.3786*** (-3.1976)					-0.0617 (-.5676)
Disclosure Index		-7.3599*** (-15.2126)				-9.7382*** (-20.416)
Legal Enforcement			-9.1133*** (-8.6823)			-11.0163*** (-10.9826)
Minority Investor Rights				-6.1755*** (-6.612)		-14.8405*** (-15.9982)
Societal Trust					.198*** (3.7763)	.248*** (4.9479)
Number of observations	17,136	17,136	17,136	17,136	17,136	17,136
R2 (or adjusted R2)	0.0053	0.1046	0.0367	0.0216	0.0071	0.2526

Panel C - AEM_K

Constant	57.3058*** (44.64)	4.3185 (1.2397)	96.1639*** (18.3453)	89.6948*** (15.8017)	47.0118*** (21.5649)	118.2039*** (15.3851)
Analyst Following	-.3605*** (-2.8946)					-0.0825 (-.7157)
Disclosure Index		-7.6184*** (-14.9504)				-10.0412*** (-19.8546)
Legal Enforcement			-9.0377*** (-8.1723)			-11.0182*** (-10.3601)
Minority Investor Rights				-6.2564*** (-6.3662)		-15.2311*** (-15.4859)
Societal Trust					.2072*** (3.76)	.2615*** (4.9212)
Number of observations	17,136	17,136	17,136	17,136	17,136	17,136
R2 (or adjusted R2)	0.0044	0.1014	0.0326	0.02	0.0071	0.2398

The use of ordinary least squares (OLS) regression is supported by the Hausman test for fixed vs. random effect, which finds a chi-square of 0.25 and a p-value of 0.9694. Breusch-Pagan Lagrangian multiplier test for random effects vs OLS finds a chi-square of 0.00 and a p-value of 1.0. These indicate that OLS is efficient. T-statistics are reported in parenthesis. Significance is identified at three levels: 0.05*, 0.01**, and 0.001***.

3.5 Robustness Checks

To cross-check initial findings, Equation 3.14 is reexamined using both quantile regression and two-stage least squares (). In the event of heterogeneity, then quantile regression will provide a more comprehensive view of the relationship between variables through the effects of independent variables across quantiles of the response distribution (Ma & Pohlman 2008). Ma & Pohlman (2008) further suggest that if the distribution is not Gaussian but fat-tailed, quantile regression estimates will be more robust and efficient than the conditional mean estimates. The use of follows Leuz et al. (2003). The authors note that institutional factors are often complementary, and thus, to control for the potential impact of other factors and disentanglement from investor protection's direct effect is difficult. The application of 2SLS estimation addresses this concern.⁵⁹ Table 3.6 presents the additional estimations and the original Pooled OLS regression for ease of comparison.

Table 3.6: Pooled OLS, Quantile Regression, 2SLS Regression Results

Variable	Pooled OLS Model			Quantile Regression Model			2SLS Regression Model		
	AEM_L	AEM_Y	AEM_K	AEM_L	AEM_Y	AEM_K	AEM_L	AEM_Y	AEM_K
Constant	108.4712*** (11.781)	118.3319*** (16.3301)	118.2039*** (15.3851)	31.945*** (8.32)	34.383*** (9.92)	34.671*** (10.00)	89.296*** (27.37)	100.592*** (32.67)	101.043*** (32.79)
Analyst Following	-0.0753 (-.5474)	-0.0617 (-.5676)	-0.0825 (-.7157)	-0.071 (-1.11)	-0.124* (-2.47)	-0.123* (-2.46)	-0.035 (-0.64)	-0.007 (-0.17)	-0.006 (-0.14)
Disclosure Index	-9.7555*** (-16.0529)	-9.7382*** (-20.416)	-10.0412*** (-19.8546)	-7.252*** (-29.23)	-6.935*** (-30.80)	-6.934*** (-30.78)	-8.804*** (-41.76)	-8.830*** (-44.15)	-8.834*** (-44.13)
Legal Enforcement	-11.1189*** (-8.6184)	-11.0163*** (-10.9826)	-11.0182*** (-10.3601)	-4.191*** (-7.65)	-4.189*** (-8.43)	-4.239*** (-8.53)	-8.999*** (-19.32)	-9.920*** (-22.49)	-9.953*** (-22.54)
Minority Rights	-13.4551*** (-11.364)	-14.8405*** (-15.9982)	-15.2311*** (-15.4859)	-4.880*** (-9.87)	-4.848*** (-10.76)	-4.842*** (-10.74)	-11.339*** (-26.99)	-12.254*** (-30.62)	-12.310*** (-30.73)
Societal Trust	.3196*** (4.8845)	.248*** (4.9479)	.2615*** (4.9212)	0.286*** (9.93)	0.237*** (9.20)	0.236*** (9.15)	0.425*** (17.37)	0.369*** (16.15)	0.370*** (16.17)
N	17,136	17,136	17,136	15674	17336	17336	15674	17336	17336
adj R2 / PseudoR2	0.1825	0.2526	0.2398	0.055	0.052	0.052	0.145	0.147	0.148

Note: t-statics reported in parenthesis. Significance is identified at three levels: 0.05*, 0.01**, and 0.001***.

2SLS regression results are largely consistent with Pooled OLS regression. *Analysts Following*, *Disclosure Index*, *Legal Enforcement*, and *Minority Investor Rights* continue to show an inverse relationship with all three AEM detection methods. A slight difference is noted in the quantile regression method, where *Analyst Following* only shows significance under the Yoon and Kothari detection methods. While not conclusive, preliminary results suggest that analysts influence accounting earnings and is associated with decreased AEM practice. Previous studies suggest that EM practices increase during optimistic moments, yet firms monitored by analysts are more prone to restrain this behaviour. This study's findings align with Miranda et al. (2018), Yu

⁵⁹Dubin-Wu-Hausman endogeneity test rejects that null of the instrument variables beings exogenous at an alpha of 0.10

(2008), who also find an increased number of analysts following is negatively associated with EM activity yet is at odds with Enomoto et al. (2015)'s mixed market study where a similarly significant relationship was not found.

The positive relationship between *Societal Trust* and the three detection proxies is contrary to expectations, and Chen et al. (2019) and Dong et al. (2018)'s China-based studies. Of note, however, greater media coverage was instrumental in curbing corporate misconduct in their studies. Further, Cui (2017) states that social trust's effect depends on the institution level, which weakens with institutional strength.

Researchers suggest that western guidelines and recommendations have dramatically transformed developing countries visage via trade and institutional development (Bhattacharyya 2012, Reddy et al. 2013). Cornett et al. (2008) suggests that if institutional factors impact earnings and performance, then reported performance might be partially cosmetic, requiring the control for performance measures on the influence of managerial choice. Accordingly, this study's second robustness check reexamines Equation 3.14 with the addition of firm and country-level control variables. Kim & Yi (2006) state that the use of cross-country data may raise concerns over potential endogeneity. Country-wide, macroeconomic factors jointly influence the extent of and institutional factors. Following Saona & Muro (2018), this study posits that AEM cannot be adequately analysed unless its internal and external determinants are considered.

Enomoto et al. (2018) suggest that opportunistic managerial behaviour is lower under more developed financial systems because higher quality accounting information is necessary. Conversely, Saona & Muro (2018) find that managers have less need for EM in less developed and less competitive markets. As financial market development is higher in countries with higher GDP per capita (Deltuvaite & Sineviciene 2014), positively associated with economic growth (Levine et al. 2000) and growth significantly impacted by trade liberalisation (Hye et al. 2016), these are controlled for via GDP per capita, GDP growth, and trade openness. Also included is a dichotomous variable if the country has adopted International Financial Reporting Standards (IFRS) for it has been associated with increased earnings quality and decreased AEM (Capkun et al. 2016, Wijayana & Gray 2019, Martens et al. 2020).

Firm-level variables also exhibit linkages in developing markets where owner-agency problems

increase (Hoskisson et al. 2013). Chung & Zhang (2011) suggest that institutional shareholders can better analyse firm performance and detect financial misreporting, much like Big-4 auditors, as they are more apt to spot internal control weaknesses (Kanagaretnam, Lobo, Ma & Zhou 2016). This study, therefore, includes a dichotomous variable if the firm employs a Big-4 auditor. Capital structure and company growth opportunities are also items controlled for via firm leverage and book-to-market ratios. When firms maintain relatively low debt levels, managers engage in active opportunistic manipulation of financial statements, whereas relatively high debt tends to constrain (Saona & Muro 2018). This study also controls for firm size as size may affect corporate governance characteristics and financial performance (Shawtari et al. 2016). Time and industry dummy variables are also included to control for possible time and industry effects.

Table 3.7: OLS, Quantile Regression, 2SLS Regression with control variables

Variables	Pooled OLS Model			Quantile Regression Model			2SLS Regression Model		
	AEM_L	AEM_Y	AEM_K	AEM_L	AEM_Y	AEM_K	AEM_L	AEM_Y	AEM_K
Constant	47.700* (2.49)	72.748*** (9.79)	75.733*** (10.23)	113.379*** (10.91)	93.995*** (9.10)	87.331*** (8.88)	92.724*** (11.63)	65.091*** (8.04)	60.618*** (7.43)
Analyst Following	-0.106 (-1.80)	-0.227*** (-4.35)	-0.254*** (-4.88)	0.008 (0.09)	-0.291*** (-3.49)	-0.313*** (-3.95)	-0.633*** (-7.91)	-0.475*** (-6.65)	-0.473*** (-6.56)
Disclosure Index	-6.767*** (-32.58)	-6.925*** (-34.81)	-7.273*** (-36.68)	-6.109*** (-18.70)	-6.855*** (-21.61)	-7.109*** (-23.53)	-2.284*** (-6.64)	-2.466*** (-7.54)	-2.664*** (-8.08)
Legal Enforcement	-4.827*** (-4.70)	-5.649*** (-5.94)	-5.544*** (-5.85)	-4.354** (-2.69)	-6.292*** (-4.15)	-6.205*** (-4.30)	-49.509*** (-15.56)	-53.212*** (-17.64)	-54.743*** (-18.01)
Minority Rights	-1.052* (-2.09)	-1.787*** (-3.64)	-1.518** (-3.10)	-0.795 (-1.00)	-0.178 (-0.23)	-0.108 (-0.15)	-16.110*** (-16.00)	-18.108*** (-17.68)	-18.387*** (-17.82)
Societal Trust	0.179*** (5.92)	0.145*** (5.06)	0.131*** (4.60)	0.182*** (3.83)	0.161*** (3.53)	0.182*** (4.19)	0.973*** (16.45)	0.999*** (17.37)	1.014*** (17.51)
Big-4	-38.503*** (-15.39)	-28.546*** (-12.15)	-25.823*** (-11.03)	-36.558*** (-9.29)	-31.194*** (-8.33)	-30.668*** (-8.59)	14.187*** (3.45)	27.387*** (6.86)	32.004*** (7.95)
GDP per capita (ln)	-9.409*** (-12.42)	-8.794*** (-12.49)	-8.986*** (-12.81)	6.085*** (5.11)	5.384*** (4.80)	6.048*** (5.66)	-10.664*** (-6.72)	-12.535*** (-8.38)	-13.077*** (-8.67)
Trade openness	0.155*** (6.05)	0.088*** (3.62)	0.060* (2.48)	0.091* (2.27)	0.046 (1.20)	0.025 (0.67)	1.001*** (16.56)	0.990*** (17.06)	0.994*** (16.99)
GDP Growth (%)	-0.797*** (-5.22)	-0.718*** (-5.02)	-0.771*** (-5.41)	-0.634** (-2.64)	-0.752*** (-3.30)	-0.703** (-3.24)	-1.497*** (-8.11)	-1.693*** (-9.40)	-1.780*** (-9.80)
Book to Market	-0.006 (-0.58)	-0.011 (-1.15)	-0.013 (-1.34)	0.005 (0.32)	-0.002 (-0.11)	-0.039** (-2.60)	-0.012 (-1.09)	-0.019 (-1.62)	-0.021 (-1.78)
IFRS	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
Leverage	0.008 (1.72)	0.012* (2.38)	0.016** (3.24)	0.005 (0.72)	0.013 (1.67)	0.014 (1.89)	0.001 (0.24)	0.020*** (3.45)	0.025*** (4.19)
Size	-2.781*** (-12.52)	-1.444*** (-6.59)	-0.699** (-3.20)	-3.521*** (-10.08)	-1.902*** (-5.44)	-0.780* (-2.34)	-2.273*** (-8.79)	-0.763** (-2.92)	-0.005 (-0.02)
Industry Dummy	yes	yes	yes	yes	yes	yes	yes	yes	yes
Year Dummy	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	7193	7944	7944	7193	7944	7944	7193	7944	7944
Adjusted R-squared	0.338	0.306	0.300	0.174	0.155	0.158	0.110	0.030	0.001

¹ t-statics reported in parenthesis ² Significance is identified at three levels: 0.05*, 0.01**, and 0.001***.

The second robustness test highlights the relationship between *Analysts Following* and the Yoon and Kothari AEM proxies. *Analyst Following* now exhibits significance across all three regression methods, suggesting earlier results may have suffered from omitted variable bias due to negative cofounders or extreme outliers.⁶⁰ The inverse relationship between AEM and *Disclosure Index*

⁶⁰Variance inflation factor () test rules out multicollinearity with a score less than 2.2 for all AEM proxies

and *Legal Enforcement* remains unchanged; however, *Minority Investor Rights* fails to show a relationship under quantile estimation. The level of *Societal Trust* also continues to remain positive and significant.

Country-level control variables of per capita, and GDP growth show a significantly negative relationship with AEM activity, suggesting that managers in wealthier frontier countries and firms from countries with greater growth are associated with less AEM activity. In contrast, Dimitras et al. (2015) note that AEM activity is not connected to GDP changes, Chen, Cheng, Hao & Liu (2020) find that firms operating in areas where GDP is lower than adjacent areas, engage in more EM.

Firm-level control variables show firm size is inversely related to activity; smaller firms engage in more AEM activity than larger firms. This is consistent with Siregar & Utama (2008) and Dimitras et al. (2015), yet is at odds with Barton & Simko (2002) and Ali et al. (2015), who find that information asymmetry in large firms motivates earnings manipulation. The Big-4 auditor finding is consistent with findings from Krishnan (2003a) and Alzoubi (2016), who suggest large auditors have greater capital, technology, human resources, and experiences from which higher audit quality flows and EM is constrained. The leverage coefficient was generally positive but not always significant, thus inconclusive. Leverage findings align with Anagnostopoulou & Tsekrekos (2017), who find leverage has no significant effect on income-increasing AEM.

3.6 Conclusion

Using a large sample of 2,509 firms across 22 frontier market countries from 2000 to 2017, this study developed hypotheses relating to institutional settings on AEM. Applying AEM detection models from Leuz et al. (2003), Yoon et al. (2006), and Kothari (2005) on several regression models, the results herein extend the previous research (Leuz et al. 2003, Shen & Chih 2005), by providing evidence that increased disclosure and greater legal enforcement are negatively associated with AEM. This study also finds that as the number of analysts following a firm increases, AEM decreases when examined with the addition of country and firm-level control variables. Novel to this study and contrary to the expected hypotheses is the inability of societal trust to influence AEM activity. Also notable was that larger firms were found to engage in less AEM than smaller firms. This latter finding is consistent with Kothari (2005) and Scholtens & Kang (2013) and suggests stronger internal control systems and reputation concerns are extant

in larger firms. Additionally, consistent with Watts & Zimmerman (1986) and Hoang & Phung (2019), leverage was positively related to AEM, suggesting managers may manage earnings to avoid debt covenant violations. This study's findings also avow De Jong et al. (2014)'s work by providing evidence that firms with superior value showed no greater propensity to manage earnings than those with lower values, advancing the argument that AEM is value-destroying.

Implications of the findings are as follows. First, the social norm theory, which suggests that individuals are driven to match what they perceive to be the social norm (Festinger 1954), failed to play a role in reducing AEM, evidenced by the insignificance of the societal trust variable as employed. Inference from societal trust's failure suggests informal institutions are less influential as control monitors in markets of weak governance and where repercussions for EM behaviour are few. An alternative measure of social trust that controls for the impact of economic development, market development, education, and transportation may, however, produce different results. A second implication from the findings is that formal control monitors of management behaviour is more influential than informal institutions. This finding is evidenced by analysts' role in providing oversight and discipline on management, and management's tendency to abridge AEM activity when the number of analysts following a firm increases. Third, increased economic growth brings about financial development and limits AEM, suggesting that the need to hide poor economic performance is greater in times of low economic growth. Conversely, there is no strong incentive to exercise discretion on earnings in times of stable economic growth. Fifth, while the scope of this study is limited to frontier markets, the results herein, complemented by the growing internationalisation of capital markets, show that distortions in AEM practices merit further segregated market research.

It should be noted that the results of this study are subject to several limitations which suggest the need for further research. First, due to data and macro condition limitations, not all frontier market countries were included in this study. Although the sample size is large enough to capture a large segment of the frontier market, the inclusion of additional frontier market countries would present an exhaustive illustration of an institutional setting's impact on in frontier markets. Second, accounting standards between countries fundamentally alter a firm's accounting. While differences between IFRS and non-IFRS firms were controlled for, variation between non-IFRS standards may bias results despite the large sample size. Future research may seek to control for difference between non-IFRS standards as well as address gaps in the effect of culture on . As noted in this study's literature review, cultural differences cannot be ignored; future research

can test additional cultural aspects. Third, researchers (see Chen, Hribar & Melessa (2018) and McNichols & Stubben (2018)) note that discretionary accruals are known to be noisy EM proxies. Future research may wish to follow several alternative methods widely used in the literature.

Table 3.8: Investor Protection, Trust, Macro Factors, and Market Correlation Table

Country	Minority Investor Rights	Legal Enforcement	Disclosure Index	Analyst Following	Societal Trust	GDP Change (%)	GPD per capita	Inflation change (%)	Trade Openness	Big 4 Ratio %	Correlation to US Markets	Correlation to EU Markets
Argentina	6.0	3.3	7	2.0	4.1	2.5	9,455	14.4	33.1	40.1	0.30	0.40
Bahrain	4.8	6.0	8	5.5	6.9	4.6	22,649	2.0	149.4	0.5	0.15	0.16
Bangladesh	5.3	4.1	6	0.0	4.8	3.6	734	7.2	37.8	13.7	-0.05	-0.19
Bulgaria	7.2	5.1	10	13.3	5.1	3.3	6,306	3.5	115.9	63.2	0.15	0.15
Croatia	6.5	5.6	3	4.5	3.9	1.4	13,535	1.9	85.9	95.8	0.36	0.25
Estonia	5.5	7.9	8	0.6	8.1	3.2	15,267	3.2	145.4	36.9	0.18	0.33
Jordan	3.7	5.5	4	4.9	2.6	4.5	3,353	3.7	120.6	38.2	0.18	0.09
Kazakhstan	6.7	4.0	9	11.8	7.7	5.6	7,907	8.5	75.9	78.1	0.40	0.30
Kenya	4.7	3.9	3	0.6	2.0	4.8	956	9.7	53.4	59.3	0.33	0.30
Kuwait	5.7	4.8	4	1.6	6.2	3.7	40,167	3.8	94.0	98.9	0.31	0.30
Lebanon	4.3	3.6	9	0.3	3.0	4.2	7,339	2.4	85.1	100	-	-
Lithuania	6.2	6.7	7	0.5	5.3	3.7	12,156	2.6	133.8	87.0	0.20	0.28
Mauritius	6.5	6.6	6	11.7	0.0	4.0	7,610	4.2	112.6	68.8	0.20	0.09
Morocco	5.0	4.8	6	0.6	4.8	4.3	2,720	1.6	74.4	37.1	-	-
Nigeria	6.8	2.9	7	1.0	1.6	5.8	2,043	11.7	47.0	26.5	0.22	0.15
Oman	4.3	6.0	8	1.4	3.8	3.6	17,946	2.6	94.5	47.2	0.30	0.07
Pakistan	6.7	3.5	6	1.2	3.9	4.3	990	8.3	31.4	93.3	0.23	0.26
Romania	5.8	5.4	9	4.2	0.0	3.8	7,858	7.3	76.3	30.6	0.53	0.28
Slovenia	7.5	6.6	5	4.7	3.9	1.9	22,574	2.4	131.4	28.0	0.33	0.35
Sri Lanka	6.0	4.6	6	2.4	0.0	5.8	2,719	8.2	57.7	57.6	0.20	0.15
Tunisia	5.0	4.6	4	1.0	3.4	3.1	3,799	3.9	98.1	17.0	0.01	-0.11
Vietnam	4.5	4.1	7	1.7	3.9	6.2	1,204	7.8	161.9	18.9	0.36	0.24
Average	5.7	5	6.3	3.3	3.8	3.9	9,317	5.6	91.4	50.6	0.24	0.20
Median	5.7	4.8	6.0	1.6	3.9	3.8	7,339	3.9	85.9	40.1	0.22	0.25
Std. Dev	1.0	1.3	2.0	3.9	2.2	1.2	9,449	3.5	38.1	30.1	0.13	0.16

Country mean data for 2000 - 2017. *Strength of Investor Protection* Data scaled 0-10, with higher numbers indicating greater investor protection. Source: World Economic Forum's Global Competitiveness Index. *Legal Enforcement*: mean of the following 3 variables: (1) judicial system efficiency, (2) assessment of the rule of law, and (3) corruption index (re-scaled from 0 - 10). Source: Items 1 - 2: World Bank's Worldwide Governance Indicators. Item 3: Transparency International *Disclosure Requirements*. Data scaled from 0-10. Source: World Bank's Extent of Business Disclosure Index. *Minority Investor Rights* Source: World Economic Forum's Global Corruption Index on 'Strength of Investor Protection'. *Analyst Following* is the number of analysts following per firm-year per country. Source: Datastream *Societal Trust* data scaled from 0-10. Source: World Values Survey *GDP Per Capita* in constant USD in 2005. Source: World Bank *Big4 Ratio* is the percentage of firms that employ a Big4 auditor firm. Source: Thomson Reuters. *Correlation with USA and Europe* is the mean of a rolling 48-month end of month close of each market's major indices. Data are for the years 2014 to 2017. Source: Investment Frontier. Reimann (2000)

Table 3.9: Country and Firm Variable Description

Variable	Description
<i>Firm-level Variables</i>	
Assets	Long-term assets and items of both current and non-current assets)
Accounts Receivables	Gross receivables less allowance for doubtful accounts
Revenue	Revenues from the sale of merchandise goods, manufactured products and services,
Property Plant & Equipment	Property/Plant/Equipment, Total items assumed to be used for operations
Return on Assets	Measure of management's effectiveness in using assets to generate earnings. Generally obtained using Ordinary Profit , divided by Total Assets
Trade Receivables	Trade Receivables, receivables from the sale of merchandise or services provided to affiliates or other related companies
Expense	Selling/General/Administrative Expense, the operating costs of running a business other than the costs of readying products or services for sale
Trade payables	Trade Payable, payables for the receipt of merchandise or services provided to affiliates or other related companies
Pension	Pension, all incomes and expenses associated with the company's pension plan.
Current assets	Total Current Assets, the sum of Cash and Short Term Investment, Total Receivables, Net Total Inventory, Prepaid Expenses, and Other Current Assets,
Cash	Cash and cash equivalent
Current Liabilities	Total Current Liabilities, liabilities incurred from operating activities and expected to be due within one year.
Short term debt	Short-Term Debt, short-term bank borrowings. It also represents notes payable that are issued to suppliers and other short-term interest-bearing liabilities
Taxes payable	Taxes Payable, represents changes in taxes payable during the period.
Depreciation	Depreciation and amortisation
Accruals	Accruals, measured as the change in current assets minus the change in current liabilities minus depreciation expense as per Dechow et al. (1995)
Cash flow from operations	Cash From Operating Activities
<i>Firm Control Variable</i>	
Analyst Following	Calculated as the natural log plus one of the number of analysts following a stock. Source: Thomson Reuters Datastream
Book to market ratio	Calculated as the quotient of the book value of equity by the market value of equity
Leverage	Calculated as the quotient of total assets by total liabilities
Size	Calculated as the natural logarithm of the market value of equity
Year Dummies	Year Dummy variables for each year in the study
Industry Dummies	Industry dummy variables for each industry in the study
<i>Country-Level Variables</i>	
Legal Enforcement	Source: WDI's Governance Indicators and Transparency International
Disclosure Requirements	Source: WDI's Worldwide Extent of Business Disclosure Index.
Minority Investors Rights	Source: World Economic Forum Global Corruption Index on the Strength of Investor Protection
Societal Trust	Source: World Values Survey
<i>Country Control Variables</i>	
Big-4	The percentage of firms that employ a Big4 auditing firm
IFRS adoption	A dichotomous variable of 1 if the country has adopted IFRS, 0 otherwise. Source: IFRS.org
GDP per Capita	Log of GDP per capita (constant 2005 US\$). Source: WDI.
GDP growth rate	Rate of change in real GDP: Source
Trade openness	Trade openness 100(Exports + imports / GDP. Source: WDI

Chapter 4

The impact of financial statement comparability on earnings management: evidence from frontier markets

Abstract

This paper examines whether financial statement comparability association with opportunistic earnings management in frontier market countries. Using a large sample of 19 frontier market countries, and an accounting comparability method that maps comparability across several accounting standards, the results show that enhanced financial comparability is negatively associated accruals earnings management (AEM). Contrary to developed markets and novel to this study, a significant relationship between financial comparability and real earnings management (REM) was not found. For greater robustness, AEM and REM were also tested using both International Financial Reporting Standards (IFRS) adopting and non-adopting countries. The results suggest IFRS adoption reduces AEM, yet exhibited no impact on reducing REM. Additionally, the use of *BigN* auditors failed to conclusively show an ability to moderate EM. When combined, the results suggest that frontier markets engage in less REM than expected. It is also noted that the legal roots (civil versus common law) play a significant role in hemming earnings management. Common law countries exhibited lower AEM when comparability increased; this significance was not found in countries that were rooted in civil law. Contributions from this study show that findings from developed markets cannot be generalised to frontier markets.

4.1 Introduction

Comparability in financial reporting enables investors to make sound financial decisions (Chauhan & Kumar 2019). From a regulatory perspective, comparability facilitates the proper interpretation of financial measures and the development of policy responses (Hasan et al. 2020, Nouy 2014). However, little is known regarding the linkages between financial statement comparability on earnings management (EM) in frontier markets—a market too small and generally less accessible to be considered an emerging market. As such, this study aims to explore the impact of financial statement comparability on EM in frontier market countries.

Comparability is a qualitative characteristic that allows users to identify and understand similarities and differences among accounting items (FASB 2010), as well as financial performance across firms (Kim, Li, Lu & Yu 2016). Greater accounting comparability enhances a firm's information quality, as rational investing and lending decisions require comparative information (Chen 2016). The enhanced firm information environment that stems from greater comparability leads to better decision making and, thus, the argument for comparability is particularly cogent. Gross & Perotti (2017) note that comparability is positively associated with analyst forecast accuracy and enhances the information environment. Accounting parallels should endure across firms, despite the discretionary flexibility afforded to managers under International Financial Reporting Standards (IFRS) (DeFond et al. 2011). It follows that firms having similar accruals quality, earnings predictability, earnings smoothness, and similar loss reporting will also exhibit greater comparability (De Franco et al. 2011).

Accruals earnings management (AEM) is the selection and interpretation of accounting policies from a set of acceptable policies to achieve earnings objectives⁶¹ (Zang 2011), and firms with greater financial statement comparability tend to engage in less of it (Kiya 2017, Sohn 2016). However, firms with greater comparability are also under greater public scrutiny, subject to closer monitoring, and under increased pressure to meet earnings targets. Consequently, such firms are expected to employ more real earnings management (REM) (Cohen et al. 2008, Braam et al. 2015), which are actions undertaken that alter the timing or structure of operations from normal business practices. Shen & Chih (2005) note that incentives to manage earnings vary across countries, yet if stakeholder's preference is universally consistent with prospect theory,⁶² then a

⁶¹Goodwill impairment or deferred tax assets and liabilities recognition are areas where interpretation may be applied.

⁶²Prospect theory suggests that individuals derive value from gains from a reference point, rather than absolute

manager has an incentive to manage earnings to accomplish the desired outcome.

Healy & Wahlen (1999) noted that future EM contributions would come from identifying factors that limit EM. As such, this study extends Sohn (2016)'s US-based study on the influences of financial statement comparability on EM into frontier markets using a broad cross-country sample. Novel to this study is the application of a model that maps the accounting comparability of a firm based on its economic performance, benchmarked using a counter-country model across a variety of accounting standards. Benchmarking allows for both a longitudinal perspective for a single firm and a cross-sectional perspective of multiple firms.

Following a systematic analysis of financial statements of 2,475 firms across 19 countries from 2001–2017, it was found that greater financial statement comparability results in lower AEM scores. This finding was in line with the study's hypothesis. However, it is argued that decreased AEM results in increased REM activity. For greater robustness, several additional statistical tests were performed on subsections of the data. Robustness test reveal that common law countries were less apt to engage in AEM, and that firms change their EM practices after IFRS adoption. The results underscore the uniqueness of frontier market countries and provide insights into EM methods applied therein. As a result, this study also provides information gains on which investors rely.

The remainder of this paper is organised as follows: Section 4.2 reviews the prior literature and develops the study's hypotheses. Section 4.3 explains the research design and describes the data. Section 4.4 presents and discusses the empirical results. Section 4.5 provides findings from additional sensitivity tests. Section 4.6 concludes with key observations, finding implications, and suggested directions for future research.

4.2 Related Research and Hypothesis Development

In this section, the literature on frontier markets, financial statement comparability, earnings management, and institutional settings are reviewed. These examined areas provide the framework for developing the study's working hypothesis.

levels (Tversky & Kahneman 1992).

4.2.1 Frontier Market Countries

The term frontier market is commonly used to describe smaller, economically immature countries with limited capitalisation (Cuervo Valledor et al. 2016). The homogeneity of the frontier market is its classification in having 'some' openness to foreign ownership, 'partial' ease of capital flow, and 'modest' operational efficiency (MSCI 2020). With an aggregate value that is slightly more than USD 100 billion,⁶³ frontier markets account for less than 0.3 per cent of global developed markets, but more than 20 per cent of the global population (Stereńczak et al. 2020). Frontier markets exhibit a low correlation (0.395) with developed markets,⁶⁴ and also a low correlation among other frontier markets (Gregoriou & Wu 2016). The integration of frontier markets with global markets remains low (Blackburn & Cakici 2017b, Zaremba & Maydybura 2019), as cross-listing of companies from developed and emerging markets in frontier settings is atypical. In examining the ownership concentration in a frontier market, Tran & Le (2020), Darmadi (2016) note that frontier equity markets are characterised by high ownership concentration and weak investor protection, unlike the more dispersed ownership form that is commonly found in developed markets. Because diversification into frontier markets can ameliorate portfolio risk (Thomas et al. 2017, Ali et al. 2020), investors and researchers alike can be better informed of company performance and management activity via financial statement comparability.

4.2.2 Comparability

Financial disclosure is at the forefront of the international standard setter's agenda and it occurs when firms with similar economic outcomes report similar accounting outcomes (Gross & Perotti 2017). The international standardisation of accounting standards,⁶⁵ has led to higher financial comparability. Lemma et al. (2018) find that firms in less competitive industries appear to engage in higher levels of EM as a consequence of weakly disciplined environments. DeFond et al. (2011) found that increased comparability occurs following IFRS adoption, as it contributed to reduced information acquisition costs and improved forecast accuracy. Young & Zeng (2015), Gross & Perotti (2017) find greater evaluation accuracy to be a benefit from greater comparability.

Findings in several prior studies provide evidence that is consistent with the view that com-

⁶³Based on the MSCI Frontier Market Index companies.

⁶⁴Based on weekly data of MSCI Frontier Market and MSCI Developed market index from 2015 to 2020. Source Thomson Datastream.

⁶⁵As evidenced by the EU members requirement to adopt IFRS, and the United States, Japan, and China, the choice to converge with IFRS (Lin et al. 2019)

comparability increases transparency. Healy & Palepu (2001) found that, on average, firms with enhanced transparency experience fewer issues with mutual agency, and they were less likely to undertake opportunistic EM. Improved firm transparency and manager forthrightness has also been associated with comparability (Zhang 2018). De Franco et al. (2015) find that analysts are more likely to use the same industry sector benchmarks for comparability as comparability between peer groups increases. Barth et al. (2012) state that the comparability effects are stronger when IFRS adoption is mandatory, and when the firms are operating in common law countries. Hail et al. (2010) found that increased comparability (due to IFRS harmonisation) resulted in increased market liquidity and reduced capital costs. Greater comparability among firms is also associated with lower bond spreads (Kim et al. 2013), and it is inversely associated with crash risk (Kim, Li, Lu & Yu 2016). Bond-rating agencies provide fewer divergent ratings for firms when firm financial comparability increases (Kim et al. 2013). Firms with greater comparability were less likely to have overly favourable earnings surprises or issue overvalued equity (Shane et al. 2014). Greater comparability was also found to decrease the size and volatility of related-party transactions (Lee et al. 2016), increase the ability of firms to make acquisition decisions and reduce post-acquisition goodwill impairments (Chen, Collins, Kravet & Mergenthaler 2018).

The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) both list comparability as a desirable property (Framework 2018). Because the comparability concept is neither an absolute nor independent trait (Sohn 2016), a mismatch between financial reports from different countries create difficulties in performing empirical tests for comparability.

Comparability's value lies in its cost-effectiveness and simplification of cross-firm comparisons (Sohn 2016). Recognising comparability's value, accounting bodies⁶⁶ seek greater comparability in financial reports, as noted by the 2002 Norwalk Agreement on developing common standards (Hughes & Larson 2017). The subjective interpretation of accounting standards between managers may be common (Bartov et al. 2002), and it further underscores comparability's importance. Standards are particularly important in less developed markets, where attenuated analyst coverage results in more laborious firm comparability.

⁶⁶Financial Accounting and Standards Board (FASB), and the International Accounting Standards Board (IASB).

4.2.3 Earnings Management

Because firms compete globally for capital, those with superior resources enjoy advantages over rivals (Clemons 2019). To secure advantages,⁶⁷ firms may opportunistically manage earnings to uphold or exceed earnings targets. Howard et al. (2019) note that headline earnings may not be a true representation of performance as earnings may have been managed. While EM may or may not in itself be opportunistic, firms in less developed markets have been found to manage earnings to a greater degree than those in developed economies (Li et al. 2011, 2014). To manage earnings, a firm can employ multiple EM strategies, *i.e.* AEM and REM.

4.2.3.1 Accruals Earnings Management

The accrual component of earnings is increasingly viewed as a proxy for firm performance.⁶⁸ The reversing nature of accruals limits a manager's ability to make misleading estimates during one period and once again in subsequent periods (Abarbanell & Lehavy 2003). Despite inherent limitations, a manager may still engage in opportunistic AEM. Studies on the factors that constrain AEM are prodigious (see Barth (2008), DeFond et al. (2011), Francis et al. (2014), Sohn (2016), Dechow et al. (2010)), yet literature linking comparability's usefulness in curtailing EM in frontier markets is sparse.

4.2.3.2 Real Earnings Management

REM provides managers with an alternative method of EM via actual business activities manipulation (Roychowdhury 2006). REM may arise through the manipulation of cash flow, production, or discretionary expenses (Roychowdhury 2006, Braam et al. 2015) and is not without costs. As a risk-increasing factor, REM requires higher bond premiums (Ge & Kim 2014), negatively impacts the corporate image (Rodriguez-Ariza et al. 2016), adversely affects future firm financial performance (Tabassum et al. 2015), and it is positively associated and more pronounced in countries with greater political stability (Lemma et al. 2019). Because REM masks true financial performance, financial transparency is diminished (Sohn 2016).

⁶⁷ Advantages may be market share dominance and or profitability above the industry average.

⁶⁸ As opposed to earnings composed of cash.

4.2.4 Institutional Factors

Institutional factors have shown the ability to constrain EM in mixed market studies (Ruddock et al. 2006, Salehi et al. 2018). The country-specific institutional factors of external audit quality shape the reporting environment. Accordingly, this study will also examine this effect in relation to EM.

4.2.4.1 External Audit Quality

External audit plays an influential role in diminishing information asymmetry among managers and companies' stakeholders; asymmetry is often rooted in agency problems. An auditor can be considered to be an agent and, thus, expected to take action where financial reports are morally hazardous (Alzoubi 2016). Through the verification of financial statement reliability and fairness, audits enhance financial information quality and mitigates EM (Khanh & Nguyen 2018). Prior research has also shown an association between audit quality and EM (Ebraheem Saleem 2019, Becker et al. 1998, Ghosh 2007, Ghosh & Moon 2005, Gul et al. 2009) and that firms that employ a high-quality auditor, experience lower levels of EM (Houqe et al. 2017, Francis & Wang 2008). Further, studies show that the manipulation of financial results (such as accruals) reduces when the auditor is independent, or the audit company is large (see Krishnan (2003b), Becker et al. (1998), Rusmin (2010), Sohn (2016)). Additionally, the clients of *BigN* audit firms exhibit increased comparability of reported earnings (Francis et al. 2014, Kawada 2014).

Based on the above discussion, the following hypothesis is formalised as H1:

Hypothesis 1 (H1): *Firms audited by high-quality auditors (BigN) are associated with lower earnings management activity*

4.2.5 AEM and REM Trade-Off Decisions

Because EM approaches are not without costs, managers interchange EM methods as a function of their respective costs (Cohen & Zarowin 2010, Zang 2011, Abernathy et al. 2014). The costlier and greater constraints to an EM strategy, the greater the likelihood a firm will engage in an alternative. REM constraints include increased tax rates, poor financial conditions, and lower industry market share (Joosten 2012). Constraints on AEM include the engagement of a large auditor with longer firm tenure, lower accounting flexibility, and the presence of an audit committee (Ebraheem Saleem 2019).

To gain the greatest financial reporting benefit, managers may employ a coordinated approach (complementary AEM and REM). Research shows that managers complement AEM and REM in nations with a relatively low accounting disclosure environment, weaker investment protection regulations, and low litigation costs (Knapp 1991, Gramling & Myers 2003, Chen et al. 2010, Zhou et al. 2017). Firms tend to substitute AEM with REM strategies under more stringent regulatory environments (Ewert & Wagenhofer 2005), or when AEM becomes a more costly proposition (Cohen et al. 2008, Cohen & Zarowin 2010, Durnev et al. 2017). Taken together, the above results suggest that managers often consider the cost of different EM methods before engaging in them.

As comparability brings about transparency, AEM is lower in firms with transparent disclosures (Hail et al. 2010, Cassell et al. 2015). Moreover, as comparability reduces information asymmetry between managers and shareholders, it is expected that AEM constraints will result in increased reliance on REM for opportunistic accounting.

By enabling firm comparisons across countries and accounting standards,⁶⁹ this study predicts that REM will increase as AEM decreases. Accordingly, it is expected that greater cross-border firm comparability will restrict a manager's ability to manipulate reported accounting performance when using AEM. Greater comparability allows outsiders increased access to performance information on other firms, allowing for better true performance evaluation. However, increased transparency does not necessarily allow for greater visibility of REM activities and, thus, REM is expected to increase.

Prior studies provide an understanding on how comparability improves the utilisation of accounting information (e.g., Bradshaw et al. (2009), Lang et al. (2010), Yu & Wahid (2014), Zhang (2018), Chircop et al. (2020)), yet the linkages between comparability and EM have not been widely examined. This study is motivated by the limited published research on the relationship between financial reporting comparability, EM, and frontier markets.

Based on the above discussions on the current literature, the following hypotheses are formalised as H2 and H3:

Hypothesis 2 (H2): *Increased comparability is associated with decreased accruals earnings management.*

⁶⁹Whether it is local accounting standards, International Financial Reporting Standards (IFRS), or Generally Accepted Accounting Principles GAAP).

Hypothesis 3 (H3): *Decreased accruals earnings management is associated with increased real earnings management.*

4.3 Research Design

4.3.1 Comparability Measures

In financial accounting literature, De Franco et al. (2011)'s comparability research can be seen to be the most influential. De Franco et al. (2011)'s comparability method uses time-series regression of quarterly earnings onto stock returns to capture within-industry comparability, yet focuses exclusively on US data without regard to accounting standards. Barth et al. (2012) modified this measure to assess firms using US GAAP and IFRS accounting systems within a cross-sectional industry setting.

Given the limited availability of quarterly financial data for frontier market companies and the various accounting standards that companies may employ, this study applies Conaway (2017)'s adaption of De Franco et al. (2011) and Barth et al. (2012)'s comparability method. This model provides a more comprehensive comparability measure, since firms may produce multiple counter-samples that are based on country-industry specific factors, despite having distinct accounting systems. The five steps to compute the comparability measure follow.

Step one uses all available firm data. A relationship estimate is calculated between economic outcomes and earnings within each country-industry-year. Each country-industry-year must include a minimum of 10 firms. Step one is formulated as per Equation (4.15)

$$\begin{aligned}
 RET_{it}^{Cj} = & \beta_{0,t}^{Cj} + \beta_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \beta_{3,t}^{Cj} Loss_{it} \\
 & + \beta_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{5,t}^{Cj} Loss_{it} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \varepsilon_{it}
 \end{aligned} \tag{4.15}$$

where superscript Cj denotes the pricing multiples relating to the accounting system for country C in industry j ; and therefore, each β varies across each country-industry-year in the sample. Δ is the change agent. NI is the net income before extraordinary items per share. Firm and year-end are denoted as i and t , respectively. P is the share price and RET is the buy-and-hold stock return beginning nine months before and ending three months after year-end. $Loss$ is an

indicator variable that is equal to 1 if NI is negative and zero otherwise, allowing the accounting system models to differ for loss-making firms. All of the variables are measured in nominal US dollars.

Step two estimates a firm's fitted stock return while using the country model, as expressed by Equation (4.16).

$$\begin{aligned}\widehat{RET}_{i,t}^{Cj,Cj} = & \widehat{\beta}_{0,t}^{Cj} + \widehat{\beta}_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{3,t}^{Cj} Loss_{it} \\ & + \widehat{\beta}_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{5,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \epsilon_{it}\end{aligned}\quad (4.16)$$

Step three calculates the fitted stock return under each counter-sample model for each firm⁷⁰, as expressed by Equation (4.17).

$$\begin{aligned}\widehat{RET}_{i,t}^{Cj,Cj^n} = & \widehat{\beta}^{Cj^n} + \widehat{\beta}_{1,t}^{Cj^n} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{2,t}^{Cj^n} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{3,t}^{Cj^n} Loss_{it} \\ & + \widehat{\beta}_{4,t}^{Cj^n} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{5,t}^{Cj^n} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \epsilon_{it}\end{aligned}\quad (4.17)$$

Step four calculates the absolute value of the difference between the within-sample and counter-sample fitted stock prices for each firm. This is represented by $DIFF$, as expressed by Equation (4.18).

$$DIFF_{i,t}^{Cj,Cj^n} = \left| \widehat{RET}_{i,t}^{Cj,Cj} - \widehat{RET}_{i,t}^{Cj,Cj^n} \right| \quad (4.18)$$

Step five calculates the median absolute difference between the within-sample and counter-samples' fitted stock prices multiplied by the negative natural log. The resultant value represents the firm's comparability measure with those of the counter-sample. The greater the score, the greater the comparability. Equation (4.19) expresses this quantity.

$$CompScore_{i_t} = -\ln[Median(DIFF_{i,t}^{Cj,Cj^n})] \quad (4.19)$$

⁷⁰ A minimum of two countries with sufficient firms in each industry-year is required.

Note that firms i and k are from different countries, but share the same two-digit SIC industry code. Thus *CompScore* has been estimated using time-series regression and captures accounting comparability between two firms across countries. Figure 4.7 illustrates the comparison method.

4.3.2 Accruals Manipulation

With respect to studies that examine discretionary accruals via commonly used proxies of (Jones 1991) and Dechow et al. (1995)), Kothari (2005) states that these methods are mis-specified when samples are applied to extreme performance. Given the wide-ranging returns of the firms, this study applies Leuz et al. (2003)'s AEM method and calculates a composite measure of AEM to indicate the extent of earnings management via accruals. The method of calculating accruals is shown as per Equation (4.20)

$$\text{Accruals} = (\Delta CA - \Delta \text{Cash}) - (\Delta CL - \Delta STD - \Delta TP) - \text{Dep} \quad (4.20)$$

where CA is total current asset. $Cash$ is cash/cash equivalents; CL is total current liabilities; STD is short term debt; TP is taxes payable; and, Dep is depreciation and amortisation expense.

The three measures of AEM are introduced as per Equations (4.21)–(4.23)

$$AEM1 = \frac{\sigma(EBIT)}{\sigma(CFO)} \quad (4.21)$$

where $AEM1$ is the ratio of the standard deviation of earnings before interest and tax to standard deviation of net operating cash flow. The smaller the $AEM1$, the greater the likelihood a manager uses accruals to artificially reduce the operating cash flow variation.

$$AEM2 = \rho(\Delta Acc, \Delta CFO) \quad (4.22)$$

where $AEM2$ is the Spearman correlation between changes in accruals and changes in net operating cash flow. Operating cash flow is the result of operating earnings minus accruals.

$$AEM3 = \frac{|\text{Acc}|}{|\text{CFO}|} \quad (4.23)$$

where $AEM3$ is the ratio of the absolute value of accruals to the net absolute value of operating cash flow. A firm-level composite of AEM is calculated by averaging the scaled firm rankings from each of the three individual AEM measures.

4.3.3 Real Activities Manipulation

The construction of the REM proxy follows prior research (Roychowdhury 2006, Cohen & Zarowin 2010, Zang 2011, Lin et al. 2016), and examines the degree to which firms manipulate real activities through three measures: abnormal cash flow from operations (CFO), abnormal production costs ($PROD$), and abnormal discretionary expenses ($DISX$). CFO manipulation arises as a result of accelerated sales while using aggressive price discounts or lenient credit terms. $DISX$ manipulation arises through the reduction of advertising, R&D, and SG&A expenses. $PROD$ manipulation results in a lower cost of goods sold ($COGS$) from overproduction to spread fixed costs over many units. They are estimated, respectively, by Equations (4.24)–(4.26). To determine a composite REM score, firm scores are ranked each year, such that a higher score equates with greater REM. The composite is repeated for each of the three measures, and the average firm scaled rank becomes the composite.

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{REV_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{\Delta REV_{it}}{A_{it-1}} \right) + \varepsilon_{it} \quad (4.24)$$

$$\frac{DISX_{it}}{A_{it-1}} = \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{REV_{it-1}}{A_{it-1}} \right) + \varepsilon_{it} \quad (4.25)$$

$$\frac{PROD_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left(\frac{REV_t}{A_{t-1}} \right) + \alpha_3 \left(\frac{\Delta REV_t}{A_{t-1}} \right) + \alpha_4 \left(\frac{\Delta REV_{t-1}}{A_{t-1}} \right) + \varepsilon \quad (4.26)$$

where REV represents sales revenue; $DISX$ is the sum of R&D, advertising, and SG&A activity; and, $PROD$ is the aggregate of the $COGS$ and changes in inventory during the year.

4.3.4 Regression Specification

This section describes the empirical model that analyses the effects of comparability on EM. This study follows Sohn (2016) while using the mean value of the firm-pair comparability scores as the firm-specific financial statement comparability measure for target firm i 's. This measure captures target firm i 's financial statement comparability relative to its peers with the same

2-digit SIC code, which is more likely to be the broad benchmark sample of comparable firms used by acquisition analysts to compare and contrast a potential target's accounting information. Equation (4.27) presents the regression that was constructed to test Hypotheses H1 - H3:

$$\begin{aligned}
 AEM_{it}, REM_{it} = & \alpha_0 + \alpha_1 CompScore_{it} + \alpha_2 Size_{it} + \alpha_3 BM_{it} + \alpha_4 ROA_{it} + \alpha_5 |ROA_{it}| + \\
 & \alpha_6 LEV_{it} + \alpha_7 OPERCYCLE + \alpha_8 SD_Sales_{it} + \alpha_9 CFOA_{it} + \alpha_{10} |CFOA_{it}| + \alpha_{11} RET_{it} + \\
 & \alpha_{12} ANALY_{it} + \alpha_{13} LOSS_{it} + \alpha_{14} BIG_N_{it} + \sum_i \gamma_1 IND + \sum_i \gamma_1 YEAR_t + \varepsilon_{it}
 \end{aligned}
 \tag{4.27}$$

where AEM_{it} and REM_{it} are the accruals and real earnings management variables of firm i at time t , respectively. This study includes the following control variables routinely included in prior studies (Ashbaugh et al. 2003, Haw et al. 2004). These are firm size ($Size$), which is proportional to the natural logarithm of equity's market value, and book to market value (BM). Dechow et al. (1995) noted the importance of controlling for financial performance. Therefore, this study also includes Return on Assets (ROA), the absolute value of ROA ($|ROA|$), firm leverage ratio (LEV), operating cycle ($OPERCYCLE$), standard deviation of sales (SD_Sales), cash flow from operations scaled by total assets ($CFOA$), the absolute value of scaled CFO ($|CFOA|$), return (RET), and analyst following ($ANALY$). Dummy variables employed are: $LOSS$ if the company incurred a loss; and, BIG_N if the firm used a Big 4 (or Big 5 auditor). Dummy variables to control for industry and year effects, denoted as IND and $YEAR$, respectively, are also included.

4.4 Results

4.4.1 Study Sample, Data Sources, and Descriptive Statistics

Data were collected on all listed firms in all frontier countries from Datastream. Subsequently, financial and insurance firms were excluded from the sample due to their unique operating properties and regulations. Also removed were firms whose fiscal year-end is not March, June, September, or December, and those country/industries firms not meeting the minimum comparability requirement. Table 4.10 displays the firms from the 19 countries that remain after all eliminations. Panel A lists the number of included firms by year. Panel B lists firms and observations by country, while Panel C provides industry data and two-digit SIC codes. The total consists of 2,475 firms in the 2001–2017 time frame, with a total of 27,549 observations across 11 industries.

Table 4.10: Composition of Sample by Calendar Year By Country, and by Industry.

Panel A			Panel B				Panel C			
Sample by Calendar Year			Sample by Country of Listing				Sample by Industry			
Year	n	%	Country	n	Freq.	%	SIC	Industry	Freq.	%
2001	568.0	23.0	Argentina	92.0	692.0	2	13	Oil & Gas	1297	4.7
2002	90.0	3.6	Bangladesh	25.0	1286.0	7	20	Food Products	1825	6.6
2003	122.0	4.9	Bulgaria	235.0	2488.0	8.7	24	Paper and paper products	2926	10.6
2004	48.0	1.9	Croatia	305.0	1033.0	3.9	28	Chemical Products	1280	4.7
2005	67.0	2.7	Jordan	134.0	1489.0	4.4	30	Manufacturing	13,413	48.7
2006	124.0	5.0	Kazakhstan	15.0	174.0	1.5	37	Transportation	314	1.1
2007	290.0	11.7	Kenya	150.0	166.0	0.4	46	Scientific instruments	181	0.7
2008	395.0	16.0	Kuwait	91.0	1229.0	3.9	48	Communications	1080	3.9
2009	180.0	7.3	Mauritius	38.0	387.0	1.5	50	Durable goods	1248	4.5
2010	101.0	4.1	Morocco	143.0	281.0	0.9	58	Eating and drinking establishments	3883	14.1
2011	135.0	5.5	Nigeria	5.0	1221.0	3.7	80	Health	102	0.4
2012	76.0	3.1	Oman	18.0	940.0	2.6				
2013	54.0	2.2	Pakistan	82.0	3510.0	9.2				
2014	40.0	1.6	Romania	57.0	3241.0	11.9				
2015	53.0	2.1	Serbia	158.0	4221.0	18.7				
2016	81.0	3.3	Slovenia	92.0	115.0	0.4				
2017	51.0	2.1	Sri Lanka	271.0	2840.0	7.9				
			Tunisia	370.0	78.0	0.4				
			Vietnam	608.0	2158.0	11.1				
Total	2475	100	Total	2475	27,549	100	Total		27,549	100

Note: Where the firm-year accounting standard is known, the break down is as follows: IFRS 44.29%, US GAPP 0.03%, and local standard 55.68%. Argentina, Morocco, Pakistan, Tunisia, and Vietnam are non-IFRS adhering countries. The number of listed companies peaked in 2001, then again in 2008. After the "Dot.com" market crash in 2001 and the Global Financial Crisis of 2008, many companies were voluntarily delisted, through bankruptcy, or failed to meet the listing requirements.

Table 4.11 reports the descriptive statistics for key variables in the study. The mean and median value for the comparison score *CompScore*, respectively, is 0.632 and 0.394, with a standard deviation of 1.116. These values are in line with Conaway (2017), and they suggest that the comparison scores are reasonably distributed. The mean values for *AEM* for REM are 0.089 and 0.247, respectively, and they are largely consistent with those reported by Sohn (2016) and Cohen et al. (2008). The large standard deviations for *AEM* and REM (0.110 and 0.341, respectively), are indications of *AEM* and REM practices that vary widely.

The mean annual stock return (*RET*) for the sample exhibits considerable variation with a mean of −98.89 per cent and a median of 0. This variation persists, despite winsorisation of the data at 1 per cent in the tails, indicating that outliers remain. The quartile descriptive values for *RET* are more normally distributed at −9.07 and 8.99, for quartile one and quartile three, respectively.

The mean value for control variables shows similarities and divergence from Sohn (2016)'s US-based. The mean values showing similarities are *ROA*, *LEV*, and *Analyst*, with the following respective scores: 0.045, 0.482, and 1.77, respectively. Variables that show divergence are *BigN*, *Size*, and *BM* with the following respective scores: 0.328, 16.762, and 2.451. *BigN* and *Size* are lower, while the mean *BM* value is higher.

Table 4.11: Descriptive Statistics.

	AEM	REM	CompScore	Size	BM	ROA	ROA	LEV	OpCycle	CFOA	CFOA	RET	Analyst	BigN
Mean	0.089	0.247	0.632	16.762	2.452	0.045	0.085	0.482	58834	0.046	0.105	-98.89	1.777	0.328
Std. Dev	0.110	0.341	1.116	2.145	24.259	0.262	0.252	0.428	1416160	0.527	0.519	21784	1.086	0.506
Q1	0.023	0.057	0.142	15.478	0.520	0.000	0.018	0.246	2649	-0.005	0.020	-9.068	0.941	0.000
Median	0.055	0.145	0.394	16.748	1.005	0.029	0.049	0.455	4895	0.033	0.061	0.000	1.279	0.000
Q3	0.115	0.306	1.637	18.193	1.849	0.082	0.103	0.661	10281	0.106	0.129	8.991	2.660	1.000

Note: Q1 is the first quartile, Q3 is the third quartile. Std.Dev. is standard deviation.

Table 4.12 presents the results of the pairwise correlation between the main variables used in Equation (4.27). *CompScore* shows a significant positive correlation with *AEM* (Spearman coefficient of 0.041, Pearson coefficient of 0.015). When *CompScore* is compared with *REM*, the coefficient is negative (Pearson -0.0106, Spearman -0.011). The variables *Size*, *LEV*, *SD_Sales*, *Loss*, *RET*, and *BigN* auditors were all found to be significant and negatively correlated with *CompScore*. The number of analysts following was also significant, yet it exhibited a positive correlation with firm comparison scores. The significance scores point to the appropriateness of the variables for continued use in the following analysis.

Table 4.12: Pairwise Correlation Matrix

	AEM	REM	CompScore	SIZE	BM	ROA	LEV	OpCycle	SD_Sales	CFOA	RET	Analyst	Loss	Big4
AEM	1	0.292	0.041	0.053	0.029	0.324	-0.115	-0.085	-0.015	-0.556	0.035	-0.025	-0.205	-0.011
REM	0.222	1	-0.019	-0.095	0.072	-0.110	0.213	-0.070	0.111	-0.423	-0.045	-0.023	0.046	-0.027
CompScore	0.015	-0.011	1	-0.066	0.002	0.038	-0.091	-0.033	-0.098	-0.005	-0.023	0.367	-0.172	-0.254
SIZE	0.061	-0.041	-0.069	1	-0.406	0.383	0.012	0.129	0.606	0.297	0.145	-0.325	-0.207	0.164
BM	0.005	-0.002	-0.00214	-0.143	1	-0.261	-0.224	-0.131	-0.148	-0.200	-0.236	0.196	0.053	-0.065
ROA	0.259	0.015	0.005	0.131	-0.003	1	-0.191	0.177	0.203	0.437	0.225	-0.246	-0.518	0.087
LEV	-0.111	0.109	-0.073	-0.043	-0.043	-0.097	1	-0.0207	0.342	-0.057	-0.010	-0.207	0.082	0.032
OperCycle	0.008	0.002	-0.0109	0.006	0.000	0.006	0.000	1	0.108	0.244	0.075	-0.122	-0.055	0.075
SD_Sales	-0.022	0.0112	-0.092	0.284	-0.018	0.030	0.073	-0.00378	1	0.161	0.086	-0.323	-0.125	0.127
CFOA	-0.234	-0.145	-0.003	0.069	-0.004	-0.124	-0.0146	0.002	0.0153	1	0.128	-0.169	-0.201	0.093
RET	-0.004	0.008	-0.0102	0.028	-0.002	0.001	-0.002	-0.001	0.0015	0.0018	1	-0.061	-0.074	0.014
Analyst	-0.018	-0.003	0.475	-0.257	0.037	-0.047	-0.022	-0.0124	-0.067	-0.036	-0.0028	1	-0.003	-0.199
Loss	-0.250	0.004	-0.275	-0.301	-0.008	-0.273	0.151	-0.00838	-0.062	-0.047	0.0009	-0.113	1	0.061
Big4	-0.004	-0.022	-0.310	0.168	-0.018	0.013	0.017	-0.00840	0.066	0.020	0.00133	-0.271	0.121	1

Note: This table presents Pearson correlation in the bottom left and Spearman correlation in the top right.

Significance is identified at three levels: 0.05, 0.01, 0.001, by italics, bold-face, bold-faced italics, respectively.

4.4.2 Discussion of the Results

Prior studies commonly test EM linkages with comparability using pooled ordinary least squares (OLS) estimation. Table 4.13, presents the regression results of both AEM and REM variables, supplemented by four different methods: Pooled OLS, Fixed effects, Between effects, and Quantile regression.⁷¹ The application of the fixed effects models addresses some statistical concerns that are not addressed by an OLS estimation, such as controlling for any unobservable

⁷¹The Hausman test for fixed vs. random-effects models returns a chi-squared value of 51.87, which is significant at the 0.01% level, indicating that the fixed-effects model is appropriate.

firm-specific heterogeneities over time that is likely constant (Gerged et al. 2020, Glass et al. 2016). The random effects model varies from the fixed effects model in that intercepts based on cross-section vary randomly, instead of a fixed manner (Gujarati 2009). Quantile regression method is used to more fully understand the various relationships between financial comparability and EM with the additional benefit of mitigating problems, such as non-Gaussian error distribution and sensitivity to outliers (Barnes & Hughes 2002, Chi et al. 2020).

Consistent with prior OLS research (Frankel et al. 2002, Ashbaugh et al. 2003, Sohn 2016), *AEM* is negatively correlated with *CompScore*. This finding holds under all four tested models, which indicates that greater comparability decreases AEM. *LOSS* and *BigN* were also negative and significant, suggesting an inverse relationship with AEM engagement. Examination of *REM* finds a negative relationship with *Size*, *BigN*, and *Loss*, and a positive relationship with absolute *ROA* and *CFOA* variables. The results suggest larger firms, and those with greater leverage, are more likely to engage in REM. *LEV* exhibits a positive relationship with AEM and REM (consistent with Beatty & Weber (2003), Jelinek (2007)), which suggests that firms with higher leverage are associated with more EM.

Contrary to developed market studies, the book-to-market valuation metric (*BM*) correlated negatively with REM under the OLS, Between Effects, and Quantile estimation methods. The book portion of the BM ratio contains two components: retained earnings and contributed capital. Because contributed capital contains no predictive power, the variation rests in the retained earnings. The inverse relationship between retained earnings and a company's growth opportunities (Asgari et al. 2015) aligns with Li & Kuo (2017), in that firms with greater growth opportunities were less likely to manipulate earnings. The findings further support that managers manipulate earnings due to a lack of growth opportunities. *ROA*, which is a measure of resource efficiency, also diverged from the results found in developed market studies, as both AEM and REM correlated negatively with the performance measure. When combined, both firm performance measures of *BM* and *ROA* suggest that management may be transferring future gains to the present for improved reporting results at the expense of future performance.

4.4.3 The Endogeneity Issue

This study presupposes that accounting comparability is determined by factors outside of the firm's control. Managerial discretion, however, may raise concerns of a potential endogeneity

Table 4.13: Earnings Management Tested on Financial Comparability

	Pooled OLS		Fixed Effects		Between Effects		Quantile	
	AEM	REM	AEM	REM	AEM	REM	AEM	REM
CompScore	-0.002*** (-3.99)	0.002 (0.79)	-0.002* (-2.45)	0.002 (0.73)	-0.002* (-2.11)	0.007 (1.36)	-0.002* (-2.39)	0.003 (1.75)
Size	-0.003*** (-4.12)	-0.010*** (-3.64)	0.006** (2.62)	0.013* (2.00)	-0.004*** (-3.75)	-0.018** (-3.20)	-0.001 (-1.13)	-0.001 (-0.51)
BM	0.000 (0.54)	-0.001 (-0.97)	0.001** (2.91)	0.002* (2.42)	-0.000 (-0.15)	-0.007* (-2.32)	0.000 (0.80)	-0.001 (-1.03)
ROA	-0.253*** (-16.36)	-0.071 (-1.23)	-0.222*** (-13.05)	-0.048 (-0.95)	-0.329*** (-10.65)	-0.085 (-0.57)	-0.292*** (-17.42)	0.041 (1.08)
ROA	0.288*** (18.65)	0.172** (2.97)	0.257*** (15.00)	0.157** (3.06)	0.367*** (12.19)	0.110 (0.74)	0.334*** (19.91)	0.046 (1.21)
LEV	0.019*** (4.14)	0.130*** (7.62)	0.018* (2.16)	0.085*** (3.44)	0.010 (1.35)	0.085* (2.47)	0.015** (3.00)	0.074*** (6.62)
Big4	-0.028*** (-5.90)	-0.120*** (-7.04)	0.000 (0.00)	0.000 (0.00)	-0.023*** (-3.50)	-0.074* (-2.34)	-0.015** (-2.87)	-0.046*** (-4.10)
CFOA	0.054*** (9.29)	0.137*** (6.53)	0.055*** (8.29)	0.054** (2.86)	0.032* (2.33)	0.194** (3.05)	-0.233*** (-36.84)	0.009 (0.62)
CFOA	0.086*** (13.81)	0.192*** (8.53)	0.082*** (11.66)	0.100*** (4.96)	0.129*** (8.36)	0.332*** (4.64)	0.444*** (65.72)	0.595*** (40.28)
Loss	-0.026*** (-6.37)	-0.052*** (-3.42)	-0.021*** (-4.46)	-0.012 (-0.85)	-0.046*** (-5.75)	-0.101** (-2.66)	-0.016*** (-3.55)	-0.020* (-2.01)
RET	0.002** (2.94)	0.000 (0.24)	0.002* (2.30)	0.004 (1.19)	0.000 (0.21)	-0.003 (-0.56)	0.001 (1.46)	0.002 (1.10)
Intercept	3.232 (1.34)	-11.688 (-1.01)	-18.989 (-1.52)	-9.706 (-0.28)	14.687 (0.96)	-44.985 (-0.51)	-12.823 (-0.95)	-17.299 (-0.59)
Industry	Included	Included	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included	Included	Included
Observations	12026	11600	12026	11600	12026	11600	12026	11600
Adj R-sq	0.188	0.090	0.065	0.198	0.268	0.095	0.359	0.136

Note: Regression coefficient reported on the top line; t-statistic reported in parenthesis. Significance is identified at three levels: 0.05*, 0.01**, and 0.001***. The results are based on fixed effects data regression with standard errors corrected for firm-level clustering. Each column presents the results for a different dependent variable, whose name appears at the top of the respective columns. Year and industry are set the fixed effects

bias, as the application of AEM and REM is decided at the managerial level along with the degree of EM. Two additional tests were conducted to address a possible reverse casualty bias. The first test is a two-stage regression, whereby *CompScore* is first regressed on the control variables. Subsequently, the predicted comparison score ($\widehat{CompScore}$) is regressed on the EM variables. The second test incorporates a lagged variable of the comparison score. The test results provide additional insight into the robustness of the findings that are presented in Table 4.13.

Table 4.14 presents the results of the two-stage regression. Stage 1 of this regression follows Amato & Amato (2007) and Larcker & Rusticus (2010) to include the capital intensity ratio (*CapitalIntensity*) as an instrumental variable to capture exogenous variations in the comparability score. Control variables included in this test include standard deviation of Return on Assets (*SD_ROA*), *Size*, *BM*, *OperCycle*, *LEV*, and intangible intensity (*Intangible*). The regression results indicate that firm size, leverage, and capital intensity are significantly negatively correlated with *CompScore*. Regression coefficients are -0.021 , -0.324 , and -0.265 for size, leverage, and capital intensity. Stage 2 finds both EM values to be significant and positively correlated with the predicted firm comparison score, with a score of 0.158 and 0.838 for *AEM* and *REM*. These results differ from earlier findings and those of developed markets, which suggests that increased firm comparability fails to show a negative association with *AEM* or *REM*.

Table 4.14: Earnings Management Variables Regressed on Firm Comparison Score.

Stage 1			Stage 2	
Variable	CompScore	Variable	AEM	REM
EM		$\widehat{CompScore}$	0.158 ** (19.54)	0.838 *** (29.63)
Std_ROA	−0.189 (−1.89)	Std_ROA	−0.032 * (−2.25)	−0.073 (−1.48)
Size	−0.021 *** (−4.74)	Size	0.003 *** (4.47)	−0.005 * (−2.47)
BM	−0.001 (−1.57)	BM	0.000 (0.02)	0.000 (0.27)
OperCycle	0.008 (1.13)	OperCycle	−0.006 *** (−5.74)	−0.015 *** (−4.61)
LEV	−0.324 *** (−10.84)	LEV	0.139 *** (−9.88)	0.639 *** (12.03)
Intangible	−0.051 (−0.97)	Intangible	−0.010 (−1.34)	−0.028 (−0.87)
CapitalIntensity	−0.265 *** (−6.90)			
Intercept	2.085 *** (10.05)	Intercept	0.080 (1.77)	0.916 *** (6.18)
Industry Dummies	Included	Industry Dummies	Included	Included
N	10511	N	10847	10343
adj. R-sq	0.084	adj. R-sq	0.073	0.126

Note: Regression coefficient reported on the top line; t-statistic reported in parenthesis. Significance is identified at three levels: 0.05 *, 0.01 **, 0.001 ***. The results are based on fixed effects panel data regression with standard errors that are corrected for firm-level clustering. Each column presents the results for a different dependent variable, whose name appears at the top of the respective columns.

As stated above, a lag of the comparison score ($L.CompScore$) is introduced in order to test reverse casualty between comparability and AEM. The thought here is that AEM may be so pervasive that REM is not required. Table 4.15 presents the results of Equation (4.27) on the $L.CompScore$ variable. Consistent with earlier results, the comparability score is significant and it continues to be negative with AEM. REM remains insignificant and positive with the comparison score under all but the between effects method. The results again support earlier results in that AEM is inversely related to $CompScore$, $Size$, ROA , $Loss$, and $BigN$, and positively related to firm LEV , $CFOA$, and RET .

Table 4.15: Lag Comparison Score.

	Pooled OLS		Fixed Effects		Between Effects	
	AEM	REM	AEM	REM	AEM	REM
L.CompScore	−0.001 *	0.002	−0.000	0.002	−0.002	−0.002
	(−2.22)	(0.81)	(−0.62)	(1.15)	(−1.95)	(−0.36)
Size	−0.003 ***	−0.011 ***	0.005 *	0.011	−0.004 **	−0.019 ***
	(−3.76)	(−3.70)	(2.11)	(1.61)	(−3.15)	(−3.31)
BM	0.000	−0.001	0.001 *	0.002 *	0.000	−0.007 *
	(0.18)	(−1.00)	(2.05)	(2.17)	(0.08)	(−2.39)
ROA	−0.262 ***	−0.069	−0.223 ***	−0.041	−0.347 ***	−0.099
	(−16.57)	(−1.17)	(−12.55)	(−0.79)	(−11.70)	(−0.68)
IROAI	0.294 ***	0.171 **	0.254 ***	0.150 **	0.373 ***	0.129
	(18.55)	(2.89)	(14.24)	(2.86)	(12.90)	(0.91)
LEV	0.019 ***	0.123 ***	0.015	0.077 **	0.012	0.081 *
	(4.07)	(6.94)	(1.75)	(3.01)	(1.68)	(2.34)
BigN	−0.024 ***	−0.122 ***	0.000	0.000	−0.024 ***	−0.071 *
	(−5.06)	(−6.83)	(0.00)	(0.00)	(−3.61)	(−2.17)
CFOA	0.052 ***	0.139 ***	0.050 ***	0.050 *	0.043 **	0.188 **
	(8.55)	(6.20)	(7.11)	(2.43)	(3.18)	(2.94)
ICFOAI	0.083 ***	0.188 ***	0.076 ***	0.091 ***	0.134 ***	0.308 ***
	(12.66)	(7.87)	(10.17)	(4.20)	(8.88)	(4.34)
Loss	−0.025 ***	−0.051 **	−0.021 ***	−0.009	−0.041 ***	−0.109 **
	(−6.11)	(−3.22)	(−4.41)	(−0.64)	(−5.27)	(−2.88)
RET	0.002 **	−0.001	0.003 **	0.004	0.000	−0.004
	(2.95)	(−0.25)	(2.94)	(1.40)	(0.13)	(−0.92)
Intercept	21.991 **	4.645	−20.732	−16.935	1.979	198.921
	(3.06)	(0.14)	(−1.70)	(−0.48)	(0.04)	(0.62)
Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
N	10960	10718	10960	10718	10960	10718
Adj R-sq	0.179	0.338	0.103	0.237	0.276	0.292

Note: Regression coefficient reported on the top line; t-statistic reported in par entesis. Significance is identified at three levels: 0.05 *, 0.01 **, and 0.001 ***. Model 1 is Pooled OLS. Model 2 is fixed effects. Model 3 is between effects. Results are based on panel data regression with standard errors corrected for firm-level clustering. Each column presents the results for a different dependent variable, whose name appears at the top of the respective columns.

4.5 Sensitivity Tests

While the robustness checks above suggest that a firm's financial statement comparability is exogenous to its managers, this study also examines other concerns. Specifically examined are the individual REM measures, the impact of mandatory IFRS adoption in the European Union (EU), and the impact of a country's legal system (civil versus common law).

4.5.1 Individual REM Measures

The aggregated REM measure may distort standard errors by eliminating individual variation and creating misleading impressions with artificial clustering. Because a manager may rely on a combination of the three REM methods, Panel A in Table 4.16 illustrates the results of the

individual REM measures to increase the power of the test. However, the explanatory power of these tests is relatively low (adjusted coefficient of determination across industry-years is 0.141, 0.183, and 0.204 for *CFO*, *DISX*, and *ProdCosts*, respectively). The results from the individual REM proxies are also quantitatively similar when tested collectively. Abnormal discretionary expenses show weak significance (0.001) with *CompSore*. Therefore, the overall linkage between individual REM activity and a firm's comparability score is inconclusive.

4.5.2 Earnings Management to Avoid Reporting Diminished Earnings and Losses

Burgstahler & Dichev (1997) offer evidence for the strong incentive for firms to avoid reporting diminished earnings. As the amount of time reported earnings remains positive, the incentive to manipulate financial results increases. The researchers also found an unusually low frequency of small decreases in earnings and small losses. Beatty et al. (2002) suggest the existence of an asymmetric pattern of more small earnings increases than small earnings decreases, is attributable to EM. In examining diminished earnings and small increases, this study follows Gunny (2010) and define firms with small profits as those with net income (scaled by lagged total assets), in the interval between 0 and 0.01. Similarly, firms with small earnings increases are defined as those with an annual change in net income (scaled by total assets) greater than 0, but less than 0.01. Panel B in Table 4.16 reports the results of small profits and small increases. Contrary to the results that are reported in Table 4.13, *CompScore* is positively related to AEM and negatively with *REM*. For the small-profit firm subset, there is no significant relationship between *REM* and *CompScore*. The findings suggest that firms with small profits have a greater tendency to engage in AEM.⁷²

4.5.3 IFRS Adoption in Europe

In 2005, EU firms were obligated to report financial statements in compliance with IFRS (Giner & Rees 2005).⁷³ Cross-country transparency, greater comparability (Barth et al. 2012), and reduced EM pervasiveness were the reported improvements due to the shared global financial reporting language. Cai & Wong (2010) found higher global capital markets integration after IFRS adoption. To evaluate the relative importance of cross-country accounting comparability,

⁷²Wooldridge test for autocorrelation in panel data finds an F-statistic of 1786.826, which is significant at the 0.01% level for the lag comparable score value. Breusch–Pagan/Cook–Weisberg test for heteroskedasticity score is 96.46, which is significant at the 0.01% level.

and EU IFRS adoption, EM between two periods of time were also examined. Years 2005–2006 (pre-IFRS adoption in the EU) and 2007–2009 (post-IFRS adoption). Table 4.16, Panel C, depicts both *AEM* and *REM* decreasing post-IFRS adoption, indicating that greater comparability after IFRS adoption is associated with decreased EM.

Table 4.16: Sensitivity Tests

	Panel A			Panel B				Panel C				Panel D			
	Individual REM proxies			Small Profit		Small Increase		2005 -2006		2007- 2009		Civil		Common	
	CFO	DISC	ProdCosts	AEM	REM	AEM	REM	AEM	REM	AEM	REM	AEM	REM	AEM	REM
CompScore	-0.000 (-0.65)	0.001* (2.47)	0.002 (0.90)	0.004* (1.98)	-0.007 (-0.83)	0.003 (1.01)	0.006 (0.50)	-0.001 (-0.87)	0.003 (0.85)	-0.007** (-2.75)	-0.003 (-0.34)	-0.001 (-0.89)	0.004 (1.10)	-0.007** (-2.88)	-0.005 (-0.55)
Size	0.006*** (3.39)	-0.002* (-2.29)	0.013* (2.06)	0.007 (1.44)	0.007 (0.34)	-0.017** (-3.13)	-0.007 (-0.30)	-0.003 (-0.85)	-0.015 (-1.16)	-0.005** (-2.68)	-0.010 (-1.56)	-0.004*** (-4.28)	-0.013*** (-3.65)	-0.005** (-2.76)	-0.012* (-1.97)
BM	0.001*** (3.51)	0.000 (0.19)	0.003** (3.20)	0.001 (1.67)	-0.000 (-0.18)	-0.001 (-1.73)	-0.004 (-0.81)	-0.001* (-2.04)	-0.001 (-0.70)	-0.001 (-0.47)	-0.009 (-1.76)	0.000 (0.84)	-0.001 (-0.89)	-0.001 (-0.45)	-0.011* (-2.08)
ROA	-0.020 (-1.43)	-0.016* (-1.97)	-0.016 (-0.33)	1.073 (1.24)	6.512 (1.96)	0.522 (1.75)	-2.841*** (-4.77)	-0.095 (-1.50)	-0.086 (-0.64)	-0.212*** (-6.59)	0.086 (0.86)	-0.245*** (-14.26)	0.038 (0.56)	-0.207*** (-6.48)	0.031 (0.28)
ROA	0.018 (1.27)	0.028*** (3.37)	0.140** (2.86)	0.000 (0.00)	0.000 (0.00)	-0.037 (-0.13)	3.382*** (6.79)	0.325*** (5.46)	-0.035 (-0.28)	0.319*** (9.91)	0.135 (1.33)	0.273*** (15.89)	0.070 (1.04)	0.315*** (9.84)	0.173 (1.56)
LEV	0.016* (2.27)	0.002 (0.60)	0.062** (2.62)	0.025 (1.06)	0.161 (1.56)	0.098*** (3.34)	0.073 (0.63)	0.022 (0.91)	0.077 (1.00)	-0.004 (-0.42)	0.156*** (4.28)	0.019*** (3.49)	0.135*** (6.38)	-0.004 (-0.35)	0.161*** (4.54)
Big4	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.032 (-1.59)	-0.003 (-0.04)	-0.026* (-2.18)	-0.135** (-3.11)	-0.060*** (-7.76)	-0.170*** (-5.88)	-0.026* (-2.25)	-0.118** (-3.00)
CFOA	0.213*** (39.13)	0.014*** (8.29)	-0.019 (-1.07)	-0.077* (-2.60)	-0.381** (-3.13)	-0.243*** (-9.50)	-0.477*** (-4.62)	-0.157** (-2.73)	-0.336* (-2.00)	-0.082*** (-5.15)	-0.086 (-1.71)	0.056*** (7.96)	0.103*** (3.95)	-0.083*** (-5.23)	-0.101 (-1.87)
CFOA	0.251*** (43.58)	0.019*** (10.43)	-0.018 (-0.92)	0.854*** (21.90)	0.937*** (5.76)	0.623*** (19.90)	0.479*** (3.77)	0.303*** (3.91)	0.892*** (4.98)	0.283*** (14.55)	0.562*** (9.13)	0.084*** (11.18)	0.143*** (5.15)	0.287*** (14.89)	0.626*** (9.39)
Loss	-0.002 (-0.47)	-0.006* (-2.57)	-0.008 (-0.56)	0.004 (0.12)	-0.174 (-1.19)	0.012 (0.66)	-0.125 (-1.80)	-0.026* (-1.97)	-0.115** (-2.80)	-0.020* (-2.12)	-0.004 (-0.12)	-0.022*** (-4.70)	-0.054** (-3.05)	-0.020* (-2.08)	-0.027 (-0.82)
RET	0.001 (0.90)	0.001* (2.48)	0.003 (0.91)	-0.002 (-0.87)	0.001 (0.13)	0.000 (0.15)	-0.011 (-1.34)	-0.000 (-0.30)	-0.002 (-0.25)	0.003* (2.34)	0.002 (0.51)	0.003*** (3.77)	0.005 (1.75)	0.003* (2.47)	0.004 (0.84)
Intercept	-7.463 (-0.73)	-1.062 (-0.18)	8.205 (0.25)	24.728 (1.18)	-130.239 (-1.54)	-46.596 (-1.90)	17.482 (0.18)	29.927 (1.58)	0.568* (2.42)	48.719* (2.36)	13.789 (0.22)	7.650 (1.59)	-22.001 (-1.15)	45.211* (2.18)	2.418 (0.03)
Industry	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
N	10960	10960	10960	1333	1308	1785	1760	1382	1238	2368	2322	2764	2476	2862	2757
Adj R-sq	0.141	0.183	0.204	0.026	0.097	0.073	0.132	0.392	0.104	0.103	0.34	0.179	0.086	0.454	0.153

¹ Regression coefficient reported on the top line; t-statistic reported in parenthesis. Significance is identified at three levels: 0.05*, 0.01**, 0.001***. The results are based on fixed effects panel data regression with standard errors corrected for firm-level clustering. Each column presents the results for a different dependent variable, whose name appears at the top of the respective columns. Civil law countries: Bahrain, Bangladesh, Kenya, Kuwait, Nigeria, and Pakistan. Common law countries: Argentina, Bulgaria, Croatia, Estonia, Jordan, Kazakhstan, Lebanon, Lithuania, Mauritius, Morocco, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, and Vietnam

4.5.4 Legal System

La Porta et al. (1997), Leuz et al. (2003) each find a robust negative correlation between ownership concentration and investor protection. A proxy for investor protection is a country's legal system, often classified as common law or civil law. Hutchison (2002) points out that a robust system of legal enforcement could substitute for weak regulations. Hung (2000) states that common law countries are likely to exhibit greater investor protection. La Porta et al. (1997) and Chin et al. (2009) demonstrate that countries that are governed by civil law systems provide investors with weaker legal rights relative to those governed by common law. In societies governed by common law, investors benefit from easier lawsuit opportunities (*e.g.*, class actions, contingent fees), which presents auditors with greater exposure to lawsuit risk and causes them to address this threat by adopting a more conservative attitude toward EM (Piot & Janin 2007, Becker et al. 1998, Kim et al. 2003). Research from Leuz et al. (2003) and Enomoto et al. (2015) has shown that strong minority investor rights limit insiders' ability to acquire private control benefits, as effective and well-functioning courts provide recourse for investors that are abused by management. Dayanandan et al. (2016) explain the presence of greater investor protection in common law countries by suggesting that common law countries possess stricter law enforcement and exhibit higher financial disclosure levels.

As strong investor protections in the marketplace should attenuate management opportunism (Hölmstrom 1979, Bao & Lewellyn 2017), Equation (4.17) is reexamined with a dichotomous variable for common and civil law countries to ascertain whether comparability and EM differ between the two legal systems. The results are reported in Panel D of Table 4.16. Both civil and common law countries show an inverse relationship between *AEM* and *CompScore*, with common law countries showing significance at the 0.01 per cent level. This finding is consistent with earlier findings. While not statistically significant, *REM* exhibits an inverse relationship with *CompScore* in common law countries. However, an endogenous link between corporate governance and the quality of the reported earnings is inconclusive from the single shareholder protection metric.

4.5.5 IFRS Adhering Countries

A portion of the countries in this study adopted IFRS, either voluntarily or as an EU membership requirement. It was estimated that the implementation of the standardised accounting systems

limits the level of EM. Accordingly, Equation (4.27) was retested on IFRS and non-IFRS adhering countries separately for 2007–2017. This time-frame is post EU IFRS adoption. *CompScore* was found to be both negative and significant in IFRS adhering countries. As shown in Table 4.17, the results support earlier findings that link greater comparability with reduced AEM, and that the use of IFRS increased comparability and reduced AEM activity. Conversely, REM was found to be both positive and not significant in IFRS and non-IFRS adhering countries. These findings add robustness to earlier findings, where greater comparability failed to reduce REM activity.

4.5.6 External Audit Quality

The findings within this study evince a notably different pattern of EM control exhibited by *BigN* than that found by Houque et al. (2017), Francis & Wang (2008). Examination shows *BigN* negative association with EM in regression estimations, save for fixed effects estimation in both the initial examination and when the lagged comparability score was tested. EM's negative association was also observed in the post-IFRS adoption time subsection (2007–2009). When examined on individual REM proxies, firms with small profits or small profit increases, or in the pre-IFRS adoption period of 2005–2006, this finding was not substantiated. Further, when separately examined on IFRS and non-IFRS adhering counties, the use of *BigN* audit firms failed to moderate both AEM and REM activity. This latter finding on *BigN*'s inability to moderate EM concurs with developing market studies from Kaawaase et al. (2016), Abid et al. (2018), Khanh & Nguyen (2018).

Table 4.17: IFRS and Non-IFRS Adhering Countries.

Variable	IFRS Only		No IFRS	
	AEM	REM	AEM	REM
CompScore	-0.005** (-3.13)	0.004 (0.96)	-0.004 (-1.22)	0.006 (0.52)
Size	-0.000 (-0.00)	0.006 (0.72)	-0.003 (-0.65)	0.004 (0.24)
BM	0.001 (1.81)	0.003* (2.48)	-0.003 (-1.36)	0.002 (0.17)
ROA	0.304*** (13.98)	0.093 (1.46)	0.054 (1.07)	0.600*** (3.31)
ROA	-0.275*** (-12.65)	0.018 (0.29)	-0.021 (-0.45)	-0.362* (-2.15)
LEV	0.009 (0.76)	0.059 (1.75)	-0.017 (-1.04)	0.176** (2.87)
BigN	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
CFOA	0.019*** (6.54)	0.033*** (3.83)	0.380*** (18.06)	0.391*** (5.06)
Loss	-0.027*** (-4.83)	0.011 (0.68)	0.007 (0.64)	-0.079 (-1.91)
RET	0.002 (1.91)	0.007 (1.84)	0.003 (1.25)	-0.002 (-0.27)
Intercept	-22.914 (-1.48)	3.998 (0.09)	-23.432 (-1.32)	-27.772 (-0.44)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
N	2957	2921	1812	1828
adj. R-sq	-0.085	-0.208	-0.054	-0.293

Note: Regression coefficient reported on the top line; t-statistic reported in parenthesis. Significance is identified at three levels: 0.05*, 0.01**, 0.001***. The results are based on fixed effects panel data regression with standard errors corrected for firm-level clustering. Each column presents the results for a different dependent variable, whose name appears at the top of the respective columns. IFRS adhering countries include: Bahrain Bulgaria, Croatia, Estonia, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Mauritius, Oman, Romania Serbia, Slovenia Sri Lanka, and Tunisia. Years from 2007 to 2017

4.6 Conclusions

The study examined 19 countries from 2001 to 2017 using a comparability technique that maps accounting comparability based on a firm's financial statements and its economic performance for cross-country sampling. Results of the study are robust after controlling for firm and country effects and employing several regression estimates. Overall study results contribute to the EM literature by showing the effects of increased comparability muted AEM activity, yet failed to influence REM activity. The departure of the second finding from the literature on developed markets casts

doubts on the pervasiveness of REM in frontier markets. Given REM's adverse impact on long-term profitability and competitive advantage (Cohen & Zarowin 2010, Wang & D'Souza 2006), managers in frontier markets may be more attuned to REM's costs and, consequently, engage in less of it. Theoretical arguments from the findings underscore the relationship between firm ownership and EM activity and contributes to enhanced agency theory understanding.

Results of the study also show that firms operating in common law environments were less apt to engage in AEM as comparability increases, suggesting that judicial systems influence EM activity. Additionally, the relationship between comparability and REM changes from positive to negative after IFRS adoption in the EU, yet this was not supported when IFRS and non-IFRS adhering countries were tested independently. Inference from this finding leads to the belief that the adoption of IFRS leads firms to alter their application of EM application choices. The trade-off of EM choices aligns with previous research from Ipino & Parbonetti (2017), Cohen et al. (2008), Cohen & Zarowin (2010).

Continuing, the inclusive results that were exhibited from *BigN* audit firms shows that the use of large audit firms fails to restrict EM conclusively, which suggests that a dichotomous variable for a measure of audit quality may be a poor proxy. The use of *BigN* auditors should, in itself, not be a representation of reporting quality and suggests that future studies consider the inclusion of auditor specialisation, independence, and audit option. The results further suggest the necessity of reviewing legal environments where litigation risk is greater, as an auditor's efforts to moderate EM may consequently be heightened.

In sum, the findings herein have several important implications for accounting standards-setting bodies, auditors, and investors. First, the findings provide useful insight into frontier market firms and their unique operating properties. The conduct divergence from that which is often found in developed markets suggests that values and norms differ and that findings from other markets may not be universally applicable. From this, future studies may seek to further frontier market EM activity with an examination of classification shifting as a substitute for AEM and REM. Second, capital markets require integrity in financial reporting. Convergence towards a single accounting system (*e.g.* IFRS) or harmonisation of existing systems is an aspiration, as noted by the increased comparability score when IFRS adhering countries are studied in isolation. Third, increased comparability facilitates transnational information transfer, the result of which is stimulated enterprise competitiveness.

This study is subject to the following limitations. First, due to the requirements of the comparability model, some countries may be over represented. As a result, larger countries may skew the comparability outcomes and overall results. Second, this study did not account for the political stability and political rights within the countries. The influence of political stability and rights may supplant the AEM and REM decisions. Third, the role of institutional investors may exert market discipline and mitigate EM activity. Future studies may consider controlling for political stability and political rights. Fourth, an examination of the settings around which IFRS adoption occurred is suggested. Christensen et al. (2013) identify substantive enforcement changes concurrent with IFRS adoption that make it difficult to isolate the effects of IFRS reporting.

Appendices

Table 4.18: Comparison statistics by industry

Industry Code	Industry	Mean	St	p25	Median	p75
13	Oil & Gas	0.675688	1.168768	-0.066618	0.482174	1.590968
20	Food Products	0.605875	1.110439	-0.19555	0.31896	1.63655
24	Paper and paper products	0.501877	0.942295	-0.143579	0.271035	1.148677
28	Chemical Products	0.579586	0.975116	-0.072821	0.305981	1.352917
30	Manufacturing	0.686949	1.040302	-0.074995	0.408874	1.63655
37	Transportation	0.535878	1.201013	-0.281128	0.403475	1.610309
46	Scientific instruments	0.541757	1.008466	-0.101431	0.227001	1.485157
48	Communications	0.94091	1.038662	0.103156	0.800769	1.945861
50	Durable goods	0.423259	0.944788	-0.194386	0.211982	0.904411
58	Eating and drinking establishments	0.747424	1.00025	-0.032264	0.437514	1.63655
80	Health	1.003957	1.182698	0.031	1.448939	1.94591

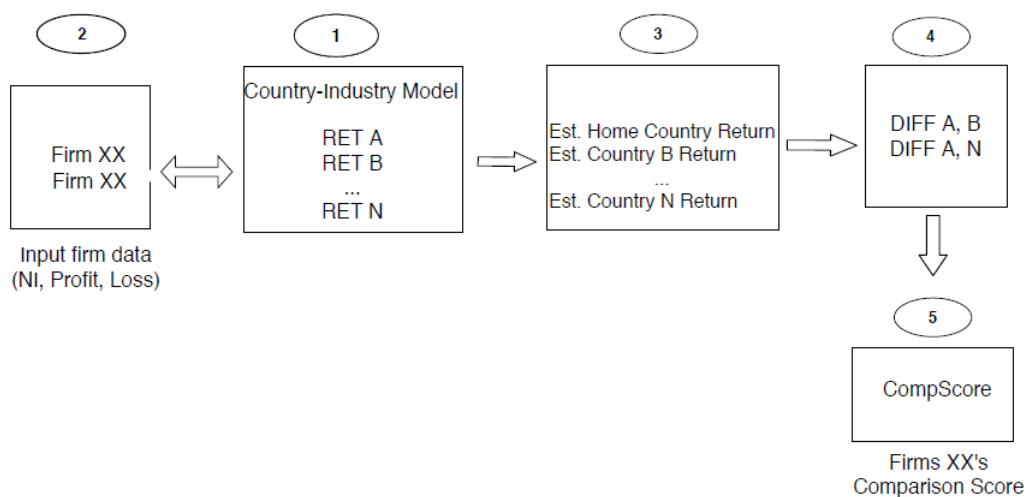


Figure 4.7: Comparison Score Method Illustrated

Table 4.19: Glossary

Variable	Definition
<i>A</i>	= Total assets, sum of current and non-current assets. Source: Datastream.
<i>AEM</i>	= Accruals earnings management score, calculated using the Leuz et al. (2003) model.
<i>Analy</i>	= Analyst following, calculated by taking the natural log of one plus the number of analysts following a stock. Data source: Datastream.
<i>BM</i>	= Book to market, calculated by dividing book value of by equity market value.
<i>Big4</i>	= Big 4 or 5 auditor, dummy variable, set to 1 if yes. No otherwise. Source: Datastream
<i>CA</i>	= Total current assets, as stated on the balance sheet. Source: Datastream.
<i>CapitalIntensity</i>	= Capital intensity, calculated by dividing net PPE by total assets
<i>Cash</i>	= Cash as stated on the balance sheet. Source: Datastream.
<i>CFOA</i>	= Cash flow from operations divided by total assets at the start of the year.
<i> CFOA </i>	= Absolute value of CFOA.
<i>CL</i>	= Current liability. Source: Datastream.
<i>COGS</i>	= Cost of goods sold as stated on the balance sheet. Source: Datastream.
<i>CompScore</i>	= Firm-year level accounting comparability for the combination for firm <i>i</i> and other firms in the same two-digit SIC in a given year calculated as per Conaway (2017)
<i>DEP</i>	= Depreciation and amortisation. Source: Datastream.
<i>DISX</i>	= Abnormal discretionary expenses, estimated by discretionary expenses divided by lagged assets. Source: Datastream.
<i>EXP</i>	= Sales and General Admin expenses. Source: Datastream.
<i>Intangible</i>	= Intangible intensity, calculated as the sum of advertising and R&D expenses divided by sales
<i>INV</i>	= Inventory. Source: Datastream.
<i>NI</i>	= Net income before extraordinary items. Source: Datastream
<i>P</i>	= Price, annual share price at year end. Source: Datastream
<i>LEV</i>	= Leverage, calculated by dividing total assets by total liabilities
<i>LOSS</i>	= Loss, a dummy variable of 1 if dummy if loss generated (Net Income before extraordinary items <0) as per Barth et al. (2012)
<i>OperCycle</i>	= Operating cycle, measured by natural logarithm of the sum of days receivables (365/(sales/accounts receivable)) and days inventory (365/(sales/ INV))
<i>PAY</i>	= Payable, net accounts payable. Source: Datastream
<i>PEN</i>	= Pension and retirement Expenses. Source: Datastream.
<i>PPE</i>	= Property, plant and equipment. Source: Datastream.
<i>REC</i>	= Receivables, total receivables. Source: Datastream.
<i>REM</i>	= Real earnings management score, calculated using the Roychowdhury (2006) model.
<i>RET</i>	= Return, 12 month buy and hold stock return; nine months before and three months after year-end.
<i>ROA</i>	= Net income before extraordinary items divided by divided by total assets at the start of the year.
<i> ROA </i>	= Absolute value of cash flow from operations divided by total assets at the start of the year.
<i>REV</i>	= Revenue, net sales. Source: Datastream.
<i>SD_ROA</i>	= Standard deviation of ROA for the previous five years at maximum
<i>SD_Sales</i>	= Standard deviation of sales, calculated on the previous 5 years of revenue divided by total assets a the start of the year.
<i>Size</i>	= Firm size as calculated using the natural logarithm of the market value of equity.
<i>STD</i>	= Short term debt. Source: Datastream.

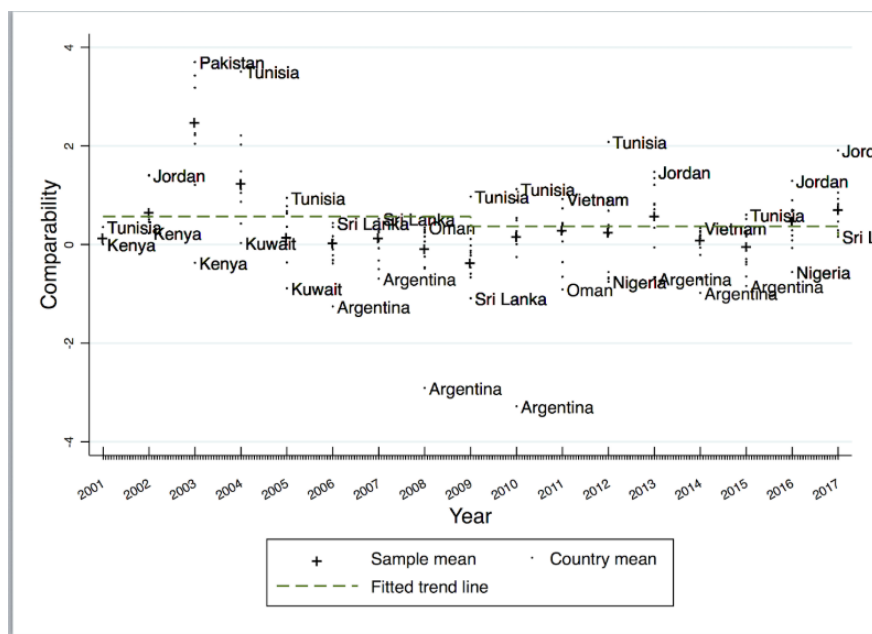


Figure 4.8: Trend Comparison

Chapter 5

Earnings management and efficiency: Empirical evidence from frontier market banks

Abstract

Employing a large sample of 22 frontier market country banks from 2011 - 2018, this study presents evidence that bank income smoothing (a form of earnings management ()) adversely affects the technical efficiency of a bank. This study also presents evidence that the European banking sector has the highest mean efficiency level of the five regions examined. Additionally, no statistical difference was found when examining efficiency levels for large and small banks. The adverse effect of income smoothing on efficiency finding aligns with prospect theory as the utility function that justifies EM is steeper than the function risk-averting behaviour. Implications from larger banks' inability to exhibit greater efficiency suggest that scale efficiency was not found. Overall, results show that presenting persistent earnings through income smoothing is associated with reduced efficiency. This study has important policy implications for depositors, owners, and regulators as efficiency is associated with competitiveness.

5.1 Introduction

The behaviour of banks across frontier markets varies considerably from developed markets. With varying regulation and enforcement levels, it is not uncommon for commercial banks with large debt loads to dominate the sector (Odell & Ali 2016). Solvency is not an uncommon concern for frontier market banks. Such concerns may emerge from unsound practices, from regional market crashes, or as a consequence of global market downturns. Widespread macroeconomic impacts may also cause banks to experience significant negative performance results (Grant & Wilson 2012).⁷⁴ Because frontier market banks often function as financial intermediaries and agents of economic growth in markets in which they operate, the degree of income smoothing (a form of earnings management (EM)) deserves particularly close attention to ensure its practice does not mask performance shortfalls.

The issuance of preferential loans, ineffective loan penalties, and weak loan management has presented challenges in loan recovery – an essential component for a banking institution (Abebe 2020). A 2014 G20 summit on global financial regulations proposed reforms that included imposing stricter financial disclosure guidelines (Thiemann 2014). The International Monetary Fund (IMF) has also expressed significant concerns about the under-provisioning practices that expose banks to financial difficulties due to unexpected defaults or economic shocks (Ozili 2017a, Leika et al. 2020, IMF 2020).

As EM examination ensures accurate and informative reporting (Choi et al. 2017), this study examines its impact on the frontier market banking sector's technical efficiency from 2011 - 2018. The objective is to determine whether EM adversely impacts efficiency. To quantify the impact of income smoothing via loan loss provisions () and loan loss reserves () on bank efficiency, various measurement analyses are applied. The inclusion of LLP and LLR in the model is underpinned by recent empirical studies in frontier markets, *e.g.* Taktak et al. (2010), Ahmed et al. (2014), Kanagaretnam, Lee, Lim & Lobo (2016). This study provides valuable insights into EM's impact on bank efficiency in a market where banks predominately fill funding

⁷⁴To provide background on issues in frontier markets, this study highlights Lithuania, a frontier market country that lost access to parts of its assets held in Russia after the collapse of the Soviet Empire (Zoli 2001). Examples of solvency concerns are those experienced by Central and Eastern European countries and the Commonwealth of Independent States; during their transition processes of removing enterprise subsidies and towards internal and external liberalisation, they possessed extensive non-performing loans (Tang et al. 1999). To inform of crises, this study notes the 1994 Latin America debt crisis, 1997 East Asian financial crisis due to currency devaluations (Patel & Sarkar 1998, Leung 2009), as well as the 2007-2008 Subprime mortgage crisis

gaps (Vo 2020).

This study's contribution to current empirical research on bank efficiency and the frontier market banking system is threefold. First, the applied methodological concept analyses efficiency levels based on individual bank's inputs/outputs, from which efficiency results are then compared to estimated optimal levels. The decomposition of technical efficiency through three inputs and two outputs is an important addition to the current bank efficiency research and helps identify efficiency trends by time and region. Second, the linkages between income smoothing and bank efficiency are examined. Application of fixed effects and truncated regression estimation quantifies the impact of and as income smoothing vehicles on bank efficiency. Results show income smoothing is negatively correlated with efficiency. Third, bank efficiency is consistent across large and small banks, showing that scale economy was not a factor in efficiency.

The efficiency methodology applied in this study is based on the parametric model simultaneously introduced by Aigner et al. (1977) and Meeusen & Van Den Broeck (1977), and based on an individual input and output form of Cobb-Douglas (Addai-Asante & Sekyi 2016). Previous bank efficiency studies primarily focus on developed and developing countries; this study provides an isolated examination of frontier markets to allow specific identification of policy efficacy and regulatory needs.

The remainder of this paper is organised as follows. Section 5.2 reviews prior literature and outlines the development of this study's hypotheses. Section 5.3 describes the research design and data. Section 5.4 presents and discusses empirical results. Section 5.5 provides additional analysis with control variables. Section 5.6 concludes with key observations, limitations, and recommendations for future research.

5.2 Related Research and Hypotheses Development

5.2.1 Frontier market contextual setting

Frontier markets are distinct from emerging or developed markets (FTSE 2020, MSC1 2019). The frontier market classification is less dependent on gross national income (GNI) or economic size and more dependent on the political and market environment. To qualify as a frontier market country, the country must score between 'partially' and 'modestly' in terms of the depth and

breadth of its financial markets, legal and regulatory infrastructure, and the ease with which foreign investors can do business (MSCI 2019a). To reference the size of frontier markets, combined, they account for approximately 11 per cent of the world's population yet only 0.43 per cent and 0.11 per cent of the world's nominal and market capitalisation.⁷⁵ 5-year returns of the MSCI Frontier Market Index⁷⁶ diverged by 55.6 per cent from the S&P Index; the latter posted positive returns, while the former posted negative.⁷⁷ Divergent market returns support Speidell & Krohne (2007)'s finding of low correlation between frontier and developed markets. Frontier markets also have low integration levels with world markets (Berger et al. 2011, Chen et al. 2014), and the spillover effects from developed markets to global markets provide an opportunity for diversification (Yavas & Rezayat 2016).

In 2011, frontier markets had a combined market value of 715 billion USD; emerging-markets, the next step in economic development, had a market value of 20 trillion USD (Speidell 2011). In 2016, the World Bank estimated frontier market capitalisation at 1.04 trillion USD (Bank 2020). Increased development and idiosyncratic growth in frontier markets can reward investors with significant returns (or losses); however, upside returns can be stymied when firms manage their earnings to present the appearance of consistent profits or smooth earnings. EM compromises investor protection, capital market stability, and macroeconomic growth (Leuz et al. 2003).

Frontier markets are vulnerable to capital outflows, which could jeopardise macroeconomic performance, an issue heightened after the 2008 Global Financial Crisis (GFC) (Abidi et al. 2016). Despite this vulnerability, capital continues to flow to nations with growth opportunities and lower costs. Many foreign investors have directly invested in frontier markets due to their young and growing populations, a boom in trade, investment and technological catch-up potential, rapid mobile communications penetration, abundant natural resources, and a growing middle class (Speidell 2011). These factors combined attest to the growth potential of frontier markets.

Following the Asian Financial Crisis and GFCs of 1997 and 2007-2008, many institutional reforms followed. Reforms enabled foreign institutions to participate in domestic markets, introduce diverse and sophisticated financial products, and demand improved accounting and auditing standards (Noble & Ravenhill 2000, Duffie 2018). Barriers to geographic expansion and

⁷⁵Source: World Bank, 2017

⁷⁶The Morgan Stanley Capital International () Frontier Market Index captures large and mid-cap representation across frontier markets, covering about 85% of the free float-adjusted market capitalisation in each country in 2017

⁷⁷Source: Refinitiv January 2014 to December 2018. S&P return 40.7%. MSCI Frontier Market Index return -14.9%

interest rate ceilings were also eliminated. Reformed regulatory practices and global governance institutions are essential dynamics in regulating business groups (Young 2013), and commercial banks have experienced substantial competition from in-state and out-of-state banks from the reforms (Wu 2010). Banks that can thrive in this environment offer stability and resilience, traits particularly important in frontier markets where banks are the foremost providers of credit.

5.2.2 Efficiency studies in the frontier markets sector

Bank efficiency considers the proximity of a bank's costs to a best-practice holding output constant at current levels (Berger & Mester 1997). Increasing competition heightens the need for increased efficiency, making financial institutions more profitable and generates greater intermediated fund flow (Djalilov & Piesse 2016). The impact banks experience from increased competition depends on how efficiently they are run (Mester 1996).

A review of country-specific frontier market bank efficiency studies shows a variety of efficiency influencing factors. In Vietnam, bank efficiency was not statistically different between pre and post public offerings (Nguyen et al. 2016). In Pakistan, Islamic banks' technical efficiency was lower than that of conventional banks when measured in terms of constant return to scale (Gishkori & Ullah 2013). In Kenya, public sector banks displayed greater efficiency than private sector banks (Miencha et al. 2015). In Bulgaria, private banks exhibited greater efficiency over state-owned banks, and that European Union (EU) membership is associated with significant efficiency improvements (Tochkov & Nenovsky 2011). In Nigeria, approximately 25 per cent of the country's banks are inefficient despite mergers and acquisitions, whereas market power positively impacts efficiency (Ajao & Ogunniyi 2010). In Jordan, bank asset size and employee numbers adversely impact bank efficiency (Bdour & Al-khoury 2008). In Croatia, foreign-controlled banks are the most efficient, and new banks are more efficient than older banks (Jemric & Vujcic 2002).

Research examining bank efficiency in transition economies⁷⁸ finds that consolidation increases bank efficiency and that international institutional investor participation positively impacts profit efficiency and reduces insider ownership (Lin & Fu 2017). Olson & Zoubi (2011)'s Middle East and North African (MENA) country study revealed MENA banks to be slightly less cost-efficient

⁷⁸Transition economies are those countries moving from a centrally planned economy to a market economy (Turley & Luke 2012)

than European banks but similar to banks in developing economies. Mlambo & Ncube (2011) found South African bank efficiency trended upward between 1998-2008, despite a declining number of efficient banks. Additionally, Johnes et al. (2014)'s mixed-development study⁷⁹ found greater inefficiency in Islamic banks than conventional bank, and the degree of inefficiency increased over the global financial crisis. In a separate MENA bank study, Sufian & Akbar Noor Mohamad Noor (2009) found a positive correlation between size, capitalisation, and profitability with efficiency. Chipalkatti & Rishi (2007) found that weaker Indian banks⁸⁰ have an incentive to under-provision their LLPs and understate gross non-performing assets to increase capital adequacy ratios. The authors also find strong evidence that weaker banks understate their non-performing assets. In a somewhat related study, Arora et al. (2018) find no relationship between non-performing assets and a bank's technical efficiency, yet note that a significant inefficiency source is a gap in technology.

The volume of literature on bank efficiency reflects its importance in academia and industry. As frontier markets develop, they tend to liberalise and allow foreign entrants, thereby boosting competitive forces (Arshad et al. 2019). Improved efficiency and productivity gains are bank goals in competitive markets and become supplementary information sources on bank performance. Efficiency measurements help establish realistic targets during an organisation's development by highlighting performance constraints (Kamau 2011).

5.2.3 Efficiency measurements

Measuring efficiency is a core concept in production economics (Devine et al. 2018). The application of an 'efficient frontier' is a more stringent measurement of efficiency than financial ratios because statistical techniques remove price effects and other exogenous market factors. Since Douglas & Cobb (1928)'s seminal work, many have attempted to quantify the maximum output for given a set of inputs.⁸¹ At the outset, researchers considered only the average input-output relationship assuming no inefficiency. Over time, however, this assumption could no longer be supported (Badunenko & Mozharovskyi 2016). As a result, best practice studies are generally divided between parametric and non-parametric methods. Parametric measurement techniques require a particular frontier function specification, a specification not required for

⁷⁹Study sample: Bahrain, Bangladesh, Brunei, Egypt, Indonesia, Jordan, Kuwait, Malaysia, Mauritania, Pakistan, Palestine, Qatar, Sudan, Tunisia, Turkey, UAE, and Yemen

⁸⁰As defined by capital adequacy ratios and earnings before provisions and contingencies

⁸¹Examples include Leontief production function, constant elasticity of substitution (), and transcendental logarithmic production and cost functions

non-parametric methods (Murillo-Zamorano & Vega-Cervera 2001). Data envelopment analysis (DEA), a popular non-parametric method, imposes less structure on the frontier function but does not allow for random errors (Battese et al. 2000). Conversely, the main advantages of stochastic frontier analysis (), a parametric method, are the allowance of measurement errors and the generation of firm-specific estimates (Ding & Sickles 2018). The SFA approach also distinguishes inefficiency from random errors, thereby avoiding biased results.

In a dual-method comparison of bank efficiency (using DEA and SFA), Silva et al. (2017) find both methods produce a consistent trend on global efficiency scores despite differences in individual efficiency results. Silva et al. (2018) consider the trend to be of more value than the efficiency score itself. Combining factors of scale, scope, and operational efficiency,⁸² bank efficiency can range between 0 and 100 per cent. Theoretically, a bank is considered optimally efficient if it produces an output level and mix that maximises profits and minimises possible costs. However, high efficiency does necessarily imply high effectiveness, and, indeed, most banks are not fully efficient (Kumar & Gulati 2009).

5.2.4 Earnings management

There is ample evidence that banks may be more inclined than manufacturers to smooth their earnings (Ma 1988, Gulzar et al. 2011, Abernathy et al. 2014). In years of notably strong or weak earnings, banks may seek to reduce earnings volatility by reducing or increasing reported earnings (Ozili 2017*b*). Smoothed earnings avoid potential financial scrutiny by regulators, market authorities, or shareholders (Liu & Ryan 2006, Beatty et al. 2002). A bank's ability to demonstrate public confidence via low stock price volatility while maximising wealth is a unique purview of the industry. Commercial banks also operate in highly regulated industries where regulators and accounting standard bodies scrutinise non-performing loan ratios, capital adequacy ratios, and liquidity ratios. When combined or taken separately, efforts to avoid regulations while projecting an appearance of soundness, creates incentives.

How banks account for problem loans may differ, but the resultant long-term impact on net income is consistent (Ma 1988). Banks provision for loan losses during good economic times to absorb them during economic downturns. The magnitude of provisioning is often bolstered

⁸²Scale efficiency measures the level of output for which the average cost is examined. Scope efficiency examines the average cost and the creation of varieties of outputs. Operational efficiency measures maximum achievable output for a given level of inputs (Said 2012)

by statistical provisioning to anticipate the next economic cycle, but actual amounts are left to management discretion (Saurina 2009).

Following Adams et al. (2009) and Wu et al. (2016), this study tests income smoothing via and . Increases in these provisions will consequently decrease the ratio of earnings to assets and firm book value. Banks with low regulatory capital ratios record lower LLPs levels (Kim & Kross 1998).⁸³ LLPs provide a mechanism for which earnings may be managed and a proxy for which it can be measured (Jin et al. 2018) and are well-suited to investigate EM's income-increasing aspect (Kanagaretnam et al. 2015). A positive relationship between bank performance and LLP potentially signals the use of LLP for income smoothing purposes (Dong 2012). Moreover, managers may allow LLP to increase and strengthen credit risk management capabilities due to risks that arise from the lending business (Sangmi & Nazir 2010).

Conversely, s are the estimated amount of the banks' loss exposure to cover uncollectible outstanding impaired loans. As the largest bank accruals component, LLRs are generally many times larger than their equity (Wahlen 1994, Altamuro & Beatty 2010), and can be used to smooth earnings (Ahmed et al. 1999, Kilic et al. 2012, Ozili 2017a). An excess of reserves is regarded as managing earnings and viewed negatively by the accounting profession (Koch & Wall 2000, Dolar & Drickey 2017).

Based on the above discussions, the following hypotheses are formalised as H1 and H2:

Hypothesis 1 (H1): *Use of loan loss reserves as an EM is vehicle negatively associated with bank efficiency.*

Hypothesis 2 (H2): *Use of loan loss provisions as an EM vehicle is negatively associated with bank efficiency.*

5.3 Research Design

5.3.1 Description of the data

Sourcing data from BankFocus, this study focuses on 22 frontier countries from 2011 to 2018. To avoid survivorship bias, past and present publicly listed commercial banks for each country are

⁸³LLP is an income statement expense account utilised to reflect expected future losses that can arise from their loan portfolios (Ahmed et al. 1999)

included. Banks with incomplete financial data for and purposes are eliminated. Also eliminated are banks with less than two consecutive years of data and those with negative equity, interest expense, and total revenue. Five hundred and forty-nine banks (n=549) and 3,429 observations remain after eliminations. Bangladesh is the country with the most numerous banks (n=52), while Argentina and Lithuania possess the least (n=9). Big banks (n=334) outnumber small banks (n=238). Geographically, Europe (n=204) and the Americas (n=11) are the most and least bank-populous regions represented. An unbalanced panel data set is used, attributed to bank entries and exits from markets. Table 5.20 presents a complete listing of the sample by year, region, and size.

Table 5.20: Banks by Year, Size, and Geographic Location

Panel A Sample by Country and Bank Size					Panel B Sample by Year, Size and Region									
Country	Banks	N	Big	Small	Year	Bank	N	Big	Small	Africa	Americas	Asia	Europe	Middle East
Argentina	9	78	4	5	2011	41	286	35	11	6	0	13	14	13
Bahrain	26	169	19	7	2012	51	304	22	22	10	0	6	19	9
Bangladesh	53	336	37	16	2013	79	473	44	34	11	0	21	33	13
Bulgaria	24	140	13	11	2014	81	493	41	35	15	3	22	25	14
Croatia	36	220	11	25	2015	81	497	45	31	19	2	23	23	11
Estonia	12	69	3	9	2016	90	504	52	38	11	2	24	34	21
Jordan	19	130	15	4	2017	81	493	59	31	19	3	21	34	12
Kenya	45	243	14	31	2018	63	379	36	31	13	1	13	22	12
Kuwait	12	82	10	2										
Lebanon	38	226	27	11										
Lithuania	9	54	6	3										
Mauritius	24	126	11	13										
Morocco	17	92	10	7										
Nigeria	35	194	22	13										
Oman	17	108	11	6										
Pakistan	32	194	24	8										
Romania	28	155	16	12										
Serbia	29	200	12	17										
Slovenia	21	108	16	5										
Sri Lanka	23	147	13	10										
Tunisia	26	177	11	15										
Vietnam	32	181	29	3										
Total	567	3429	334	233	Total	567	3429	334	233	104	11	143	204	105

Note: Banks with total assets greater than 1 billion USD are considered big as per Siems et al. (1992) and Navaretti et al. (2019); small otherwise. Asia includes: Bangladesh, Pakistan, Vietnam, Sri Lanka | Africa includes: Kenya Mauritius Morocco Nigeria Tunisia | Americas countries include: Argentina | European countries include: Croatia, Estonia, Lithuania, Romania, Serbia, Slovenia | Middle Eastern countries include: Bahrain, Jordan, Kuwait, Lebanon, Oman.

5.3.2 Selection of variables

As a service industry, banks can define inputs and outputs using several different approaches. The 'production' approach views banks as producers, using labour and capital to produce deposits and loans in terms of the number of accounts. The 'value-added' approach states that all bank liabilities and assets have some output characteristics, rather than categorising them as inputs or outputs only. The 'intermediation' approach assumes that banks use labour and capital to collect deposits and transform them into loans and other assets. In the intermediation approach, banks

are considered financial intermediaries connecting savers and investors (Sealey Jr & Lindley 1977). Because the intermediation approach better represents banks' roles in providing financial services (Berger & Humphrey 1997, Altunbas et al. 2007, Vu & Turnell 2010), this study adopts the intermediation approach to bank inputs and outputs.

Following Ding & Sickles (2018), this study selects the following three input variables: (i) borrowed funds; (ii) labour; and (iii) capital. Borrowed funds are calculated as the quotient of interest paid on deposits over total deposits. Labour is calculated as the quotient of salary expenses over full-time equivalent employees. Capital is calculated as the quotient of amortisation and depreciation of premises and fixed assets over gross premises and fixed assets. The following two outputs are selected: (i) securities and (ii) loans. Securities are the sum of securities held to maturity and securities available for sale. Loans are calculated as the net of gross loans minus reserves for loan loss provisions. Fonseca & González (2008) and Kanagaretnam et al. (2009) document a positive relationship between prior loan loss reserves and the provision for loan losses. Accordingly, this study follows Fonseca & González (2008) and Cho & Chung (2016) and includes loan loss reserve in the model to control for non-discretionary proportional contribution to the loan loss provisions.

Table 7.33 reports descriptive statistics for the study sample. The mean and median *LLP* are both 0.01, with a standard deviation of 0.05, indicating significant variation across the sample. A similar conclusion can be drawn about the *LLR* as the mean is 0.07 with a standard deviation of 0.14. *Net Income Growth* had an overall negative mean (-0.20), while the median and standard were 0.03 and 7.08, respectively. Despite all the banks in the sample possessing similar frontier market classification characteristics, significant diversity exists.

A Pearson's correlation matrix (Table 5.22) of the variables from Table 7.33 is included to examine the relationship among the regressors. Of note, is that most variables are statistically significantly correlated with one another, with *LLP* being a notable holdout. *LLP* is not significantly correlated with the other balance sheet items (Total Loans, Total Assets, and Total Liabilities). The relationship between *Net Income Growth* and the *Price of Labour* and the *Price of Physical Capital* was found not to be statistically significant.

Table 5.21: Descriptive Statistics of key Variables

Stochastic frontier arguments	Mean	Std.Dev	1st Quartile	Median	3rd Quartile
Price of Deposits (W1)	0.59	13.43	0.02	0.04	0.06
Price of Labour (W2)	0.02	0.02	0.01	0.01	0.02
Price of Physical Capital (W3)	6.85	113.55	0.27	0.60	1.42
Total Financial Securities (y1)	1,139,524.0	2,659,164.0	60,834.6	305,144.1	896,525.0
Total Loans (y2)	2,757,976.0	4,991,452.0	309,087.3	1,155,074.0	3,036,222.0
Total Operating Cost (TOC)	107,286.5	189,086.6	15,113.7	46,789.7	118,234.2
Regression arguments	Mean	Std.Dev	1st Quartile	Median	3rd Quartile
Total Assets	4,835,772.0	8,525,795.0	529,546.9	1,895,257.0	5,127,845.0
Fixed Assets	65,437.3	135,583.1	5,843.0	22,006.5	66,459.7
Total Deposits	3,637,405.0	6,483,415.0	345,757.9	1,375,604.0	3,858,692.0
Total Liabilities	4,302,115.0	7,715,444.0	438,516.5	1,639,897.0	4,537,809.0
Loan Loss Provisions (%)	0.01	0.05	0.00	0.01	0.01
Loan Loss Reserves (%)	0.07	0.14	0.01	0.04	0.07
Net Income Growth (%)	-0.20	7.08	-0.31	0.03	0.31

¹ Notes: All variables are reported in thousands of USD

5.3.3 Bank efficiency

This study applies the approach in its estimation of efficiency. The central idea of SFA technical efficiency (TE) can be formalised as the ratio of realised output, given a specific set of inputs to maximum attainable output, as per Eq (5.28):

$$TE_{it} = \frac{y_{it}}{y_{it}^*} = \frac{f(x_{it}; \beta) e^{-u_{it}} e^{v_{it}}}{f(x_{it}; \beta) e^{v_{it}}} = e^{-u_{it}} \in (0, 1] \quad (5.28)$$

where y_{it}^* is the maximum attainable output for unit i given X_{it} and where $f(x_{it}; \beta)$ is a log-linear production function. ε denotes the error term.

Following researchers Altunbas et al. (2007), Ding & Sickles (2018) and Anastasiya Shamshur (2019), this paper specifies a cost frontier model with two-output (γ), and three-input (w), parameters via the translog functional form as per Eq (5.29). TOC is a vector of the dependent variable total cost, γ_m is the m^{th} banks' outputs ($m=1,2$). w_n is n^{th} input price ($n=1,2$). w_3 is the price of borrowed funds. β is a vector of the coefficients to be estimated. v is a random error identically and independently distributed as $N(0, \sigma_{2n})$. The term μ measures an individual bank's distance to the efficient frontier and represents a bank's one-sided inefficiency. Subscripts denoting firm and year have been dropped for presentation ease. Table 5.28 describes the input and output variables.

Table 5.22: Correlation Matrix of Key Variables

	w1	w2	w3	y1	y2	TOC	TA	FA	TD	TL	LLP	LLR
Price of Labour (w2)	0.1771*	1										
Price of Physical Capital (w3)	-0.0205	0.1958*	1									
Total Financial Securities (y1)	-0.0291	-0.3732*	-0.1971*	1								
Total Loans (y2)	-0.1270*	-0.4345*	-0.1642*	0.7902*	1							
Total Operating Cost (TOC)	-0.0471*	-0.1291*	-0.0765*	0.8126*	0.8914*	1						
Total Assets (TA)	-0.1043*	-0.4481*	-0.1929*	0.8801*	0.9771*	0.9136*	1					
Fixed Assets (FA)	-0.0073	-0.1871*	-0.4160*	0.7586*	0.8021*	0.8550*	0.8332*	1				
Total Deposits (TD)	-0.1727*	-0.4441*	-0.1927*	0.8657*	0.9529*	0.8847*	0.9731*	0.8152*	1			
Total Liabilities (TL)	-0.1049*	-0.4524*	-0.1922*	0.8784*	0.9759*	0.9080*	0.9973*	0.8295*	0.9808*	1		
Loan Loss Provision (%)	0.1099*	0.2219*	0.0748*	-0.0398*	-0.0047	0.0809*	-0.0235	0.0540*	-0.0211	-0.022	1	
Loan Loss Reserve (%)	-0.1081*	0.1945*	-0.0772*	-0.0367	-0.0926*	0.0147	-0.0764*	0.0548*	-0.0835*	-0.0821*	0.3758*	1
Net Income Growth (%)	-0.0078	-0.1236*	-0.0249	0.0818*	0.1183*	0.0747*	0.1114*	0.0526*	0.1098*	0.1112*	-0.1108*	-0.1228*

Notes: Significance is identified at three levels: 0.05*, 0.01**, and 0.001***

$$\begin{aligned}
 \ln\left(\frac{TOC}{w_3}\right) = & \beta_0 + \sum_m \alpha_m \ln y_m + \sum_n \beta_n \ln\left(\frac{w_n}{w_3}\right) + \frac{1}{2} \sum_m \sum_j \alpha_{mj} \ln y_m \ln y_j \\
 & + \frac{1}{2} \sum_n \sum_k \beta_{nk} \ln\left(\frac{w_n}{w_3}\right) \ln\left(\frac{w_k}{w_3}\right) + \sum_n \sum_m \gamma \ln\left(\frac{w_n}{w_3}\right) \ln y_m + u + v
 \end{aligned} \quad (5.29)$$

Technical inefficiency is expressed as per Eq. (5.30) in the following general form:

$$u_{it} = \delta_0 + \sum_{k=1}^n \delta_k z_{kit} + \omega_{kit} \quad (5.30)$$

where ω is stochastic noise; z denotes exogenous variables affecting bank efficiency; δ are estimated coefficients. If δ is negative (positive), it indicates a positive (negative) relationship between variables and bank efficiency.

Following Eq. (5.29) and Eq. (5.30), the estimation for the parameters of the SFA model can be achieved by applying the maximum likelihood estimation method, which estimates the likelihood function in terms of two variance parameters (Kea et al. 2016) as per Eq (5.31):

$$\gamma = \sigma_u^2 / \sigma_s^2; \sigma_s^2 = \sigma_v^2 + \sigma_u^2 \quad (5.31)$$

where γ reflects the impact of random disturbances (v, u) and will fall in the range between zero and one. The closer γ is to one, the smaller the gap between actual output and maximum possible output. When γ is at one, the sample bank is fully efficient, whereas a γ close to zero is essentially meaningless, since it indicates that output is uncontrolled by random factors.

5.3.4 Income Smoothing

This study additionally examines the impact of income smoothing through s or s on TE scores in frontier markets' banking industry. Wang (2003) shows that consistent estimators of the regression coefficients can be obtained via ordinary least squares regression (OLS), notwithstanding that technical efficient regression coefficients range between zero and one. Despite the evidence supporting OLS, this paper follows Wu et al. (2016) and applies both the random effect regression and the truncated regression model for greater robustness.⁸⁴ Variance inflation factor test () tests for multicollinearity, report a value of 3.41 on the full sample of data, indicating that the independent variables are not highly correlated. The final model is stated as Eq (5.32)

$$TE_{it} = \alpha_0 + \alpha_1 LLP_{it} + \alpha_2 LLR_{it} + \alpha_3 Total\ Assets_{it} + \alpha_4 GROW_{it} + \alpha_5 Total\ Liabilities_{it} + \sum Year_i + \sum Country_i + \epsilon_{it} \quad (5.32)$$

where TE is the technical efficiency based on analysis. LLP and LLR are respectively loss provisions scaled by loans, and loan loss reserves scaled by loans. $Total\ Assets$ (TA) is the natural logarithm of total assets and is used to control for firm size. $GROW$ is the growth rate of net income and a control variable for the growth opportunities of banks. $Total\ Liabilities$ (TL) is total liabilities scaled by total assets and a proxy for the individual bank's risk-taking. $\sum Year$ and $\sum Country$ are used respectively year-specific and country-specific effect dummy variables. These dummy variables control for different loss provision levels across countries and capture unobserved time-invariant effects not included in the regression. The error term is denoted by ϵ . Subscripts i and t denote company and time, respectively. This study predicts that the α_1 and α_2 coefficients will be negative if a bank manages earnings using LLP and LLR vehicles.

⁸⁴The choice for the random effects regression stems from its out-performance over the fixed effect model in explaining mean technical efficiency (Odeck & Bråthen 2012). The Breusch-Pagan Lagrange Multiplier test supports the Hausman test, which indicates that the random effects () model is most appropriate. Support for the truncated regression over the use of a Tobit regression as per Casu & Molyneux (2003) and Batir et al. (2017), follows suggestions made by Simar & Wilson (2007) and Perelman & Serebrisky (2010), who note that the choice of a truncated model is dictated by the nature of the technical efficiency measure, which by definition is bounded at 1.0

5.4 Results

5.4.1 Estimation of results for Stochastic Frontier Analysis

Table 5.23 shows the efficiency model results for banking institutions for the entire population of frontier markets from 2011 - 2018 by country and region. Also shown are the mean scores by country, year, and the efficiency scores for large and small banks. Overall, the efficiency scores appear to fall during the sample period. Argentinian and Nigerian banks report the lowest mean efficiency scores of 67.1 per cent and 76.7 per cent, respectively. The most efficient commercial banks are in Lithuania and Mauritius, with mean efficiency scores of 84.1 and 83.4 per cent. Figure 5.9 and Figure 5.12 provide a visual illustration of efficiency scores by year and by country.

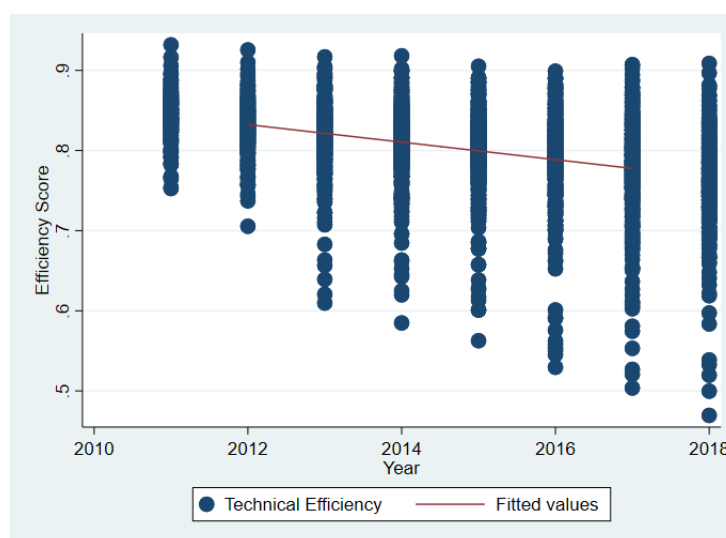


Figure 5.9: Efficiency Scores by Year

5.4.2 Efficiency scores by region

The findings in Table 5.23 also report the efficiency across the five geographical regions in the sample. The region with the highest mean efficiency score is Europe at 82.6 per cent efficiency. The Americas is the least efficient region with a mean score of 66.7 per cent efficient. However, this latter finding should be taken with circumspection as the Americas region includes only one country (Argentina). Additionally, Argentina faced a particularly difficult financial situation that left the country with half as many fixed assets than pre-financial crisis years (years 2001 versus

Table 5.23: Efficiency scores by year, country, and bank size

Country	2011	2012	2013	2014	2015	2016	2017	2018	Mean	Large Banks (Mean)	Small Banks (Mean)
Argentina	0.776	0.747	0.688	0.701	0.663	0.623	0.603	0.569	0.671	0.667	0.634
Bahrain	0.851	0.841	0.838	0.823	0.816	0.806	0.792	0.764	0.816	0.819	0.805
Bangladesh	0.836	0.821	0.813	0.798	0.781	0.773	0.760	0.746	0.791	0.783	0.795
Bulgaria	0.852	0.844	0.832	0.827	0.825	0.822	0.809	0.816	0.828	0.835	0.814
Croatia	0.850	0.841	0.841	0.833	0.830	0.829	0.814	0.815	0.832	0.821	0.838
Estonia	0.840	0.842	0.849	0.848	0.834	0.823	0.811	0.767	0.827	0.833	0.814
Jordan	0.862	0.849	0.831	0.818	0.809	0.800	0.783	0.767	0.815	0.811	0.825
Kenya	0.823	0.795	0.801	0.787	0.768	0.749	0.740	0.732	0.774	0.762	0.769
Kuwait	0.859	0.847	0.835	0.827	0.818	0.801	0.786	0.776	0.819	0.820	0.792
Lebanon	0.857	0.845	0.835	0.822	0.808	0.784	0.768	0.748	0.808	0.813	0.793
Lithuania	0.863	0.853	0.836	0.838	0.845	0.842	0.829	0.821	0.841	0.843	0.832
Mauritius	0.876	0.848	0.838	0.839	0.823	0.830	0.821	0.801	0.834	0.851	0.802
Morocco	0.863	0.853	0.831	0.817	0.813	0.803	0.800	0.767	0.818	0.818	0.824
Nigeria	0.816	0.794	0.784	0.768	0.753	0.756	0.736	0.726	0.767	0.754	0.781
Oman	0.855	0.841	0.815	0.797	0.787	0.770	0.762	0.745	0.796	0.813	0.737
Pakistan	0.834	0.824	0.814	0.802	0.798	0.787	0.778	0.765	0.800	0.798	0.804
Romania	0.824	0.813	0.813	0.806	0.801	0.796	0.784	0.762	0.800	0.799	0.800
Serbia	0.821	0.815	0.796	0.794	0.801	0.809	0.802	0.796	0.804	0.810	0.799
Slovenia	0.863	0.852	0.846	0.847	0.843	0.836	0.825	0.809	0.840	0.838	0.847
Sri Lanka	0.845	0.822	0.813	0.808	0.803	0.785	0.769	0.752	0.800	0.792	0.804
Tunisia	0.854	0.841	0.836	0.821	0.811	0.804	0.781	0.764	0.814	0.800	0.826
Vietnam	0.844	0.823	0.835	0.828	0.819	0.812	0.799	0.782	0.818	0.815	0.831
Mean	0.844	0.830	0.819	0.811	0.802	0.793	0.780	0.763	0.805	0.804	0.798
Region											
Africa	0.835	0.814	0.805	0.789	0.774	0.766	0.750	0.739	0.784	0.769	0.790
Americas	0.776	0.747	0.688	0.701	0.663	0.623	0.603	0.569	0.671	0.667	0.634
Asia	0.838	0.822	0.819	0.807	0.797	0.786	0.774	0.758	0.800	0.795	0.802
Europe	0.846	0.837	0.829	0.824	0.820	0.819	0.808	0.797	0.822	0.826	0.817
Middle East	0.856	0.844	0.832	0.818	0.809	0.792	0.778	0.761	0.811	0.815	0.791

Note: Results from the non-parametric Mann-Whitney test show that the null hypothesis H_0 of equality of mean technical efficiency across bank size. The null hypothesis was accepted at the 5% significance level, indicating no significant difference in efficiency between large and small banks. The Kruskal-Wallis test for equality of medians had a chi-square value of 512.592 with 4 degrees of freedom and a p -value less than 0.05, indicating the efficiency score median is unequal between regions. Levene's T-test for equal variances results in a T value of 42.12, and the null of equal variance between the groups is rejected at a p -value less than 0.05.

2015) and very little credit growth (Ferro et al. 2018). An examination of the most and least efficient regions finds Lithuania has the highest efficiency score in Europe at 84.1 per cent, while Romania has the lowest at 80.0 per cent. Novickytė & Drożdż (2018) state Lithuanian banks markedly outperformed other banks operating in the EU, as foreign banks dominate the sector.⁸⁵ Figure 5.10 provides a visual illustration of efficiency scores by region.

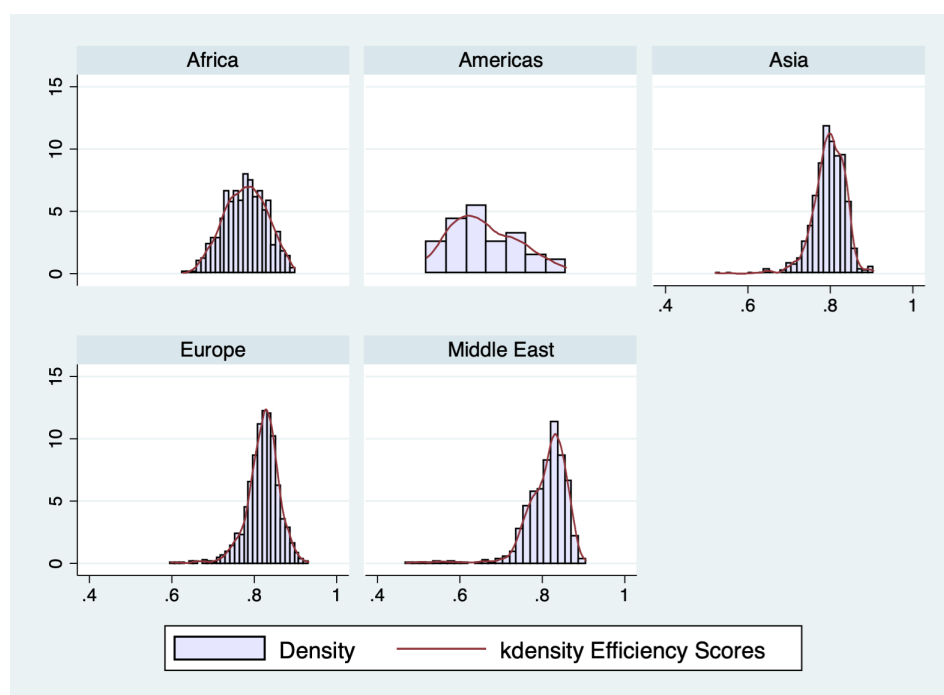


Figure 5.10: Histogram and Kernel Density of Efficiency Scores by Region

5.4.3 Efficiency scores by bank size

Table 5.23 also presents mean efficiency scores by large and small banks at 80.4 and 79.8 per cent efficient, respectively. These mean values show large banks to be more efficient; however, a Mann-Whitney test for equality of means shows no significant difference between large and small banks. When scores were examined by size and region, three out of the five regions reported higher scores for large banks. Accordingly, the findings herein align with Girardone et al. (2004) and Ruslan et al. (2019) in that there is no clear relationship between size and efficiency. The absence of a clear relationship may be due to external macroeconomic factors beyond the bank's control or internal factors such as less effective asset management. Figure 5.11 provides a visual illustration of efficiency by size.

⁸⁵Local banks suffered heavy losses during the global financial crisis, losses which were amortised from 2012 onward (Račickas & Vasiliauskaitė 2010)

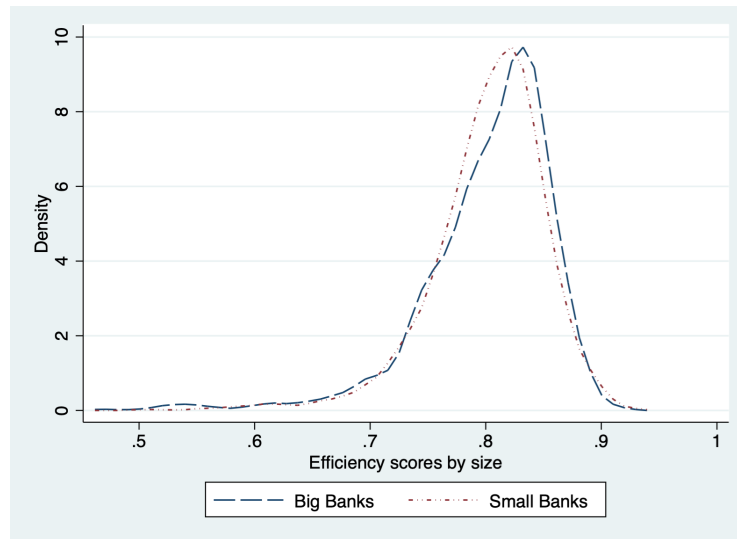


Figure 5.11: Histogram and Kernel Density of Efficiency Scores by Size

5.4.4 Earnings management, efficiency, and regions

Tables 5.24 and 5.25 report the outcomes for the full data sample, by bank size, and by geographic region. Table 5.24 presents random effects regression results, while Table 5.25 shows truncated regression outcomes. Regression findings signify that s and s are significant and negative when applied to the entire data set (coefficients of -0.046 and -0.027 respectively for random effects regression; and -0.069 and -0.040 respectively for truncated regression). The negative coefficients for both variables suggest an inverse relationship between technical efficiency and both s and s . Results between the two methods show only slight differences in the degree of managed earnings. This finding, therefore, supports hypotheses H1 and H2.

Both regression models reveal a statically significant relationship between s and small banks as well as between s and both big and small banks. From this, it is inferred that large banks are more likely to employ LLRs as a vehicle to manage earnings, while small banks use both LLP and LLR to smooth earnings.

In the Americas region, this study failed to detect a meaningful relationship between efficiency and EM. These results are supported by Fonseca & González (2008) and Jin et al. (2018), who also failed to discover a relationship. The authors suggest that greater availability of investor protection constrains s and that allowances were not made for opportunistic purposes. Tables 5.24 and 5.25 also indicate a bank's income smoothing vehicle preference. In the Middle East, s is preferred, while in Africa, s is favoured. The Asian region showed mixed results, with both LLP and LLR being significant and negative for the random effects method. However, both LLP and

LLR methods show a significant relationship in the truncated model. Overall, European banks appear to favour LLR as an EM technique.

Table 5.24: Earnings Management Random Effect Regression Results

Variable	Random Effects Regression							
	All	Size		Region				
		Big	Small	Africa	Europe	Middle East	Americas	Asia
Intercept	0.767*** (0.026)	0.707*** (0.036)	0.737*** (0.047)	0.733*** (0.061)	0.774*** (0.042)	0.608*** (0.098)	-0.381 (1.003)	0.626*** (0.053)
LLP	-0.046*** (0.010)	-0.027 (0.022)	-0.046** (0.014)	-0.146** (0.053)	-0.007 (0.011)	-0.222** (0.077)	0.837 (0.972)	-0.011 (0.050)
LLR	-0.027*** (0.005)	-0.030* (0.013)	-0.022*** (0.007)	0.031 (0.020)	-0.014** (0.005)	-0.050 (0.027)	-0.656 (0.877)	-0.128*** (0.031)
TA	-0.001 (0.002)	0.002 (0.002)	0.004 (0.004)	0.002 (0.004)	-0.001 (0.003)	0.009 (0.007)	0.069 (0.070)	0.010* (0.004)
GROW	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.017 (0.010)	-0.000 (0.000)
TL	0.018 (0.013)	0.027 (0.021)	-0.012 (0.022)	-0.036 (0.024)	0.046 (0.024)	0.020 (0.030)	-0.012 (0.162)	-0.019 (0.021)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F Statistic	293.79	355.45	28.22	101.90	30.43	96.37	5.85	179.21
Adj. R ²	0.515	0.671	0.087	0.69	0.142	0.65	0.561	0.715
Observations	2557	1748	809	458	857	516	35	726

Note: The *p-value* denotes significance at three levels: 0.05*, 0.01**, and 0.001***. F Statistics are significant at the 0.01 level, except the Americas, which is significant at the 0.05 level.

5.5 Additional Control Variables

To add robustness and mitigate a potential omitted variable bias, several bank and country-specific control variables were added to Eq (5.32). Specifically, inflation and GDP growth were included to control for the variability in accounting earnings due to macroeconomic factors. Return on Assets (*ROA*) was incorporated as a financial performance measure to address whether abnormal operating activities are correlated with firm performance (Huang & Sun 2017). *Rule of Law* and *Regulatory Quality* were included. *Rule of Law* is an overarching norm of cultural autonomy and antithetical to corruption (Licht et al. 2007). *Regulatory Quality* is an external environmental factor that reinforces an institutional shareholders' role in ensuring accurate earnings reporting. *Regulatory Quality* also strengthens the effect of institutional ownership on EM (Bao & Lewellyn 2017). *Change in Loan Losses* is a proxy for the level of risk institutions face. Higher loan losses require increased LLP for the additional risk (Anandarajan et al. 2006). *Commission fee and fee income (CFEE)* is the ratio of commission fees and other income to total assets. Higher commission fees may indicate an interest in non-depository banking activities and a need for

Table 5.25: Earnings Management Truncated Regression Results

Variable	Truncated Regression							
	All	Size		Region				
		Big	Small	Africa	Europe	Middle East	Americas	Asia
Intercept	0.838*** (0.010)	0.822*** (0.018)	0.800*** (0.030)	0.889*** (0.014)	0.814*** (0.017)	0.725*** (0.021)	0.633*** (0.042)	0.875*** (0.015)
LLP	-0.069*** (0.015)	-0.081 (0.043)	-0.060** (0.018)	-0.118* (0.051)	-0.020 (0.015)	-0.375*** (0.107)	0.773 (0.550)	-0.376*** (0.049)
LLR	-0.040*** (0.005)	-0.100*** (0.017)	-0.031*** (0.007)	-0.077** (0.027)	-0.027*** (0.006)	-0.070 (0.039)	-0.978 (0.542)	-0.036** (0.012)
TA	-0.004*** (0.001)	-0.005*** (0.001)	-0.002 (0.002)	-0.004*** (0.001)	-0.002** (0.001)	-0.005** (0.001)	0.022*** (0.004)	-0.001 (0.001)
GROW	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)	-0.017*** (0.005)	-0.001*** (0.000)
TL	0.009 (0.008)	0.056*** (0.014)	-0.078*** (0.014)	-0.118*** (0.017)	0.010 (0.015)	0.164*** (0.015)	-0.383*** (0.030)	-0.116*** (0.015)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj-R ²	0.035	0.029	0.039	0.032	0.032	0.035	0.024	0.03
Observations	2557	1748	809	458	857	516	35	726

Notes: The *p-value* denotes significance at three levels: 0.05*, 0.01**, and 0.001***. All Sigma values are significant at the 0.01 level.

higher loan loss reserve allocations (Anandarajan et al. 2007, Hasan & Hunter 1999).

Regression results show that the inclusion of control variables does not quantitatively change the main variables under the truncated regression method; however, a few differences are noted. Under the random effect regression, LLP remains inversely related with efficiency but fails to show statistical significance in a few subsections of the random effects estimation and a negative relationship in the truncated regression for small banks and African banks. Total liabilities also show a significant positive relationship with efficiency. Liabilities are considered a proxy for risk-taking, and thus a negative coefficient is expected. Applying random effects regression, a positive relationship appears, yet under truncated regression, a significant relationship between efficiency and liabilities was not found for the entire data set but showed a significant negative relationship for small banks. Additional illumination on the relationship between efficiency and other control variables are detailed below, while Table 5.26 and Table 5.27 show the results.

Inflation harms efficiency under both regression estimations, whereas GDP growth positively impacts efficiency. The logic here is that when GDP growth is robust, banks exhibit a greater likelihood of higher deposits and loan growth (Dietrich & Wanzenried 2014). Inflation negatively influences a bank's ability to allocate resources (Azad et al. 2017); this is particularly true when inflation is unpredicted, for costs will rise, negatively impacting efficiency (Boyd & De Nicolo 2005). *ROA* shows a significant positive relationship with efficiency. This finding is in-line

with Adelopo et al. (2018) and Farandy et al. (2017) and suggests that higher bank profitability levels will produce more efficient banks. *Rule of law* and *Regulatory Quality* are not significant, suggesting that institutional frameworks do not influence costs and ergo efficiency. *Change in Loan Losses*, a risk proxy, is similarly not influential on impact efficiency. *CFEE* exhibits a strong, significant negative relationship with efficiency, which suggests that income from non-depository banking activity harms efficiency.

Table 5.26: Earnings Management Random Effects Regression with Additional Control Variables

Variable	Random Effects Regression							
	All	Size		Region				
		Big	Small	Africa	Europe	Middle East	Americas	Asia
Intercept	0.873*** (0.018)	0.834*** (0.027)	0.968*** (0.048)	0.651*** (0.094)	0.823*** (0.042)	0.768*** (0.103)	0.935 (0.000)	0.657*** (0.057)
LLP	-0.017 (0.009)	-0.009 (0.022)	-0.018 (0.013)	-0.054 (0.060)	0.005 (0.010)	-0.074 (0.078)	-3.337 (0.000)	0.045 (0.063)
LLR	-0.014** (0.004)	-0.007 (0.013)	-0.003 (0.007)	0.006 (0.026)	0.000 (0.005)	-0.024 (0.028)	-4.452 (0.000)	-0.098*** (0.029)
TA	-0.005*** (0.001)	-0.004* (0.001)	-0.016*** (0.004)	0.008 (0.006)	-0.004 (0.003)	0.003 (0.008)	0.000 (0.000)	0.011** (0.004)
GROW	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000* (0.000)
TL	0.024* (0.010)	0.044* (0.017)	0.045* (0.023)	-0.008 (0.029)	0.068** (0.022)	-0.027 (0.030)	0.000 (0.00)	-0.042 (0.022)
Inflation	-0.001*** (0.000)	-0.001*** (0.000)	-0.002** (0.001)	-0.000 (0.001)	-0.002*** (0.001)	-0.000 (0.001)	0.000 (0.000)	-0.003*** (0.000)
GDP growth	0.001*** (0.000)	0.000* (0.000)	0.002** (0.001)	-0.003** (0.001)	0.000 (0.000)	-0.000 (0.001)	0.000 (0.000)	0.001 (0.001)
ROA	0.192*** (0.020)	0.156*** (0.043)	0.264*** (0.032)	0.376*** (0.073)	0.216*** (0.023)	0.328* (0.134)	0.000 (0.000)	-0.263** (0.096)
Rule of Law	-0.003 (0.004)	-0.006 (0.004)	0.003 (0.012)	-0.007 (0.016)	-0.020* (0.009)	-0.006 (0.011)	0.000 (0.000)	0.030*** (0.006)
Regulatory Quality	0.007 (0.005)	0.017*** (0.005)	-0.018 (0.014)	0.002 (0.024)	0.013 (0.011)	-0.014 (0.012)	0.000 (0.000)	-0.043** (0.015)
Change in Loan Losses	0.019 (0.010)	-0.021 (0.032)	0.047** (0.014)	0.089 (0.055)	0.032** (0.011)	0.014 (0.104)	0.000 (0.000)	0.018 (0.074)
CFEE	-0.978*** (0.072)	-1.136*** (0.119)	-1.096*** (0.166)	-0.146 (0.231)	-1.319*** (0.206)	-1.214*** (0.180)	0.000 (0.000)	-1.019* (0.412)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.5134	0.6491	0.242	0.691	0.312	0.633	0.000	0.723
Observations	2557	1748	809	458	857	516	35	726

Note: The *p-value* denotes significance at three levels: 0.05*, 0.01**, and 0.001***. Inflation data and GDP growth figures source from World Bank for 2011 - 2018. ROA is the ratio of net income to average total assets. Rule of law sourced from World Bank and captures perceptions of the extent to which agents have confidence in and abide by the rules of society. Scores are collected annually for each year and range from -2.5 to 2.5. Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Annual data is sourced from the World Bank and range from -2.5 to 2.5. Change in Loan Losses is the ratio of change in loan losses to total assets. CFEE is the ratio of commission and fee income to total assets

Table 5.27: Earnings Management Truncated Regression with Additional Control Variables

Variable	Truncated Regression							
	ALL	Size		Region				
		Big	Small	Africa	Europe	Middle East	Americas	Asia
Intercept	0.877*** (0.010)	0.882*** (0.016)	0.856*** (0.029)	0.931*** (0.030)	0.864*** (0.041)	0.811*** (0.020)	0.871*** (0.078)	0.864*** (0.037)
LLP	-0.038* (0.016)	0.019 (0.039)	-0.043* (0.019)	0.412*** (0.066)	-0.032* (0.016)	-0.339*** (0.093)	-1.442 (0.990)	-0.303* (0.125)
LLR	-0.026*** (0.005)	-0.061*** (0.015)	-0.018** (0.007)	-0.136*** (0.027)	-0.004 (0.006)	-0.103** (0.036)	-0.169 (0.698)	-0.035** (0.011)
TA	-0.004*** (0.001)	-0.005*** (0.001)	-0.005** (0.002)	-0.009*** (0.001)	-0.001 (0.001)	-0.007*** (0.001)	-0.007 (0.011)	-0.004** (0.001)
GROW	-0.000 (0.000)	-0.000** (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.053** (0.017)	-0.002*** (0.000)
TL	0.002 (0.007)	0.017 (0.013)	-0.048*** (0.014)	-0.073*** (0.015)	0.003 (0.014)	0.124*** (0.014)	-0.132 (0.096)	-0.040* (0.019)
Inflation	-0.001** (0.000)	-0.001* (0.000)	-0.002 (0.001)	-0.000 (0.001)	-0.003** (0.001)	-0.000 (0.001)	0.000 (0.00)	-0.004*** (0.001)
GDP growth	0.001* (0.000)	0.000 (0.000)	0.003** (0.001)	-0.001 (0.002)	0.001 (0.001)	-0.001 (0.001)	0.000 (0.00)	-0.000 (0.002)
ROA	0.117*** (0.028)	0.337*** (0.061)	0.091* (0.036)	0.615*** (0.080)	0.071* (0.030)	0.383* (0.154)	0.000 (0.00)	0.091 (0.120)
Rule of Law	0.001 (0.008)	-0.011 (0.007)	0.028 (0.020)	0.004 (0.029)	-0.029 (0.016)	-0.005 (0.020)	0.000 (0.00)	0.038* (0.015)
Regulatory Quality	-0.004 (0.010)	0.024* (0.010)	-0.027 (0.023)	-0.016 (0.040)	0.011 (0.021)	-0.022 (0.023)	0.000 (0.00)	-0.051 (0.034)
Change in Loan Losses	-0.016 (0.017)	0.015 (0.058)	-0.017 (0.020)	0.085 (0.097)	-0.008 (0.016)	0.020 (0.182)	0.000 (0.00)	0.204 (0.181)
CFEE	-0.847*** (0.046)	-1.670*** (0.075)	-0.607*** (0.066)	-1.604*** (0.143)	-2.006*** (0.140)	-0.560*** (0.059)	0.000 (0.00)	-0.211 (0.292)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.2147	0.3169	0.2121	0.3462	0.1461	0.2262	0.004	0.1909
Observations	2557	1748	809	458	857	516	35	726

Note: The *p-value* denotes significance at three levels: 0.05*, 0.01**, and 0.001***. Inflation data and GDP growth figures source from the World Bank for 2011 - 2018. ROA is the ratio of net income to average total assets. Rule of law sourced from World Bank and captures perceptions of the extent to which agents have confidence in and abide by the rules of society. Score are collected annually for each year and range from -2.5 to 2.5. Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Annual data is sourced from World bank and range from -2.5 to 2.5. Change in Loan Losses is the ratio of change in loan losses to total assets. CFEE is ratio of commission and fee income to total assets

5.6 Conclusion

This study looks at how income smoothing affects a bank's efficiency. To this end, model results are first provided to present the efficiency score of the entire population of frontier market commercial banks individually, by size and by region. Thereafter, 's impact on a bank's technical efficiency scores are assessed. Results suggest that income smoothing adversely impacts efficiency. To add robustness, similar conclusions were derived after the inclusion of macroeconomic and financial performance control variables.

Results show that managers that smooth earnings via s and s , have lower technical efficiency. These findings concur with Wu et al. (2016)'s non-parametric efficiency assessment model. Findings also concur with researchers Kahneman & Tversky (1979a), Shu et al. (2002) and Shen & Chih (2005), implying that prospect theory is a strong justification in managing earnings as risk-taking behaviour function is steeper than risk-averting behaviour.

This study fails to find any statistically significant relationship between efficiency and bank size. Banks with significant assets or a large workforce do not exhibit greater efficiency. This finding concurs with Elyasiani & Mehdi (2019) yet fails to align with Colesnic et al. (2019), who find large banks less efficient as they may experience costlier non-performing loan disposals, which reduces efficiency. The disconnect on greater efficiency and size may also indicate an inefficient banking system that could achieve economies of scale in a more concentrated environment. This study, thereby further illuminates the idiosyncrasies of the frontier market, a consequence of their limited transparency, weak management capabilities, and inadequate investments in productivity-enhancing activities such as technology (Iqbal 2007)

Inputs and outputs of this study were examined in aggregate and compared to the estimated frontier. As a theoretical extension of previous research, future research may benefit by examining the sensitivity of individual efficiency inputs and outputs to help banks determine where gains can be best gotten. Significant constraints in income-increasing EM can be achieved with this addition (Kanagaretnam et al. 2010). Future studies may also consider the inclusion of additional bank-level (*i.e.*, auditor reputation and earnings quality) and country-level control variables (*i.e.*, anti-director rights, legal enforcement, timeliness of financial disclosure, international financial reporting standards (IFRS) adoption and analyst coverage) to account for bank and country-specific heterogeneity.

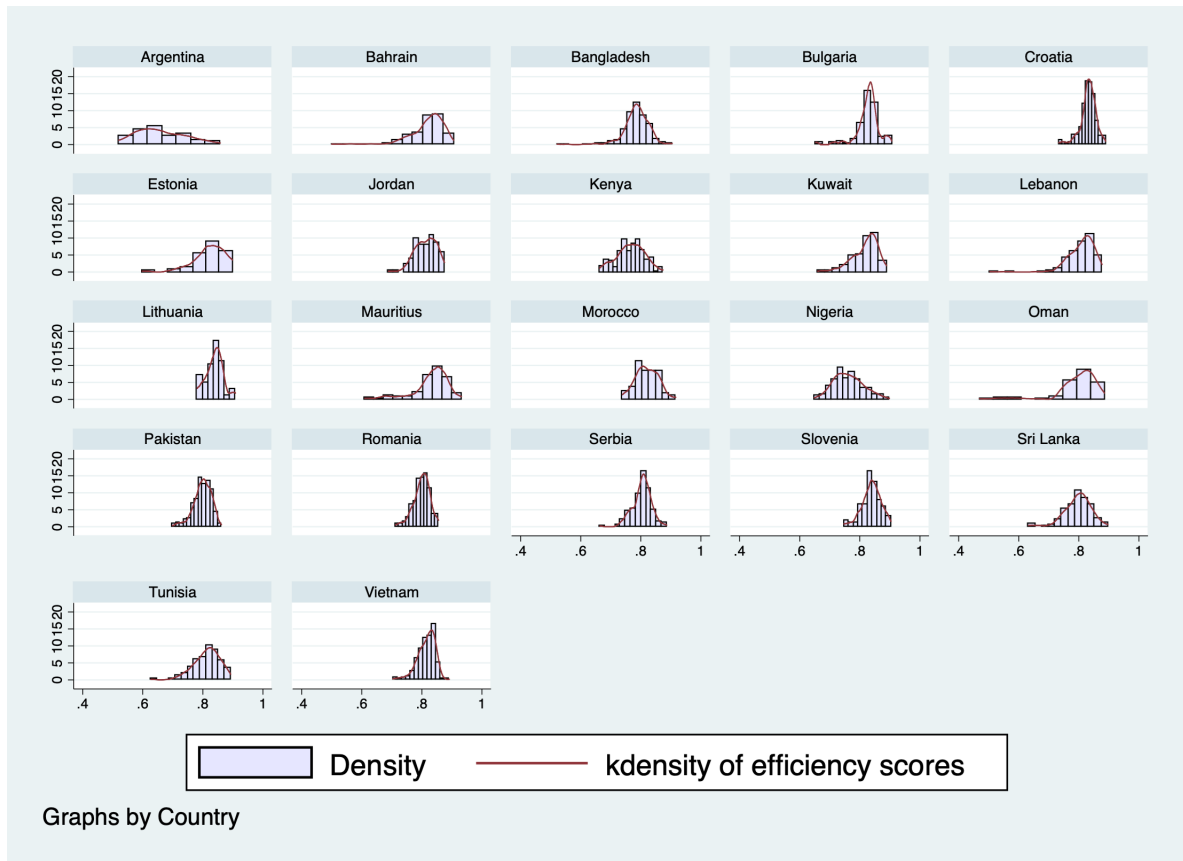


Figure 5.12: Density plot of efficiency scores by country

Implications from this study's findings suggest that banks should review the use of income smoothing and credit provisioning vehicles. The use of non-discretionary s and s as vehicles are adversely associated with a bank's efficiency. As frontier market countries develop, foreign competitors are apt to enter the market and capture market share. Maintaining competitiveness is the core of a company's success (Porter 1997) and influential on depositors, owners, and regulators' behaviour. For this reason, banks need to maximise returns on invested inputs and recognise that the use of income smoothing vehicles harms efficiency and competitiveness. Additionally, the adoption of other loss provisioning systems should be considered *i.e.*, a dynamic provisioning system whereby provisions adapt to economic stages. This addition will aid in smoothing credit cycles as it increases the effectiveness of macro-prudential policies while maintaining the temerity of the financial system and financial reports.

Table 5.28: Definition of Key Variables

Variable	Definition
<i>TOC</i>	= Total Operating Costs calculated as the sum of interest + non-interest expense.
Outputs	
<i>$\gamma 1$</i>	= Total Loans calculated as gross loans less reserve for loan loss provision
<i>$\gamma 2$</i>	= Total Financial Securities calculated as the sum of securities held to maturity and securities held for sale
Input Prices	
<i>w1</i>	= Price of deposits calculated as the ratio of interest expense to total deposits
<i>w2</i>	= Price of labour calculated as the ratio of salaries to total assets
<i>w3</i>	= Price of physical capital calculated as the ratio of expenditure on premises and fixed assets to fixed assets
Earnings Management	
LLP (%)	= Loan loss provisions calculated as the ratio of Loan Loss Provision to Total Loans
LLR (%)	= Loan loss reserves calculated as the ratio of Loan Loss Reserves of Total Loans
FA	= Fixed assets calculated as the sum of Property, Plant and Equipment
GROW (%)	= Net income growth calculated as the ratio of Growth Rate of Net Income
TA	= Natural logarithm of total assets, the sum of current + non-current assets
TL	= Total liabilities calculated as the ratio of total liabilities to total assets

Chapter 6

Conclusion

This thesis examines *earnings management* in frontier markets by using three separate but interrelated studies. EM is not without costs; thus understanding its impedance and consequences provides guidance for those examining frontier markets. The management of earnings biases financial statements; consequently, the study of *earnings management*, its constraint factors, and its performance implications are central in curbing the practice. Unbiased and reliable financial statements are fundamental to the functioning of secondary markets and the integrity of the broader financial system. Investors rely on publicly available financial statements for financing and ownership decisions and for deriving value estimates. Managers require accurate data in formulating decisions for research and development, creating dividend payout policies, or considering merger or acquisition opportunities. Policymakers and corporate governance reformists entrust that the information is accurate when crafting mechanisms to curb excessive opportunistic behaviour. It is recognised that more work remains to be done before a full understanding of all EM facets is achieved. The three studies of this thesis represent another step along the path towards that understanding.

The first of three studies in this thesis examined *earnings management* and institutional settings. The second study examined financial statement comparability and *earnings management*. The third study looked at the impact of *earnings management* on bank performance. All studies are relevant in the discipline and demonstrate the importance of understanding *earnings management*, factors that limit EM, and EM's performance trade-offs. This final chapter outlines key findings and literature contributions, implications of the study, and limitations of the research, and future research directions.

6.6.1 Key Findings and Literature Contributions

The first study in this thesis extends the previous research (Leuz et al. 2003, Shen & Chih 2005, Enomoto et al. 2018) by providing evidence that increased disclosure and greater legal

enforcement are negatively associated with . This study also finds that the increased quantity of analysts monitoring a firm decreases the likelihood of . This was observed at both the country and firm levels using appropriate control variables. Novel to this study and contrary to the expected hypotheses is the inability of societal trust to influence AEM activity. Also notable was that the use of IFRS as a dichotomous control variable, failed to show significance in curbing , yet size was a statically significant factor, as larger firms were found to engage in less than smaller firms. This latter finding suggests stronger internal control systems and reputation concerns are extant in larger firms. Additionally, leverage was positively related to AEM, suggesting managers may manage earnings to avoid debt covenant violations. This study also provides evidence that firms with superior value showed no greater propensity to manage earnings than those with lower values, advancing the argument that is value-destroying.

The second study of this thesis examined financial statement comparability and in frontier markets using a technique that maps accounting comparability based on a firm's financial statements and its economic performance from cross-country sampling. Results remain robust after controlling for firm and country effects, and employing several regression estimates. Overall, the results contribute to the literature by showing the impacts of increased comparability muted activity, yet failed to influence activity. The departure of the second finding from the literature on developed markets casts doubts on the pervasiveness of REM in frontier markets. Given 's adverse impact on long-term profitability and competitive advantage, managers in frontier markets may be more attuned to 's costs and, consequently, engage in less of it.

The third study of this thesis examined how the smoothing of income by frontier market banks impacts the level of technical efficiency (as measured by stochastic frontier analysis). Following Haw et al. (2004), the ratio of loan loss provisions to loans and the ratio of loan loss reserves to loans was used to measure practices. Consistent with this study's hypothesis, it was found that the practice of income smoothing is consistent with lower technical efficiency. Also examined, but not central to this study's hypotheses, was the impact of size on a banks' efficiency level. In three of the five geographic regions examined, support for large banks exhibiting greater technical efficiency was found. This study extends EM literature by deepening the insights into frontier market banks, a market where bank behaviour should vary significantly due to regulatory and enforcement level differences. Findings improve understanding of EM's influences on bank efficiency. Work herein departs significantly from existing empirical literature by focusing on income smoothing's role in efficiency.

6.7 Implications

With increased pressure on organisations to operate ethically and sustainably, the examination of EM and the findings contained within this dissertation's three studies have both practical and theoretical implications. The sections that follow will those implications.

6.7.1 Practical Implications

Implications of this first study are three-fold. First, investors would be wise to avoid over-reliance on informal institutions to restrain EM in frontier markets. Second, as analysts' oversight shows to be significant as an AEM deterrent, policymakers should take note that external monitors are more influential in moderating activity than internal monitors. Third, as economic growth and financial development are valuable in ensuring AEM constraint and reducing opportunities for a manager to expropriate investors' benefits, governments should recognise that economic expansion policies have the additional advantage of compensating for the weak rule of law and decreasing opportunistic EM behaviour.

Implications from this second study's findings provide helpful insight into companies in frontier markets and their unique operating properties. The divergence in behaviour from that which is frequently observed in developed markets indicates that values and standards vary and that other markets' findings may not be universally applicable. Policy makers and investors should recognise that differences in values and standards lead to transparency (opaqueness), which has been shown to be negatively (positively) linked to EM (Hao et al. 2020). Second, convergence towards a single accounting system (*e.g.* IFRS) or harmonisation of existing systems is an ideal for standard setters and their stakeholders to support. The increased comparability score exhibited when IFRS adopting countries are studied in isolation reveals that accounting standards are influential in the level of earnings quality. Third, increased comparability facilitates the transfer of cross-border information, thereby stimulating enterprise competitiveness. In such circumstances, management can create first-mover strategies to better meet the needs of consumers and generate high returns for shareholders. Four, recognition of the institutional settings variables that limit (and those that fail to limit) , provides ancillary governance tools. From recognising that enhanced comparability reduced , stakeholders can be informed of the resultant increase in financial statements' informativeness.

Implications from this third study suggest that banks should review their use of non-discretionary s and s as vehicles due to their adverse impact on a bank's efficiency. Additionally, banks should seek to maintain their efficiency as it is shown to impact their competitiveness. Competitiveness is the core of a company's success or failure (Porter 1997) as it serves as a protector against adverse effects (Degl'Innocenti et al. 2018). By recognising the inverse relationship between income smoothing and bank efficiency, stakeholders can create judgements on future competitive positions. When all tolled, this study's implications can be delimited to the influences of future firm value.

6.7.2 Theoretical Implications

Findings from this first study have implications for social norm theory. Social norm theory suggests that societal trust contributes significantly to the reduction of unethical corporate behaviour. The governance functions of societal trust in this study present results that are antithetical to the theory. Governance mechanism from a society that shapes behaviour and moderates a firms' association with EM, failed to reduce . This finding underscores the critical importance of explicitly accounting for the societal context when examining the governance mechanisms and their role in moderating discretionary accruals.

The findings of this second study have implications for agency theory. According to agency theory, insiders' motivations to misrepresent firm performance stem from their opportunistic behaviours. Increased financial compatibility was found to be negatively associated with but positively associated with . Due to the availability of comparable firm data, managers had less leeway to engage in EM. The findings are consistent with the theory and emphasise the importance of aligning the agent's and principal's interests.

The third study's findings have implications for prospect theory. According to prospect theory, individuals derive their values from gains and losses relative to a reference point rather than from absolute levels. Variation in the magnitude of the EM between countries and its detrimental effect on efficiency is consistent with elements of prospect theory. The justification for managing earnings is stronger than the justification for risk-averse behaviour.

6.7.3 Limitations and Future Research

Limitations of the first study suggest a direction for future research. First, not all countries designated as 'frontier' were included in this study due to macro condition limitations. For this reason, it cannot be considered an exhaustive look into frontier market firms. Second, accounting standards in the countries included in this study will vary and fundamentally alter a firm's accounting. Future studies may seek to further control for differences in accounting standards in non-IFRS adhering countries for accounting standard differences may bias results. Future research may also seek to examine gaps in the cultural effects on EM.

Limitations to the second study are three-fold. First, due to the comparability model's data requirements, select countries may be over-represented whereby larger countries may skew results. Second, this study did not account for political stability and rights within the countries examined. Political stability and rights may supplant the AEM and REM decisions and influence study findings. Third, institutional investors may exert market discipline and mitigate EM activity. Proposals for future research should consider controlling for the listed shortcomings. Insights gained from the research will help bridge this knowledge gap and broaden the scope of EM studies.

A limitation to the third study is in its examination of aggregated inputs and outputs compared to the estimated frontier level. As a theoretical extension of previous research, future research may examine individual efficiency inputs and outputs' sensitivity. From this, banks may better evaluate where gains can be achieved. Second, studies may also consider the inclusion of additional bank-level (*e.g.* auditor reputations and earnings quality) and country-level control variables (*e.g.* anti-director rights, legal enforcement, timeliness of financial disclosure, and analyst coverage) to account for bank and country-specific heterogeneity.

An overarching limitation applicable to all studies is the co-dependence of policy attributes within a country. The degree to which variables interact may result in correlated country attributes affecting a country. Isidro et al. (2020) note the interdependence of numerous institutional attributes results in statistical insignificance of individual country attributes but a high portfolio of joint explanatory power country attributes. Future research is suggested to infer country attributes associations using a multi-testing framework rather than a single-test perspective.

Bibliography

- Abarbanell, J. & Lehavy, R. (2003), 'Biased forecasts or biased earnings? The role of reported earnings in explaining apparent bias and over/underreaction in analysts' earnings forecasts', *Journal of Accounting and Economics* **36**(1-3), 105–146.
- Abdellaoui, M., Bleichrodt, H. & Paraschiv, C. (2007), 'Loss aversion under prospect theory: A parameter-free measurement', *Management Science* **53**(10), 1659–1674.
- Abdul-majid, M., Saal, D. S. & Battisti, G. (2010), 'Efficiency in Islamic and conventional banking: an international comparison', *Journal of Productivity Analysis* **34**(1), 25–43.
- Abebe, S. (2020), Assessment of loan recovery performance in Wegagen Bank SC, PhD thesis, St. Mary's University.
- Abernathy, J. L., Beyer, B. & Rapley, E. T. (2014), 'Earnings Management Constraints and Classification Shifting', *Journal of Business Finance & Accounting* **41**(5-6), 600–626.
- Abid, A., Shaique, M. & Anwar ul Haq, M. (2018), 'Do big four auditors always provide higher audit quality? Evidence from Pakistan', *International Journal of Financial Studies* **6**(2), 58.
- Abidi, N., Hacibedel, M. B. & Nkusu, M. M. (2016), *Changing times for frontier markets: a perspective from portfolio investment flows and financial integration*, Vol. 177, International Monetary Fund.
- Adams, B., Carow, K. A. & Perry, T. (2009), 'Earnings management and initial public offerings: The case of the depository industry', *Journal of Banking & Finance* **33**(12), 2363–2372.
- Addai-Asante, J. & Sekyi, S. (2016), 'Stochastic Frontier Analysis of Production Technology: An Application to the Pharmaceutical Manufacturing Firms in Ghana', *World Journal Curr. Econmics Res* **2**, 1–20.

- Adelopo, I., Lloydking, R. & Tauringana, V. (2018), 'Determinants of bank profitability before, during, and after the financial crisis', *International Journal of Managerial Finance* **14**(4), 378–398.
- Adolfo Barajas, Roberto Steiner, N. S. (2000), 'The impact of liberalization and foreign investment in Colombia's financial sector', *Journal of Development Economics* **63**(1), 157–196.
- Adusei, M. (2016), 'Determinants of bank technical efficiency: Evidence from rural and community banks in Ghana', *Cogent Business & Management* **3**(1), 1199519.
- Aggarwal, R. & Goodell, J. W. (2014), 'Cross- national differences in access to finance: Influence of culture and institutional environments', *Research in International Business and Finance* **31**(6), 193–211.
- Agrawal, A. & Knoeber, C. R. (1996), 'Firm performance and mechanisms to control agency problems between managers and shareholders', *Journal of Financial and Quantitative Analysis* **31**(3), 377–397.
- Ahmed, A., Mohammed, A. Y. & Adisa, A. O. (2014), 'Loan loss provision and earnings management in Nigerian deposit money banks', *Mediterranean Journal of Social Sciences* **5**(17), 49–49.
- Ahmed, A. S., Takeda, C. & Thomas, S. (1999), 'Bank loan loss provisions: a reexamination of capital management, earnings management and signaling effects', *Journal of Accounting and Economics* **28**(1), 1–25.
- Ahmed, F., Ahmed, A. & Kanwal, S. (2018), 'Mergers and Acquisitions in Selected Frontier Markets of Asia', *Signifikan: Jurnal Ilmu Ekonomi* **7**(1), 123–136.
- Ahmed, N., Zander, K. K. & Garnett, S. T. (2011), 'Socioeconomic aspects of rice-fish farming in Bangladesh: opportunities, challenges and production efficiency.', *Australian Journal of Agricultural Resource Economics* **55**(2), 199–219.
- Ahmed, P. A. & Fang, X. (1999), *Project finance in developing countries*, Vol. 7, World Bank Publications.
- Aigner, D., Lovell, C. K. & Schmidt, P. (1977), 'Formulation and estimation of stochastic frontier production function models', *Journal of Econometrics* **6**(1), 21–37.

- Ajao, A. & Ogunniyi, L. (2010), 'Technical and scale efficiency of commercial banks in Nigeria', *IUP Journal of Applied Economics* **9**(4), 59.
- Ajibefun, I. (2008), 'An evaluation of parametric and non-parametric methods of technical efficiency measurement: application to small scale food crop production in Nigeria', *ISSN OnlineAWB* **4**(3), 1813–2235.
- Al-Absy, M. S. M., Ismail, K. N. I. K., Ch, S. et al. (2019), 'Corporate Governance Mechanisms and Family Directives: Aggressive or Conservative in Earnings Management?', *Academy of Accounting and Financial Studies Journal* **23**(1), 1–9. Copyright- Jordan Whitney Enterprises, Inc 2019; Last updated - 2019-06-14 - Malaysia.
- Al Arif, M. N. R. & Awwaliyah, T. B. (2019), 'Market Share, Concentration Ratio and Profitability: Evidence from Indonesian Islamic Banking Industry', *Journal of Central Banking Theory and Practice* **8**(2), 189–201.
- Al-Jarrah, I. M., Al-Abdulqader, K. S. & Hammoudeh, S. (2017), 'Cost-efficiency and financial and geographical characteristics of banking sectors in the MENA countries.', *Applied Economics* **49**(35), 3523–3537.
- Al Masud, M. & Kutlu, L. (2017), 'US Bank Efficiency and the Fed Activity', *Available at SSRN 3042122* **38**, 20.
- Al-Muharrami, S. (2008), 'An examination of technical, pure technical and scale efficiencies in GCC banking', *American Journal of Finance and Accounting* **1**(2), 152–166.
- Alareeni, B. & Aljuaidi, O. (2014), 'The modified jones and yoon models in detecting earnings management in Palestine Exchange (PEX)', *International Journal of Innovation and Applied Studies* **9**(4), 1472.
- Alfraih, M. M. (2016), 'Have financial statements lost their relevance? Empirical evidence from the frontier market of Kuwait', *Journal of Advances in Management Research* **3**(2), 224–239.
- Alhadab, M. M., Al-Own, B. et al. (2017), 'Earnings management and banks performance: Evidence from Europe', *International Journal of Academic Research in Accounting, Finance and Management Sciences* **7**(4), 134–145.
- Alhassan, A. L., Tetteh, M. L. & Brobbey, F. O. (2016), 'Market power, efficiency and bank profitability: evidence from Ghana', *Economic Change and Restructuring* **49**(1), 71–93.

- Ali, S., Bouri, E., Czudaj, R. L. & Shahzad, S. J. H. (2020), 'Revisiting the valuable roles of commodities for international stock markets', *Resources Policy* **66**(11), 101603.
- Ali, U., Noor, M., Khurshid, M. K. & Mahmood, A. (2015), 'Impact of firm size on earnings management: A study of textile sector of Pakistan', *European Journal of Business and Management* **7**(28), 52–68.
- Allen, C., Gasior, M. & Smith, A. (1998), 'The competition effects of the Single Market in Europe', *Economic Policy* **13**(27), 440–486.
- Allen, L. & Rai, A. (1996), 'Operational efficiency in banking: An international comparison', *Journal of Banking & Finance* **20**(4), 655–672.
- Almarayeh, T. S., Aibar-Guzmán, B. & Abdullatif, M. (2020), 'Does audit quality influence earnings management in emerging markets? Evidence from Jordan', *Revista de Contabilidad-Spanish Accounting Review* **23**(1), 64–74.
- Altamuro, J. & Beatty, A. (2010), 'How does internal control regulation affect financial reporting?', *Journal of Accounting and Economics* **49**(1-2), 58–74.
- Altonji, J. G. & Blank, R. M. (1999), 'Race and gender in the labor market', *Handbook of Labor Economics* **3**(n.k.), 3143–3259.
- Altunbas, Y., Carbo, S., Gardener, E. P. & Molyneux, P. (2007), 'Examining the relationships between capital, risk and efficiency in European banking', *European Financial Management* **13**(1), 49–70.
- Altunbaş, Y., Gardener, E. P., Molyneux, P. & Moore, B. (2001), 'Efficiency in European banking', *European Economic Review* **45**(10), 1931–1955.
- Alzoubi, E. S. S. (2016), 'Audit quality and earnings management: evidence from Jordan', *Journal of Applied Accounting Research* **17**(2), 170–189.
- Alzoubi Ebraheem, S. S. (2016), 'Disclosure quality and earnings management: evidence from Jordan', *Accounting Research Journal* **29**(4), 429–456.
- Amato, L. H. & Amato, C. H. (2007), 'The effects of firm size and industry on corporate giving', *Journal of Business Ethics* **72**(3), 229–241.

- An, Z., Li, D. & Yu, J. (2016), 'Earnings management, capital structure, and the role of institutional environments', *Journal of Banking & Finance* **68**(n.k.), 131–152.
- Anagnostopoulou, S. C. & Tsekrekos, A. E. (2017), 'The effect of financial leverage on real and accrual-based earnings management', *Accounting and Business Research* **47**(2), 191–236.
- Anandarajan, A., Hasan, I. & McCarthy, C. (2006), 'The Use of Loan loss provisions for Capital Management, Earnings Management, and Signaling by Australian Banks', *Discussion Papers. Bank of Finland Research* .
- Anandarajan, A., Hasan, I. & McCarthy, C. (2007), 'Use of loan loss provisions for capital, earnings management and signalling by Australian banks', *Accounting & Finance* **47**(3), 357–379.
- Anastasiya Shamshur, L. W. (2019), 'Does bank efficiency influence the cost of credit?', *Journal of Banking & Finance* **105**(n.k.), 62–73.
- Andersen, T. B. & Tarp, F. (2003), 'Financial liberalization, financial development and economic growth in LDCs', *Journal of International Development: The Journal of the Development Studies Association* **15**(2), 189–209.
- Anderson, G. (1988), 'Mr. Smith and the Preachers: The Economics of Religion in the Wealth of Nations', *Journal of Political Economy* **96**(n.k.), 1066–88.
- Andreasson, S. (2011), 'Africa's prospects and South Africa's leadership potential in the emerging markets century', *Third World Quarterly* **32**(6), 1165–1181.
- Anon. (2019a), 'Global Frontier - TCM Investment Funds', <https://www.tcminvestmentfunds.com/global-frontier>. (Accessed on 09/30/2019).
- Anon. (2019b), 'IFRS - Argentina', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/argentina/#extent>. (Accessed on 09/10/2019).
- Anon. (2019c), 'IFRS - Bulgaria', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/bulgaria/>. (Accessed on 09/26/2019).

- Anon. (2019d), 'IFRS - Croatia', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/croatia/>. (Accessed on 09/26/2019).
- Anon. (2019e), 'IFRS - Estonia', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/estonia/>. (Accessed on 09/26/2019).
- Anon. (2019f), 'IFRS - Jordan', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/jordan/>. (Accessed on 09/26/2019).
- Anon. (2019g), 'IFRS - Kenya', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/kenya/>. (Accessed on 09/26/2019).
- Anon. (2019h), 'IFRS - Mauritius', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/mauritius/#commitment>. (Accessed on 09/26/2019).
- Anon. (2019i), 'IFRS - Oman', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/oman/#participant>. (Accessed on 09/26/2019).
- Anon. (2019j), 'IFRS - Serbia', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/serbia/#application>. (Accessed on 09/26/2019).
- Anon. (2019k), 'IFRS - Vietnam', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/vietnam/#commitment>. (Accessed on 09/26/2019).
- Anon. (2019l), 'IFRS for SMEs in Lebanon', <https://www.iasplus.com/en/news/2010/March/news6019>. (Accessed on 09/26/2019).
- Anon. (2019m), 'Kazakhstan', <https://www.iasplus.com/en/jurisdictions/asia/kazakhstan>. (Accessed on 09/26/2019).

- Anon. (2019n), 'Kuwait | IFAC', <https://www.ifac.org/about-ifac/membership/country/kuwait>. (Accessed on 09/26/2019).
- Anon. (2019o), 'Lithuania', <https://www.iasplus.com/en/jurisdictions/europe/lithuania>. (Accessed on 09/26/2019).
- Anon. (2019p), 'Morningstar', <https://www.morningstar.ca/IntroPage.aspx?site=ca&backurl=x>. (Accessed on 09/30/2019).
- Anon. (2019q), 'Morocco', <https://www.iasplus.com/en/jurisdictions/africa/morocco>. (Accessed on 09/26/2019).
- Anon. (2019r), 'Nigeria', <https://www.iasplus.com/en/jurisdictions/africa/nigeria>. (Accessed on 09/26/2019).
- Anon. (2019s), 'Romania', <https://www.iasplus.com/en/jurisdictions/europe/romania>. (Accessed on 09/30/2019).
- Anon. (2019t), 'Serbia Economy - overview - Economy', https://www.indexmundi.com/serbia/economy_overview.html. (Accessed on 09/30/2019).
- Anon. (2019u), 'Serbia Overview', <https://www.worldbank.org/en/country/serbia/overview>. (Accessed on 09/30/2019).
- Anon. (2019v), 'Slovenia', <https://www.iasplus.com/en/jurisdictions/europe/slovenia>. (Accessed on 09/26/2019).
- Anon. (2019w), 'Tunisia | IFAC', <https://www.ifac.org/about-ifac/membership/country/tunisia>. (Accessed on 09/26/2019).
- Arasaratnam, I. & Haykin, S. (2011), 'Cubature kalman smoothers', *Automatica* **47**(10), 2245–2250.
- Arasaratnam, L. A. (2011), *Perception and communication in intercultural spaces*, University Press of America.
- Armitage, P. (1955), 'Tests for linear trends in proportions and frequencies', *Biometrics* **11**(3), 375–386.
- Armstrong, C. S., Barth, M. E., Jagolinzer, A. D. & Riedl, E. J. (2010), 'Market reaction to the adoption of IFRS in Europe', *The Accounting Review* **85**(1), 31–61.

- Arnold, D. J. & Quelch, J. A. (1998), 'New strategies in emerging markets', *MIT Sloan Management Review* **40**(1), 7.
- Arora, N., Nidhi, G. A. & Kanwar, K. (2018), 'Non-performing assets and technical efficiency of Indian banks: a meta-frontier analysis', *Benchmarking* **25**(7), 2105–2125. Copyright - Emerald Publishing Limited 2018; Last updated - 2019-12-20.
- Arshad, S., Rizvi, S. A. R. & Haroon, O. (2019), 'Understanding Asian Emerging Stock Markets', *Buletin Ekonomi Moneter dan Perbankan* **21**(4), 495–510.
- Arshinova, T. (2011), 'Construction of Equity Portfolio on the Basis of Data Envelopment Analysis Approach', *Scientific Journal of Riga Technical University. Computer Sciences* **45**(1), 104–108.
- Arsinova, T. (2009), 'The Application of Data Envelopment Analysis Approach to the Efficiency Measurement of Latvian Banks'', *Scientific Journal of Riga Technical University. Computer Sciences* **39**, 92. Date revised - 2012-06-01; Last updated - 2012-06-11.
- Asgari, M. R., Pour, A. A. S., Zadeh, R. A. & Pahlavan, S. (2015), 'The relationship between firm's growth opportunities and firm size on changes ratio in retained earnings of listed companies in Tehran Stock Exchange', *International Journal of Innovation and Applied Studies* **10**(3), 923.
- Ashbaugh, H., LaFond, R. & Mayhew, B. W. (2003), 'Do nonaudit services compromise auditor independence? Further evidence', *The Accounting Review* **78**(3), 611–639.
- Ashbaugh, H. & Pincus, M. (2001), 'Domestic accounting standards, international accounting standards, and the predictability of earnings', *Journal of Accounting Review* **39**(3), 417–434.
- Ashkanasy, N. M., Wilderom, C. P. & Peterson, M. F. (2000), *Handbook of organizational culture and climate*, Sage.
- Athanasakou, V., Strong, N. C. & Walker, M. (2011), 'The market reward for achieving analyst earnings expectations: Does managing expectations or earnings matter?', *Journal of Business Finance Accounting* **38**(1-2), 58–94.
- Atwi, L., Safieddine, A. & Titman, S. (2017), 'Investor Protection and Governance in the Valuation of Emerging Markets Investments', *Journal of Applied Corporate Finance* **29**(3), 89–100.

- Ayadi, I. (2014), 'Technical efficiency of Tunisian banks', *International Business Research* **7**(4), 170.
- Azad, M. A. K., Munisamy, S., Masum, A. K. M., Saona, P. & Wanke, P. (2017), 'Bank efficiency in Malaysia: a use of malmquist meta-frontier analysis', *Eurasian Business Review* **7**(2), 287–311.
- Bader, M. K. I., Mohamad, S., Ariff, M. & Shah, T. H. (2008), 'Cost, revenue, and profit efficiency of Islamic versus conventional banks: international evidence using data envelopment analysis', *Islamic Economic Studies* **15**(2), 54.
- Badunenko, O. & Mozharovskyi, P. (2016), 'Nonparametric frontier analysis using Stata', *The Stata Journal* **16**(3), 550–589.
- Ball, R., Kothari, S. & Robin, A. (2000), 'The effect of international institutional factors on properties of Accounting earnings', *Journal of Accounting and Economics* **29**(1), 1–51.
- Ball, R., Robin, A. & Wu, J. S. (2003), 'Incentives versus standards: properties of accounting income in four East Asian countries', *Journal of Accounting and Economics* **36**(1-3), 235–270.
- Band, D. (1992), 'Corporate governance: Why agency theory is not enough', *European Management Journal* **10**(4), 453–459.
- BangladeshEconomicReview (2018), 'BangladeshEconomicReview - Finance Division, Ministry of Finance-Government of the People's Republic of Bangladesh', <https://mof.gov.bd/site/page/44e399b3-d378-41aa-86ff-8c4277eb0990/BangladeshEconomicReview>. (Accessed on 10/21/2019).
- Bank, T. W. (2018), 'World Development Indicators'. data retrieved from World Development Indicators, <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.
- Bank, T. W. (2019), 'Sri Lanka Overview', <https://www.worldbank.org/en/country/srilanka/overview>. (Accessed on 02/11/2020).
- Bank, W. (2015), 'Lebanon Economic Monitor, Spring 2015: The Economy of New Drivers and Old Drags', <https://www.worldbank.org/en/country/lebanon/publication/lebanon-economic-monitor-spring-2015>. (Accessed on 03/01/2020).

- Bank, W. (2020), 'Market capitalization of listed domestic companies (% of GDP) | Data', <https://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS>. (Accessed on 07/21/2020).
- Bao, B. & Bao, D. (2004), 'Income smoothing, earnings quality and firm valuation', *Journal of Business Finance Accounting* **31**(9-10), 1525–1557.
- Bao, S. R. & Lewellyn, K. B. (2017), 'Ownership structure and earnings management in emerging markets—An institutionalized agency perspective', *International Business Review* **26**(5), 828–838.
- Barako, D. G., Hancock, P. & Izan, H. Y. (2006), 'Factors Influencing Voluntary Corporate Disclosure by Kenyan Companies', *Corporate Governance: An International Review* **14**(2), 107–125.
- Barberis, N. C. (2013), 'Thirty years of prospect theory in economics: A review and assessment', *Journal of Economic Perspectives* **27**(1), 173–96.
- Barnes, M. L. & Hughes, A. T. W. (2002), 'A quantile regression analysis of the cross section of stock market returns', **2**(2), n.k.
- Barro, R. J. & McCleary, R. (2003), Religion and Economic Growth, Working Paper 9682, National Bureau of Economic Research.
- Barth, M. E. (2008), 'Global financial reporting: Implications for US academics', *The Accounting Review* **83**(5), 1159–1179.
- Barth, M. E., Landsman, W. R., Lang, M. & Williams, C. (2012), 'Are IFRS-based and US GAAP-based accounting amounts comparable?', *Journal of Accounting and Economics* **54**(1), 68–93.
- Barton, J. & Simko, P. J. (2002), 'The balance sheet as an earnings management constraint', *The Accounting Review* **77**(s-1), 1–27.
- Bartov, E. & Cohen, D. A. (2009), 'The “numbers game” in the pre-and post-Sarbanes-Oxley eras', *Journal of Accounting, Auditing & Finance* **24**(4), 505–534.
- Bartov, E., Givoly, D. & Hayn, C. (2002), 'The rewards to meeting or beating earnings expectations', *Journal of Accounting and Economics* **33**(2), 173–204.

- Baten, M. A. & Kamil, A. A. (2013), 'Evaluating advance efficiency of Bangladeshi online banks using stochastic frontier analysis', *African Journal of Business Management* **7**(32), 3177–3185.
- Batir, T. E., Volkman, D. A. & Gungor, B. (2017), 'Determinants of bank efficiency in Turkey: Participation banks versus conventional banks', *Borsa Istanbul Review* **17**(2), 86–96.
- Battese, G. E., Heshmati, A. & Hjalmarsson, L. (2000), 'Efficiency of labour use in the Swedish banking industry: a stochastic frontier approach.', *Empirical Economics* **25**(4), 623–640.
- Baumöhl, E. & Lyócsa, (2014), 'Volatility and dynamic conditional correlations of worldwide emerging and frontier markets', *Economic Modelling* **38**(n.k.), 175–183.
- Bayeh, A., Bitar, M., Burlacu, R. & Walker, T. J. (2018), 'Competition, Securitization, and Efficiency in US Banks', *Available at SSRN 3256392 n.k.(n.k.)*.
- Bdour, J. I. & Al-khoury, A. F. (2008), 'Predicting change in bank efficiency in Jordan: a data envelopment analysis', *Journal of Accounting & Organizational Change* **4**(2), 162–181.
- Beatty, A. L., Ke, B. & Petroni, K. R. (2002), 'Earnings management to avoid earnings declines across publicly and privately held banks', *The Accounting Review* **77**(3), 547–570.
- Beatty, A. & Weber, J. (2003), 'The effects of debt contracting on voluntary accounting method changes', *The Accounting Review* **78**(1), 119–142.
- Bebchuk, L. A. & Weisbach, M. S. (2010), 'The state of corporate governance research', *The review of financial studies* **23**(3), 939–961.
- Bebchuk, L., Cohen, A. & Ferrell, A. (2008), 'What matters in corporate governance?', *The Review of Financial Studies* **22**(2), 783–827.
- Beccalli, E., Anolli, M. & Borello, G. (2015), 'Are european banks too big? evidence on economies of scale', *Journal of Banking & Finance* **58**(03), 232–246.
- Beck, T., Demirgüç-Kunt, A. & Levine, R. (2003), 'Law, endowments, and finance', *Journal of Financial Economics* **70**(2), 137–181.
- Beck, T., Demirguc-Kunt, A. & Levine, R. (2005), 'SMEs, growth, and poverty: cross-country evidence', *Journal of Economic Growth* **10**(3), 199–229.
- Beck, T., Demirgüç-Kunt, A. & Merrouche, O. (2010), *Islamic vs. conventional banking: Business model, efficiency and stability*, Vol. 37, The World Bank.

- Beck, T. & Levine, R. (2004), Legal Institutions and Financial Development, in 'Handbook of new institutional economics', number 10417 in 'Working Paper Series', Elsevier, pp. 251–278.
- Becker, C. L., DeFond, M. L., Jiambalvo, J. & Subramanyam, K. (1998), 'The effect of audit quality on earnings management', *Contemporary accounting research* **15**(1), 1–24.
- Beechy, T. H. (2009), 'The Many Challenges of Pension Accounting.', *Accounting Perspectives* **8**(2), 91–111.
- Bekaert, G., Harvey, C. R., Lundblad, C. T. & Siegel, S. (2014), 'Political risk spreads', *Journal of International Business Studies* **45**(4), 471–493.
- Bekiris, F. V. & Doukakis, L. C. (2011), 'Corporate governance and accruals earnings management', *Managerial and Decision Economics* **32**(7), 439–456.
- Bems, R., Caselli, F., Grigoli, F., Gruss, B. & Lian, W. (2018), *Is Inflation Domestic or Global? Evidence from Emerging Markets*, Vol. 18, International Monetary Fund.
- Beneish, M. D. (1999), 'The detection of earnings manipulation', *Financial Analysts Journal* **55**(5), 24–36.
- Beneish, M. D. & Press, E. (1993), 'Costs of technical violation of accounting-based debt covenants', *The Accounting Review* **68**(03), 233–257.
- Berg, S. A., Førsund, F. R., Hjalmarsson, L. & Suominen, M. (1993), 'Banking efficiency in the Nordic countries', *Journal of Banking & Finance* **17**(2-3), 371–388.
- Berger, A. N. (2007), 'International Comparisons of Banking Efficiency', *Financial Markets, Institutions & Instruments* **16**(3), 119–144.
- Berger, A. N. & Humphrey, D. B. (1997), 'Efficiency of financial institutions: International survey and directions for future research', *European Journal of Operational Research* **98**(2), 175–212.
- Berger, A. N. & Mester, L. J. (1997), 'Inside the black box: What explains differences in the efficiencies of financial institutions?', *Journal of Banking & Finance* **21**(7), 895–947.
- Berger, D., Pukthuanthong, K. & Yang, J. J. (2011), 'International diversification with frontier markets', *Journal of Financial Economics* **101**(1), 227–242.
- Berglöf, E. & Claessens, S. (2006), 'Enforcement and good corporate governance in developing countries and transition economies', *The World Bank Research Observer* **21**(1), 123–150.

- Berle, A. A. & Means, G. G. C. (1991), *The modern corporation and private property*, Transaction publishers.
- Bezaf, A. (2009), 'Comparison of the deterministic and stochastic approaches for estimating technical efficiency on the example of non-parametric DEA and parametric SFA methods', *Metody ilościowe w badaniach ekonomicznych* **10**(1), 20–29.
- Bhattacharyya, S. (2012), 'Trade liberalization and institutional development', *Journal of Policy Modeling* **34**(2), 253–269.
- Bhojraj, S., Lee, C. M. & Oler, D. K. (2003), 'What's my line? A comparison of industry classification schemes for capital market research', *Journal of Accounting Research* **41**(5), 745–774.
- Biao Xie, Wallace N Davidson, P. J. D. (2003), 'Earnings management and corporate governance: the role of the board and the audit committee', *Journal of Corporate Finance* **9**(3), 295–316.
- Binavince, E. S. (1970), 'Major Legal Systems in the World Today', *The University of Toronto Law Journal* **20**(4), 499–501.
- Black, B. S. & Gilson, R. J. (1998), 'Venture capital and the structure of capital markets: banks versus stock markets', *Journal of Financial Economics* **47**(3), 243–277.
- Blackburn, D. W. & Cakici, N. (2017a), 'Frontier stock markets: Local vs global factors', *Gabelli School of Business, Fordham University Research Paper* (2930491).
- Blackburn, D. W. & Cakici, N. (2017b), 'Overreaction and the cross-section of returns: International evidence', *Journal of Empirical Finance* **42**(03), 1–14.
- Blanchette, M., Racicot, F.- & Girard, J.-Y. (2011), *The Effects of IFRS on Financial Ratios: Early Evidence in Canada*, Technical report. Copyright- Federal Reserve Bank of St. Louis 2011; Last updated - 2015-10-03.
- Blay, A. D., Gooden, E. S., Mellon, M. J. & Stevens, D. E. (2018), 'The usefulness of social norm theory in empirical business ethics research: A review and suggestions for future research', *Journal of Business Ethics* **152**(1), 191–206.
- Bley, J. & Saad, M. (2012), 'Idiosyncratic risk and expected returns in frontier markets: Evidence from GCC', *Journal of International Financial Markets, Institutions and Money* **22**(3), 538–554.

- Bloomfield, R. J., Libby, R. & Nelson, M. W. (2003), 'Do investors overly on old elements of the earnings time series?', *Contemporary Accounting Research* **20**(1), 1–31.
- Bobek, D. D., Hageman, A. M. & Kelliher, C. F. (2013), 'Analyzing the role of social norms in tax compliance behavior', *Journal of Business Ethics* **115**(3), 451–468.
- Bonin, J. P., Hasan, I. & Wachtel, P. (2005), 'Bank performance, efficiency and ownership in transition countries', *Journal of Banking & Finance* **29**(1), 31–53.
- Boonlert-U-Thai, K., Meek, G. K. & Nabar, S. (2006), 'Earnings attributes and investor-protection: International evidence', *The International Journal of Accounting* **41**(4), 327–357.
- Boyacigiller, N. A. & Adler, N. J. (1991), 'The parochial dinosaur: Organizational science in a global context', *Academy of Management Review* **16**(2), 262–290.
- Boyd, J. H. & De Nicolo, G. (2005), 'The theory of bank risk taking and competition revisited', *The Journal of finance* **60**(3), 1329–1343.
- Bozanic, Z., Chen, J. & Jung, M. J. (2019), 'Analyst Contrarianism', *Journal of Financial Reporting* **4**(2), 61–88.
- Braam, G., Nandy, M., Weitzel, U. & Lodh, S. (2015), 'Accrual-based and real earnings management and political connections', *The International Journal of Accounting* **50**(2), 111–141.
- Bradshaw, M. T. (2009), 'Analyst information processing, financial regulation, and academic research', *The Accounting Review* **84**(4), 1073–1083.
- Bradshaw, M. T., Miller, G. S., Serafeim, G. et al. (2009), 'Accounting method heterogeneity and analysts' forecasts', *Unpublished paper, University of Chicago, University of Michigan, and Harvard University*.
- Britannica (2019), 'Argentina - Economy | Britannica', <https://www.britannica.com/place/Argentina/Economy>. (Accessed on 02/28/2020).
- Brochet, F., Jagolinzer, A. D. & Riedl, E. J. (2013), 'Mandatory IFRS adoption and financial statement comparability', *Contemporary Accounting Research* **30**(4), 1373–1400.
- Brown, K. (2003), 'Islamic banking comparative analysis', *The Arab Bank Review* **5**(2), 43–50.

- Brown, L. D. & Higgins, H. N. (2005), 'Managers' forecast guidance of analysts: International evidence', *Journal of Accounting and Public Policy* **24**(4), 280–299.
- Brown, P. (2013), 'Some observations on research on the benefits to nations of adopting IFRS', *The Japanese Accounting Review* **3**(2013), 1–19.
- Brown, S. V. & Tucker, J. W. (2011), 'Large-sample evidence on firms' year-over-year MD&A modifications', *Journal of Accounting Research* **49**(2), 309–346.
- Burgstahler, D. & Dichev, I. (1997), 'Earnings management to avoid earnings decreases and losses', *Journal of Accounting and Economics* **24**(1), 99–126.
- Burnett, B. M., Cripe, B. M., Martin, G. W. & McAllister, B. P. (2012), 'Audit quality and the trade-off between accretive stock repurchases and accrual-based earnings management', *The Accounting Review* **87**(6), 1861–1884.
- Cai, F. & Wong, H. (2010), 'The effect of IFRS adoption on global market integration', *International Business and Economics Research Journal* **9**(10), 25–34.
- Cai, G., Li, W. & Tang, Z. (2020), 'Religion and the method of earnings management: Evidence from China', *Journal of Business Ethics* **161**(1), 71–90.
- Callao, S., Jarne, J. I. & Wróblewski, D. (2017), 'Eurasian Journal of Business and Management', *Eurasian Journal of Business and Management* **5**(2), 60–84.
- Callen, J. L., Morel, M. & Richardson, G. (2011), 'Do culture and religion mitigate earnings management? Evidence from a cross-country analysis', *International Journal of Disclosure and Governance* **8**(2), 103–121.
- Campbell, J. L. & Yeung, P. E. (2017), 'Earnings Comparability, Accounting Similarities, and Stock Returns: Evidence From Peer Firms' Earnings Restatements.', *Journal of Accounting, Auditing Finance* **32**(4), 480–509.
- Capkun, V., Collins, D. & Jeanjean, T. (2016), 'The effect of IAS/IFRS adoption on earnings management (smoothing): A closer look at competing explanations', *Journal of Accounting and Public Policy* **35**(4), 352–394.
- Casale, G. & Arrigo, G. (2017), *International Labour Law Handbook: From A to Z*, Vol. 1, G Giappichelli Editore.

- Cascino, S. & Gassen, J. (2010), Mandatory IFRS adoption and accounting comparability, Technical report, SFB 649 discussion paper. Copyright Federal Reserve Bank of St. Louis 2010; Last updated - 2015-10-03.
- Cascino, S. & Gassen, J. (2016), 'Have unified standards made financial reporting more comparable?', *LSE Business Review* **n.k.(n.k.)**, n.k.
- Cassell, C. A., Myers, L. A. & Seidel, T. A. (2015), 'Disclosure transparency about activity in valuation allowance and reserve accounts and accruals-based earnings management', *Accounting, Organizations and Society* **46**(8), 23–38.
- Castrillo, L. A., Marcos, S. & San Martin, J. M. (2010), 'Corporate governance, legal investor protection, and performance in Spain and the United Kingdom', *Corporate Ownership and Control* **7**(3), 416–429.
- Casu, B. & Molyneux, P. (2003), 'A comparative study of efficiency in European banking', *Applied Economics* **35**(17), 1865–1876.
- Ceccobelli, G. & Giosi, A. (2019), 'Earnings management practices in the banking industry: The role of bank regulation and supervision', *Corporate Governance: Search for the Advanced Practices* **n.k.(n.k.)**, 193–214.
- Chan, L. H., Chen, K. C., Chen, T. Y. & Yu, Y. (2014), 'Substitution between real and accruals-based earnings management after voluntary adoption of compensation clawback provisions', *The Accounting Review* **90**(1), 147–174.
- Chan-Lau, J. (2014), 'Frontier Equity Markets: Risk Parity Lessons for Asset Allocation', *The Journal of Alternative Investments* **16**(4), 28–36,4.
- Chandren, S. (2016), 'Review on the Double Side of Earnings Management.', *Pertanika Journal of Social Sciences & Humanities* **24**(4), 114–135.
- Charnes, A., Cooper, W. W. & Rhodes, E. (1978), 'Measuring the efficiency of decision making units', *European Journal of Operational Research* **2**(6), 429–444.
- Chauhan, Y. & Kumar, S. B. (2019), 'Does accounting comparability alleviate the informational disadvantage of foreign investors?', *International Review of Economics & Finance* **60**(6), 114–119.

- Chen, A. (2016), 'Does comparability restrict opportunistic accounting?', *ProQuest Dissertations and Theses* **n.k.**(n.k.), 63.
- Chen, C. C. S., Chou, Y.-Y. & Wei, P. (2020), 'Country factors in earnings management of ADR firms', *Finance Research Letters* **32**(3), 101146.
- Chen, C., Gotti, G., Kang, T. & Wolfe, M. C. (2018), 'Corporate codes of ethics, national culture, and earnings discretion: International evidence', *Journal of Business Ethics* **151**(1), 141–163.
- Chen, C.-J. & Yu, C.-M. J. (2012), 'Managerial ownership, diversification, and firm performance: Evidence from an emerging market', *International Business Review* **21**(3), 518–534.
- Chen, C., Kim, J.-B. & Yao, L. (2017), 'Earnings smoothing: Does it exacerbate or constrain stock price crash risk?', *Journal of Corporate Finance* **42**(3), 36–54.
- Chen, C.-M., Delmas, M. A. & Lieberman, M. B. (2015), 'Production frontier methodologies and efficiency as a performance measure in strategic management research', *Strategic Management Journal* **36**(1), 19–36.
- Chen, C.-W., Collins, D. W., Kravet, T. D. & Mergenthaler, R. D. (2018), 'Financial statement comparability and the efficiency of acquisition decisions', *Contemporary Accounting Research* **35**(1), 164–202.
- Chen, J. C., Patten, D. M. & Roberts, R. W. (2008), 'Corporate charitable contributions: a corporate social performance or legitimacy strategy?', *Journal of Business Ethics* **82**(1), 131–144.
- Chen, J. Z., Rees, L. L. & Sivaramakrishnan, S. (2010), 'On the use of accounting vs. real earnings management to meet earnings expectations-a market analysis', *SSRN Electronic Journal* **n.k.**(n.k.), 55.
- Chen, M.-P., Chen, P.-F. & Lee, C.-C. (2014), 'Frontier stock market integration and the global financial crisis', *The North American Journal of Economics and Finance* **29**(3), 84–103.
- Chen, S., Cai, W. & Jebran, K. (2019), 'Does social trust mitigate earnings management? Evidence from China', *Emerging Markets Finance and Trade* **37**(4), 1–22.
- Chen, W., Hribar, P. & Melessa, S. (2018), 'Incorrect inferences when using residuals as dependent variables', *Journal of Accounting Research* **56**(3), 751–796.

- Chen, X., Cheng, Q., Hao, Y. & Liu, Q. (2020), 'GDP growth incentives and earnings management: evidence from China', *Review of Accounting Studies* **25**(2), 1–38.
- Chen, Y.-K. (2001), 'Three essays on bank efficiency', *ProQuest Dissertations and Theses* **n.k.**(n.k.), 205. Copyright ProQuest LLC; Last updated - 2019-10-18.
- Chen, Y.-S. H. H.-J. & Huang, S.-H. (2020), 'The Impact of Incentive Compensation Structure on the Choice Strategy of Earnings Management', *Management Review* **39**(1), 141–161.
- Chi, C.-W., Hung, K. & Liu, S. (2020), 'Corporate Governance and Earnings Management in Taiwan: A Quantile Regression Approach', *Journal of Accounting and Finance* **20**(2), n.k.
- Chi, W., Lisic, L. L. & Pevzner, M. (2011), 'Is enhanced audit quality associated with greater real earnings management?', *Accounting Horizons* **25**(2), 315–335.
- Chin, C.-L., Chen, Y.-J. & Hsieh, T.-J. (2009), 'International diversification, ownership structure, legal origin, and earnings management: Evidence from Taiwan', *Journal of Accounting, Auditing & Finance* **24**(2), 233–262.
- Chipalkatti, N. & Rishi, M. (2007), 'Do Indian banks understate their bad loans?', *The Journal of Developing Areas* **40**(2), 75–91.
- Chircop, J., Collins, D. W., Hass, L. H. & Nguyen, N. N. Q. (2020), 'Accounting comparability and corporate innovative efficiency', *The Accounting Review* **95**(4), 127–151.
- Cho, E. & Chun, S. (2016), 'Corporate social responsibility, real activities earnings management, and corporate governance: evidence from Korea', *Asia-Pacific Journal of Accounting & Economics* **23**(4), 400–431.
- Cho, M. & Chung, K.-H. (2016), 'The effect of commercial banks' internal control weaknesses on loan loss reserves and provisions', *Journal of Contemporary Accounting & Economics* **12**(1), 61–72.
- Choi, J., Choi, S., Myers, L. & Ziebart, D. (2014), Financial statement comparability and the ability of stock return to reflect future earnings, Technical Report n.k., Working Paper, Seoul National University.
- Choi, J.-H., Kim, J.-B., Qiu, A. A. & Zang, Y. (2012), 'Geographic proximity between auditor and client: How does it impact audit quality?', *Auditing: A Journal of Practice* **31**(2), 43–72.

- Choi, J. H. et al. (2017), *Accrual Accounting and Resource Allocation: A General Equilibrium Analysis*, Technical report.
- Choy, H., Gul, F. A. & Yao, J. (2011), 'Does political economy reduce agency costs? Some evidence from dividend policies around the world', *Journal of Empirical Finance* **18**(1), 16–35.
- Christensen, H. B., Hail, L. & Leuz, C. (2013), 'Mandatory ifrs reporting and changes in enforcement', *Journal of Accounting and Economics* **56**(2-3), 147–177.
- Christensen, T. E., Huffman, A. A. & Lewis-Western, M. F. (2017), 'Earnings Management Proxies: Prudent Business Decisions or Earnings Manipulation?', *Available at SSRN 293838 n.k.(n.k.)*, 53.
- Chuanchen, X., Guiting, Z. & Shutian, Q. (2002), 'On the Economies of Scale in the State-Owned Banks and Strategy Analysis of Financial Reform [J]', *Economic Research Journal* **10**(03), 94–108.
- Chui, A. C., Lloyd, A. E. & Kwok, C. C. (2002), 'The determination of capital structure: is national culture a missing piece to the puzzle?', *Journal of International Business Studies* **33**(1), 99–127.
- Chung, B. H. (2017), *Do differences in national cultures affect cross-country financial statement comparability under IFRS?*, PhD thesis, The University of Iowa.
- Chung, K. H. & Jo, H. (1996), 'The impact of security analysts' monitoring and marketing functions on the market value of firms', *Journal of Financial and Quantitative analysis* **31**(4), 493–512.
- Chung, K. H. & Zhang, H. (2011), 'Corporate governance and institutional ownership', *Journal of financial and quantitative analysis* **46**(1), 247–273.
- Cialdini, R. B., Trost, M. R., Gilbert, D. T., Fiske, S. T. & Lindzey, G. (1998), 'The handbook of social psychology', *Social influence: Social norms, conformity and compliance* **4**(n.k.), n.k.
- Cieslewicz, J. K. (2014), 'Relationships between national economic culture, institutions, and accounting: Implications for IFRS', *Critical Perspectives On Accounting* **25**(6), 511–528.
- Cioffi, J. W. (2000), 'State of the art: A review essay on comparative corporate governance: The state of the art and emerging research', *The American Journal of Comparative Law* **48**(n.k.), 501.

- CitiBank (2020), 'https://www.citibank.co.uk/personal/market-insights.do?article=reviewing_citis_global_growth_estimates', https://www.citibank.co.uk/personal/market-insights.do?article=reviewing_citis_global_growth_estimates. (Accessed on 06/25/2020).
- Claessens, S. (2003), 'Corporate Governance and Development', *World Bank Research Observer* p. n.k.
- Claessens, S. & Laeven, L. (2004), Competition in the Financial Sector and Growth: A Cross-Country Perspective, in 'Financial Development and Economic Growth', Vol. n.k., Palgrave Macmillan UK, pp. 66–105.
- Claessens, S. & Lee, J. (2002), 'Foreign banks in low-income countries: Recent development and impacts, background paper for the Global Development Finance 2002 (Washington DC: The World Bank), forthcoming in James Hanson et al', *Globalization and National Financial System*.
- Clarke, G., Cull, R., d'Amato, L. & Molinari, A. (2000), 'On the kindness of strangers? The impact of foreign entry on domestic banks in Argentina', *The internationalization of financial services: Issues and lessons for developing countries* pp. 331–54.
- Clarke, P. B. & Byrne, P. (1993), *Religion defined and explained*, Vol. n.k., Springer.
- Clarke, T. (2004), 'Theories of corporate governance', *The Philosophical Foundations of Corporate Governance*, Oxon n.k.(n.k.), 370.
- Cleary, S. & Hebb, G. (2016), 'An efficient and functional model for predicting bank distress: In and out of sample evidence', *Journal of Banking & Finance* **64**(n.k.), 101–111.
- Clemons, E. K. (2019), Resources, Platforms, and Sustainable Competitive Advantage: How to Win and Keep on Winning, in 'New Patterns of Power and Profit', Springer, pp. 93–104.
- Coën, A. & Desfleurs, A. (2016), 'Another look at financial analysts' forecasts accuracy: recent evidence from Eastern European frontier markets', *Handbook of Frontier Markets* pp. 171–189.
- Coffee, J. C. (1999), 'Privatization and corporate governance: The lessons from securities market failure', *The Journal of Corporation Law* **25**(4), 1.

- Cohen, D. A., Dey, A. & Lys, T. Z. (2008), 'Real and Accrual-Based Earnings Management in the Pre- and Post-Sarbanes-Oxley Periods.', *The Accounting Review* **83**(3), 757–787.
- Cohen, D. A. & Zarowin, P. (2010), 'Accrual-based and real earnings management activities around seasoned equity offerings', *Journal of Accounting and Economics* **50**(1), 2–19.
- Cohen, L. J., Cornett, M. M., Marcus, A. J. & Tehranian, H. (2014), 'Bank Earnings Management and Tail Risk during the Financial Crisis', *Journal of Money, Credit and Banking* **46**(1), 171–197.
- Colesnic, O., Kounetas, K. & Michael, P. (2019), 'Estimating risk efficiency in Middle East Banks before and after the crisis:A Metafrontier framework', *Global Finance Journal* **38**(3), 100484.
- Collins, D. W., Kothari, S. P., Shanken, J. & Sloan, R. G. (1994), 'Lack of timeliness and noise as explanations for the low contemporaneous return-earnings association', *Journal of Accounting and Economics* **18**(3), 289–324.
- Conaway, J. (2017), Has global financial reporting comparability improved?, PhD thesis. Copyright ProQuest LLC; Last updated - 2020-01-27.
- Cornett, M. M., Marcus, A. J. & Tehranian, H. (2008), 'Corporate governance and pay-for-performance: The impact of earnings management', *Journal of Financial Economics* **87**(2), 357–373.
- Coskun, A. & Balci, E. (2018), 'An Efficiency Analysis on Interest Free Banks: An International Comparison', *Journal of Insurance and Financial Management* **4**(1), 1–30.
- Country, C. (2020), 'South america :: Argentina — the world factbook - central intelligence agency', <https://www.cia.gov/library/publications/the-world-factbook/geos/ar.html>. (Accessed on 11/01/2020).
- Crittenden, C. A. & Crittenden, W. F. (2014), 'The accounting profession's role in corporate governance in frontier markets: A research agenda', *Organizations and Markets in Emerging Economies* **5**(5), 7–22.
- Crittenden, V., Crittenden, W., Ferrell, L., Ferrell, O. & Pinney, C. (2011), 'Market-oriented sustainability: a conceptual framework and propositions.', *Journal of the Academy of Marketing Science* **39**(1), 71–85.

- Crockett, A. et al. (2008), 'Market liquidity and financial stability', *Financial Stability Review* **11**(n.k.), 13–17.
- Cuervo Valledor, Á., Pérez Mena, A., Vicente López, M. & Calvo Clúa, R. (2016), 'Estudio de las posibilidades de inversión en los mercados frontera', **n.k.**(n.k.).
- Cuesta, R. A. & Orea, L. (2002), 'Mergers and technical efficiency in Spanish savings banks: A stochastic distance function approach', *Journal of Banking & Finance* **26**(12), 2231–2247.
- Cui, W. (2017), 'Social trust, institution, and economic growth: Evidence from China', *Emerging Markets Finance and Trade* **53**(6), 1243–1261.
- Cull, R., Peria, M. S. M. & Verrier, J. (2018), *Bank ownership: Trends and implications*, The World Bank.
- Cunha, V. L. M., Mendes, S. M. D. et al. (2017), 'Financial Determinants of Corporate Governance Disclosure: Portuguese Evidence', *Athens Journal of Business and Economics* **3**(1), 21–36.
- Cyril, U. M., Ogbogu, N. B. G. & Emeka, N. P. (2020), 'Appraisal of the Impact of Earnings Management on Financial Performance of Consumer Goods Firms in Nigeria', *Journal of Finance and Accounting* **8**(1), 34.
- Dai, X. & Kuosmanen, T. (2014), 'Best-practice benchmarking using clustering methods: Application to energy regulation', *Omega* **42**(1), 179–188.
- Dainton, M. & Zelle, D. (n.d.), 'E.(2011)', *Introduction to Communication Theory. Applying Communication Theory for Professional Life* **n.k.**(n.k.), 1–13.
- Dale A, Buckmaster Gary J, P. R. B. (2001), *Development of the income smoothing literature, 1893-1998: a focus on the United States*, Vol. 4, Elsevier.
- Darmadi, S. (2016), 'Ownership concentration, family control, and auditor choice', *Asian Review of Accounting* **24**(1), 19–42.
- Daske, H., Hail, L., Leuz, C. & Verdi, R. (2008), 'Mandatory IFRS reporting around the world: Early evidence on the economic consequences', *Journal of Accounting Review* **46**(5), 1085–1142.

- Daske, H., Hail, L., Leuz, C. & Verdi, R. (2013), 'Adopting a label: Heterogeneity in the economic consequences around IAS/IFRS adoptions', *Journal of Accounting Research* **51**(3), 495–547.
- Davidson III, W. N., Jiraporn, P., Kim, Y. S. & Nemec, C. (2004), 'Earnings management following duality-creating successions: Ethnostatistics, impression management, and agency theory', *Academy of management journal* **47**(2), 267–275.
- Davis, J. H., Schoorman, F. D. & Donaldson, L. (1997), 'Toward a stewardship theory of management', *Academy of Management review* **22**(1), 20–47.
- Dayanandan, A., Donker, H., Ivanof, M. & Karahan, G. (2016), 'IFRS and accounting quality: legal origin, regional, and disclosure impacts', *International Journal of Accounting and Information Management* **7**(2), 117–140.
- De Franco, G., Hope, O.-K. & Larocque, S. (2015), 'Analysts' choice of peer companies', *Review of Accounting Studies* **20**(1), 82–109.
- De Franco, G., Kothari, S. P. & Verdi, R. S. (2011), 'The benefits of financial statement comparability', *Journal of Accounting Research* **49**(4), 895–931.
- De Jong, A., Mertens, G., van der Poel, M. & van Dijk, R. (2014), 'How does earnings management influence investor's perceptions of firm value? Survey evidence from financial analysts', *Review of Accounting Studies* **19**(2), 606–627.
- DeAngelo, L. E. (1981), 'Auditor size and audit quality', *Journal of accounting and economics* **3**(3), 183–199.
- Debreu, G. (1951), 'The Coefficient of Resource Utilization', *Econometrica* **19**(3), 273–292.
- Dechow, P., Ge, W. & Schrand, C. (2010), 'Understanding earnings quality: A review of the proxies, their determinants and their consequences', *Journal of Accounting and Economics* **50**(2-3), 344–401.
- Dechow, P. M., Ge, W., Larson, C. R. & Sloan, R. G. (2011), 'Predicting material accounting misstatements', *Contemporary Accounting Review* **28**(1), 17–82.
- Dechow, P. M., Hutton, A. P., Kim, J. H. & Sloan, R. G. (2012), 'Detecting earnings management: A new approach', *Journal of Accounting Review* **50**(2), 275–334.

- Dechow, P. M., Sloan, R. G. & Sweeney, A. P. (1995), 'Detecting earnings management', *Accounting Review* **70**(2), 193–225.
- DeFond, M., Hu, X., Hung, M. & Li, S. (2011), 'The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability', *Journal of Accounting and Economics* **51**(3), 240–258.
- DeFond, M., Hung, M. & Trezevant, R. (2007), 'Investor protection and the information content of annual earnings announcements: International evidence', *Journal of Accounting and Economics* **43**(1), 37–67.
- DeFond, M. L. & Hung, M. (2003), 'An empirical analysis of analysts' cash flow forecasts', *Journal of Accounting and Economics* **35**(1), 73–100.
- Degeorge, F., Ding, Y., Jeanjean, T. & Stolowy, H. (2013), 'Analyst coverage, earnings management and financial development: An international study', *Journal of Accounting and Public Policy* **32**(1), 1–25.
- Degeorge, F., Patel, J. & Zeckhauser, R. (1999), 'Earnings management to exceed thresholds', *The Journal of Business* **72**(1), 1–33.
- Degl'Innocenti, M., Grant, K., Šević, A. & Tzeremes, N. G. (2018), 'Financial stability, competitiveness and banks' innovation capacity: Evidence from the global financial crisis', *International Review of Financial Analysis* **59**(2), 35–46.
- Delboeuf, J. (1881), *Mathematical psychics: An essay on the application of mathematics to the moral sciences*, Vol. 12, Presses Universitaires de France.
- Delis, M. D. & Tsionas, E. G. (2009), 'The joint estimation of bank-level market power and efficiency', *Journal of Banking & Finance* **33**(10), 1842–1850.
- Deloitte (2020), 'Use of IFRS by jurisdiction', <https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>. (Accessed on 01/31/2020).
- Deltuvaitė, V. & Sinevičienė, L. (2014), 'Research on the relationship between the structure of financial system and economic development', *Procedia-Social and Behavioral Sciences* **156**(2), 533–537.

- Demirer, R. (2013), 'Can advanced markets help diversify risks in frontier stock markets? Evidence from Gulf Arab stock markets', *Research in International Business and Finance* **29**(n.k.), 77–98.
- Denis, D. K. & McConnell, J. J. (2003), 'International corporate governance', *Journal of Financial and Quantitative Analysis* **38**(1), 1–36.
- Denizer, C., Dinc, M. & Tarimcilar, M. (2000), *Measuring banking efficiency in the pre-and post-liberalization environment: evidence from the Turkish banking system*, Vol. 2476, World Bank Publications.
- Deutsch, M. & Gerard, H. B. (1955), 'A study of normative and informational social influences upon individual judgment.', *The Journal of Abnormal and Social Psychology* **51**(3), 629.
- Devine, P. J., Lee, N., Jones, R. & Tyson, W. J. (2018), *An introduction to industrial economics*, Routledge.
- Dietrich, A. & Wanzenried, G. (2014), 'The determinants of commercial banking profitability in low-, middle-, and high-income countries', *The Quarterly Review of Economics and Finance* **54**(3), 337–354.
- Dimitras, A. I., Kyriakou, M. I. & Iatridis, G. (2015), 'Financial crisis, GDP variation and earnings management in Europe', *Research in International Business and Finance* **34**(2), 338–354.
- Dimitrov, K. (2018), 'Geert Hofstede et al's set of national cultural dimensions-popularity and criticisms', *arXiv preprint arXiv:1810.02621* .
- Ding, D. & Sickles, R. C. (2018), 'Frontier efficiency, capital structure, and portfolio risk: An empirical analysis of US banks', *BRQ Business Research Quarterly* **21**(4), 262–277.
- Dittmar, A. & Mahrt-Smith, J. (2007), 'Corporate governance and the value of cash holdings', *Journal of Financial Economics* **83**(3), 599–634.
- Djalilov, K. & Piesse, J. (2016), 'Determinants of bank profitability in transition countries: What matters most?', *Research in International Business and Finance* **38**(1), 69–82.
- Djalilov, K. & Piesse, J. (2019), 'Bank regulation and efficiency: Evidence from transition countries', *International Review of Economics & Finance* **64**(1), 308–322.

- Djankov, S., Glaeser, E., La Porta, R., Lopez-de Silanes, F. & Shleifer, A. (2003), 'The new comparative economics', *Journal of Comparative Economics* **31**(4), 595–619.
- Doan, A.-T., Lin, K.-L. & Doong, S.-C. (2019), 'State-controlled banks and income smoothing. Do politics matter?', *The North American Journal of Economics and Finance* **51**(1), 101057.
- Dolar, B. & Drickey, K. M. (2017), 'The Differential Impact of Size on Earnings Management Practices of Banks: Evidence from the Financial Crisis of 2008', *Journal of Business and Accounting* **10**(1), 63–80.
- Dong, W., Han, H., Ke, Y. & Chan, K. C. (2018), 'Social trust and corporate misconduct: Evidence from China', *Journal of Business Ethics* **151**(2), 539–562.
- Dong, X. (2012), 'Research on the Relationship of Commercial Bank's Loan Loss Provision and Earning Management and Capital Management', *Journal of Service Science and Management* **05**(n.k.), 171–179.
- Douglas, P. & Cobb, C. W. (1928), 'A theory of production', *The American Economic Review* **n.k.**(1), 139–165.
- Doupnik, T. S. & Tsakumis, G. T. (2004), 'A critical review of tests of Gray's theory of cultural relevance and suggestions for future research', *Journal of Accounting Literature* **23**(1), 1.
- Drake, L., Hall, M. J. & Simper, R. (2006), 'The impact of macroeconomic and regulatory factors on bank efficiency: A non-parametric analysis of Hong Kong's banking system', *Journal of Banking & Finance* **30**(5), 1443–1466.
- Duffie, D. (2018), 'Financial regulatory reform after the crisis: An assessment', *Management Science* **64**(10), 4835–4857.
- Durnev, A., Li, T. & Magnan, M. (2017), 'Beyond tax avoidance: Offshore firms' institutional environment and financial reporting quality', *Journal of Business Finance & Accounting* **44**(5-6), 646–696.
- Durocher, S. & Gendron, Y. (2011), 'Ifrs: On the docility of sophisticated users in preserving the ideal of comparability', *European Accounting Review* **20**(2), 233–262.
- Dyck, A., Morse, A. & Zingales, L. (2010), 'Who blows the whistle on corporate fraud?', *The Journal of Finance* **65**(6), 2213–2253.

- Ebraheem Saleem, S. A. (2019), 'Audit committee, internal audit function and earnings management: evidence from Jordan', *Meditari Accountancy Research* **28**(1), 72–90.
- Economics, T. (2019), 'Mauritius GDP Growth Rate | 2000-2019 Data | 2020-2022 Forecast | Calendar', <https://tradingeconomics.com/mauritius/gdp-growth>. (Accessed on 03/01/2020).
- Eisenhardt, K. M. (1989), 'Agency theory: An assessment and review', *Academy of management review* **14**(1), 57–74.
- El-Helaly, M., Shehata, N. F. & El-Sherif, R. (2018), 'National corporate governance, GMI ratings and earnings management', *Asian Review of Accounting* **26**(3), 373–390.
- Ellickson, R. C. (1999), 'The evolution of social norms: a perspective from the legal academy', *Yale Law School, Program for Studies in Law, Economics and Public Policy, Working Paper* (230).
- Elster, J. (1989), 'Social norms and economic theory', *Journal of economic perspectives* **3**(4), 99–117.
- Elyasiani, E. & Mehdian, S. (2019), 'The comparative efficiency performance of small and large US commercial banks in the pre- and post-deregulation eras.', *Applied Economics* **27**(11), 1069–1079.
- Enomoto, M., Kimura, F. & Yamaguchi, T. (2015), 'Accrual-based and real earnings management: An international comparison for investor protection', *Journal of Contemporary Accounting & Economics* **11**(3), 183–198.
- Enomoto, M., Kimura, F. & Yamaguchi, T. (2018), 'A cross-country study on the relationship between financial development and earnings management', *Journal of International Financial Management & Accounting* **29**(2), 166–194.
- Esty, B. C. & Megginson, W. L. (2003), 'Creditor rights, enforcement, and debt ownership structure: Evidence from the global syndicated loan market', *Journal of Financial and Quantitative Analysis* **38**(1), 37–59.
- Evans, P. & Rauch, J. E. (1999), 'Bureaucracy and growth: A cross-national analysis of the effects of "Weberian" state structures on economic growth', *American Sociological Review* **64**(5), 748–765.

- Ewert, R. & Wagenhofer, A. (2005), 'Economic effects of tightening accounting standards to restrict earnings management', *The Accounting Review* **80**(4), 1101–1124.
- Fam, K., Waller, D. & Erdogan, B. Z. (2004), 'The Influence of religion on attitudes towards the advertising of controversial products', *European Journal of Marketing* **38**(n.k.), 537–555.
- Fama, E. F. & Jensen, M. C. (1983), 'Separation of ownership and control', *The journal of law and Economics* **26**(2), 301–325.
- Fan, J. P., Wei, K. J. & Xu, X. (2011), 'Corporate finance and governance in emerging markets: A selective review and an agenda for future research', **n.k.**(n.k.).
- Fan, J. P. & Wong, T. J. (2005), 'Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia', *Journal of Accounting Research* **43**(1), 35–72.
- Fang, X., Li, Y., Xin, B. & Zhang, W. (2016), 'Financial statement comparability and debt contracting: Evidence from the syndicated loan market', *Accounting Horizons* **30**(2), 277–303.
- Farandy, A. R., Suwito, D. A. & Dabutar, L. K. (2017), 'Efficiency of Islamic Banks in Indonesia: Data Envelopment Analysis', *International Journal of Economics, Management and Accounting* **25**(2), 337–354.
- Färe, R., Grosskopf, S., Maudos, J. & Tortosa-Ausina, E. (2015), 'Revisiting the quiet life hypothesis in banking using nonparametric techniques', *Journal of Business Economics and Management* **16**(1), 159–187.
- Farooq, M. & Zaheer, S. (2015), 'Are Islamic Banks More Resilient During Financial Panics?', *Pacific Economic Review* **20**(1), 101–124.
- FASB (2010), 'Conceptual Framework for Financial Reporting: Concepts Statement No. 8', <https://www.fasb.org/resources/ccurl/515/412/Concepts%20Statement%20No%208.pdf>. (Accessed on 09/13/2020).
- FASB (n.d.), 'Comparability in International Accounting Standards—A Brief History', <https://www.fasb.org/jsp/FASB/Page/SectionPage&cid=1176156304264>. (Accessed on 10/17/2019).
- Fase, M. M. & Abma, R. (2003), 'Financial environment and economic growth in selected Asian countries', *Journal of Asian economics* **14**(1), 11–21.

- Feldstein, M. (2002), *Argentina's fall*, Vol. 81, Palm Coast Data.
- Feng, G. & Zhang, X. (2012), 'Productivity and efficiency at large and community banks in the US: A Bayesian true random effects stochastic distance frontier analysis', *Journal of Banking & Finance* **36**(7), 1883–1895.
- Fenichel, E. P., Adamowicz, W., Ashton, M. S. & Hall, J. S. (2019), 'Incentive systems for forest-based ecosystem services with missing financial service markets', *Journal of the Association of Environmental and Resource Economists* **6**(2), 319–347.
- Ferreira, C. (2012), 'Bank efficiency, market concentration and economic growth in the European Union', *IDEAS Working Paper Series from RePEc* .
- Ferro, G., León, S., Romero, C. A. & Wilson, D. (2018), 'From scratch to efficiency gains after a financial crisis? A tale of a restructured banking system', *International Review of Applied Economics* **32**(1), 119–133.
- Festinger, L. (1954), 'A theory of social comparison processes', *Human relations* **7**(2), 117–140.
- Fiegenbaum, A. (1990), 'Prospect theory and the risk-return association: An empirical examination in 85 industries', *Journal of Economic Behavior & Organization* **14**(2), 187–203.
- Fligstein, N. (2001), 'Social skill and the theory of fields', *Sociological Theory* **19**(2), 105–125.
- FocusEconomics (2018a), 'Kenya Economy - GDP, Inflation, CPI and Interest Rate', <https://www.focus-economics.com/countries/kenya>. (Accessed on 10/21/2019).
- FocusEconomics (2018b), 'Kuwait Economy - GDP, Inflation, CPI and Interest Rate', <https://www.focus-economics.com/countries/kuwait>. (Accessed on 10/21/2019).
- Fonseca, A. & González, F. (2008), 'Cross-country determinants of bank income smoothing by managing loan-loss provisions', *Journal of Banking Finance* **32**(2), 217–228.
- Framework, C. (2018), 'Conceptual framework for financial reporting', *IFRS Foundation* .
- Francis, B., Hasan, I. & Li, L. (2016), 'A cross-country study of legal-system strength and real earnings management', *Journal of Accounting and Public Policy* **35**(5), 477–512.
- Francis, J. R., Maydew, E. L. & Sparks, H. C. (1999), 'The role of Big 6 auditors in the credible reporting of accruals', *Auditing: a Journal of Practice* **18**(2), 17–34.

- Francis, J. R., Pinnuck, M. L. & Watanabe, O. (2014), 'Auditor style and financial statement comparability', *The Accounting Review* **89**(2), 605–633.
- Francis, J. R. & Wang, D. (2008), 'The joint effect of investor protection and Big 4 audits on earnings quality around the world', *Contemporary Accounting Review* **25**(1), 157–191.
- Frankel, R. M., Johnson, M. F. & Nelson, K. K. (2002), 'The relation between auditors' fees for nonaudit services and earnings management', *The Accounting Review* **77**(s-1), 71–105.
- FTSE (2020), 'FTSE-Country-Classification-Update-2018.pdf', <https://research.ftserussell.com/products/downloads/FTSE-Country-Classification-Update-2018.pdf>. (Accessed on 08/19/2020).
- Fukuyama, H. (1993), 'Technical and scale efficiency of Japanese commercial banks: a non-parametric approach', *Applied Economics* **25**(8), 1101–1112.
- Fuller, J. & Jensen, M. C. (2002), 'Just say no to Wall Street: Putting a stop to the earnings game', *Journal of Applied Corporate Finance* **14**(4), 41–46.
- Fung, A. (2013), 'Infotopia: Unleashing the democratic power of transparency', *Politics & Society* **41**(2), 183–212.
- Fungáčová, Z., Klein, P.-O. & Weill, L. (2018), 'Persistent and transient inefficiency: Explaining the low efficiency of Chinese big banks', *BOFIT Discussion Papers* **2018**(16), 4–29. Name - Organization for Economic Cooperation Development; Copyright - © 2018.
- Gaganis, C., Hasan, I. & Pasiouras, F. (2016), 'Regulations, institutions and income smoothing by managing technical reserves: International evidence from the insurance industry', *Omega* **59**(1), 113–129.
- Garas, S. & ElMassah, S. (2018), 'Corporate governance and corporate social responsibility disclosures: The case of GCC countries', *Critical Perspectives On International Business* **14**(1), 2–26.
- García-Sánchez, I.-M., Hussain, N., Khan, S. A. & Martínez-Ferrero, J. (2020), 'Managerial entrenchment, corporate social responsibility, and earnings management', *Corporate Social Responsibility and Environmental Management* **27**(4), 1818–1833.

- Gavurová, B., Belás, J., Kocisova, K., Dapkus, R. & Bartkute, R. (2017), 'Revenue and cost efficiency of banking sectors in the European Union countries: Do they depend on size, location or crisis period?', *Transformations In Business & Economics* **16**(2).
- Ge, W. & Kim, J.-B. (2014), 'Real earnings management and the cost of new corporate bonds', *Journal of Business Research* **67**(4), 641–647.
- Gelb, D. S. & Zarowin, P. (2002), 'Corporate disclosure policy and the informativeness of stock prices', *Review of Accounting Studies* **7**(1), 33–52.
- Gempesaw, C. M. (1992), 'Nonparametric Analysis of Production Efficiency: Discussion', *Northeastern Journal of Agricultural and Resource Economics* **21**(2), 121–124.
- Gerged, A. M., Al-Haddad, L. M. & Al-Hajri, M. O. (2020), 'Is earnings management associated with corporate environmental disclosure?', *Accounting Research Journal* **7**(2), 117–140.
- Ghosh, A. & Moon, D. (2005), 'Auditor tenure and perceptions of audit quality', *The accounting review* **80**(2), 585–612.
- Ghosh, S. (2007), 'Loan loss provisions, earnings, capital management and signalling: Evidence from Indian Banks', *Global Economic Review* **36**(2), 121–136.
- Gilliam, T. A., Heflin, F. & Paterson, J. S. (2015), 'Evidence that the zero-earnings discontinuity has disappeared', *Journal of Accounting and Economics* **60**(1), 117–132.
- Giner, B. & Rees, B. (2005), 'The Introduction of International Financial Reporting Standards in the European Union', *European Accounting Review* **14**(1), 35–52.
- Girard, E. & Sinha, A. (2008), 'Risk and return in the next frontier', *Journal of Emerging Market Finance* **7**(1), 43–80.
- Girardone, C., Molyneux, P. & Gardener, E. P. (2004), 'Analysing the determinants of bank efficiency: the case of Italian banks', *Applied Economics* **36**(3), 215–227.
- Gishkori, M. A. & Ullah, N. (2013), 'Technical efficiency of Islamic and commercial banks: evidence from Pakistan using DEA model (2007-2011)', *Journal of Business and Management* **7**(4), 68–76.
- Glaeser, E. L., La Porta, R., Lopez-de Silanes, F. & Shleifer, A. (2004), 'Do institutions cause growth?', *Journal of Economic Growth* **9**(3), 271–303.

- Glaeser, E. & Sacerdote, B. (2008), 'Education and Religion', *Journal of Human Capital* **2**(n.k.), 188–215.
- Glass, C., Cook, A. & Ingersoll, A. R. (2016), 'Do women leaders promote sustainability? Analyzing the effect of corporate governance composition on environmental performance', *Business Strategy and the Environment* **25**(7), 495–511.
- Goel, S. (2017), 'Earnings management detection over earnings cycles: the financial intelligence in Indian corporate', *Journal of Money Laundering Control* **20**(2), 116–129.
- Goetzmann, W. N., Li, L. & Rouwenhorst, K. G. (2001), Long-Term Global Market Correlations, Working Paper 8612, National Bureau of Economic Research.
- Goetzmann, W. & Rouwenhorst, K. (2005), 'The Origins of Value: The Financial Innovations that Created Modern Capital Markets', *The Financial Innovations that Created Modern* **n.k.**(n.k.), 1134–1135.
- Goldberg, L. G. & Rai, A. (1996), 'The structure-performance relationship for European banking', *Journal of Banking & Finance* **20**(4), 745–771.
- Gordon, R. A. & Howell, J. E. (1959), 'Higher education for business', *The Journal of Business Education* **35**(3), 115–117.
- Graham, J. R., Harvey, C. R. & Rajgopal, S. (2005), 'The economic implications of corporate financial reporting', *Journal of Accounting and Economics* **40**(1), 3–73.
- Gramling, A. A. & Myers, P. M. (2003), 'Internal auditors' assessment of fraud warning signs: Implications for external auditors', *The CPA Journal* **73**(6), 20.
- Grant, W. & Wilson, G. K. (2012), *The consequences of the global financial crisis: The rhetoric of reform and regulation*, Oxford University Press.
- Gray, R., Owen, D. & Maunders, K. (1988), 'Corporate social reporting: emerging trends in accountability and the social contract', *Accounting, Auditing & Accountability Journal* **1**(1), 6–20.
- Gray, S. J. (1988), 'Towards a theory of cultural influence on the development of accounting systems internationally', *Abacus* **24**(1), 1–15.

- Gregoriou, G. & Wu, M. (2016), An Application of Style Analysis to Middle East and North African (MENA) Hedge Funds, in 'Handbook of Frontier Markets', Elsevier, pp. 19–31.
- Griffin, D. & Tversky, A. (1992), 'The weighing of evidence and the determinants of confidence', *Cognitive Psychology* **24**(3), 411–435.
- Gross, C. & Perotti, P. (2017), 'Output-based measurement of accounting comparability: A survey of empirical proxies', *Journal of Accounting Literature* **39**(1), 1–22.
- Grougiou, V., Leventis, S., Dedoulis, E. & Owusu-Ansah, S. (2014), 'Corporate social responsibility and earnings management in US banks', *Accounting Forum* **38**(3), 155–169.
- Group, T. P. (2018), *The handbook of country and political risk analysis*, PRS Group, the.
- Guan, Y., Lobo, G. J., Tsang, A. & Xin, X. (2020), 'Societal Trust and Management Earnings Forecasts', *The Accounting Review* pp. 00–00.
- Guesmi, K. & Nguyen, D. K. (2011), 'How strong is the global integration of emerging market regions? An empirical assessment', *Economic Modelling* **28**(6), 2517–2527.
- Gujarati, D. N. (2009), *Basic econometrics*, Tata McGraw-Hill Education.
- Gul, F. A., Fung, S. Y. K. & Jaggi, B. (2009), 'Earnings quality: Some evidence on the role of auditor tenure and auditors' industry expertise', *Journal of accounting and Economics* **47**(3), 265–287.
- Gulzar, M. A. et al. (2011), 'Corporate governance characteristics and earnings management: Empirical evidence from Chinese listed firms', *International Journal of Accounting and Financial Reporting* **1**(1), 133.
- Gunny, K. A. (2005), What are the consequences of real earnings management?, PhD thesis. Copyright ProQuest LLC; Last updated - 2019-10-18.
- Gunny, K. A. (2010), 'The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks', *Contemporary Accounting Research* **27**(3), 855–888.
- Güth, W. & Napel, S. (2006), 'Inequality aversion in a variety of games—an indirect evolutionary analysis', *The Economic Journal* **116**(514), 1037–1056.

- Habbash, M. & Alghamdi, S. (2017), 'Audit quality and earnings management in less developed economies: the case of Saudi Arabia', *Journal of Management & Governance* **21**(2), 351–373.
- Haidar, J. I. (2009), 'Investor protections and economic growth', *Economics Letters* **103**(1), 1–4.
- Hail, L., Leuz, C. & Wysocki, P. (2010), 'Global accounting convergence and the potential adoption of IFRS by the US (Part I): Conceptual underpinnings and economic analysis', *Accounting Horizons* **24**(3), 355–394.
- Halabi, H., Alshehabi, A. & Zakaria, I. (2019), 'Informal institutions and managers' earnings management choices: Evidence from IFRS-adopting countries', *Journal of Contemporary Accounting & Economics* **15**(3), 100162.
- Han, S., Kang, T., Salter, S. & Yoo, Y. K. (2010), 'A cross-country study on the effects of national culture on earnings management', *Journal of International Business Studies* **41**(1), 123–141.
- Haniffa, R. M. & Cooke, T. E. (2002), 'Culture, corporate governance and disclosure in Malaysian corporations', *Abacus* **38**(3), 317–349.
- Hao, Y., Han, D., Ning, C. & Liao, J. (2020), 'Culture from overseas and corporate transparency: Evidence from china', *International Journal of Finance & Economics* **n.k.**(n.k.).
- Harford, J., Mansi, S. A. & Maxwell, W. F. (2008), 'Corporate governance and firm cash holdings in the US', *Journal of Financial Economics* **87**(3), 535–555.
- Hart, O. (1995), 'Corporate governance: some theory and implications', *The Economic Journal* **105**(430), 678–689.
- Hasan, I. & Hunter, W. C. (1999), 'Loan loss provision and income smoothing: An analysis of the thrift industry', *Advances in Quantitative Analysis of Finance and Accounting* **7**(3), 67–81.
- Hasan, I., Kobeissi, N. & Song, L. (2014), 'Corporate governance, investor protection, and firm performance in MENA countries', *Middle East Development Journal* **6**(1), 84–107.
- Hasan, M. M., Taylor, G. et al. (2020), 'Financial statement comparability and bank risk-taking', *Journal of Contemporary Accounting & Economics* **16**(3), 109–126.
- Hassan, K. M. & Sanchez, B. (2009), 'Efficiency analysis of microfinance institutions in developing countries', *Networks Financial Institute Working Paper* **n.k.**(n.k.), 22.

- Hassan, M. (2013), Corporate governance characteristics and voluntary disclosure: The case of UAE listed corporations, in 'International Conference on business, Economics, and Accounting (2013 IBEA), Bangkok, Thailand', Vol. n.k., s.n.
- Hassan, M. K. (2011), 'Corporate governance practices in emerging economies: initial findings from the UAE', *China-USA Business Review* **10**(9).
- Hassan, M. K. & Sanchez, B. (2007), 'Efficiency determinants and dynamic efficiency changes in Latin American banking industries', *Available at SSRN 3263102* .
- Hauner, M. D. & Peiris, S. J. (2005), *Bank Efficiency and Competition in Low-Income Countries: The Case of Uganda (EPub)*, number 5-240, International Monetary Fund.
- Havránek, T. & Irsová, Z. (2010), 'Which Foreigners Are Worth Wooing? A Meta-Analysis of Vertical Spillovers from FDI', *IDEAS Working Paper Series from RePEc* . Copyright - Federal Bank of St. Louis 2010; Last updated - 2015-10-03.
- Haw, I.-M., Hu, B., Hwang, L.-S. & Wu, W. (2004), 'Ultimate ownership, income management, and legal and extra-legal institutions', *Journal of Accounting Review* **42**(2), 423–462.
- Haw, I.-M., Hu, B., Lee, J. J. & Wu, W. (2012), 'Investor protection and price informativeness about future earnings: international evidence', *Review of Accounting Studies* **17**(2), 389–419.
- Hayn, C. (1995), 'The information content of losses', *Journal of Accounting and Economics* **20**(2), 125–153.
- He, Z. C., Cox, R. A. & Kimmel, R. K. (2017), 'Cultural Influences on Earnings Management', *Journal of Competitiveness Studies* **25**(3-4), 201–216.
- Healy, P. M. & Palepu, K. G. (1993), 'The effect of firms' financial disclosure strategies on stock prices', *Accounting Horizons* **7**(1), 1.
- Healy, P. M. & Palepu, K. G. (2001), 'Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature', *Journal of Accounting and Economics* **31**(1-3), 405–440.
- Healy, P. M. & Wahlen, J. M. (1999), 'A review of the earnings management literature and its implications for standard setting', *The Accounting Horizons* **13**(4), 365–383.

- Henry, E., Liu, F.-C., Yang, S. Y. & Zhu, X. (2018), 'Structural Comparability of Financial Statements', *Stevens Institute of Technology School of Business Research Paper* **1**(2), n.k.
- Higgs, M. (2003), 'How can we make sense of leadership in the 21st century?', *Leadership Organization Development Journal* **24**(5), 273–284. Date revised - 2008-01-01; Last updated - 2011-11-12.
- Hilary, G. & Hui, K. W. (2009), 'Does religion matter in corporate decision making in America?', *Journal of Financial Economics* **93**(3), 455–473.
- Hill, C. W. & Jones, T. M. (1992), 'Stakeholder-agency theory', *Journal of Management Studies* **29**(2), 131–154.
- Hirshleifer, D. & Teoh, S. H. (2003), 'Limited attention, information disclosure, and financial reporting', *Journal of Accounting and Economics* **36**(1-3), 337–386.
- Hisham Yahya, M., Muhammad, J. & Razak Abdul Hadi, A. (2012), 'A comparative study on the level of efficiency between Islamic and conventional banking systems in Malaysia', *International Journal of Islamic and Middle Eastern Finance and Management* **5**(1), 48–62.
- Ho, K.-C., Yen, H.-P., Gu, Y. & Shi, L. (2020), 'Does societal trust make firms more trustworthy?', *Emerging Markets Review* **42**(2), 100674.
- Hoang, K. M. T. & Phung, T. A. (2019), 'The effect of financial leverage on real and accrual-based earnings management in Vietnamese firms', *Economics & Sociology* **12**(4), 299–333.
- Hoberg, G. & Phillips, G. (2016), 'Text-based network industries and endogenous product differentiation', *Journal of Political Economy* **124**(5), 1423–1465.
- Hofstede, G. (1980), 'Motivation, leadership, and organization: do American theories apply abroad?', *Organizational Dynamics* **9**(1), 42–63.
- Hofstede, G. (1984), *Culture's consequences: International differences in work-related values*, Vol. 5, Sage Publications Sage CA: Thousand Oaks, CA.
- Hofstede, G. (2001), *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*, Sage Publications Sage CA: Thousand Oaks, CA.
- Hogg, C. L. (2003), 'Sri Lanka's leader takes a step backward on human rights (Human Rights Watch, 15-8-2007)', <https://web.archive.org/web/20070929144522/http://>

//hrw.org/english/docs/2007/08/15/slanka16690_txt.htm. (Accessed on 02/11/2020).

- Hölmstrom, B. (1979), 'Moral hazard and observability', *The Bell Journal of Economics* pp. 74–91.
- Holt, T. P. & DeZoort, T. (2009), 'The effects of internal audit report disclosure on investor confidence and investment decisions', *International Journal of Auditing* **13**(1), 61–77.
- Hong, Y., Huseynov, F. & Zhang, W. (2014), 'Earnings management and analyst following: A simultaneous equations analysis', *Financial Management* **43**(2), 355–390.
- Hope, O.-K. (2003), 'Firm-level disclosures and the relative roles of culture and legal origin', *Journal of International Financial Management & Accounting* **14**(3), 218–248.
- Horton, J., Serafeim, G. & Serafeim, I. (2013), 'Does mandatory IFRS adoption improve the information environment?', *Contemporary Accounting Research* **30**(1), 388–423.
- Horvatova, E. (2018), 'Technical efficiency of banks in Central and Eastern Europe', *International Journal of Financial Studies* **6**(3), 66.
- Hoskisson, R. E., Wright, M., Filatotchev, I. & Peng, M. W. (2013), 'Emerging multinationals from mid-range economies: The influence of institutions and factor markets', *Journal of Management Studies* **50**(7), 1295–1321.
- Houque, M. N., Ahmed, K. & van Zijl, T. (2017), 'Audit Quality, Earnings Management, and Cost of Equity Capital: Evidence from India', *International Journal of Auditing* **21**(2), 177–189.
- Howard, M., Warren, M. & Garnett, R. (2019), 'Misuse of non-mandatory earnings reporting by companies', *Meditari Accountancy Research* **28**(1), 125–146.
- Howell, A. & Gratsova, M. (2011), 'Call of the frontier: the search for a new generation of emerging markets', *Citi Global Perspectives and Solutions* **n.k.**(n.k.).
- Hsiao, D. F., Hu, Y. & Lin, J. W. (2016), 'The earnings management opportunity for US oil and gas firms during the 2011 Arab Spring event', *Pacific Accounting Review* **28**(1), 71–91.
- Hu, C., Chand, P. & Evans, E. (2013), 'The effect of national culture, acculturation, and education on accounting judgments: A comparative study of Australian and Chinese culture', *Journal of International Accounting Research* **12**(2), 51–77.

- Huafang, X. & Jianguo, Y. (2007), 'Ownership structure, board composition and corporate voluntary disclosure: Evidence from listed companies in China', *Managerial Auditing Journal* **22**(6), 604.
- Huang, T.-H. & Wang, M.-H. (2002), 'Comparison of economic efficiency estimation methods: Parametric and non-parametric techniques', *The Manchester School* **70**(5), 682–709.
- Huang, X. S. & Sun, L. (2017), 'Managerial ability and real earnings management', *Advances in Accounting* **39**(2), 91–104.
- Hughes, J. P. & Mester, L. J. (2013), 'Who said large banks don't experience scale economies? Evidence from a risk-return-driven cost function', *Journal of Financial Intermediation* **22**(4), 559–585.
- Hughes, S. & Larson, Robert, S. G. X. (2017), 'Difficulties converging US GAAP and IFRS through joint projects: The case of business combinations', *Advances in Accounting* **39**(2), 1–20.
- Hung, M. (2000), 'Accounting standards and value relevance of financial statements: An international analysis', *Journal of Accounting and Economics* **30**(3), 401–420.
- Hutchison, M. M. (2002), 'European banking distress and EMU: institutional and macroeconomic risks', *Scandinavian Journal of Economics* **104**(3), 365–389.
- Hye, Q. M. A., Wizarat, S. & Lau, W.-Y. (2016), 'The impact of trade openness on economic growth in China: An empirical analysis', *The Journal of Asian Finance, Economics, and Business* **3**(3), 27–37.
- Iannaccone, L. R. & Bainbridge, W. S. (2010), 'Economics of religion', *The Routledge Companion to the Study of Religion* pp. 461–475.
- IAS.org (2019), 'IFRS - Bahrain', <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/bahrain/#commitment>. (Accessed on 09/26/2019).
- IASPlus (2019), 'Pakistan', <https://www.iasplus.com/en/jurisdictions/asia/pakistan>. (Accessed on 03/01/2020).

- IFRS.org (2016), 'sri-lanka-ifs-profile.pdf', <https://www.ifs.org/-/media/feature/around-the-world/jurisdiction-profiles/sri-lanka-ifs-profile.pdf>. (Accessed on 02/11/2020).
- IFRS.org. (2019), 'IFRS - Bangladesh', <https://www.ifs.org/use-around-the-world/use-of-ifs-standards-by-jurisdiction/bangladesh/>. (Accessed on 09/26/2019).
- IFRS.org (2020), 'IFRS - Home', <https://www.ifs.org/>. (Accessed on 04/15/2020).
- Imi, A. (2004), 'Banking sector reforms in Pakistan: economies of scale and scope, and cost complementarities', *Journal of Asian Economics* **15**(3), 507–528.
- IMF (2020), 'IMF Occasional Paper 188 – Financial Sector Crisis and Restructuring–Lessons from Asia', <https://www.imf.org/external/pubs/ft/op/opFinsec/op188.pdf>. (Accessed on 07/23/2020).
- Imhoff Jr., E. A. (2003), 'Accounting Quality, Auditing, and Corporate Governance.', *Accounting Horizons* **17**(n.k.), 117–128.
- Inanoglu, H., Filipovic, D. F., Geng, J. & Metreud, L. T. (2015), 'Power amplifier envelope tracking'. US Patent App. 14/151,757.
- InvestmentFrontier (2017), 'Frontier Stock Market Correlations for 2017 - Investment Frontier', <https://www.investmentfrontier.com/2017/06/05/frontier-stock-market-correlations-2017/>. (Accessed on 07/26/2020).
- Ipino, E. & Parbonetti, A. (2017), 'Mandatory IFRS adoption: the trade-off between accrual-based and real earnings management', *Accounting and Business Research* **47**(1), 91–121.
- Ippoliti, R., Melcarne, A. & Ramello, G. B. (2015), 'The impact of judicial efficiency on entrepreneurial action: A European perspective', *Economic Notes: Review of Banking, Finance and Monetary Economics* **44**(1), 57–74.
- Iqbal, Z. (2007), 'Challenges facing Islamic financial industry', *Journal of Islamic Economics, Banking and Finance* **3**(1), 1–14.
- Iršová, Z. & Havránek, T. (2013), 'Determinants of horizontal spillovers from FDI: Evidence from a large meta-analysis', *World Development* **42**(2), 1–15.

- Irvine, P. J. (2003), 'The incremental impact of analyst initiation of coverage', *Journal of Corporate Finance* **9**(4), 431–451.
- Isidro, H., Nanda, D. & Wysocki, P. D. (2020), 'On the relation between financial reporting quality and country attributes: Research challenges and opportunities', *The Accounting Review* **95**(3), 279–314.
- Islam, M. A., Ali, R. & Ahmad, Z. (2011), 'Is modified Jones model effective in detecting earnings management? Evidence from a developing economy', *International Journal of Economics and Finance* **3**(2), 116.
- Islam, M. N. (n.d.), 'Three Essays on Financial Statement Comparability'.
- Istrate, C., Georgescu, I. E., Carp, M., Robu, I. B. & Pavaloaia, L. (2015), 'Accruals earnings management in emerging markets under the transition to IFRS: The case of Romanian listed companies', *Transformations in Business & Economics* **14**(2A), 393–411.
- Jackson, G. & Hoepner, M. (2001), 'An emerging market for corporate control? The Mannesmann takeover and German corporate governance', *Max-Planck-Institute for the Study of Societies, Discussion Paper* (01/4). Copyright - Max Planck Institute for the Study of Societies 2001; Last updated - 2012-04-19.
- Jain, P. K. & Rezaee, Z. (2006), 'The Sarbanes-Oxley Act of 2002 and capital-market behavior: Early evidence', *Contemporary Accounting Research* **23**(3), 629–654.
- Jelinek, K. (2007), 'The effect of leverage increases on earnings management', *The Journal of Business and Economic Studies* **13**(2), 24.
- Jemric, I. & Vujcic, B. (2002), 'Efficiency of banks in Croatia: A DEA approach', *Comparative Economic Studies* **44**(2), 169–193.
- Jensen, M. C. & Meckling, W. H. (1976a), 'Theory of the firm: Managerial behavior, agency costs and ownership structure', *Journal of Financial Economics* **3**(4), 305–360.
- Jensen, M. C. & Meckling, W. H. (1976b), 'Theory of the firm: Managerial behavior, agency costs and ownership structure', *Journal of Financial Economics* **3**(4), 305–360.
- Jin, J., Kanagaretnam, K. & Lobo, G. J. (2018), 'Discretion in bank loan loss allowance, risk taking and earnings management', *Accounting & Finance* **58**(1), 171–193.

- Jiraporn, P., Miller, G. A., Yoon, S. S. & Kim, Y. S. (2008), 'Is earnings management opportunistic or beneficial? An agency theory perspective', *International Review of Financial Analysis* **17**(3), 622–634.
- Johl, S., Jubb, C. A. & Houghton, K. A. (2007), 'Earnings management and the audit opinion: Evidence from Malaysia', *Managerial Auditing Journal* **7**(2), 117–140.
- Johnes, J., Izzeldin, M. & Pappas, V. (2014), 'A comparison of performance of Islamic and conventional banks 2004–2009', *Journal of Economic Behavior & Organization* **103**, S93–S107.
- Jones, J. J. (1991), 'Earnings management during import relief investigations', *Journal of Accounting Review* **29**(2), 193–228.
- Jones, S. & Sharma, R. (2001), 'The impact of free cash flow, financial leverage and accounting regulation on earnings management in Australia's "old" and "new" economies', *Managerial Finance* **27**(12), 193–211.
- Joosten, C. (2012), 'Real earnings management and accrual-based earnings management as substitutes', *Tilburg University, Tilburg* p. 52.
- JordanEconomicUpdate (2019), 'Jordan's Economic Update - April 2019', <https://www.worldbank.org/en/country/jordan/publication/economic-update-april-2019>. (Accessed on 10/21/2019).
- Joshi, M., Yapa, P. W. S. & Kraal, D. (2016), 'IFRS adoption in ASEAN countries: perceptions of professional accountants from Singapore, Malaysia and Indonesia', *Malaysia and Indonesia (January 4, 2016)* pp. 211–240.
- Kaawaase, T. K., Assad, M. J., Kitindi, E. G. & Nkundabanyanga, S. K. (2016), 'Audit quality differences amongst audit firms in a developing economy', *Journal of Accounting in Emerging Economies* **6**(3), 123–159.
- Kahneman, D. & Tversky, A. (1979a), 'An analysis of decision under risk [J]', *Econometrica: Journal of the Econometric Society* **47**(2), 53.
- Kahneman, D. & Tversky, A. (1979b), 'Prospect theory: An analysis of decision under risk', *Econometrica: Journal of the econometric society* pp. 263–291.

- Kahneman, D., Tversky, A. et al. (1979), 'Prospect theory: an analysis of decision under risk', *Econometrica* **47**(2), 263–291.
- Kaldor, N. (1966), *Causes of the slow rate of economic growth of the United Kingdom: an inaugural lecture*, Vol. 34, Cambridge University Press.
- Kamarudin, F., Sufian, F., Loong, F. W. & Anwar, N. A. M. (2017), 'Assessing the domestic and foreign Islamic banks efficiency: Insights from selected Southeast Asian countries', *Future Business Journal* **3**(1), 33–46.
- Kamau, A. W. (2011), 'Intermediation efficiency and productivity of the banking sector in Kenya', *Interdisciplinary Journal of Research in Business* **1**(9), 12–26.
- Kanagaretnam, K., Krishnan, G. V. & Lobo, G. J. (2009), 'Is the market valuation of banks' loan loss provision conditional on auditor reputation?', *Journal of Banking & Finance* **33**(6), 1039–1047.
- Kanagaretnam, K., Lee, J., Lim, C. Y. & Lobo, G. J. (2016), 'Relation between auditor quality and tax aggressiveness: Implications of cross-country institutional differences', *Auditing: A Journal of Practice & Theory* **35**(4), 105–135.
- Kanagaretnam, K., Lim, C. Y. & Lobo, G. J. (2010), 'Auditor reputation and earnings management: International evidence from the banking industry', *Journal of Banking & Finance* **34**(10), 2318–2327.
- Kanagaretnam, K., Lim, C. Y. & Lobo, G. J. (2014), 'Effects of international institutional factors on earnings quality of banks', *Journal of Banking & Finance* **39**(n.k.), 87–106.
- Kanagaretnam, K., Lobo, G. J., Ma, C. & Zhou, J. (2016), 'National culture and internal control material weaknesses around the world', *Journal of Accounting, Auditing & Finance* **31**(1), 28–50.
- Kanagaretnam, K., Lobo, G. J. & Wang, C. (2015), 'Religiosity and earnings management: International evidence from the banking industry', *Journal of Business Ethics* **132**(2), 277–296.
- Kang, Y. J., Trotman, A. J. & Trotman, K. T. (2015), 'The effect of an audit judgement rule on audit committee members' professional skepticism: The case of accounting estimates', *Accounting, Organizations and Society* **46**(2), 59–76.

- Karimzadeh, M. (2012), 'Efficiency analysis by using Data Envelop Analysis model: evidence from Indian banks', *International Journal of Latest Trends in Finance and Economic Sciences* **2**(3), 228–237.
- Karray, S. C. & Chichti, J. (2013), 'Bank size and efficiency in developing countries: intermediation approach versus value added approach and impact of non-traditional activities', *Asian Economic and Financial Review* **3**(5), 593.
- Kasznik, R. (1999), 'On the association between voluntary disclosure and earnings management', *Journal of Accounting Review* **37**(1), 57–81.
- Kawada, B. (2014), 'Auditor offices and the comparability and quality of clients' earnings', Available at SSRN 2510186, San Diego State University .
- Kazakhstan, T. W. B. (2018), 'Kazakhstan Overview', <https://www.worldbank.org/en/country/kazakhstan/overview>. (Accessed on 10/21/2019).
- Kea, S., Li, H. & Pich, L. (2016), 'Technical Efficiency and Its Determinants of Rice Production in Cambodia', *Economies* **4**(4), 22–n/a.
- Khanh, H. T. M. & Nguyen, V. K. (2018), 'Audit quality, firm characteristics and real earnings management: The case of listed Vietnamese firms', *International Journal of Economics and Financial Issues* **8**(4), 243.
- Khanna, T. (2015), 'A case for contextual intelligence', *Management International Review* **55**(2), 181–190.
- Khlif, H. & Souissi, M. (2010), 'The determinants of corporate disclosure: a meta-analysis', *International Journal of Accounting and Information Management* **18**(3), 198–219.
- Kilgore, A. (2007), 'Corporate governance, professional regulation and audit quality', *Management and Accounting Review (MAR)* **6**(1), 65–84.
- Kilic, E., Lobo, G. J., Ranasinghe, T. & Sivaramakrishnan, K. (2012), 'The impact of SFAS 133 on income smoothing by banks through loan loss provisions', *The Accounting Review* **88**(1), 233–260.
- Kim, I., Miller, S., Wan, H. & Wang, B. (2016), 'Drivers behind the monitoring effectiveness of global institutional investors: Evidence from earnings management', *Journal of Corporate Finance* **40**(2), 24–46.

- Kim, J. (2012), 'How politics shaped modern banking in early modern England: Rethinking the nature of representative democracy, public debt, and modern banking', *55*(2), 181–190.
- Kim, J.-B., Chung, R. & Firth, M. (2003), 'Auditor conservatism, asymmetric monitoring, and earnings management', *Contemporary Accounting Research* **20**(2), 323–359.
- Kim, J.-B., Li, L., Lu, L. Y. & Yu, Y. (2016), 'Financial statement comparability and expected crash risk', *Journal of Accounting and Economics* **61**(2-3), 294–312.
- Kim, J.-B. & Sohn, B. C. (2011), 'Real versus accrual-based earnings management and implied cost of equity capital', *Journal of Accounting and Public Policy* **n.k.**(n.k.).
- Kim, J.-B. & Sohn, B. C. (2013), 'Real earnings management and cost of capital', *Journal of Accounting and Public Policy* **32**(6), 518–543.
- Kim, J.-B. & Yi, C. H. (2006), 'Ownership structure, business group affiliation, listing status, and earnings management: Evidence from Korea', *Contemporary Accounting Research* **23**(2), 427–464.
- Kim, J., Kim, Y. & Zhou, J. (2017), 'Languages and earnings management', *Journal of Accounting and Economics* **63**(2-3), 288–306.
- Kim, M.-S. & Kross, W. (1998), 'The impact of the 1989 change in bank capital standards on loan loss provisions and loan write-offs', *Journal of Accounting and Economics* **25**(1), 69–99.
- Kim, S., Kraft, P. & Ryan, S. G. (2013), 'Financial statement comparability and credit risk', *Review of Accounting Studies* **18**(3), 783–823.
- Kiya, Ali, S. G. (2017), 'Financial statement comparability, accruals-based earnings management, real earnings management. An empirical test of Tehran Stock Exchange', *Journal of Financial Accounting Knowledge* **26**(5), 117–140.
- Klapper, L. (2004), 'F., & Love', *Corporate Governance, Investor Protection and Performance in Emerging Market* **55**(2), 181–190.
- Klapper, L. F. & Love, I. (2004), 'Corporate governance, investor protection, and performance in emerging markets', *Journal of Corporate Finance* **10**(5), 703–728.
- Knapp, M. C. (1991), 'Factors that audit committee members use as surrogates for audit quality', *Auditing-A Journal of Practice & Theory* **10**(1), 35–52.

- Koch, T. W. & Wall, L. D. (2000), 'The use of accruals to manage reported earnings: Theory and evidence', *Federal Reserve Bank of Atlanta working paper* **23**.
- Kongiri, A. (2012), 'Effects of CAMEL Variables on Bank Efficiency: A Panel Analysis of Kenyan Commercial Banks', *Unpublished MBA Project, University of Nairobi* **n.k.(n.k.)**.
- Koopmans, T. C. (1951), 'Efficient Allocation of Resources', *Econometrica* **19**(4), 455–465.
- Kosnik, R. D. (1987), 'Greenmail: A study of board performance in corporate governance', *Administrative Science Quarterly* pp. 163–185.
- Kothari, S. (2001), 'Capital markets research in accounting', *Journal of Accounting and Economics* **31**(1-3), 105–231.
- Kothari, S., Mizik, N. & Roychowdhury, S. (2012), Managing for the moment: The role of real activity versus accruals earnings management in SEO valuation, Technical report, Working paper.
- Kothari, SP, A. J. L. C. E. W. (2005), 'Performance matched discretionary accrual measures', *Journal of Accounting and Economics* **39**(1), 163–197.
- Kraft, E., Hofler, R. & Payne, J. (2006), 'Privatization, foreign bank entry and bank efficiency in Croatia: a Fourier-flexible function stochastic cost frontier analysis', *Applied Economics* **38**(17), 2075–2088.
- Krishnan, G. V. (2003a), 'Audit quality and the pricing of discretionary accruals', *Auditing: A journal of practice & theory* **22**(1), 109–126.
- Krishnan, G. V. (2003b), 'Does big 6 auditor industry expertise constrain earnings management?', *Accounting horizons* **17**(3), 1–16.
- Kristo, S. et al. (2013), 'Efficiency of the Albanian banking system: Traditional approach and Stochastic Frontier Analysis', *International Journal of Economic Sciences and Applied Research* **6**(3), 61–78.
- Kumar, S. & Gulati, R. (2009), 'Measuring efficiency, effectiveness and performance of Indian public sector banks', *International Journal of Productivity and Performance Management* **59**(1), 51–74.

- Kuosmanen, T., Johnson, A. & Saastamoinen, A. (2015), Stochastic nonparametric approach to efficiency analysis: A unified framework, in 'Data envelopment analysis', Springer, pp. 191–244.
- Kutz, M. R. & Bamford-Wade, A. (2014), 'Contextual Intelligence: A Critical Competency for Leading', *Approaches to Managing Organizational Diversity and Innovation* **40**(1), 42.
- Kuwait Direct Investment Promotion Authority (2020, month = , note = (Accessed on 10/19/2019), howpublished = <https://www.kdipa.gov.kw/en/>).
- Kvaal, E. & Nobes, C. (2012), 'IFRS policy changes and the continuation of national patterns of IFRS practice', *European Accounting Review* **21**(2), 343–371.
- Kwok, C. C. & Tadesse, S. (2006), 'National culture and financial systems', *Journal of International Business Studies* **37**(2), 227–247.
- La Porta, R., Lopez-de Silanes, F. & Shleifer, A. (1999), 'Corporate ownership around the world', *The Journal of Finance* **54**(2), 471–517.
- La Porta, R., Lopez-de Silanes, F., Shleifer, A. & Vishny, R. (2000a), 'Investor protection and corporate governance', *Journal of Financial Economics* **58**(1), 3–27.
- La Porta, R., Lopez-de Silanes, F., Shleifer, A. & Vishny, R. (2002), 'Investor protection and corporate valuation', *The Journal of Finance* **57**(3), 1147–1170.
- La Porta, R., Lopez-de Silanes, F., Shleifer, A. & Vishny, R. W. (1997), 'Legal determinants of external finance', *The Journal of Finance* **52**(3), 1131–1150.
- La Porta, R., Lopez-de Silanes, F., Shleifer, A. & Vishny, R. W. (2000b), 'Agency problems and dividend policies around the world', *The Journal of Finance* **55**(1), 1–33.
- Lahrech, N., Lahrech, A. & Boulaksil, Y. (2014), 'Transparency and performance in Islamic banking: Implications on profit distribution', *International Journal of Islamic and Middle Eastern Finance and Management* **7**(1), 61–88.
- Lang, M. H., Maffett, M. G. & Owens, E. (2010), 'Earnings comovement and accounting comparability: The effects of mandatory IFRS adoption', **89**(2), 605–633.
- Lang, M. & Maffett, M. (2011), 'Transparency and liquidity uncertainty in crisis periods', *Journal of Accounting and Economics* **52**(2-3), 101–125.

- Lantto, A.-M. & Sahlström, P. (2009), 'Impact of International Financial Reporting Standard adoption on key financial ratios', *Accounting & Finance* **49**(2), 341–361.
- Laporta, R., Lopez-de Silanes, F. & Shleifer, A. (1999), 'Investor Protection and Corporate Valuation', *NBER Working paper* **7403**.
- Larcker, D. F. & Rusticus, T. O. (2010), 'On the use of instrumental variables in accounting research', *Journal of accounting and economics* **49**(3), 186–205.
- Larelle, C., Keitha, D. & Truong, T. P. (2018), 'Corporate governance and management earnings forecast behaviour', *Pacific Accounting Review* **30**(2), 222–242.
- Lee, H.-L. & Lee, H. (2015), 'Effect of information disclosure and transparency ranking system on mispricing of accruals of Taiwanese firms', *Review of Quantitative Finance and Accounting* **44**(3), 445–471.
- Lee, M.-G., Kang, M., Lee, H.-Y. & Park, J. C. (2016), 'Related-party transactions and financial statement comparability: evidence from South Korea', *Asia-Pacific Journal of Accounting & Economics* **23**(2), 224–252.
- Lee, T.-S. & Yeh, Y.-H. (2004), 'Corporate governance and financial distress: Evidence from Taiwan', *Corporate Governance: An International Review* **12**(3), 378–388.
- Leika, M., Perez-Saiz, H., Stankova, O. I. & Wezel, T. (2020), 'Stress Testing in Sub-Saharan Africa: Practices, Communications, and Capacity Development', *International Monetary Fund* **2020**(2), 181–190.
- Lel, U. (2019), 'The role of foreign institutional investors in restraining earnings management activities across countries', *Journal of International Business Studies* **50**(6), 895–922.
- Lemma, T. T., Lulseged, A., Mlilo, M. & Negash, M. (2019), 'Political stability, political rights and earnings management: some international evidence', *Accounting Research Journal* **55**(2), 181–190.
- Lemma, T. T., Negash, M., Mlilo, M. & Lulseged, A. (2018), 'Institutional ownership, product market competition, and earnings management: Some evidence from international data', *Journal of Business Research* **90**(2), 151–163.
- Leoni, G. & Florio, C. (2015), 'A comparative history of earnings management literature from Italy and the US', *Accounting History* **20**(4), 490–517.

- Lesmond, D. A. (2005), 'Liquidity of emerging markets', *Journal of Financial Economics* **77**(2), 411–452.
- Leung, S. (2009), 'Banking and financial sector reforms in Vietnam', *ASEAN Economic Bulletin* pp. 44–57.
- Leuz, C., Nanda, D. & Wysocki, P. D. (2003), 'Earnings management and investor protection: an international comparison', *Journal of Financial Economics* **69**(3), 505–527.
- Levine, R., Loayza, N. & Beck, T. (2000), 'Financial intermediation and growth: Causality and causes', *Journal of monetary Economics* **46**(1), 31–77.
- Levitt Jr, A. (1998), 'The numbers game', *The CPA Journal* **68**(12), 14.
- Levitt, P. & Schiller, N. G. (2004), 'Conceptualizing simultaneity: a transnational social field perspective on society 1', *International Migration Review* **38**(3), 1002–1039.
- Levy, J. S. (1992), 'An introduction to prospect theory', *Political Psychology* pp. 171–186.
- Lewellyn, K. B. et al. (2017), 'The role of national culture and corruption on managing earnings around the world', *Journal of World Business* **52**(6), 798–808.
- Li, H. & Qi, A. (2008), 'Impact of corporate governance on voluntary disclosure in Chinese listed companies', *Corporate Ownership and Control* **5**(2), 360–366.
- Li, K., Griffin, D., Yue, H. & Zhao, L. (2013), 'How does culture influence corporate risk-taking?', *Journal of Corporate Finance* **23**(1), 1–22.
- Li, L. (2012), Three essays on earnings management using real business operations, PhD thesis.
- Li, L. & Kuo, C.-S. (2017), 'CEO equity compensation and earnings management: The role of growth opportunities', *Finance Research Letters* **20**(3), 289–295.
- Li, S. (2010), 'Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?', *The Accounting Review* **85**(2), 607–636.
- Li, S., Ho Park, S. & Shuji Bao, R. (2014), 'How much can we trust the financial report? Earnings management in emerging economies', *International Journal of Emerging Markets* **9**(1), 33–53.

- Li, S., Selover, D. D. & Stein, M. (2011), “‘Keep silent and make money’”: Institutional patterns of earnings management in China’, *Journal of Asian Economics* **22**(5), 369–382.
- Li, X., Lin, Z. & Luo, J.-h. (2019), ‘Does auditor-client distance matter to real earnings management? Evidence from China’, *Asia-Pacific Journal of Accounting & Economics* **78**(3), 1–27.
- Licht, A. N., Goldschmidt, C. & Schwartz, S. H. (2007), ‘Culture rules: The foundations of the rule of law and other norms of governance’, *Journal of Comparative Economics* **35**(4), 659–688.
- Lim, C. & Putnam, R. (2010), ‘Religion, Social Networks, and Life Satisfaction’, *American Sociological Review* **75**(n.k.), 21–45.
- Lin, F. & Wu, S.-F. (2014), ‘Comparison of cosmetic earnings management for the developed markets and emerging markets: Some empirical evidence from the United States and Taiwan’, *Economic Modelling* **36**(5), 466–473.
- Lin, H.-W. W., Lo, H.-C. & Wu, R.-S. (2016), ‘Modeling default prediction with earnings management’, *Pacific-Basin Finance Journal* **40**(5), 306–322.
- Lin, J. W. & Hwang, M. I. (2010), ‘Audit quality, corporate governance, and earnings management: A meta-analysis’, *International Journal of Auditing* **14**(1), 57–77.
- Lin, S., Riccardi, W. N., Wang, C., Hopkins, P. E. & Kabureck, G. (2019), ‘Relative effects of IFRS adoption and IFRS convergence on financial statement comparability’, *Contemporary Accounting Research* **36**(2), 588–628.
- Lin, S., Riccardi, W. & Wang, C. (2012), ‘Does accounting quality change following a switch from US GAAP to IFRS? Evidence from Germany’, *Journal of Accounting and Public Policy* **31**(6), 641–657.
- Lin, Y. R. & Fu, X. M. (2017), ‘Does institutional ownership influence firm performance? Evidence from China’, *International Review of Economics & Finance* **49**(1), 17–57.
- Line, M. (2019), ‘Country Profile Series’, *Market Line PESTLE Country Analysis Report* .
- Liu, C.-C. & Ryan, S. G. (2006), ‘Income Smoothing over the Business Cycle: Changes in Banks’ Coordinated Management of Provisions for Loan Losses and Loan Charge-Offs from the Pre-1990 Bust to the 1990s Boom.’, *The Accounting Review* **81**(2), 421–441.

- L.L. Eng, Y. M. (2003), 'Corporate governance and voluntary disclosure', *Journal of Accounting and Public Policy* **22**(4), 325–345.
- Lo, K. (2008), 'Earnings management and earnings quality', *Journal of Accounting and Economics* **45**(2-3), 350–357.
- Lobo, G. J. & Zhou, J. (2001), 'Disclosure quality and earnings management', *Asia-Pacific Journal of Accounting & Economics* **8**(1), 1–20.
- Louis, H. & Robinson, D. (2005), 'Do managers credibly use accruals to signal private information? evidence from the pricing of discretionary accruals around stock splits', *Journal of Accounting and Economics* **39**(2), 361–380.
- Lourengo, I., Branco, M. C. & Curto, J. D. (2015), Do IFRS Matter in Emerging Countries?: An Exploratory Analysis of Brazilian Firms, in 'Standardization of Financial Reporting and Accounting in Latin American Countries', IGI Global, pp. 103–125.
- Lozano-Vivas, A., Pastor, J. T. & Hasan, I. (2001), 'European bank performance beyond country borders: What really matters?', *Review of Finance* **5**(1-2), 141–165.
- Lubetsky, M. H. (2008), 'Cultural difference and corporate governance', *Transnational Law & Contemporary Problems* **17**(1), 187.
- Lundblad, C. (2007), 'The risk return tradeoff in the long run: 1836–2003', *Journal of Financial Economics* **85**(1), 123–150.
- Ma, C. K. (1988), 'Loan loss reserves and income smoothing: the experience in the US banking industry', *Journal of Business Finance & Accounting* **15**(4), 487–497.
- Ma, J., Pagan, J. A. & Chu, Y. (2009), 'Abnormal returns to mergers and acquisitions in ten asian stock markets.', *International Journal of business* **14**(3), 1–20.
- Ma, L. & Pohlman, L. (2008), 'Return forecasts and optimal portfolio construction: a quantile regression approach', *The European Journal of Finance* **14**(5), 409–425.
- Ma, S. & Ma, L. (2017), 'The association of earnings quality with corporate performance: Evidence from the emerging market of China', *Pacific Accounting Review* **29**(3), 397–422.
- Macintosh, N. B. (2009), 'Accounting and the truth of earnings reports: philosophical considerations', *European Accounting Review* **18**(1), 141–175.

- Malik, M. (2015), 'Corporate Governance and Real Earnings Management: The Role of the Board and Institutional Investors.', *Journal of Knowledge Globalization* **8**(1), 200–231.
- Man, C. K. & Wong, B. (n.d.), 'Corporate governance and earnings management: A survey of literature'.
- Mantri, J. K. (2008), *Research methodology on data envelopment analysis (DEA)*, Universal.
- Maradin, D., Drazenovic, B. O. & Benkovic, S. (2018), 'Performance evaluation of banking sector by using DEA method', *Economic and Social Development: Book of Proceedings* pp. 684–690.
- Marcocchi, D. C. (2006), *Efficiency in the Brazilian banking industry: A data envelopment analysis approach*, ProQuest.
- Martens, W., Yapa, P. W. & Safari, M. (2020), 'The impact of financial statement comparability on earnings management: Evidence from frontier markets', *International Journal of Financial Studies* **8**(4), 73.
- Matthews, K. & Ismail, M. (2006), Efficiency and productivity growth of domestic and foreign commercial banks in Malaysia, Technical Report n.k., Cardiff economics working papers.
- Maudos, J. & Pastor, J. M. (2001), 'Cost and profit efficiency in banking: an international comparison of Europe, Japan and the USA', *Applied Economics Letters* **8**(6), 383–387.
- Mayfield, J., Mayfield, M., Drew, M. & Herbig, P. (1998), 'How location impacts international business negotiations', *Review of Business* **19**(2), 21.
- McDonald, R. I. & Crandall, C. S. (2015), 'Social norms and social influence', *Current Opinion in Behavioral Sciences* **3**(4), 147–151.
- McGuire, M. B. (2008), *Religion: The social context*, Waveland Press.
- McNichols, M. F. & Stubben, S. R. (2018), 'Research design issues in studies using discretionary accruals', *Abacus* **54**(2), 227–246.
- McSweeney, B. (2002), 'Hofstede's model of national cultural differences and their consequences: A triumph of faith-a failure of analysis', *Human relations* **55**(1), 89–118.
- McVay, S. E. (2006), 'Earnings management using classification shifting: An examination of core earnings and special items', *The Accounting Review* **81**(3), 501–531.

- Meeusen, W. & Van Den Broeck, J. (1977), 'Efficiency Estimation from Cobb-Douglas Functions with composed error.', *International Economic Review* **18**(2), 435.
- Mehl, A. & Winkler, A. (2003), The finance-growth nexus and financial sector environment: new evidence from Southeast Europe, in 'Ninth Dubrovnik Economic Conference on "Banking and the Financial Sector in Transition and Emerging Market Economies", organized by the Croatian National Bank'.
- Memis, M. U. & Cetenak, E. H. (2012), 'Earnings Management, Audit Quality and Legal Environment: An International Comparison', *International Journal of Economics and Financial Issues* **2**(4), 460–n/a.
- Mertens, A. & Urga, G. (2001), 'Efficiency, scale and scope economies in the Ukrainian banking sector in 1998', *Emerging Markets Review* **2**(3), 292–308.
- Mester, L. J. (1996), 'A study of bank efficiency taking into account risk-preferences', *Journal of Banking & Finance* **20**(6), 1025–1045.
- Metwally, M. M. (1997), 'Differences between the financial characteristics of interest-free banks and conventional banks', *European Business Review* **97**(2), 92–98.
- Miah, M. D. & Uddin, H. (2017), 'Efficiency and stability: A comparative study between Islamic and conventional banks in GCC countries', *Future Business Journal* **3**(2), 172–185.
- Miencha, I. O., Murugesan, S., Vasanth, V., Lingaraja, K. & Raja, M. (2015), 'Efficiency measurement of Kenyan commercial banks', *Mediterranean Journal of Social Sciences* **6**(4), 621.
- Millstein, I. M., Bajpai, G., Berglöf, E. & Claessens, S. (2005), Enforcement and Corporate Governance: Three Views, in 'Global Corporate Governance Forum, Focus', Vol. 3.
- Miranda, K. F., Machado, M. A. & Macedo, L. A. (2018), 'Investor sentiment and earnings management: Does analysts' monitoring matter?', *RAM. Revista de Administração Mackenzie* **19**(4), 160–187.
- Mitnick, B. M. (2015), 'Agency theory', *Wiley encyclopedia of management* pp. 1–6.
- Mitton, T. (2004), 'Corporate governance and dividend policy in emerging markets', *Emerging Markets Review* **5**(4), 409–426.

- Mlambo, K. & Ncube, M. (2011), 'Competition and efficiency in the banking sector in South Africa', *African Development Review* **23**(1), 4–15.
- Mohsni, S. & Otchere, I. (2017), 'Does regulatory regime matter for bank risktaking? A comparative analysis of US and Canada', *d/Seas Working Papers-ISSN 2611-0172* **1**(1), 28–28.
- Mohti, W., Dionísio, A., Vieira, I. & Ferreira, P. (2019), 'Financial contagion analysis in frontier markets: Evidence from the US subprime and the Eurozone debt crises', *Physica A: Statistical Mechanics and its Applications* **525**(n.k.), 1388–1398.
- Mongin, P. (1997), 'Expected utility theory', *Handbook of economic methodology* **342350**, 342–350.
- Moradi-Motlagh, A. & Saleh, A. S. (2014), 'Re-examining the technical efficiency of Australian banks: a Bootstrap DEA Approach', *Australian Economic Papers* **53**(1-2), 112–128.
- Moss, T. J., Ramachandran, V. & Standley, S. (2007), 'Why doesn't Africa get more equity investment? Frontier stock markets, firm size and asset allocations of global emerging market funds', *Center for Global Development Working Paper n.k.*(112), 20.
- Mostafa, W. (2017), 'The impact of earnings management on the value relevance of earnings: Empirical evidence from Egypt', *Managerial Auditing Journal* **32**(1), 50–74.
- MSCI (2019), 'Market classification - MSCI', <https://www.msci.com/market-classification>. (Accessed on 06/25/2020).
- MSCI (2019a), 'Market classification - MSCI', <https://www.msci.com/market-classification>. (Accessed on 12/23/2019).
- MSCI (2019b), 'MSCI Market Classification Framework', https://www.msci.com/documents/1296102/1330218/MSCI_Global_Market_Framework_2019.pdf/57f021bc-a41b-f6a6-c482-8d4881b759bf. (Accessed on 06/27/2020).
- MSCI (2020), 'MSCI Market Classification Framework', https://www.msci.com/documents/1296102/1330218/MSCI_Global_Market_Framework_2019.pdf/57f021bc-a41b-f6a6-c482-8d4881b759bf. (Accessed on 04/28/2020).

- Muhmad, S. N. & Hashim, H. A. (2015), 'Using the CAMEL framework in assessing bank performance in Malaysia', *International Journal of Economics, Management and Accounting* **23**(1), 109–127.
- Murillo-Zamorano, L. R. & Vega-Cervera, J. A. (2001), 'The use of parametric and non-parametric frontier methods to measure the productive efficiency in the industrial sector: A comparative study', *International Journal of Production Economics* **69**(3), 265–275.
- Myers, M. D. & Tan, F. B. (2002), Beyond models of national culture in information systems research, in 'Human factors in information systems', IGI Global, pp. 1–19.
- Nakasone, G. A. T. (2015), Accounting standards in Peru: Issues and challenges, in 'Standardization of financial reporting and accounting in Latin American countries', IGI Global, pp. 219–251.
- Nakpodia, F., Shrives, P. J. & Sorour, M. K. (2018), 'Examining the link between religion and corporate governance: insights from Nigeria', *Business & Society* **55**(2), 52.
- Navaretti, G. B., Calzolari, G., Pozzolo, A. F. & de Daverio, M. T. T. (2019), 'Few Large with Many Small: Banks Size Distribution and Cross-Border Financial Linkages', *Journal of Financial Services Research* **56**(3), 229–258.
- Neideen, T. & Brasel, K. (2007), 'Understanding statistical tests', *Journal of Surgical Education* **64**(2), 93–96.
- Nenovski, N., Čobanov, P., Koleva, D. & Mihajlova, G. (2008), 'How the bank efficiency changes: Case of Bulgaria', *Megatrend revija* **5**(1), 5–17.
- Ng, L., Wu, F., Yu, J. & Zhang, B. (2011), 'The role of foreign blockholders in stock liquidity: A cross-country analysis', **n.k.**(n.k.), n.k.
- Nguyen, T. N., Stewart, C. & Matousek, R. (2018), 'Market structure in the Vietnamese banking system: a non-structural approach', *Journal of Financial Regulation and Compliance* **26**(1), 103–119.
- Nguyen, T. P. T., Nghiem, S. H., Roca, E. & Sharma, P. (2016), 'Bank reforms and efficiency in Vietnamese banks: evidence based on SFA and DEA', *Applied Economics* **48**(30), 2822–2835.

- Nix, P. (2012), The role of institutional investors in corporate governance: Evidence from German corporations: How corporate managers in German listed companies experience the role of institutional investors in corporate governance: An empirical study, PhD thesis.
- Noble, G. W. & Ravenhill, J. (2000), *The Asian financial crisis and the architecture of global finance*, Vol. n.k., Cambridge University Press.
- Noulas, A. G., Ray, S. C. & Miller, S. M. (1990), 'Returns to scale and input substitution for large US banks', *Journal of Money, Credit and Banking* **22**(1), 94–108.
- Nouy, D. (2014), 'Regulatory and financial reporting essential for effective banking supervision and financial stability', <https://www.bankingsupervision.europa.eu/press/speeches/date/2014/html/se140603.en.html>. (Accessed on 09/13/2020).
- Novickytė, L. & Drożdż, J. (2018), 'Measuring the Efficiency in the Lithuanian Banking Sector: The DEA Application', *International Journal of Financial Studies* **6**(n.k.), 37.
- Obafemi, F. N. (2012), 'The technical efficiency of Nigerian banks', *Asian Economic and Financial Review* **2**(2), 407.
- Odeck, J. & Bråthen, S. (2012), 'A meta-analysis of DEA and SFA studies of the technical efficiency of seaports: A comparison of fixed and random-effects regression models', *Transportation Research Part A: Policy and Practice* **46**(10), 1574–1585.
- Odell, J. & Ali, U. (2016), 'ESG investing in emerging and frontier markets', *Journal of Applied Corporate Finance* **28**(2), 96–101.
- Odo, J. O. (2018), 'Adoption_of_IFRS_in_Nigeria_Challenges_and_the_Way_Forward.pdf', http://hrmars.com/hrmars_papers/Adoption_of_IFRS_in_Nigeria_Challenges_and_the_Way_Forward.pdf. (Accessed on 03/01/2020).
- Okike, E. & Adegbite, E. (2012), 'The Code of Corporate Governance in Nigeria: Efficiency Gains or Social Legitimation?', *Corporate Ownership Control* **9**(n.k.), 262–275.
- Olson, D. & Zoubi, T. (2017), 'Convergence in bank performance for commercial and Islamic banks during and after the Global Financial Crisis', *The Quarterly Review of Economics and Finance* **65**(n.k.), 71–87.

- Olson, D. & Zoubi, T. A. (2011), 'Efficiency and bank profitability in MENA countries', *Emerging Markets Review* **12**(2), 94–110.
- Orpurt, S. F. & Zang, Y. (2009), 'Do direct cash flow disclosures help predict future operating cash flows and earnings?', *The Accounting Review* **84**(3), 893–935.
- Oshikoya, T. W. & Durosinmi-Etti, K. (2019), *Frontier Capital Markets and Investment Banking: Principles and Practice from Nigeria*, Vol. 13, Taylor Francis Group.
- Osma, B. G., Mora, A. & Porcuna-Enguix, L. (2019), 'Prudential supervisors' independence and income smoothing in European banks', *Journal of Banking & Finance* **102**(n.k.), 156–176.
- Osma, B. G. & Young, S. (2009), 'R&D expenditure and earnings targets', *European Accounting Review* **18**(1), 7–32.
- Oswald, S. L. & Jahera Jr, J. S. (1991), 'The influence of ownership on performance: An empirical study', *Strategic Management Journal* **12**(4), 321–326.
- Owolabi, S. A., Folajimi, F., Oluwatosin, A. et al. (2019), 'Leadership Structure and Earnings Management in the Quoted Food and Beverages Companies in Nigeria', *American Based Research Journal* **8**(03), 88.
- Özdağoğlu, A., Yakut, E. & Bahar, S. (2017), 'Performance evaluation of turkish banking sector with data envelopment analysis using entropic weights', *İşletme Fakültesi Dergisi* **18**(1), 1–28.
- Ozili, P. K. (2017a), 'Bank earnings smoothing, audit quality and procyclicality in Africa: the case of loan loss provisions', *Review of Accounting and Finance* **16**(2), 142–161.
- Ozili, P. K. (2017b), 'Discretionary provisioning practices among Western European banks', *Journal of Financial Economics Policy* **9**(1), 109–118.
- O'Connell, A. (2005), '12. The Recent Crisis—and Recovery—of the Argentine Economy: Some Elements and Background', *Financialization and the World Economy* pp. 289–213.
- O'Donovan, G. (2003), 'A board culture of corporate governance', *Corporate Governance International Journal* **6**(3), 22–30.
- Pacheco Paredes, A. A. & Wheatley, C. (2017), 'The influence of culture on real earnings management', *International Journal of Emerging markets* **12**(1), 38–57.

- Pae, J. (2005), 'Expected accrual models: the impact of operating cash flows and reversals of accruals', *Review of Quantitative Finance and Accounting* **24**(1), 5–22.
- Papanastasopoulos, G. & Tsiritakis, E. (2015), 'The accrual anomaly in Europe: The role of accounting distortions', *International Review of Financial Analysis* **41**(3), 176.
- Pappas, K. (2016), 'Three Essays on Earnings Management: Evidence from the UK', *PQDT - UK Ireland* p. 215.
- Pareto, V., Politique, M. D. & Press, A. (1927), 'Paris', *The Journal of Investments* **55**(2), 181–190.
- Pastor, J., Perez, F. & Quesada, J. (1997), 'Efficiency analysis in banking firms: An international comparison', *European Journal of Operational Research* **98**(2), 395–407.
- Patel, S. A., Balic, A. & Bwakira, L. (2002), 'Measuring transparency and disclosure at firm-level in emerging markets', *Emerging Markets Review* **3**(4), 325–337.
- Patel, S. A. & Sarkar, A. (1998), 'Crises in developed and emerging stock markets', *Financial Analysts Journal* **54**(6), 50–61.
- Pepper, A. (2019), What's Wrong With Agency Theory?, in 'Agency Theory and Executive Pay', Springer, pp. 15–42.
- Perelman, S. & Serebrisky, T. (2010), *Measuring the technical efficiency of airports in Latin America*, The World Bank.
- Perraton, J., Goldblatt, D., Held, D. & McGrew, A. (1997), 'The globalisation of economic activity', *New Political Economy* **2**(2), 257–277.
- Perry, G. & Servén, L. (2003), *The anatomy of a multiple crisis: why was Argentina special and what can we learn from it?*, The World Bank.
- Persakis, A. & Iatridis, G. E. (2016), 'Audit quality, investor protection and earnings management during the financial crisis of 2008: An international perspective', *Journal of International Financial Markets, Institutions and Money* **41**, 73–101.
- Pessarossi, P. & Weill, L. (2015), 'Do capital requirements affect cost efficiency? Evidence from China', *Journal of Financial Stability* **19**(n.k.), 119–127.

- Peterson, K., Schmardebeck, R. & Wilks, T. J. (2015), 'The earnings quality and information processing effects of accounting consistency', *The Accounting Review* **90**(6), 2483–2514.
- Phan, T. M. H. (2015), 'Market concentration, bank competition and bank efficiency in emerging Asian countries', *PQDT - Global* **n.k.**(n.k.), 118.
- Phelps, O. (1947), 'Academic research in business administration', *The Journal of Higher Education* **18**(2), 81–114.
- Philippatos, G. C. & Yildirim, H. S. (2002), 'Competition and contestability in central and eastern European banking markets', *Cambridge, Massachusetts: Social Science Research Network*, *unpublished*.
- Pincus, M., Rajgopal, S. & Venkatachalam, M. (2007), 'The Accrual Anomaly: International Evidence', *The Accounting Review* **82**(1), 169–203.
- Piot, C. & Janin, R. (2007), 'External auditors, audit committees and earnings management in France', *European accounting review* **16**(2), 429–454.
- Pong, C., Chia, Y. M., Lapsley, I. & Lee, H.-W. (2007), 'Choice of auditors and earnings management during the Asian financial crisis', *Managerial Auditing Journal* **273**(5277), 974–977.
- Porcelli, F. (2009), 'Measurement of Technical Efficiency. A brief survey on parametric and non-parametric techniques', *University of Warwick* **11**(527), 1–27.
- Porter, M. E. (1997), 'Competitive strategy', *Measuring business excellence* **1**(2), 12–17.
- Pradiknas, T. Y. & Faturohman, T. (2015), 'Efficiency of Islamic banking compared to the conventional banking: Evidence from Indonesian banking sector', *Journal of Business and Management* **4**(5), 540–551.
- Pucheta-Martínez, M. C. & García-Meca, E. (2014), 'Institutional investors on boards and audit committees and their effects on financial reporting quality', *Corporate Governance: An International Review* **22**(4), 347–363.
- Punda, P. (2011), 'The Impact of International Financial Reporting Standard (IFRS) Adoption on Key Financial Ratios—Evidence from the UK', **273**(5277), 974–977.

- Quebe, R. C. o. P., Law, C. & Allard (2003), *Private Law Dictionary and Bilingual Lexicons. Obligations*, Cowansville, Quebec: Editions Y. Blais.
- Račickas, E. & Vasiliauskaitė, A. (2010), 'Global financial crisis and its impact on Lithuanian economy', *Ekonomika ir vadyba* **n.k.**(15), 1006–1017.
- Radebaugh, L. H., Gray, S. J. & Black, E. L. (2006), *International Accounting and Multinational Enterprises*, John Wiley & Sons.
- Reddy, K. S., Nangia, V. K. & Agrawal, R. (2013), 'Indian economic-policy reforms, bank mergers, and lawful proposals: The ex-ante and ex-post 'lookup'', *Journal of Policy Modeling* **35**(4), 601–622.
- Reichelt, K. J. & Wang, D. (2010), 'National and office-specific measures of auditor industry expertise and effects on audit quality', *Journal of Accounting Research* **48**(3), 647–686.
- Reimann, M. (2000), 'Beyond national systems: a comparative law for the international age', *Tul. L. Rev.* **75**(3), 1103.
- Richardson, S. (2003), 'Earnings quality and short sellers', *Accounting Horizons* **17**(n.k.), 49.
- Roberts, J., Kayande, U. & Srivastava, R. K. (2015), 'What's different about emerging markets, and what does it mean for theory and practice?', **24**(1), 245–250.
- Robst, J. (2001), 'Cost efficiency in public higher education institutions', *The Journal of Higher Education* **72**(6), 730–750.
- Rodriguez-Ariza, L., Martínez-Ferrero, J. & Bermejo-Sánchez, M. (2016), 'Consequences of earnings management for corporate reputation: Evidence from family firms', *Accounting Research Journal* **29**(4), 457–474.
- Roe, M. J. (2005), The institutions of corporate governance, in 'Handbook of new institutional economics', Springer, pp. 371–399.
- Roman, M. & Gotiu (Lucaciu), L. (2017), 'Non-parametric methods applied in the efficiency analysis of European structural funding in Romania', **18**(2), 23.
- Ross, S. A. (1973), 'The economic theory of agency: The principal's problem', *The American Economic Review* **63**(2), 134–139.

- Rost, K., Stahel, L. & Frey, B. S. (2016), 'Digital social norm enforcement: Online firestorms in social media', *PLoS one* **11**(6), e0155923.
- Roychowdhury, S. (2006), 'Earnings management through real activities manipulation', *Journal of Accounting and Economics* **42**(3), 335–370.
- Ruddock, C., Taylor, S. J. & Taylor, S. L. (2006), 'Nonaudit services and earnings conservatism: Is auditor independence impaired?', *Contemporary Accounting Research* **23**(3), 701–746.
- Ruslan, A., Pahlevi, C., Alam, S. & Nohong, M. (2019), 'The role of efficiency mediation in the effect of banks size on bank profitability in Indonesia', *Hasanuddin Economics and Business Review* **3**(1), 49–58.
- Rusmin, R. (2010), 'Auditor quality and earnings management: Singaporean evidence', *Managerial Auditing Journal* **25**(7), 1–24.
- Saad, W. (2012), 'Causality between economic growth, export, and external debt servicing: the case of Lebanon', *International Journal of Economics and Finance* **4**(11), 134–143.
- Safari, M., Cooper, B. J. & Dellaportas, S. (2016), 'The influence of remuneration structures on financial reporting quality: Evidence from australia', *Australian Accounting Review* **26**(1), 66–75.
- Said, A. (2012), 'Comparing the change in efficiency of the Western and Islamic banking systems', *Journal of Money, Investment and Banking* **23**(1), 149–180.
- Said, R. M. & Tumin, M. H. (2011), 'Performance and financial ratios of commercial banks in Malaysia and China', *International Review of Business Research Papers* **7**(2), 157–169.
- Salehi, M., Tarighi, H. & Safdari, S. (2018), 'The relation between corporate governance mechanisms, executive compensation and audit fees: Evidence from Iran', *Management Research Review* **41**(8), 939–967.
- Salter, S. B. & Niswander, F. (1995), 'Cultural influence on the development of accounting systems internationally: A test of Gray's [1988] theory', *Journal of International Business Studies* **26**(2), 379–397.
- Sangmi, P. & Nazir, D. (2010), 'Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model', *Pakistan Journal of Commerce and Social Sciences* **4**(1), n.k.

- Saona, P. & Muro, L. (2018), 'Firm-and country-level attributes as determinants of earnings management: An analysis for Latin American firms', *Emerging Markets Finance and Trade* **54**(12), 2736–2764.
- Sarmiento, M. & Galán, J. E. (2017), 'The influence of risk-taking on bank efficiency: Evidence from Colombia', *Emerging Markets Review* **32**(n.k.), 52–73.
- Sarquis, R. W. & Luccas, R. G. (2015), Accounting Systems' Classification in Latin America: Is There Harmonization in the IFRS Era?, in 'Standardization of Financial Reporting and Accounting in Latin American Countries', IGI Global, pp. 32–55.
- Sathye, M. (2003), 'Efficiency of banks in a developing economy: The case of India', *European Journal of Operational Research* **148**(3), 662–671.
- Saurina, J. (2009), 'Loan loss provisions in Spain. A working macroprudential tool', *Revista de Estabilidad Financiera* **17**(1), 11–26.
- Schipper, K. (1989), 'Commentary on earnings management', *Accounting Horizons* **3**(4), 91–102.
- Schipper, K. & Vincent, L. (2003), 'Earnings quality', *Accounting Horizons* **17**(2), 97–110.
- Schmidt, P. & Sickles, R. C. (1984), 'Production frontiers and panel data', *Journal of Business & Economic Statistics* **2**(4), 367–374.
- Schoenholz, D. (2010), 'The new frontier: Understanding the opportunities, knowing the risks', *Financial Services* **29**(30), 77–98.
- Scholtens, B. & Kang, F.-C. (2013), 'Corporate social responsibility and earnings management: Evidence from Asian economies', *Corporate Social Responsibility and Environmental Management* **20**(2), 95–112.
- Sealey Jr, C. W. & Lindley, J. T. (1977), 'Inputs, outputs, and a theory of production and cost at depository financial institutions', *The Journal of Finance* **32**(4), 1251–1266.
- Seelanatha, L. (2010), 'Market structure, efficiency and performance of banking industry in Sri Lanka', *Banks and Bank Systems* **5**(1), 20–31.
- Sellami, M. (2015), 'Incentives and constraints of real earnings management: The literature review', *International Journal of Finance and Accounting* **4**(4), 206–213.

- Shane, P., Smith, D. & Zhang, S. (2014), 'Financial statement comparability and valuation of seasoned equity offerings', **n.k.(n.k.)**, 1–48.
- Shanmugam, K. R. & Das, A. (2004), 'Efficiency of Indian commercial banks during the reform period', *Applied Financial Economics* **14**(9), 681–686.
- Sharma, A., Park, S. & Nicolau, J. L. (2020), 'Testing loss aversion and diminishing sensitivity in review sentiment', *Tourism Management* **77**(n.k.), 104020.
- Sharma, P., Luk, S. T., Cardinali, S. & Ogasavara, M. H. (2018), 'Challenges and opportunities for marketers in the emerging markets', *Journal of Business Research* **151**(1), 141–163.
- Shawtari, F. A., Salem, M. A., Hussain, H. I., Alaeddin, O. & Thabit, O. B. (2016), 'Corporate governance characteristics and valuation: Inferences from quantile regression', *Journal of Economics, Finance and Administrative Science* **21**(41), 81–88.
- Shen, C.-H. & Chih, H.-L. (2005), 'Investor protection, prospect theory, and earnings management: An international comparison of the banking industry', *Journal of Banking & Finance* **29**(10), 2675–2697.
- Shivakumar, L. (1996), 'Estimating abnormal accruals for detection of earnings management', *Available at SSRN* 2593 .
- Shleifer, A. & Vishny, R. W. (1997), 'A survey of corporate governance', *The Journal of Finance* **52**(2), 737–783.
- Shleifer, A. & Wolfenzon, D. (2002), 'Investor protection and equity markets', *Journal of Financial Economics* **66**(1), 3–27.
- Shu, P.-G., Yeh, Y.-H. & Yamada, T. (2002), 'The behavior of Taiwan mutual fund investors—performance and fund flows', *Pacific-basin finance journal* **10**(5), 583–600.
- Shum (2017), 'Frontier Stock Market Correlations for 2017 - Investment Frontier', <https://www.investmentfrontier.com/2017/06/05/frontier-stock-market-correlations-2017/>. (Accessed on 03/03/2020).
- Siems, T. F. et al. (1992), 'Quantifying management's role in bank survival', *Economic Review* **20**(2), 29–41.

- Silva, T. C., Tabak, B. M., Cajueiro, D. O. & Dias, M. V. B. (2017), 'A comparison of DEA and SFA using micro-and macro-level perspectives: Efficiency of Chinese local banks', *Physica A: Statistical Mechanics and its Applications* **469**(2), 216–223.
- Silva, T. C., Tabak, B. M., Cajueiro, D. O. & Dias, M. V. B. (2018), 'Adequacy of deterministic and parametric frontiers to analyze the efficiency of Indian commercial banks', *Physica A: Statistical Mechanics and its Applications* **506**(n.k.), 1016–1025.
- Simar, L. & Wilson, P. W. (2007), 'Estimation and inference in two-stage, semi-parametric models of production processes', *Journal of Econometrics* **136**(1), 31–64.
- Simon S.M Ho, K. S. W. (2001), 'A study of the relationship between corporate governance structures and the extent of voluntary disclosure', *Journal of International Accounting, Auditing and Taxation* **10**(2), 139–156.
- Singh, G., Singh, P. & Munisamy, S. (2008), 'A cross country comparison of banking efficiency: Asia Pacific banks', *International Review of Business Research Papers* **4**(3), 73–95.
- Sir Adrian Cadbury | ICGN (n.d.), <https://www.icgn.org/speakers/sir-adrian-cadbury>. (Accessed on 03/14/2020).
- Siregar, S. V. & Utama, S. (2008), 'Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practices: Evidence from Indonesia', *The International Journal of Accounting* **43**(1), 1–27.
- Sloan, R. G. (1996), 'Do stock prices fully reflect information in accruals and cash flows about future earnings?', *The Accounting Review* **n.k.**(n.k.), 289–315.
- Smolo, E. & Mirakhor, A. (2010), 'The global financial crisis and its implications for the Islamic financial industry', *International Journal of Islamic and Middle Eastern Finance and Management* **3**(4), 372–385.
- Sohn, B. C. (2016), 'The effect of accounting comparability on the accrual-based and real earnings management', *Journal of Accounting and Public Policy* **35**(5), 513–539.
- Speidell, L. (2011), 'Frontier Markets Equity Investing: Finding the Winners of the Future', *CFA Institute Research Foundation M2011-2 n.k.*(2).
- Speidell, L. & Krohne, A. (2007), 'The Case for Frontier Equity Markets', *Journal of Investing* **16**(3), 12–22,4.

- Srairi, S. A. (2010), 'Cost and profit efficiency of conventional and Islamic banks in GCC countries', *Journal of Productivity Analysis* **34**(1), 45–62.
- Starosta, W. J. & Chen, G.-M. (2005), 'Intercultural listening: Collected reflections, collated refractions', *International and Intercultural Communication Annual* **28**(n.k.), 274–285.
- Stereńczak, S., Zaremba, A. & Umar, Z. (2020), 'Is there an illiquidity premium in frontier markets?', *Emerging Markets Review* **42**(1), 100673.
- Stulz, R. (1990), 'Managerial discretion and optimal financing policies', *Journal of Financial Economics* **26**(1), 3–27.
- Stulz, R. M. & Williamson, R. (2003), 'Culture, openness, and finance', *Journal of Financial Economics* **70**(3), 313–349.
- Sturm, J.-E. & Williams, B. (2004), 'Foreign bank entry, deregulation and bank efficiency: Lessons from the Australian experience', *Journal of Banking & Finance* **28**(7), 1775–1799.
- Subekti, I. (2013), 'Accrual and Real Earnings Management: One of The Perspectives of Prospect Theory', *Journal of Economics, Business, & Accountancy Ventura* **15**(3), 443–456.
- Subramanian, A. (2001), 'Mauritius: A case study', *Finance and Development* **38**(4), 22–25.
- Subramanyam, K. (1996a), 'The pricing of discretionary accruals', *Journal of Accounting and Economics* **22**(1), 249–281.
- Subramanyam, K. (1996b), 'The pricing of discretionary accruals', *Journal of Accounting and Economics* **22**(1), 249–281.
- Sufian, F. & Akbar Noor Mohamad Noor, M. (2009), 'The determinants of Islamic banks' efficiency changes: Empirical evidence from the MENA and Asian banking sectors', *International Journal of Islamic and Middle Eastern Finance and Management* **2**(2), 120–138.
- Sun, J. & Liu, G. (2016), 'Does analyst coverage constrain real earnings management?', *The Quarterly Review of Economics and Finance* **59**(1), 131–140.
- Sundararajan, V. & Errico, L. (2002), *Islamic financial institutions and products in the global financial system: Key issues in risk management and challenges ahead*, Vol. 2, International Monetary Fund.

- Sunder, S. (2005), 'Minding our manners: Accounting as social norms', *The British Accounting Review* **37**(4), 367–387.
- Susanto, Y. K., Pradipta, A. & Djashan, I. A. (2017), 'Free cash flow and earnings management: board of commissioner, board independence and audit quality', *Corporate Ownership and Control* **14**(4-1), 284–288.
- Svirydzenka, K. & Petri, M. (2017), 'Mauritius: The Drivers of Growth—Can the Past Be Extended?', *Journal of Banking and Financial Economics* (2 (8)), 91–106.
- Tabassum, N., Kaleem, A. & Nazir, M. S. (2015), 'Real earnings management and future performance', *Global Business Review* **16**(1), 21–34.
- Tahir, I. M., Bakar, M. & Haron, S. (2008), 'Technical efficiency of the Malaysian commercial banks: A stochastic frontier approach', *Banks and Bank Systems* **3**(4), 1–16.
- Taktak, N. B., Zouari, S. B. S. & Boudriga, A. (2010), 'Do Islamic banks use loan loss provisions to smooth their results?', *Journal of Islamic Accounting and Business Research* **20**(1), 2318–2327.
- Tang, H., Zoli, E. & Klytchnikova, I. (1999), *Banking crises in transition economies: fiscal costs and related issues*, The World Bank.
- Tang, HuiWen, C. A. C. C.-C. (2013), 'Insider trading, accrual abuse, and corporate governance in emerging markets — Evidence from Taiwan', *Pacific-Basin Finance Journal* **24**(1), 132–155.
- Tanko, M. (2012), 'The effect of international financial reporting standards (IFRS) adoption on the performance of firms in Nigeria', *Journal of Administrative and Economic Sciences* **5**(2), 133–157.
- Taylor, G. K. & Xu, R. Z. (2010), 'Consequences of real earnings management on subsequent operating performance', *Research in Accounting Regulation* **22**(2), 128–132.
- Taylor, W. M., Thompson, R. G., Thrall, R. M. & Dharmapala, P. (1997), 'DEA/AR efficiency and profitability of Mexican banks a total income model', *European Journal of Operational Research* **98**(2), 346–363.
- Teoh, S. H., Welch, I. & Wong, T. J. (1998), 'Earnings management and the underperformance of seasoned equity offerings¹', *Journal of Financial Economics* **50**(1), 63–99.

- Tetley, W. (1999), 'Mixed jurisdictions: Common law v. civil law (codified and uncoded)', *La. L. Rev.* **60**(1), 677.
- Thiemann, M. (2014), 'In the shadow of Basel: How competitive politics bred the crisis', *Review of International Political Economy* **21**(6), 1203–1239.
- Thomas, N. M., Kashiramka, S. & Yadav, S. S. (2017), 'Dynamic linkages among developed, emerging and frontier capital markets of Asia-Pacific region', *Journal of Advances in Management Research* **14**(3), 332–351.
- Titko, J. & Jureviciene, D. (2014), 'DEA application at cross-country benchmarking: Latvian vs Lithuanian banking sector', *Procedia-Social and Behavioral Sciences* **110**(n.k.), 1124–1135.
- Tochkov, K. & Nenovsky, N. (2011), 'Institutional reforms, EU accession, and bank efficiency in transition economies: Evidence from Bulgaria', *Emerging Markets Finance and Trade* **47**(1), 113–129.
- Toma, P., Miglietta, P. P., Zurlini, G., Valente, D. & Petrosillo, I. (2017), 'A non-parametric bootstrap-data envelopment analysis approach for environmental policy planning and management of agricultural efficiency in EU countries', *Ecological Indicators* **83**(1), 132–143.
- Toumeh, A. A. & Yahya, S. (2017), 'Stock market segmentations, free cash flow and earnings management: The roles of moderating independent audit committee and audit quality (the case of Jordan from an agency theory perspective).', *Global Business & Management Research* **9**(4), 267–275.
- Tran, N. H. & Le, C. D. (2020), 'Ownership concentration, corporate risk-taking and performance: Evidence from Vietnamese listed firms', *Cogent Economics & Finance* **8**(1), 219–238.
- Tsamenyi, M., Enninful-Adu, E. & Onumah, J. (2007), 'Disclosure and corporate governance in developing countries: evidence from Ghana', *Managerial Auditing Journal* **22**(3), 319–334.
- Turley, G. & Luke, P. J. (2012), *Transition economics: Two decades on*, Routledge.
- Tversky, A. & Kahneman, D. (1992), 'Advances in Prospect Theory: Cumulative Representation of Uncertainty.', *Journal of Risk Uncertainty* **5**(4), 297–323.
- U-Din, S., Tripe, D. W. & Kabir, M. (2017), 'Market Competition and Bank Efficiency: A Post GFC Assessment of Australia and New Zealand', *Available at SSRN 3021357* **n.k.**(n.k.), 17.

- Uyen, D. (2011), 'The CAMEL rating system in banking supervision: A case study', *Unpublished Degree's Thesis, Arcada University of Applied Sciences, Finland*.
- van de Wiel, I. (2013), 'The Argentine Crisis 2001/2002 - RaboResearch', <https://economics.rabobank.com/publications/2013/august/the-argentine-crisis-20012002-/>. (Accessed on 02/28/2020).
- van der Tas, L. (1992), 'Harmonization of financial reporting—with a special focus on the European Community', *European Accounting Review* **1**(2), 469–473.
- Varghese, R. (2010), 'Corporate disclosure by Indian companies', **n.k.(n.k.)**, 199.
- Vo, X. V. (2020), 'The role of bank funding diversity: Evidence from Vietnam', *International Review of Finance* **20**(2), 529–536.
- Volonté, C. (2015), 'Culture and Corporate Governance: The Influence of Language and Religion in Switzerland', *MIR: Management International Review* **55**(1), 77–118.
- Vu, H. T. & Turnell, S. (2010), 'Cost efficiency of the banking sector in Vietnam: A Bayesian stochastic frontier approach with regularity constraints', *Asian Economic Journal* **24**(2), 115–139.
- Wahlen, J. M. (1994), 'The nature of information in commercial bank loan loss disclosures', *The Accounting Review* **15**(4), 455–478.
- Wai, P. W. & Deng, Q. (2016), 'Efficiency analysis of banks in ASEAN countries', *Benchmarking* **23**(7), 1798–1817.
- Walker, M. (2013), 'How far can we trust earnings numbers? What research tells us about earnings management', *Accounting and Business Research* **43**(4), 445–481.
- Wang, C. (2014), 'Accounting standards harmonization and financial statement comparability: Evidence from transnational information transfer', *Journal of Accounting Research* **52**(4), 955–992.
- Wang, H.-J. (2003), 'A stochastic frontier analysis of financing constraints on investment: the case of financial liberalization in Taiwan', *Journal of Business & Economic Statistics* **21**(3), 406–419.

- Wang, R. & Luo, H. (2019), 'Does financial liberalization affect bank risk-taking in china?', *SAGE Open* **9**(4), 2158244019887948.
- Wang, S. & D'Souza, J. (2006), 'Earnings management: The effect of accounting flexibility on R&D investment choices', *SSRN Electronic Journal* **6**(10), n.k.
- Wang, Y. & Huang, J. (2008), 'Formal modeling and specification of design patterns using RTPA', *International Journal of Cognitive Informatics and Natural Intelligence (IJCINI)* **2**(1), 100–111.
- Wang, Y., Wang, Y., Xie, L., Zhou, H. et al. (2018), 'Impact of Perceived Uncertainty on Public Acceptability of Congestion Charging: An Empirical Study in China', *Sustainability* **11**(1), 1–21.
- Watts, R. L. & Zimmerman, J. L. (1978), 'Towards a positive theory of the determination of accounting standards', *Accounting Review* **53**(1), 112–134.
- Watts, R. L. & Zimmerman, J. L. (1986), 'Positive accounting theory', **11**(1), 1–10.
- Weber, K. & Hallerberg, M. (2001), 'Explaining variation in institutional integration in the European Union: why firms may prefer European solutions', *Journal of European Public Policy* **8**(2), 171–191.
- Weber, R. A. (2001), 'Behavior and learning in the “dirty faces” game', *Experimental Economics* **4**(3), 229–242.
- Wei, F. & Li, W. (2020), The Influence of Enterprise Earnings Management on Cost Stickiness, in '5th International Conference on Financial Innovation and Economic Development (ICFIED 2020)', Atlantis Press, pp. 113–117.
- Wheelock, D. C. & Wilson, P. W. (2000), 'Why Do Banks Disappear? The Determinants of U.S. Bank Failures and Acquisitions', *The Review of Economics and Statistics* **82**(1), 127–138.
- Wijayana, S. & Gray, S. J. (2019), 'Institutional factors and earnings management in the asia-pacific: is ifrs adoption making a difference?', *Management International Review* **59**(2), 307–334.
- Williams, C., Colovic, A. & Zhu, J. (2017), 'Earnings management involves using managerial discretion to distort firm financial performance.', *Journal of World Business* **52**(6), 798–808.

- Wiprächtiger, D., Narayanamurthy, G., Moser, R. & Sengupta, T. (2019), 'Access-based business model innovation in frontier markets: Case study of shared mobility in Timor-Leste', *Technological Forecasting and Social Change* **143**(2), 224–238.
- Worimegbe, P. M., Abosede, A. J. & Worimegbe, T. M. (2018), 'Efficiency, customers' satisfaction and deposit money banks' performance in Nigeria', *Journal of Economics & Management* **31**(3), 133–148.
- Wozniowska, G. (2008), 'Methods of measuring the efficiency of commercial banks: An example of Polish banks.', *Ekonomika/Economics* **84**(3), 228–237.
- Wu, J. (2010), 'The Role of State Ownership in Commercial Banks: Experience of CEE Transition Countries', **11**(1), 1–10.
- Wu, S.-W., Lin, F. & Fang, W. (2012), 'Earnings management and investor's stock return', *Emerging Markets Finance and Trade* **48**(sup3), 129–140.
- Wu, Y.-C., Ting, I. W. K., Lu, W.-M., Nourani, M. & Kweh, Q. L. (2016), 'The impact of earnings management on the performance of ASEAN banks', *Economic Modelling* **53**(1), 156–165.
- Xiaoqing Maggie, F. & Heffernan, S. (2007), 'Cost X-efficiency in China's banking sector', *China Economic Review* **18**(1), 35–53.
- Xu, R. Z., Taylor, G. K. & Dugan, M. T. (2007), 'Review of real earnings management literature', *Journal of Accounting Literature* **26**(n.k.), 195.
- Yapa, P. W. S., Jalathge, S. L. U. & Siriwardhane, P. (2017), 'The professionalisation of auditing in less developed countries: the case of Sri Lanka', *Managerial Auditing Journal* **32**(4), 500–523.
- Yavas, B. F. & Rezayat, F. (2016), 'Country ETF returns and volatility spillovers in emerging stock markets, Europe and USA', *International Journal of Emerging Markets* **11**(3), 419–437.
- Yildirim, H. S. & Philippatos, G. C. (2007), 'Competition and contestability in Central and Eastern European banking markets', *Managerial Finance* **33**(3), 195–209.
- Yip, R. W. & Young, D. (2012), 'Does mandatory IFRS adoption improve information comparability?', *The Accounting Review* **87**(5), 1767–1789.

- Yoon, S. S. & Miller, G. (2002), 'Earnings management of seasoned equity offering firms in Korea', *The international Journal of Accounting* **37**(1), 57–78.
- Yoon, S. S., Miller, G. & Jiraporn, P. (2006), 'Earnings management vehicles for Korean firms', *Journal of International Financial Management Accounting* **17**(2), 85–109.
- Young, K. (2013), 'Financial industry groups' adaptation to the post-crisis regulatory environment: Changing approaches to the policy cycle', *Regulation & Governance* **7**(4), 460–480.
- Young, S. & Zeng, Y. (2015), 'Accounting comparability and the accuracy of peer-based valuation models', *The Accounting Review* **90**(6), 2571–2601.
- Yu, F. F. (2008), 'Analyst coverage and earnings management', *Journal of Financial Economics* **88**(2), 245–271.
- Yu, G. & Wahid, A. S. (2014), 'Accounting standards and international portfolio holdings', *The Accounting Review* **89**(5), 1895–1930.
- Zafar, A. (2011), 'Mauritius: An economic success story', *Yes Africa can: Success stories from a dynamic continent* pp. 91–106.
- Zajc, P. (2006), 'A comparative study of bank efficiency in central and eastern Europe: The role of foreign ownership', *International Finance Review* **6**(1), 117–156.
- Zang, A. Y. (2011), 'Evidence on the trade-off between real activities manipulation and accrual-based earnings management', *The Accounting Review* **87**(2), 675–703.
- Zang, A. Y. (2012), 'Evidence on the Trade- Off between Real Activities Manipulation and Accrual- Based Earnings Management', **87**(n.k.), 675–703.
- Zaremba, A. & Maydybura, A. (2019), 'The cross-section of returns in frontier equity markets: Integrated or segmented pricing?', *Emerging Markets Review* **38**(n.k.), 219–238.
- Zarzeski, M. T. (1996), 'Spontaneous harmonization effects of culture and market forces on accounting disclosure practices', *Accounting Horizons* **10**(1), 18.
- Zeff, S. A. (2007), 'The SEC rules historical cost accounting: 1934 to the 1970s', *Accounting and Business Research* **37**(sup1), 49–62.
- Zenebe Lema, T. (2017), 'Determinants of bank technical efficiency: Evidence from commercial banks in Ethiopia', *Cogent Business & Management* **4**(1), 1268356.

- Zhang, J. H. (2018), 'Accounting Comparability, Audit Effort, and Audit Outcomes', *Contemporary Accounting Research* **35**(1), 245–276.
- Zhang, X., Liang, X. & Sun, H. (2013), 'Individualism–collectivism, private benefits of control, and earnings management: A cross-culture comparison', *Journal of Business Ethics* **114**(4), 655–664.
- Zhao, T. & Murinde, V. (2011), 'Bank deregulation and performance in Nigeria', *African Development Review* **23**(1), 30–43.
- Zhou, Z., Ma, J. & Geng, Y. (2017), 'Does Tenure Location Impact Governance Role of Independent Directors? Empirical Evidence from the Earnings Management Perspective', *Journal of Accounting and Economics* **n.k.**(5), 3.
- Zhu, T., Lu, M., Shan, Y. & Zhang, Y. (2015), 'Accrual-based and real activity earnings management at the back door: Evidence from Chinese reverse mergers', *Pacific-Basin Finance Journal* **35**(1), 317–339.
- Živković, B. & Minović, J. (2010), 'Illiquidity of frontier financial market: Case of Serbia', *Panoeconomicus* **57**(3), 349–367.
- Zoli, M. E. (2001), *Cost and effectiveness of banking sector restructuring in transition economies*, number 1-157, International Monetary Fund.

Appendices

Appendix 1 - Glossary

Variable	Definition
$\Delta.CA$	= The change in cash
$\Delta.EXP$	= The change in expenses
$\Delta.REC$	= The change in receivables
$\Delta.REV$	= The change in net sales revenue
$\Delta.PAY$	= The change in accounts payable
$\Delta.PPE$	= The change in property, plant, and equipment
A	= Total assets
A_{t-1}	= Total assets at the beginning of the year
$AbnREM$	= Real earnings management score, calculated using the Roychowdhury (2006) model.
$ AbnREM $	= Absolute of abnormal REM calculate by using the Roychowdhury (2006) model.
AEM_3	= Measurement of earnings measurement as per Leuz et al. (2003)
$Analysts$	= Analyst following, calculated by taking the natural log of one plus the number of analysts following a stock. Data sourced from Thomson Reuters Datastream
$Analysts\ Following$	= Number of analysts following a company. Data sourced from Reuters' Datastream
$Big\ 4\ Ratio$	= Ratio of companies audited by Big 4 auditors. Data sourced from Datastream
BM	= Book to market value, calculated by dividing the book value of equity by the market value of equity
$Big_N\ Ratio$	= Ratio of companies audited by Big 4 auditors. Data sourced from Thomson Reuters Datastream
Big_N	= Big 4 or 5 auditor, dummy variable, set to 1 if a firm's auditor is one of the Big 4 or Big 5 audit firms. Data sourced from Thomson Reuters Datastream
CA	= Cash as stated on the Balance Sheet. Data sourced from Thomson Reuters Datastream
CFO	= Cash flow from operations
$CFOA$	= Cash flow from operations divided by total assets at the start of the year
$ CFOA $	= Absolute value of cash flow from operations divided by total assets at the start of the year
$COGS$	= Cost of goods sold as stated on balance sheet. Data sourced from Thomson Reuters Datastream
$Control\ of\ corruption$	= Measurement of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as the appropriation of the state by elite and private interest
DAC	= Discretionary Accruals, calculated using the Berger et al. (2011) and Yoon et al. (2006) method.
$ DAC $	= Absolute of abnormal REM calculate by using the Roychowdhury (2006) model.
$DACC$	= Discretionary accruals, the product of NDA subtracted from TACC.
$Disclosure\ Requirements$	= Sourced from the World Bank's Investor protection index. Index scaled from 0 -10, with 10 offering the greatest disclosure, as per Enomoto et al. (2015)
DEP	= Depreciation and amortisation

Variable	Definition
<i>DISX</i>	= Discretionary expenses
<i>EXP</i>	= Expenses
<i>FINANCING</i>	= A dummy variable set to 1 if sales of common and preferred stock exceed purchases of common and preferred stock by more than 5% of total assets
<i>Government effectiveness</i>	= Measurement of the quality of public services; of the civil service and the degree of its independence from political pressures; of policy formulation and implementation; and the credibility of the government's commitment to such policies
<i>INV</i>	= Inventory
<i>Legal Enforcement</i>	= Sourced from the World Bank's Worldwide Governance Indicators (WGI) survey. It is the mean value across three legal variables (1) efficiency of judicial system, (2) rule of law, (3) corruption index
<i>LEV</i>	= Leverage, calculated by dividing total assets by total liabilities
<i>LOSS</i>	= Loss, a dummy variable of 1 if dummy if loss generated (Net Income before extraordinary items <0) as per Barth et al. (2012)
<i>M4_CompScore</i>	= Median company comparison score over the most recent four years
<i>NI</i>	= Net income before extraordinary items as stated on the Balance sheet. Data sourced from Datastream
<i>NDA</i>	= Non-discretionary accruals as calculated by using the Modified Jones Model.
<i>P</i>	= Price, annual share price at year-end. Data sourced from Thomson Reuters Datastream
<i>PAY</i>	= Payable, net accounts payable
<i>PEN</i>	= Pension and retirement Expenses
<i>Political stability and absence of violence</i>	= Measurement of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism
<i>PPE</i>	= Property, plant and equipment
<i>REC</i>	= Receivables, total receivables
<i>RET</i>	= Return, Percentage change in annual closing stock price
<i>REV</i>	= Revenue, net sales
<i>ROA</i>	= Net income before extraordinary items divided by total assets at the start of the year
<i> ROA </i>	= Absolute value of cash flow from operations divided by total assets at the start of the year
<i>OPERCYCLE</i>	= Operating cycle, measured by the natural logarithm the sum of days receivable ($365/(\text{sales/receivables})$) and days inventory ($365/(\text{sales/inventory})$)
<i>Outside Investor Rights</i>	= The World Bank Doing Business database measurement on the Strength of Minority Investor Protection index. Index ranges from 0-10. 10 offers the greatest outside investor protection. (Haidar 2009)
<i>Regulatory Quality</i>	= Measurement of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development
<i>Rule of Law</i>	= Measurement of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence
<i>Size</i>	= Firm size as measured by the natural logarithm of market value of equity
<i>Societal Trust</i>	= Sourced from World Values Survey as per Papanastasopoulos & Tsiritakis (2015)
<i>StdSales</i>	= Standard deviation of sales, calculated on the previous 5 years of revenue divided by total assets at the start of the year
<i>TACC</i>	= Total accruals in the year as calculated by using the Modified Jones Model
<i>Voice and accountability</i>	= Measure of the extent to which a country's citizens can participate in selecting their government, along with freedom of expression, freedom of association, and the availability of free media

Appendix 2 - Acronyms

Appendix 3 - GDP growth by country and year

Table 7.29: Rate of change in real GDP by country from 2000 - 2017

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean
Argentina	-0.79	-4.41	-10.89	8.84	9.03	8.85	8.05	9.01	4.06	-5.92	10.13	6.00	-1.03	2.41	-2.51	2.73	-1.82	2.85	2.47
Bahrain	5.30	2.49	3.61	6.02	6.98	6.77	6.47	8.29	6.25	2.54	4.33	1.98	3.73	5.42	4.35	2.86	3.22	3.88	4.69
Bangladesh	5.29	5.08	3.83	4.74	5.24	6.54	6.67	7.06	6.01	5.05	5.57	6.46	6.52	6.01	6.06	6.55	7.11	7.28	5.94
Bulgaria	4.77	3.77	5.94	5.16	6.44	7.12	6.87	7.34	6.02	-3.59	1.32	1.91	0.03	0.49	1.84	3.47	3.94	3.81	3.70
Croatia	3.77	3.45	5.25	5.58	3.91	4.11	4.87	5.28	2.04	-7.29	-1.47	-0.34	-2.30	-0.49	-0.09	2.40	3.54	2.92	1.95
Estonia	10.57	6.33	6.08	7.42	6.29	9.37	10.27	7.75	-5.42	-14.72	2.26	7.60	4.31	1.94	2.89	1.67	2.06	4.85	3.97
Jordan	4.25	5.27	5.78	4.16	8.57	8.15	8.09	8.18	7.23	5.48	2.31	2.59	2.65	2.83	3.10	2.39	2.00	1.97	4.72
Kazakhstan	9.80	13.50	9.80	9.30	9.60	9.70	10.7	8.90	3.30	1.20	7.30	7.40	4.80	6.00	4.20	1.20	1.10	4.10	6.77
Kenya	0.60	3.78	0.55	2.93	5.10	5.91	6.47	6.85	0.23	3.31	8.41	6.11	4.56	5.88	5.36	5.72	5.87	4.87	4.58
Kuwait	4.69	0.73	3.00	17.32	10.76	10.08	7.52	5.99	2.48	-7.08	-2.37	9.63	6.63	1.15	0.50	0.59	3.55	-2.87	4.01
Lebanon	1.34	3.84	3.42	3.23	6.29	2.75	1.70	9.34	9.25	10.05	8.04	0.92	2.80	2.65	1.97	0.24	1.74	1.53	3.95
Lithuania	3.83	6.52	6.76	10.54	6.55	7.73	7.41	11.09	2.63	-14.81	1.64	6.04	3.83	3.50	3.54	2.03	2.34	3.83	4.16
Mauritius	9.03	2.57	2.11	3.66	5.75	1.24	8.54	5.73	5.39	3.31	4.38	4.08	3.50	3.36	3.74	3.55	3.84	3.82	4.31
Morocco	1.91	7.32	3.12	5.96	4.8	3.29	7.57	3.53	5.92	4.24	3.82	5.25	3.01	4.54	2.67	4.54	1.13	4.09	4.26
Nigeria	5.02	5.92	15.33	7.35	9.25	6.44	6.06	6.59	6.76	8.04	8.01	5.31	4.23	6.67	6.31	2.65	-1.62	0.81	6.06
Oman	5.40	4.48	-1.10	-2.67	1.29	2.49	5.37	4.45	8.20	6.11	4.80	-1.11	9.33	4.37	2.75	4.74	5.38	-0.27	5.55
Pakistan	4.26	1.98	3.22	4.85	7.37	7.67	6.18	4.83	1.70	2.83	1.61	2.75	3.51	4.04	4.67	4.73	5.53	5.70	4.32
Romania	2.40	5.59	5.18	5.52	8.36	4.17	8.06	6.86	8.26	-5.91	-2.81	2.01	2.08	3.51	3.41	3.87	4.80	7.26	4.03
Serbia	7.76	4.99	7.12	4.42	9.05	5.54	4.90	5.89	5.37	-3.12	0.58	1.40	-1.02	2.57	-1.83	0.76	2.80	1.87	3.28
Slovenia	4.16	2.95	3.84	2.84	4.35	4.00	5.66	6.94	3.30	-7.80	1.24	0.65	-2.67	-1.13	2.98	2.26	3.15	5.00	2.31
Sri Lanka	6.00	-1.55	3.96	5.94	5.45	6.24	7.67	6.80	5.95	3.54	8.02	8.40	9.14	3.40	4.96	5.01	4.47	3.31	5.37
Tunisia	4.71	3.80	1.32	4.70	6.24	3.49	5.24	6.71	4.24	3.04	3.51	-1.92	4.00	2.88	2.97	1.15	1.11	1.96	3.28
Vietnam	6.79	6.19	6.32	6.90	7.54	7.55	6.98	7.13	5.66	5.40	6.42	6.24	5.25	5.42	5.98	6.68	6.21	6.81	6.41
Mean	4.82	4.11	4.06	5.85	6.70	6.05	6.84	6.98	4.55	-0.02	3.78	3.88	3.34	3.38	3.03	3.12	3.10	3.45	4.35

Appendix 4 - Firm Industry Description

Table 7.30: Comparison statistics by industry

Industry	N	Mean	St.Dev	Q1	Median	Q3	Two-digit SIC Code
Oil & Gas	866	0.675688	1.168768	-0.06662	0.482174	1.590968	13,29
Food Products	4099	0.605875	1.110439	-0.19555	0.31896	1.63655	20
Paper and paper products	649	0.501877	0.942295	-0.14358	0.271035	1.148677	24-27
Chemical Products	826	0.579586	0.975116	-0.07282	0.305981	1.352917	28
Manufacturing	5394	0.686949	1.040302	-0.075	0.408874	1.63655	30-34
Computer Equipment and services	71	0.532364	1.017866	-0.24552	0.2193	1.448939	35,73
Electronic Equipment	10	0.07126	0.535158	-0.31014	0.100131	0.248363	36
Transportation	4727	0.535878	1.201013	-0.28113	0.403475	1.610309	37,39,40-42,44,45
Scientific instruments	508	0.541757	1.008466	-0.10143	0.227001	1.485157	38
Communications	93	0.94091	1.038662	0.103156	0.800769	1.945861	48
Electric,gas and sanitary services	633	0.015306	1.065938	-0.60861	-0.30232	0.428328	49
Durable goods	393	0.423259	0.944788	-0.19439	0.211982	0.904411	50
Retail	1561	1.02377	1.078259	0.058692	1.263053	1.94591	53,54,56,57,59
Eating and drinking establishments	591	0.747424	1.00025	-0.03226	0.437514	1.63655	58
Real Property	2804	0.517335	1.136978	-0.24284	0.348593	1.446722	65
Entertainment Services	162	1.304638	0.974916	0.532191	1.629693	2.041101	70,78,79
Health	1010	1.003957	1.182698	0.031	1.448939	1.94591	80
Other	404	0.660014	1.055679	-0.08186	0.352795	1.63655	–

Appendix 5 - Accounting Scandals

Table 7.31: Accounting Scandals by Year

No.	Company	Year	Country	Notes
1	Fred Stern & Company	1925	United States	Inaccurate balance sheet used obtain financing
2	Hatry Group	1929	United Kingdom	Borrowed millions on worthless paper
3	Royal Mail Steam Packet Company	1931	United Kingdom	Issued a false prospectus, creative accounting
4	Interstate Hosiery Mills	1937	United States	Inflated assets for the purpose of stock manipulation
5	McKesson & Robbins, Inc.	1938	United States	Falsified sales and paid commission to shell company
6	Yale Express System	1965	United States	Overstated net worth and failed to indicate net operating loss
7	Atlantic Acceptance Corporation	1965	Canada	CPA conflicts of interest
8	Continental Vending Machine Corp.	1969	United States	CPA partners convicted and fined
9	National Student Marketing Corporation	1970	United States	Overstatement of earnings
10	4 Seasons Nursing Centres of America	1970	United States	Overstatement of earnings
11	Equity Funding	1973	United States	Created fictitious insurance policies
12	Fund of Funds-Investors Overseas	1973	Canada	Mutual fund inflated asset value
13	Lockheed Corporation	1976	United States	Bribing foreign officials to purchase air crafts to aid debt repayment
14	Nugan Hand Bank	1980	Australia	Involved in illegal activities ie money laundering
15	O.P.M. Leasing Services	1981	United States	Created fictitious leases
16	ZZZZ Best	1986	United States	Ponzi scheme
17	ESM Government Securities	1986	United States	Bribery of CPA partner.
18	Bankers Trust	1988	United States	Hide derivative mispricing contributing to profits
19	Barlow Clowes	1988	United Kingdom	Gilts management service. £110 million missing
20	Crazy Eddie	1989	United States	Falsified income to reduce taxable income
21	MiniScribe	1989	United States	Falsified inventory and financial statements
22	Livent	1989	Canada	Fraud and forgery
23	Polly Peck	1990	United Kingdom	Fraudulent transfers concealed as cash flow
24	Bank of Credit and Commerce Inter'l	1991	United Kingdom	Money laundering and concealing ownership of bank acquired
25	Phar-Mor	1992	United States	Bank fraud and transportation of funds obtained by fraud
26	Informix Corporation	1996	United States	Fraudulently overstated earnings
27	Sybase	1997	United States	Fraudulently overstated earnings from aggressive sales recognition
28	Cendant	1998	United States	Fraudulently overstated earnings
29	Cinar	1998	Canada	Misuse of corporate funds
30	Waste Management, Inc.	1999	United States	Financial misstatements
31	MicroStrategy	2000	United States	Fraudulently overstated earnings
32	Unify Corporation	2000	United States	Fraudulently overstated earnings by improper revenue recognition
33	Computer Associates	2000	United States	Improper revenue recognition
34	Lernout & Hauspie	2000	Belgium	Fictitious transactions and improper accounting methodologies
35	Xerox	2000	United States	Falsifying financial results
36	Enron	2001	United States	Misrepresented earnings, hid debt off-balance sheet
37	Swissair	2001	Switzerland	Misrepresent financial statements
38	Adelphia	2002	United States	Falsified earnings
39	AOL	2002	United States	Inflated sales
40	Bristol-Myers Squibb	2002	United States	Inflated revenues
41	CMS Energy	2002	United States	Round trip trades
42	Duke Energy	2002	United States	Round trip trades
43	Vivendi Universal	2002	France	Financial reshuffling
44	Dynegy	2002	United States	Round trip trades
45	El Paso Corporation	2002	United States	Round trip trades

Table 7.32: Accounting Scandals by Year - Continued

No.	Company	Year	Country	Notes
46	Freddie Mac	2002	United States	Understated earnings
47	Global Crossing	2002	Bermuda	Network capacity swaps to inflate revenues
48	Halliburton	2002	United States	Improper booking of cost overruns
49	Homestore.com	2002	United States	Improper booking of sales
50	ImClone Systems	2002	United States	Insider trading
51	Kmart	2002	United States	Misleading accounting practices
52	Merck & Co.	2002	United States	Recorded co-payments that were not collected
53	Merrill Lynch	2002	United States	Conflict of interest
54	Mirant	2002	United States	Overstated assets and liabilities
55	Nicor	2002	United States	Overstated assets, understated liabilities
56	Peregrine Systems	2002	United States	Overstated sales
57	Qwest Communications	2002	United States	Inflated revenues
58	Reliant Energy	2002	United States	Round trip trades
59	Sunbeam	2002	United States	Overstated sales and revenues
60	Symbol Technologies	2002	United States	Overstated sales and revenues
61	Tyco International	2002	Bermuda	Improper accounting
62	WorldCom	2002	United States	Fraudulent expense capitalization,
63	Royal Ahold	2003	United States	Inflating promotional allowances
64	Parmalat	2003	Italy	Falsified accounting documents
65	HealthSouth Corporation	2003	United States	Improper expenses capitalization, asset overvaluation
66	Nortel	2003	Canada	Distributed ill-advised corporate bonuses to top managers
67	Chiquita Brands International	2004	United States	Illegal payments
68	AIG	2004	United States	Accounting of structured financial deals
69	Bernard Madoff Securities LLC	2008	United States	Ponzi scheme
70	Anglo Irish Bank	2008	Ireland	Hidden loans, falsified statements
71	Satyam Computer Services	2009	India	Falsified accounts
72	Biovail	2009	Canada	Falsified Statements
73	Taylor, Bean & Whitaker	2009	United States	Fraudulent spending
74	Monsanto	2009	United States	Improper accounting for incentive rebates
75	Kinross Gold	2010	Canada	Overstated asset values
76	Lehman Brothers	2010	United States	Failure to disclose misclassified transactions to investors
77	Amir-Mansour Aria	2011	Iran	Business loans without putting any collateral and financial system
78	Bank Saderat Iran	2011	Iran	Forged documents to obtain credit
79	Sino-Forest Corporation	2011	Canada-China	Ponzi scheme, falsifying assets
80	Olympus Corporation	2011	Japan	Concealment of losses
81	Autonomy Corporation	2012	United States	False statements to investors
82	Penn West Exploration	2012	Canada	Overstated profits
83	Pescanova	2013	Spain	Understated debt, Fraudulent invoices, Falsified accounts
84	Petrobras	2014	Brazil	Government bribes, Misappropriation, Money laundering
85	Tesco	2014	UK	Revenue recognition inflated profits
86	Toshiba	2015	Japan	Overstated profits
87	Valeant Pharmaceuticals	2015	Canada	Overstated revenues
88	Alberta Motor Association	2016	Canada	Fraudulent invoices
89	Odebrecht	2016	Brazil	Government bribes
90	1Malaysia Development Berhad	2018	Malaysia	Fraud, money laundering, abuse of political power, government bribes

Appendix 6- IFRS Adoption Summary by Country

Table 7.33: IFRS adoption summary by country

Country	Domestic listed companies				Domestic unlisted companies
	IFRSs not permitted	IFRSs required for some	IFRSs required for all	Audit report states compliance with IFRS	IFRS Use
Argentina		X			Not permitted
Bahrain			X	Yes	Required for all
Bangladesh			X		
Bulgaria			X	X4	Required for unlisted financial institutions
Croatia			X	X4	Required for all financial institutions and large unlisted companies, permitted for others
Estonia			X	X4	Required for financial institutions. IFRSs permitted for others
Jordan			X	Yes	Required for some (banks, insurance companies), permitted for others
Kazakhstan			X	Yes	Required for some (banks, insurance companies , significant public interest companies)
Kenya			X	Yes	Required for all
Kuwait			X	Yes	Required for all
Lebanon			X	Yes	Required for all
Lithuania			X	X4	Required for some (banks, insurance companies), permitted for others
Mauritius			X	Yes	Required for some (banks, insurance companies), permitted for others
Morocco		X1		Yes	
Nigeria			X2	X3	
Norway			X	X4	Permitted in both consolidated and separate company statements.
Oman			X	Yes	Required for all
Pakistan		X			Not permitted
Romania			X	X4	Required for some (banks, insurance companies), permitted for others
Serbia			X	Yes	Required for all
Slovenia			X	X4	Required for some (banks, insurance companies), permitted for others
Sri Lanka			X	Yes	Required for all
Tunisia	X				Not permitted
Vietnam	X				Not permitted

¹ X1: Financial institutions must use IFRS; X2: Starting 2012; X3: To be determined* X4: As adopted by the EU. Source: Deloitte (2020)

Appendix 7 - Measuring Comparability

Below is a detailed outline of the 5 steps to the financial comparability measure. Inclusion into the model requires sufficient firms (10 or more) within an industry for a given year.

1. Estimate the Country-Industry-Year Model using all available firms [RET_{it}^{Cj}]

$$RET_{Industry A, 2001}^{Country A} = \beta_{0,t}^{Cj} + \beta_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \beta_{3,t}^{Cj} Loss_{it} + \beta_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{5,t}^{Cj} Loss_{it} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right]$$

$$RET_{Industry A, 2001}^{Country B} = \beta_{0,t}^{Cj} + \beta_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \beta_{3,t}^{Cj} Loss_{it} + \beta_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{5,t}^{Cj} Loss_{it} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right]$$

...

$$RET_{Industry A, 2001}^{Country N} = \beta_{0,t}^{Cj} + \beta_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \beta_{3,t}^{Cj} Loss_{it} + \beta_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \beta_{5,t}^{Cj} Loss_{it} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right]$$

2. Estimate firm XX's Home-Country model Model [$\widehat{RET}_{it}^{Cj,C}$]

$$\widehat{RET}_{Industry A, 2001}^{XX, Country A} = \widehat{\beta}_{0,t}^{Cj} + \widehat{\beta}_{1,t}^{Cj} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{2,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{3,t}^{Cj} Loss_{it} + \widehat{\beta}_{4,t}^{Cj} Loss_{it} \left[\frac{NI_{it}}{P_{it-1}} \right] + \widehat{\beta}_{5,t}^{Cj} \left[\frac{\Delta NI_{it}}{P_{it-1}} \right]$$

Input firm XX's data (NI, P, Loss) into home country model for within-sample return

3. Estimate firm xx's Counter-sample Country Model [$\widehat{RET}_{it}^{Cj,C}$]

$$(a) \widehat{RET}_{XX, 2001}^{Country B} = 0.00\% \quad (b) \widehat{RET}_{XX, 2001}^{Country C} = 0.00\% \quad (c) \widehat{RET}_{XX, 2001}^{Country N} = 0.00\%$$

Input firm XX's data (NI, P, Loss) into counter-country model for XX's predicted return

4. Calculate absolute difference between firm XX's predicted home-country and counter-countries return [$DIFF_{it}^{Cj,C_j^n} = \left| \widehat{RET}_{it}^{Cj,Cj} - \widehat{RET}_{it}^{Cj,C_j^n} \right|$]

$$(a) DIFF_{XX, 2001}^{A,B} = 0.00\% \quad (b) DIFF_{XX, 2001}^{A,B} = 0.00\% \quad (c) DIFF_{XX, 2001}^{A,N} = 0.00\%$$

5. Firm XX's comparability score is the negative natural log of the median differences [$COMP_{it} = -\ln \left[\text{Median} \left(DIFF_{it}^{Cj,C_j^n} \right) \right]$]

Appendix 8 - Country Description

The following provides an overview of each frontier market country included in this thesis. Along with providing information on each country's economic aspects of each country, the accounting reporting profile, corporate governance performance indicators are provided. The maximum score for each governance indicator is 100. Below each of the six governance indicators is outlined.

Voice and accountability measure the extent to which a country's citizens can participate in selecting their government. It also measures freedom of expression, freedom of association, and the availability of free media.

Stability is a measure of political stability and absence of violence. It also measures the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including domestic violence and terrorism.

Effectiveness measures the quality of public services; the quality of the civil service and the degree of its independence from political pressures; the quality of policy formulation and implementation; and the credibility of the government's commitment to such policies.

Regulatory Quality measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Rule of Law measures the extent to which agents have confidence in and abide by the rules of society. Of particular focus is the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.

Corruption measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as the appropriation of the state by elites and private interests.⁸⁸

Argentina

Argentina is located in the southern part of South America, bordering the South Atlantic Ocean, between Chile and Uruguay. The country also its borders with Bolivia and Paraguay. With greater than 2.7 million square kilometres of land, Argentina is the eighth-largest country in the

world (Line 2019). See Figure 7.13.⁸⁶



Figure 7.13: Country-level geographic overview of Argentina

Overview⁸⁷

Population	44.49 million
GDP per Capita	US11,644.430
Ethnic composition	European [mostly Spanish and Italian descent]
Exports	Soybeans and derivatives, petroleum and gas, vehicles
Major religions	Roman Catholic (92%), Protestant (2%), Jewish (2%)

Background

The Argentine economy is characterised by its rich natural resources, a highly-educated population, an export-oriented agricultural sector, and a diverse industrial base, Argentina produces more grain than any other country in Latin America. Argentina also raises the second most cattle in the region and has the second-largest receipts from tourism, compared to Brazil and Mexico, respectively (Britannica 2019). Argentina has long played an important role in the history of the continent as during most of the 1990s, Argentina outperformed most other countries in Latin America in terms of growth (van de Wiel 2013).

In the 1990s, the Argentine peso peg was set a level that made exports too few and imports too plentiful. As a consequence, the trade balance made payments on foreign debt too onerous and resulted in Argentina's borrowing reaching 50 per cent of GDP by late 2001. More specially, the total external debt rose from 27.7 per cent to 52.5 per cent of GDP between 1993 and 2001. (Perry & Servén 2003). In 2001, concerns about a peso devaluation and deposit freeze started a bank run. Spreads between local treasury bonds and US treasuries increased 5,000 basis points.

⁸⁶Image source: CIA Factbook 2019

⁸⁷Sourced from PRS Group: Country Report

The one-to-one peg of the peso to the dollar became meaningless. Unable to citizens unable access bank deposits and an IMF announcement that it will discontinue support if the country failed to meet conditions of an earlier rescue package, unrest was fuelled (Feldstein 2002). Capital flight in Argentina was severe but started to subside in 2003 when the peso devaluation program began to show some favourable outcomes. Employment and GDP began to increase, causing poverty levels to decline. Between 2003 -2008, the economy registered an average growth of over 8.0%. (O'Connell 2005).

The global economic crisis temporarily slowed economic momentum, which resulted in growth contracting to 5.92 per cent in 2009. In 2010, the economy recovered to register growth of 10.13 per cent in 2010; and 6.00 om 2011. Economic activity slowed in 2012, causing GDP growth to contract to 1.03 per cent. Over the years that followed, Argentina again experienced economic growth and contraction due to high levels of inflation and the continued depreciation of the peso. The economy witnessed a contraction of 2.52 per cent in 2018 (Line 2019). Future growth is expected to hover around 1.9 per cent till 2023. driven by private sector investments, increasing productivity in terms of shale gas and oil extraction, and improving international trade prospects (Bank 2018)

Accounting reporting

In December 2009, Argentina adopted a requirement that all publicly listed companies and those firms regulated by the National Securities Commission (), must prepare their financial statements using as issued by for annual periods beginning on or after January 2012. The IFRS requirement also applies to all companies whose debt is traded on a public market and those companies that have applied for authorisation for their debt or equity securities to trade in a public market (Anon. 2019b).

Governance indicators

Governance indicators for Argentina are stated in Table 7.34.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
65.52	53.33	59.62	41.34	46.15	47.6

Table 7.34: Governance Performance Indicators Percentile Ranking - Argentina

⁸⁸Sourced from MarketLine's PESTLE Country Analysis Report: Governance Indicators

Bahrain

Bahrain, located in the Middle East, is an archipelago in the Persian Gulf, east of Saudi Arabia. See Figure 7.14.⁸⁶



Figure 7.14: Country-level geographic overview of Bahrain

Overview⁸⁷

Population	1.57mn
GDP per Capita	US\$47,833.90
Ethnic composition	Bahraini 46%, Asian 45.5%, other Arab 4.7%, African 1.6%
Exports	Petroleum and petroleum products, aluminium, textiles
Major religions	Muslim 73.7%, Christian 9.3%, Jewish 0.1%, other 16.9%

Background

Bahrain exhibited robust economic performance in the early 1990s due to high crude oil production and increased output in other sectors of the economy. Total economic output fluctuated during 1994 – 1997 due to inconsistent crude oil and agricultural output and fluctuating crude oil prices. With stability in the construction and manufacturing sectors, economic growth began to expand. Economic growth was supported by a fast-growing financial services industry and increased exports of refined petroleum products in part due to the government’s encouragement of free trade and foreign direct investment. The service sector is the largest contributor to , followed by the industry sector. Bahrain maintains a fast-growing financial services sector which attracts significant foreign investors. Economic growth was 3.7 and 3.1 per cent in 2017 and 2018, respectively. (Line 2019).

Accounting Reporting

In 2011, the Kingdom ruled that all companies must prepare their financial statements according to international accounting standards set out in . Reporting requirements pertain to small and

medium businesses. These statements should be prepared all days of a tax year, from January to December.(IAS.org 2019)

Governance indicators

Governance indicators for Bahrain are stated in Table 7.35.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
11.33	15.24	60.1	66.83	67.31	51.92

Table 7.35: Governance Performance Indicators Percentile Ranking - Bahrain

Bangladesh

Bangladesh is located in Southern Asia, bordering the Bay of Bengal, between Myanmar and India. See Figure 7.15.⁸⁶



Figure 7.15: Country-level geographic overview of Bangladesh

Overview⁸⁷

Population	166.4mn
GDP per Capita	US\$4,284
Ethnic composition	European and mestizo (97.2%), Amerindian (2.4%), African (0.4%)
Exports	Machinery, motor vehicles, petroleum and natural gas
Major religions	Roman Catholic (92%), Protestant (2%), Jewish (2%), and other (4%)

Background

Although Bangladesh possesses a relatively modest per capita , is has experienced steady economic growth. The Bangladeshi economy is based on agriculture - employing 40.1% of the total labour force as of 2018 (Country 2020)), agriculture contributes a lower amount to GDP than either industry or services. The agriculture sector is also vulnerable to heavy rain and floods. The export-oriented garment manufacturing and the jute industry both important foreign exchange earners and contributes to the increasing , however political instability, corruption, and infrastructural deficiencies weakened the country's business environment. The country's current account balance has shown a surplus due to high remittances by Bangladeshi nationals working abroad. Economic growth averaged 6.3% during 2007–17. In 2017, the economy registered growth of 7.86 per cent; the surge is a result of an increase in exports, private consumption and gross fixed capital formation (Line 2019).

Bangladesh's legal system is based on English Common Law system, but most laws fall short of international standards. Many of the country's laws and regulations are not enforced, and

standards are not maintained as its regulatory system remains weak (Line 2019).

In addition to high tariff rates and supplementary duties, Bangladesh has registration procedures and other regulatory requirements that often impede market access. Foreign companies are however, allowed to provide services in Bangladesh except those subject to administrative licensing processes. New market entrants face significant restrictions to most regulated commercial fields (including telecommunications, banking, and insurance), and the process for establishing legal entities such as financial institutions is subject to strict regulatory requirements. There have been reports that licenses are not always awarded transparently. Transfer of control of a business from local to foreign shareholders requires prior approval from the Bangladesh Bank.⁸⁹ In 2016, the Bangladesh Investment Development Authority () was formed from the merger of the Board of Investment and the Privatisation Commission. BIDA's goal is to push for implementation of a One-Stop Service Act and to become Bangladesh's one-stop private investment promotion and facilitation agency (BangladeshEconomicReview 2018).

Bureaucratic inefficiencies often discourage investment in Bangladesh. Overlapping administrative procedures and a lack of transparency in regulatory and administrative systems can frustrate investors seeking to undertake projects in the country. Frequent transfers of top- and mid-level officials in various Bangladeshi ministries, directorates, and departments are disruptive and prevent timely implementation of both strategic reform initiatives and routine duties (Line 2019)

Many laws affecting investment in Bangladesh are old and outdated. Bankruptcy laws, which apply mainly to individual insolvency, are sometimes not used in business cases because of webs of falsified assets and uncollectible cross-indebtedness supporting insolvent banks and companies. A Bankruptcy Act was enacted in 1997, but has been ineffective in addressing these issues. An amendment to the Bank Companies Act of 1991 was enacted in 2013. Some bankruptcy cases fall under the Money Loan Court Act, which has more stringent and timely procedures (Line 2019).

Corruption remains a severe impediment to investment and economic growth in Bangladesh. While the government has established legislation to combat bribery, embezzlement and other forms of corruption, enforcement is inconsistent. The Anti-Corruption Commission () is the leading institutional anti-corruption watchdog. With recent amendments to the Money Prevention

⁸⁹Control is defined as the ability to control the board of directors or a majority of the directors

Act, the ACC is no longer the sole authority to probe money-laundering offences. Although it still has primary authority for bribery and corruption, other agencies will now investigate related offenses (Group 2018).

Accounting reporting

In 1987, Bangladesh adopted standards. All financial statements by a domestic public company should be prepared according to the International Accounting Standards as adopted by the Institute of Chartered Accounts of Bangladesh (IFRS.org. 2019).

Governance indicators

Governance indicators for Bangladesh are stated in Table 7.36.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
30.05	10.48	22.17	20.67	28.37	19.23

Table 7.36: Governance Performance Indicators Percentile Ranking - Bangladesh

Bulgaria

Bulgaria is located in Southeastern Europe, bordering the Black Sea, between Romania and Turkey. See Figure 7.16.⁸⁶



Figure 7.16: Country-level geographic overview of Bulgaria

Overview⁸⁷

Population	6.99 mn
GDP per Capita	US\$23,806.21
Ethnic composition	Bulgarian 76.9%, Turkish 8.0%, Romani 4.4%, other 0.7%
Exports	Clothing, footwear, iron and steel, machinery and equipment
Major religions	Eastern Orthodox (59.4%) Muslim 7.8% other 1.7% Unspecified 27.4%

Background

The Bulgarian economy has improved much since its turbulent political and economic transition in the 1990s. In 2018 it became a European Union (EU) member. The country embraced tough reforms to build macroeconomic stability and stimulate growth during the years leading up to accession. As of this writing, Bulgaria is one of the most fiscally disciplined EU member states. Amidst domestic uncertainty, the Bulgarian economy recorded a low growth rate of 1.84 per cent in 2014 (Line 2019). The economy witnessed some recovery in 2015 as its growth rate increased to 3.47 per cent and increased further to 3.94 per cent in 2016. In 2017, growth remained strong at 3.81 per cent, and the growth rate stood at 3.08 per cent in 2018, driven by increased domestic consumption and investment. Growth was also supported by rising wages and lower borrowing costs (Bank 2018)

As of 2009, there were no general limits on foreign ownership or control of firms, nor is there screening or restricting of foreign investment in Bulgaria. Despite the absence of formal restrictions, companies with more than 10 per cent foreign participation are banned from

doing business in Bulgaria across 28 specific activities. These activities include government procurement, natural resource exploitation, national park management, banking, and insurance. Certain exemptions are available, however (Line 2019).

While Bulgaria generally affords national treatment to foreign investors, there are government reports of discrimination against US investors. Investors often cite general problems with corruption, Rule of Law, frequently changing legislation, and weak law enforcement. Transparency International's (TI) Corruption Perception Index (CPI) for 2017 ranked Bulgaria 71st out of 180 countries surveyed – the lowest-ranked member state (Group 2018).

Accounting reporting

In 1987, the country adopted the standards for all their banks in accordance with the Law on Bulgarian National Bank. In 2001, a law was passed that required all publicly traded companies and other companies to adhere to the IFRS standards. As Bulgaria is a member of the EU, it is expected to adhere to IFRS, as a requirement in EU membership. This adherence applies to companies that trade securities in regulated security markets (Anon. 2019c).

Governance indicators

Governance indicators for Bangladesh are stated in Table 7.37.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
59.11	60.48	63.94	72.6	51.92	50.96

Table 7.37: Governance Performance Indicators Percentile Ranking - Bulgaria

Croatia

Croatia is located in Southeastern Europe, bordering the Adriatic Sea, between Bosnia and Herzegovina and Slovenia. See Figure 7.17.⁸⁶



Figure 7.17: Country-level geographic overview of Croatia

Overview⁸⁷

Population	4.09mn
GDP per Capita	US6,332.24
Ethnic composition	Croat (90.4%), Serb (4.4%), other including Bosniak, Hungarian
Exports	Petroleum and petroleum products, aluminium, textiles
Major religions	Roman Catholic (86.3%), Orthodox (4.4%), Muslim (1.5%), other (1.5%)

Background

After World War II, the Croatian economy (as part of Yugoslavia) witnessed rapid industrialisation and diversification. Decentralisation in the 1960s enabled growth in certain sectors such as the tourism industry. However, profits derived from the Croatian economy were utilised in the development of more impoverished regions in Yugoslavia. With unstructured economic policies, the country recorded hyperinflation in the 1980s that fuelled the independence movement. Prior to the dissolution of Yugoslavia, Croatia was the most prosperous of the Yugoslav regions after Slovenia. The economy, especially the tourism sector on which the economy still depends greatly, suffered greatly during the Croatian War of Independence between 1991 and 1992. According to Line (2019), economic output plunged by 35.9 per cent during 1990–1993. After the war ended in 1995, tourism rebounded, and Croatia’s economy recovered moderately to witness growth at an average rate of 5.25 per cent during 1995–1998 (Bank 2018).

Croatia’s war-scarred economy made a comeback in the late 1990s and gathered pace from

2000 onward. Propelled by strong domestic demand, the economy registered an average growth of 4.31 per cent during 2001–2008. The global economic crisis took a toll on Croatia, with economic growth slowing down to 2.04 per cent in 2008 and contracting by a much larger 7.29 per cent in 2009. The recessionary conditions continued in the following years, with the economy contracting by an average of 0.94 per cent during 2010–2014. After the economic contraction, the economy was revived and grew at an average rate of 2.95 per cent from 2015–2017. In 2018 it grew at a robust rate of 2.7 per cent, driven by domestic demand (Line 2019).

Accounting reporting

In 20015, Croatia adopted IFRS standards. As such, all companies whose securities are traded in a regulated market are required to make their financial statements according to the standards. As a member of the EU, Croatia is also subjected to the application of . These standards require that all European companies that trade their securities in a regulated securities market make their financial statements in line with the standards. Croatia adopted the standards in 2005 (Anon. 2019d).

Governance indicators

Governance indicators for Croatia are stated in Table 7.38.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
64.04	71.9	72.6	68.75	63.46	61.06

Table 7.38: Governance Performance Indicators Percentile Ranking - Croatia

Estonia

Estonia is located in Eastern Europe, bordering the Baltic Sea and the Gulf of Finland, between Latvia and Russia. See Figure 7.18.⁸⁶



Figure 7.18: Country-level geographic overview of Estonia

Overview⁸⁷

Population	1.33 mn
GDP per Capita	US\$31,704 (2017)
Ethnic composition	Estonian (68.7%), Russian (24.8%), Ukrainian (1.7%), Belarusian (1.0%),
Exports	Machinery and electrical equipment, food products and beverages
Major religions	Lutheran (9.9%), Orthodox (16.2%), other Christian (2.2%),

Background

For an economy in transition, Estonia was quick to make a decisive economic break with the past. Estonia launched its economic reforms at a measured pace soon after its independence from Russia in 1991. Inheriting a state-run economy from the Soviet Union, it continued to transform itself into a market economy. Privatisation efforts led to the development of a dynamic and prosperous private sector. The economic growth rate averaged a healthy 5.16 per cent during 1995–2000, which improved to 7.64 per cent during 2001–2007 (Line 2019).

The Estonian economy, was, however, severely affected by the global economic crisis during 2008–2009, which led to a contraction of 5.42 per cent in 2008 and 14.72 per cent in 2009. The economy recovered in 2010 to grow at 2.26 per cent, higher than the average of 2 per cent. Driven initially by manufacturing exports and later by domestic demand, the Estonian economy grew by 7.60 per cent in 2011. In 2012 and 2013, domestic consumption remained the main driver of economic growth as external demand from key export partners remained weak. Despite weak exports, the economy grew by 4.31 per cent and 1.94 per cent in 2012

and 2013, respectively. According to Line (2019), the economy grew by 2.89 per cent in 2014, supported by external and domestic demands. In 2015, the growth recorded was 1.67 per cent, which marginally increased to 2.06 per cent in 2016. Driven by rising private consumption, the economy recorded a solid growth of 4.85 per cent in 2017 (Bank 2018).

Accounting reporting

The Estonian government adopted standards in January 2013. Estonia requires that all companies that trade their securities in a regulated market make their financial statements in per IFRS standards. As Estonia is an member, it must adhere to these rules (Anon. 2019e).

Governance indicators

Governance indicators for Estonia are stated in Table 7.39.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
88.67	68.57	82.69	93.27	86.54	84.62

Table 7.39: Governance Performance Indicators Percentile Ranking - Estonia

Jordan

Jordan is located in the Middle East, northwest of Saudi Arabia and between Israel and Iraq. See Figure 7.19.⁸⁶



Figure 7.19: Country-level geographic overview of Jordan

Overview⁸⁷

Population	10.26 mn
GDP per Capita	US\$47,833.90
Ethnic composition	Jordanian 69.3%, Syrian 13.3%, Palestinian 6.7%, Egyptian 6.7%,
Exports	Textiles, fertilizers, potash, phosphates, vegetables, pharmaceuticals
Major religions	Sunni Muslims (97.2%), Christian (2.2%), Others (0.6%)

Background

Jordan's economy, with a GDP of US\$41.8 bn in 2018, is one of the smallest economies in the Middle East (Line 2019). The services sector dominates with a 65.1 per cent share of the country's . The industrial sector follows this at 29.06 per cent, and the agricultural sector at 5.84 per cent, as of 2018. The country has limited natural resources, especially oil and water. The economy depends on imports for more than 95 per cent of its energy requirements and is the fourth poorest country in terms of water resources (Country 2020). Vulnerability in the supplies of discounted natural gas from Egypt and the influx of Syrian refugees from across the border have also put a significant strain on the nation's finances (JordanEconomicUpdate 2019).

Accounting reporting

Jordan government requires that all companies that have their debt or equity securities in a trade market to make their financial statements according to the standards set by the . This applies to all domestic and foreign public companies in the country. It adopted these standards back in 1997 (Anon. 2019f).

Governance indicators

Governance indicators for Jordan are stated in Table 7.40.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
26.6	28.1	57.69	57.69	61.06	63.94

Table 7.40: Governance Performance Indicators Percentile Ranking - Jordan

Kazakhstan

Kazakhstan, a former Soviet republic, is located in Central Asia, to the northwest of China. See Figure 7.20.⁸⁶



Figure 7.20: Country-level geographic overview of Kazakhstan

Overview⁸⁷

Population	18.38 mn
GDP per Capita	US\$28,225.87
Ethnic composition	Kazakh (63.1%), Russian (23.7%), Uzbek(2.9%), Ukrainian (2.1%)
Exports	Oil and oil products, natural gas, ferrous metals, chemicals, machinery
Major religions	Muslim (70.2%), Christian (26.2%)

Background

The legislation of Kazakhstan has set up basic principles for fostering competition on a non-discriminatory basis. Kazakhstan has steadily improved its business environment since independence. It has streamlined bureaucratic practices, provided accelerated business start-up procedures, reduced minimum capital requirements for businesses, and simplified the procedures for registering property and obtaining construction permits. As a result, the World Bank in 2017 moved Kazakhstan up six places to 35 out of 190 countries in its “Doing Business” report (Group 2018)

Several investment disputes involving foreign companies have arisen in the past several years linked to alleged violations of environmental regulations, tax laws, transfer pricing laws, and investment clauses. Some disputes relate to alleged illegal extensions of exploration schedules by subsurface users. Production sharing agreements with the government usually result in costs incurred during this period being fully reimbursable. Some disputes involve hundreds of millions of dollars. Problems arise in the enforcement of judgments, and ample opportunity exists for influencing judicial outcomes given the relative lack of judicial independence (Kazakhstan 2018).

To encourage foreign investment, the government of Kazakhstan has developed dispute resolution mechanisms aimed at enabling aggrieved investors to seek redress without requiring them to litigate their claims. The government established an Investment Ombudsman in 2013, billed as being able to resolve foreign investors' grievances by refereeing inter-governmental disagreements hampering investors' activities. According to the Ministry of Investment and Development, from 2015-2016 the Investment Ombudsman successfully addressed 60 investors' requests (Line 2019).

Accounting reporting

All domestic companies in Kazakhstan whose debt and equity securities trade in a public market are required by the government through the Ministry of Finance and the National Bank of Kazakhstan to make their financial statements in accordance with the standards of the . The standards were adopted in 2004 (Anon. 2019*m*).

Governance indicators

Governance indicators for Kazakhstan are stated in Table 7.41.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
13.79	45.24	53.85	61.06	38.46	19.71

Table 7.41: Governance Performance Indicators Percentile Ranking - Kazakhstan

Kenya

Kenya is located in Eastern Africa, bordering the Indian Ocean, between Somalia and Tanzania. See Figure 7.21.⁸⁶



Figure 7.21: Country-level geographic overview of Kenya

Overview⁸⁷

Population	50.95 mn
GDP per Capita	US\$3,483.28
Ethnic composition	BKikuyu (17.2%), Luhya (13.8%), Luo (10.5%), Kalenjin (12.9%)
Exports	Tea, horticultural products, coffee, petroleum products, fish, cement
Major religions	Christian (83%) (Protestant (47.%), Catholic (23.4%), other (11.9%))

Background

The Kenyan government does not have a policy to steer investment to specific geographic locations but encourages investments in sectors that create employment, generates foreign exchange, and creates forward and backward linkages with rural areas. Kenya also puts significant effort into assuring the health and growth of its tourism industry. To strengthen its manufacturing capacity, the government offers incentives for the production of goods for export. Significant intellectual property enforcement issues in Kenya have related to counterfeit products are corruption, lack of penalty enforcement, failure to impound imports of counterfeit goods at the ports of entry, and the reluctance of brand owners to file a complaint with the Anti-Counterfeit Agency (). The prevalence of genuine products that enter the country illegally without paying import duties also presents a challenge. This issue is particularly pressing in the mobile phone and computer sectors (FocusEconomics 2018a)

Corruption in Kenya is pervasive and entrenched. In 2016, 's 2016 Global Corruption Perception Index ranked Kenya 145 out of 176 countries. Lack of political will, little progress in prosecuting

past corruption cases, and the slow pace of reform in key sectors were reasons cited for Kenya's chronic low ranking. Corruption impedes , with allegations of high-level corruption related to health, energy, , and infrastructure contracts. Reports also suggest that corruption influences the outcomes of government tenders (Group 2018).

According to the PricewaterhouseCoopers () Global Economic Crimes Survey 2016, 72 per cent of the firms in Kenya reported incidences of asset misappropriation compared to the global average of 64 per cent. Bribery was the second most prevalent form of economic crime in Kenya with 47 per cent of the firms reporting incidents, representing the third-highest rate of incidence globally. Procurement fraud was the third most prevalent economic crime reported in Kenya, with 37 per cent of the respondents having experienced procurement fraud in the last two years, against a global average of 23 per cent. Kenyan law provides for criminal penalties for official corruption, but no top officials have been prosecuted (Group 2018)

Accounting reporting

In 1999, the government of Kenya, through the Institute of Certified Public Accountants of Kenya (), adopted standards and the IFRS for s Standard. IFRS Standards are also required for consolidated financial statements of all firms whose securities trade in a public market (Anon. 2019g).

Governance indicators

Governance indicators for Kenya are stated in Table 7.42.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
40.39	12.86	40.87	43.75	37.98	15.38

Table 7.42: Governance Performance Indicators Percentile Ranking - Kenya

Kuwait

Kuwait is located in the Middle East, bordering the Persian Gulf, and is between Iraq and Saudi Arabia. See Figure 7.22.⁸⁶



Figure 7.22: Country-level geographic overview of Kuwait

Overview⁸⁷

Population	1.57mn
GDP per Capita	US\$47,833.90
Ethnic composition	Bahraini 46%, Asian 45.5%, other Arab 4.7%, African 1.6%
Exports	Petroleum and petroleum products, aluminium, textiles
Major religions	Muslim 73.7%, Christian 9.3%, Jewish 0.1%, other 16.9%

Background

The Kuwaiti economy witnessed its most challenging period during the war with Iraq in 1990. Although it was liberated in 1991 by a coalition of military forces led by the US, the invasion almost halted oil production, and as many as 789 oil wells were set ablaze by the Iraqi army. According to US Congress, the cost of the war stood at around US\$61 bn, of which Kuwait had to bear US\$36 bn. The Kuwaiti government's oil funds, which totalled nearly US\$100 bn before the war, was depleted to approximately US\$50 bn after the war (Line 2019).

From 1992-1993, after the war ended, the economy witnessed substantial growth rates, averaging more than 58.4 per cent. Most of this growth was driven by crude oil exports, the reserves of which are the backbone of the Kuwaiti economy. Oil and oil-related products have dominated the Kuwaiti economy since the production of oil commenced in the 1940s. The country has more than 100 billion barrels of proven oil reserves, which constitutes more than 6.5 per cent of the world's total proven oil reserves. A sudden spike in oil prices during 2002-2003 due to the US-led attack on Iraq resulted in windfall gains for most oil-producing nations, including Kuwait, and its economy grew at a rate of 17.32 per cent in 2003. Due to a rise in oil prices

that continued until mid-2008, the Kuwaiti economy underwent a long period of significant growth. Real growth averaged 10.33 per cent during 2003-2007. Economic growth slowed to 2.48 per cent in 2008, which was followed by a contraction of 7.08 per cent in 2009 and 2.37 per cent in 2010. For the three years between 2011 - 2013, the economy grew at 9.6 per cent, 6.63 per cent, and 1.15 per cent, respectively. The average annual growth rate was 1.29 per cent during 2013-2016. In 2017, the economy contracted by 3.48 per cent as a result of -agreed oil production cuts Line (2019). In 2018, the economy recorded a real growth rate of 1.24 per cent, boosted by higher oil prices (Bank 2018).

Kuwait continues to encourage FDI with the implementation of the Law. With the decline in oil revenue and the need to diversify its economy, the government seeks increased foreign investments and has taken several steps towards achieving this goal. The FDI Law established (*Kuwait Direct Investment Promotion Authority* 2020, month = , note = (Accessed on 10/19/2019), howpublished = <https://www.kdipa.gov.kw/en/>) to solicit investment proposals, evaluate their potential, and assist in the licensing process. The Law allows 100 per cent foreign ownership in certain industries, including infrastructure (water, power, wastewater treatment, and communications); insurance; information technology and software development; hospitals and pharmaceuticals; air, land, and sea freight; tourism, hotels, and entertainment; housing projects and urban development; and investment management (Line 2019).

While Kuwait's open economy has generally promoted a competitive market, Kuwait has not developed effective antitrust laws to foster competition. When government intervention occurs, it is most frequently to the benefit of Kuwaiti citizens and Kuwaiti-owned firms. The State Audit Bureau reviews government contracts and accounting but does not share the results transparently. Kuwait does not have a centralised online location where key regulatory actions are published similar to the Federal Register in the United States (FocusEconomics 2018b).

Accounting reporting

In 1990, Kuwait committed to follow International Accounting Standards. As such, all companies whose debt and equity securities are traded in a public market should make their financial statements in accordance with the standards of the . Securities of foreign companies are not publicly traded in Kuwait; thus IFRS is not applicable in this circumstance. (Anon. 2019n).

Governance indicators

Governance indicators for Kuwait are stated in Table 7.43.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
30.54	43.81	46.63	53.37	57.69	44.71

Table 7.43: Governance Performance Indicators Percentile Ranking - Kuwait

Lebanon

Lebanon is located in the Middle East, bordering the Mediterranean Sea, between Israel and Syria. See Figure 7.23 for a map of Lebanon.⁸⁶



Figure 7.23: Country-level geographic overview of Lebanon

Overview⁸⁷

Population	6.09 mn
GDP per Capita	US\$14,233
Ethnic composition	Arab (95%), Armenian (4%), other (1%)
Exports	Jewelry, base metals, consumer goods, fruit and vegetables, tobacco
Major religions	Muslim 57.7% Christian 36.2%, Druze 5.2%,))

Background

Lebanon has witnessed significant internal hostilities and political turmoil. The friction between Lebanese Muslims and Christians led to civil war during 1975–90. The late 1970s and early 1980s also witnessed military conflicts with Israel and interventions by the US. The Taif Agreement of 1989 provided a framework to restore peace and initiated political reforms in Lebanon; as a result, peace was restored in 1990. Lebanese law mandates a Maronite Christian President, a Sunni Muslim Prime Minister and a Shi’a Muslim speaker of parliament. The President is the head of state while the Prime Minister is the head of government and the cabinet. The emergence of Hezbollah in the early 1980s as a radical movement against the Israeli occupation of Lebanese territory changed the political situation in the country. Presidential elections took place in April 2014; however, no candidate attained the two-thirds majority needed to win the presidency. In October 2016, a president was elected after two and a half years of political deadlock (Line 2019).

Lebanon’s external debt remained at low levels till 1992. It was at this point, the external debt-GDP ratio started to grow steadily from 5.7 per cent in 1993 to reach 90.6 per cent in 2007

as persistent instability and corruption contribute to increased government debt levels. Growing sectarianism resulted in a 52 per cent increase in 2010 in the export-external debt ratio (Saad 2012). Lower oil prices and increased private demand pushed real GDP growth to an estimated 2.0 per cent in 2014, compared to 0.9 per cent in 2013. Renewed improvement in security conditions in 2015 and the launch of a dialogue between opposing political parties have shown to impact consumer and investor confidence positively (Bank 2015).

Accounting reporting

Lebanon adopted in August 1996 when IFRS was known as for listed companies. Unlisted companies now have the option of using full IFRS or the IFRS for s, of which many companies have chosen to follow. Companies listed on the Beirut Stock Exchange must use full IFRS. (Anon. 2019/).

Governance indicators

Governance indicators for Lebanon are stated in Table 7.44.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
31.53	8.57	33.17	40.87	21.15	14.9

Table 7.44: Governance Performance Indicators Percentile Ranking - Lebanon

Lithuania

Lithuania is located in Eastern Europe, bordering the Baltic Sea, between Latvia and Russia. See Figure 7.24.⁸⁶



Figure 7.24: Country-level geographic overview of Lithuania

Overview⁸⁷

Population	2.79 mn
GDP per Capita	US\$35,111.62
Ethnic composition	Lithuanian (84.1%), Polish (6.6%), Russian (5.8%), Belarusian (1.2%)
Exports	Refined fuel, machinery and equipment, chemicals, textiles, foodstuffs
Major religions	Roman Catholic (77.2%), Old Believer (0.8%)

Background

For a country whose economy was in transition, Lithuania has been quick in making a decisive economic break from the past. Lithuania launched its economic reforms at a measured pace after gaining independence from Russia in 1991, and has since embraced market reforms. In the run-up to, and the period following entry, the republic recorded strong economic growth. During 2002–2008, the economy grew at an average annual rate of 7.53 per cent. It was in January 2015, Lithuania formally joined the Eurozone. Euro adoption is indicative of Lithuania’s economic success and is an opportunity for the country to develop further. According to the , Lithuania needs a strong fiscal council to guard against a pro-cyclical fiscal policy, the close alignment of wage and productivity developments, and continued economic flexibility (Line 2019).

Lithuania’s boom years came to a sudden end in 2008. After two decades of capitalism, the country fell victim to the financial crisis and its economy contracted by 14.81% in 2009. Lithuania’s economy grew by 1.64 per cent in 2010, followed by strong growth of 6.04 per cent in 2011. Among nations, Lithuania’s growth rate in 2011 was second only to its Baltic counterpart, Estonia. Despite fiscal consolidation and the slowdown in the Eurozone, the economy recorded

substantial growth rates of 3.83 per cent and 3.5 per cent, in 2012 and 2013, respectively, driven by strong export performance. In 2014, the economy grew by 3.54 per cent, but growth slowed to 2.02 per cent in 2015. The economy expanded by 2.35 per cent and 4.14 per cent in 2016 and 2017, respectively. Economic growth slowed to 3.45 per cent in 2018 (Line 2019).

Accounting reporting

In June 2002, the European Union adopted an Regulation requiring European companies listed in an securities market, including banks and insurance companies, to prepare their consolidated financial statements in accordance with . (Anon. 2019o).

Governance indicators

Governance indicators for Lithuania are stated in Table 7.45.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
78.33	72.86	80.2	83.17	80.77	70.19

Table 7.45: Governance Performance Indicators Percentile Ranking - Lithuania

Mauritius

Mauritius is located in Southern Africa, an island in the Indian Ocean, about 800 km east of Madagascar. See Figure 7.25 for a map of Mauritius.⁸⁶



Figure 7.25: Country-level geographic overview of Mauritius

Overview⁸⁷

Population	1.36 mn
GDP per Capita	US\$22,300
Ethnic composition	Indo-Mauritian, Creole, Sino-Mauritian, Franco-Mauritian
Exports	Clothing and textiles, sugar, cut flowers, molasses, fish, primates
Major religions	Hindu (48.5%), Roman Catholic (26.3%), Muslim (17.3%)

Background

Despite being a small island economy vulnerable to exogenous shocks, Mauritius has been able to craft a strong growth-oriented developmental path. Natural disasters and terms of trade shocks have not prevented the economy from recording steady growth (Zafar 2011). Mauritius managed to develop into an upper-middle-income diversified economy, generating an average real GDP growth of 5.3 per cent between 1969 and 2013⁹⁰ (Svirydzenka & Petri 2017). The success of economic policies was made possible by the resulting political stability, the Rule of Law, and strong domestic institutions, with Mauritius topping the World Bank Doing Business rankings in Africa (Subramanian 2001). GDP Growth Rate in Mauritius averaged 0.94 per cent from 2000 until 2019, reaching an all-time high of 6.10 per cent in the first quarter of 2008 and a record low of -1.70 per cent in the first quarter of 2002 (Economics 2019).

Accounting reporting

⁹⁰compared to 3.8 per cent for Sub-Saharan Africa

Mauritius has committed to following the standards of the . Through the Financial Reporting Council Mauritius (), the government requires that all domestic companies and other companies in the country that trade their debts and equity securities in a public market should prepare their financial statements in line with the standards of the . They adopted these standards in 2001 when a provision was made in the Companies Act of 2001 that compels the companies to follow these standards (Anon. 2019*h*).

Governance indicators

Governance indicators for Mauritius are stated in Table 7.46.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
NA	NA	NA	NA	NA	NA

Table 7.46: Governance Performance Indicators Percentile Ranking - Mauritius

Morocco

Morocco borders the North Atlantic Ocean and the Mediterranean Sea, between Algeria and Western Sahara. The northern portion of the country is close to Spain, separated by the Strait of Gibraltar. See Figure 7.26 for a map of Morocco.⁸⁶



Figure 7.26: Country-level geographic overview of Morocco

Overview⁸⁷

Population	34.85 mn
GDP per Capita	US\$8,567
Ethnic composition	Arab-Berber (99%), other (1%)
Exports	Clothing and textiles, automobiles, electric components
Major religions	Muslim (99%), Christian (1%), about 6000 Jews

Background

The Moroccan government has implemented sound macroeconomic policies and initiated various reforms which have improved the economy's resilience. According to , net government lending reached 3.58 per cent of in 2017, from 4.09 per cent in 2016. With the improved fiscal condition, the country's current economic programs are focused on strengthening the business environment and improving competitiveness via tax reforms, fiscal decentralisation and the oversight of state-owned enterprises. In order to improve external competitiveness, the government has moved towards a more flexible exchange rate system, reducing the weight of the Euro to 60 per cent from 80 per cent and increasing the weight of US dollar to 40 per cent from 20 per cent in the pegged currency basket (Line 2019).

Accounting reporting

Morocco adopted standards in January 2008. The Central Bank of Morocco requires all companies to create their financial statements following the IFRS standards (Anon. 2019q).

Governance indicators

Governance indicators for Morocco are stated in Table 7.47⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
29.06	35.71	50.96	45.19	49.04	52.88

Table 7.47: Governance Performance Indicators Percentile Ranking - Morocco

Nigeria

Nigeria is located in Western Africa, bordering the Gulf of Guinea, between Benin and Cameroon. See Figure 7.27 for a map of Nigeria.⁸⁶



Figure 7.27: Country-level geographic overview of Nigeria

Overview⁸⁷

Population	197.66 mn
GDP per Capita	US\$5,914
Ethnic composition	Hausa (27.4%), Igbo (Ibo) (14.1%), Yoruba (13.91%), Fulani (6.3%)
Exports	Petroleum and petroleum products (95%), cocoa, rubber
Major religions	Muslim (51.6%), Roman Catholic (11.2%), other Christian

Background

In 1995, Nigerian dismantled years of controls and limits on , allowing 100 per cent foreign ownership in all sectors⁹¹ and creating the Nigerian Investment Promotion Commission () with a mandate to encourage and assist investment in Nigeria. The NIPC features a One-Stop Investment Centre () that nominally includes the participation of 27 governmental and parastatal agencies⁹² in order to consolidate and streamline administrative procedures for new businesses and investments. Foreign investors largely receive the same treatment as domestic investors in Nigeria, including tax incentives. However, without firm political and policy support, and unresolved challenges to investment and business, the ability of the NIPC to attract new investment has been limited (Group 2018).

The Nigerian economy has witnessed robust growth, averaging 7.54 per cent during 2000–2015. In 2016, the fall in crude oil prices, coupled with the rebel attacks on the country’s infrastructure,

⁹¹with the exception of the petroleum sector, where FDI is limited to joint ventures or production sharing contracts

⁹²not all of which are physically present at the OSIC

led to a slump not seen in 25 years. As a result, output contracted by 1.62 per cent. In 2017, the economy recorded 0.81 per cent growth as oil prices rebounded, and oil production increased. The government continues to maintain a fragile peace pact with militants. Higher government spending resulted in accelerating the economic activity, with the real growth accelerating by 1.94 per cent in 2018 (Line 2019).

The political risks of investing in Nigeria were recently compounded by authorities ordering a South African telecoms firm to repay billions of funds repatriated without permission from 2007 to 2015. Four banks involved in the transfer of funds have been fined for their part. As a result, Nigeria's reputation with foreign investors has been hurt (Group 2018). The government's action on foreign telecom firms acts as a deterrent to , as investors fear repeat instances. Additionally, Nigeria's appeal to foreign investors outside of the energy sector has been limited by concerns about political instability and rampant corruption, as well as inadequate infrastructure and the uncertain prospects for macroeconomic stability (Group 2018).

Accounting reporting

In 2012, the Nigeria government enacted laws that ensure that all domestic and foreign companies create their financial statements according to the (Anon. 2019^r). The country staggered IFRS implementation, with publicly listed entities and significant public interest entities being the first to implement, followed by other public interest entities in 2013. SMEs implemented IFRS in 2014 (Odo 2018).

Governance indicators

Governance indicators for Nigeria are stated in Table 7.48⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
34.98	5.24	16.35	16.83	18.75	12.5

Table 7.48: Governance Performance Indicators Percentile Ranking - Nigeria

Oman

Oman is located in the Middle East, bordering the Arabian Sea, the Gulf of Oman, the United Arab Emirates, Saudi Arabia, and Yemen. See Figure 7.28 for a map of Oman.⁸⁶



Figure 7.28: Country-level geographic overview of Oman

Overview⁸⁷

Population	4.55mm
GDP per Capita	US\$41,046.79
Ethnic composition	Arab, Baluchi, South Asian, African
Exports	Petroleum, re-exports, fish, metals, textiles
Major religions	Muslim (85.9%), Christian (6.5%), Hindu (5.5%), Buddhist (0.8%)

Background

The country's oil sector has been the main engine of growth, although the government has been making efforts to diversify the production base in recent years. Pragmatic policies have led to steady economic growth. growth averaged 6.01 per cent during 2006–08, and was 6.11 per cent in 2009. Due to growing instability amidst the Arab Spring protests in 2011, the country hit the lowest growth in its history at -1.11 per cent. The economy rebounded to grow by 9.33 per cent in 2012 buoyed by high oil prices, fiscal expansion and increased production, but slowed to 4.37 per cent and 2.75 per cent in 2013 and 2014, respectively. Declining oil prices in 2016 and 2017 harmed growth as oil revenue declined. In 2017, the GDP grew at a slower pace of 4.3 per cent (Line 2019). Increases in oil prices in 2018 resulted in increased government revenue and boosted the GDP. Despite oil-related economic improvements, job growth in the non-oil sector has been slow (Line 2019).

Accounting reporting

The Omani government, through the Capital Market Authority, ensures that all domestic

companies in the country adhere to the standards as they make their financial statements. These laws have been backed by Article 282 of the Executive Regulation of the Capital Market Law (in 1981), which states that all companies comply with the IFRS standards. (Anon. 2019i).

Governance indicators

Governance indicators for Oman are stated in Table 7.49⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
19.21	71.43	61.54	68.27	65.87	63.46

Table 7.49: Governance Performance Indicators Percentile Ranking - Oman

Pakistan

Pakistan is located in Southern Asia. It borders the Arabian Sea, India on the east, Iran and Afghanistan on the west, and China in the north. See Figure 7.29 for a map of Pakistan.⁸⁶

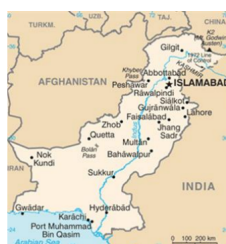


Figure 7.29: Country-level geographic overview of Pakistan

Overview⁸⁷

Population	200.52mn
GDP per Capita	US\$5,726.4
Ethnic composition	Punjabi (44.7%), Pashtun (Pathan) (15.4%), Sindhi (14.1%)
Exports	Textiles, rice, leather goods, sporting goods, chemicals
Major religions	Muslim (official) 96.4% (Sunni 85-90%, Shia 10-15%), other (3.6%)

Background

Pakistan's hostile political climate and the lack of progress in reducing the substantial informal barriers frustrate those investors willing to brave the hazards. The nations' dire need for assistance makes it ripe for government implemented business-friendly reforms. Investor however, remain aloof pending the emergence of clear evidence that reform efforts were producing actual improvements. Pakistan has one of the lowest tax-to-gross domestic product ratios in the world⁹³ and relies heavily on multinational corporations for its tax collections. Foreign investors regularly report that both federal and provincial tax regulations are challenging to navigate. The World Bank's Doing Business 2018 report notes that companies pay 47 different taxes. In comparison, other South Asian countries average 27 different taxes. On average, it takes businesses over 312 hours per year to calculate the payments required under the federal and provincial tax regulations. In addition, companies frequently lament the lack of transparency in the assessment of taxes (Line 2019)

⁹³ Approximately 12.5 per cent in 2017

In the past decade (2008 - 2018), Pakistan was unable to attract sufficient foreign investments to support desired growth objectives and remains a low priority country for foreign investors. Pakistan's need for foreign investment resulted in the country offering incentives to attract new capital inflows. As such, they introduced liberal investment policies in many sectors and created incentives that include tax breaks, tax refunds, tariff reductions, the provision of dedicated infrastructure, and investor facilitation services. Pakistan also designated special economic zones (s), none of which are fully operational and have attracted some actual investment. SEZs offer a separate basket of incentives to potential investors (Group 2018).

Accounting reporting

Domestic companies whose securities trade in a public market, financial institutions, public utilities, and large-sized companies are required to use IFRS Standards. Foreign companies whose securities trade in a public market in Pakistan are required to use IFRS Standards as adopted in Pakistan (Group 2018). Banks and other financial institutions and Economically Significant Entities (ESE) are also required to adopt IFRS, even if they are not listed (IASPlus 2019).

Governance indicators

Governance indicators for Pakistan are stated in Table 7.50⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
28.08	1.9	31.25	29.33	24.04	22.6

Table 7.50: Governance Performance Indicators Percentile Ranking - Pakistan

Romania

Romania is located in Southeast Europe, bordering the Black Sea, between Bulgaria and Ukraine. See Figure 7.30 for a map of Romania.⁸⁶



Figure 7.30: Country-level geographic overview of Romania

Overview⁸⁷

Population	19.47 mn
GDP per Capita	US\$26,572
Ethnic composition	Romanian (83.4%), Hungarian (6.1%), Roma (3.1%), Ukrainian (0.3%)
Exports	Machinery and equipment, other manufactured goods, foodstuffs
Major religions	Eastern Orthodox (81.9%), Protestant (6.4%), Roman Catholic (4.3%)

Background

Romania's communist regime was a poor manager of the economy. It left behind a legacy of outdated infrastructure and institutional setup. The macroeconomic picture improved during 2001–2008, with economic growth averaging 6.49 per cent. -guided reforms helped the economy prepare successfully for accession at the beginning of 2007. However, the global economic crisis took a heavy toll on Romania, causing the economy to contract by 5.95 per cent in 2009 and 2.84 per cent in 2010. Faced with high deficits and unemployment, the government sought a bailout from multilateral financial agencies and received funding of EUR 20bn in May 2009. The country has been implementing an – assistance program to undertake fiscal consolidation and structural reforms in the industrial sector and the labour market to support economic growth and employment generation. The fiscal deficit has been reduced owing to the government's austerity measures. However, the outlook remains challenging. Economic growth in 2016 came in at 4.8 per cent, aided by the reduction of the rate. Significant hikes in both public and private wages, coupled with an increase in private consumption, driven by indirect tax cuts and changes in inventories, helped the country to record growth of 6.97 per cent in 2017. However, the economy slowed down to 4.1 per cent in 2018 (Group 2018).

Accounting reporting

Romania requires all domestic and foreign companies that trade publicly listed debt and equity securities, create their financial statements in line with the standards set by the IFRS. Romania adopted standards in 2007 (Anon. 2019s).

Governance indicators

Governance indicators for Romania are stated in Table 7.51.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
64.53	49.05	46.15	70.19	63.94	55.29

Table 7.51: Governance Performance Indicators Percentile Ranking - Romania

Serbia

Serbia is located in Southeastern Europe, between Macedonia and Hungary. See Figure 7.31 for a map of Serbia.⁸⁶



Figure 7.31: Country-level geographic overview of Serbia

Overview⁸⁷

Population	7.078 mn
GDP per Capita	US\$15,100
Ethnic composition	Serb (83.3%), Hungarian (3.5%), Romani (2.1%), Bosniak (2%)
Exports	Automobiles, iron and steel, rubber, clothes, wheat, fruit and vegetables
Major religions	Orthodox (84.6%), Catholic (5%), Muslim (3.1%), Protestant (1%)

Background

Serbia experienced political instability in the '90s due to poor governance. Poor governance aside, Serbia's grew 5.7 per cent on average from 2000-2008 by a GDP of 5.7 per cent. Since the early 2000s, the Serbian economy has been strengthened by domestic consumption of its trade products (Anon. 2019^u) despite the global financial crisis, which caused the county's GDP to fall by 27.5 per cent in 2015 (Anon. 2019^t). As Serbia continues to rebuild its economy, it faces significant economic challenges, such as high unemployment rates and the need for private-sector job creation; structural reforms of state-owned companies; strategic public sector reforms; and the need for new foreign direct investment (Anon. 2019^t).

Accounting reporting

In July 2013, Serbia enacted a provision in the Law of Accounting through the Ministry of Finance that required that all companies adhere to the standards. This provision applies to all companies, domestic and foreign, except micro-entities (Anon. 2019^j).

Governance indicators

Governance indicators for Serbia were not available as shown in Table 7.52.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
NA	NA	NA	NA	NA	NA

Table 7.52: Governance Performance Indicators Percentile Ranking - Serbia

Slovenia

Slovenia is located in Central Europe, in between Austria and Croatia. See Figure 7.32 for a map of Slovenia.⁸⁶



Figure 7.32: Country-level geographic overview of Slovenia

Overview⁸⁷

Population	2.07 mn
GDP per Capita	US\$34,394
Ethnic composition	Slovene (83.1%), Serb (2%), Croat (1.8%), Bosniak (1.1%)
Exports	Manufactured goods, machinery and transport equipment, chemicals
Major religions	Catholic (57.8%), Muslim (2.4%), Orthodox (2.3%), other (23%)

Background

After joining the Eurozone in 2007, Slovenia experienced a construction and investment-driven boom, the majority of which was externally financed. However, the global economic crisis led to a sudden stop in external finance, which caused the economy to contract by 7.79 per cent in 2009. Although the economy recovered slightly in 2010, growth again slipped in 2011 due to the effects of fiscal consolidation, waning exports, and household and corporate deleveraging. According to (Line 2019), the economy went into a deep recession in 2012 and 2013 as it contracted by 2.69 per cent and 1.13 per cent, respectively. Strains in the banking sector due to rising non-performing assets and high corporate indebtedness are some of the significant factors affecting Slovenian economic growth. The economy grew by 2.98 per cent, 2.26 per cent and 3.15 per cent in 2014, 2015 and 2016, respectively. Economic growth further strengthened in 2017 with real accelerating by 5.0 per cent due to higher foreign demand and a rise in domestic consumption expenditure (Line 2019).

Accounting reporting

Slovenia being a member of the is mandated to have its companies that trade their debts and equities in public markets prepare their financial statements in line with the standards. The country adopted these IFRS standards in 2005 (Anon. 2019v).

Governance indicators

Governance indicators for Slovenia are stated in Table 7.53.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
79.8	77.14	84.62	72.12	82.69	79.33

Table 7.53: Governance Performance Indicators Percentile Ranking - Slovenia

Sri Lanka

Sri Lanka is an island country in South Asia, located in the Indian Ocean to the southwest of the Bay of Bengal and the southeast of the Arabian Sea. See Figure 7.33 for a map of Sri Lanka.⁸⁶



Figure 7.33: Country-level geographic overview of Sri Lanka

Overview⁸⁷

Population	21.67 mn
GDP per Capita	US\$13,511
Ethnic composition	Sinhalese (74.9%), Sir Lankan Tamil (11.2%), Sir Lankan Moors (9.2%)
Exports	Textiles and apparel, tea and spices, rubber manufactures
Major religions	Buddhist (70.2%), Hindu (12.6%), Muslim (9.7%), Catholic (6.1%)

Background

Despite on-going tension and violence during the 1990s, Sri Lanka posted steady economic growth, averaging 5.25 per cent annually. The economic liberalisation program that placed foreign investment and trade liberalisation as priorities resulted in inflows increasing on average, 37 per cent yearly from 1991 to 1997. Growth in the agricultural sector saw Sri Lanka become one the largest producers and exporters of tea by the end of the 1990s (Line 2019). In the early 2000s, the economy was negatively impacted by a series of global and domestic problems, in addition to a terrorist attack. With gradual recovery during a short-lived peacetime, the economy benefited from lower interest rates, increased tourist arrivals, and increased FDI. Civil unrest in 2005 resulted in increased violence and lawlessness, and a cut in donor aid to the country (Hogg 2003). In 2009, thirty years of civil war came to an end. Thereafter, the economy grew at an average of 5.6 per cent from 2010 - 2018 in the presence of peace and reconstruction. As the economy grew from 2006 to 2016, the number of citizens in poverty declined from 15.4 per cent

to 4.1 per cent (Bank 2019)

Accounting reporting

Sri Lanka adopted IFRS Standards for all companies as of January 2012. Sri Lanka has also adopted Sri Lanka Financial Reporting Standards, which are similar to IFRS standards, except that it does not require comparative information for periods before January, 2013 (IFRS.org 2016).

Governance indicators

Governance indicators for Sri Lanka are stated in Table 7.55.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
60.1	42.38	40.08	50.48	55.29	41.35

Table 7.54: Governance Performance Indicators Percentile Ranking - Sri Lanka

Tunisia

Tunisia is located in Northern Africa, bordering the Mediterranean Sea, between Algeria and Libya. See Figure 7.34.⁸⁶



Figure 7.34: Country-level geographic overview of Tunisia

Overview⁸⁷

Population	11.66 mn
GDP per Capita	US\$12,427.57
Ethnic composition	Arab (98%), European (1%), Jewish and other (1%)
Exports	Clothing, semi-finished goods and textiles, agricultural products
Major religions	Muslim (99.1%), Other (0.9%)

Background

The Tunisian economy has benefited from the liberal economic policies implemented by the former Ben Ali government. Increased foreign investments in export-oriented manufacturing industries, the privatisation of state enterprises, and the strengthening of trade relations with the have contributed to industrial growth. Economic growth has been driven by the fast-growing tourism industry and the increased production and export of agricultural products such as olive oil, fruits and dates. In 2011, the economy contracted by 1.92 per cent due to domestic unrest and conflict in neighbouring Libya. Growth rebounded to 4.00 per cent in 2012. Increasing political and social instability in 2014 led to a slowdown in the growth rate to 2.87 per cent. The decline in revenue from tourism has impacted growth. In 2015, the economy grew by 1.15 per cent and then decreased marginally to 1.11 per cent in 2016. On the back of improving agriculture, tourism and manufacturing, the economy recorded a modest growth rate of 1.96 per cent in 2017,

which further improved to 2.44 per cent in 2018 (Line 2019).

Accounting standard

Tunisia has not adopted standards. The country has also not recorded any plans to adopt the IFRS standards (Anon. 2019_w). The country has, however, plans to join the International Federation of Accounts (Anon. 2019_w).

Governance indicators

Governance indicators for Tunisia are stated in Table 7.55.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
53.2	13.81	50.96	36.06	56.25	53.85

Table 7.55: Governance Performance Indicators Percentile Ranking - Tunisia

Vietnam

Vietnam is located in Southeast Asia. The country is bordered by the Gulf of Thailand (to the southwest), the South China Sea (to the southeast), and the Gulf of Tonkin (to the east). Cambodia and Laos lie to the west of Vietnam, while China lies to the north. See Figure 7.35.⁸⁶



Figure 7.35: Country-level geographic overview of Vietnam

Overview⁸⁷

Population	93.66 mn
GDP per Capita	US\$6,900
Ethnic composition	Kinh (Viet) (85.7%), Tay (1.9%), Thai (1.8%), Muong (1.5%)
Exports	Clothes, shoes, electronics, seafood, crude oil, rice, coffee, machinery
Major religions	Buddhist (7.9%), Catholic (6.6%), none (81.8%), others (3.6%)

Background

Since the unification of Vietnam in 1976, the Communist Party of Vietnam () has been in charge of the country. The government does not tolerate political dissent and regularly jails political activists. Its decisions constitute national policy, which the executive (Central Committee) and the legislature (National Assembly) are required to follow. The CPV has not faced any serious threat to its power in the last few years, and is expected to continue to rule the country for the near future. However, its territorial dispute with China has continued over the years (Line 2019).

Despite the increasing debt problems in the banking sector, which led to a lending freeze in 2011, the Vietnam economy performed well, due to increased foreign investments and accommodative monetary policy. The economy grew at 6.8 per cent in 2017. The country intends to restructure

its economy to revive growth, but the vulnerable banking system casts a shadow on the prospects of the economy (Line 2019).

Vietnam's population is very young, which is an advantage for the country due to the large workforce and lower social expenditure, in contrast to many developed countries which are facing the problem of an ageing population. However, the lack of religious freedom and the rapid growth of slums remain an area of concern (Line 2019).

Accounting reporting

Vietnam has not committed to adopting standards. The accounting standards in the country are controlled by the Vietnamese Accounting Standards Board (). As such, financial statements are only prepared according to IFRS standards for purposes of reporting to foreign investors (Anon. 2019k).

Governance indicators

Governance indicators for Vietnam are stated in Table 7.56.⁸⁸

Governance Performance Indicators (Percentile)					
Accountability	Stability	Effectiveness	Regulatory Quality	Rule of Law	Corruption
10.84	59.52	52.88	36.54	55.77	31.73

Table 7.56: Governance Performance Indicators Percentile Ranking - Vietnam

Appendix 9 - Publications

Journal Publications

Martens, W.; Yapa, P.W.S.; Safari, M. 2020. '*The Impact of Financial Statement Comparability on Earnings Management: Evidence from Frontier Market*' International Journal of Financial Studies, **8**(4),73.

Martens, W.; Yapa, P.W.S.; Safari, M. 2021. "*Earnings Management in Frontier Market: Do Institutional Settings Matter?*". Economies, **9**(1), p.17.

Martens, W.; Yapa, P.W.S.; Safari, M. 2021. "*Frontier market banks and efficiency: Does earnings management matter?*" Managerial Auditing Journal. *under review*

Martens, W. 2021. "*A review of earnings management constraints in emerging markets*" VNU Journal of Science: Economics and Business . *under review*

Conferences

Martens, W.; Yapa, P.W.S.; Safari, M. (2018), "*Accruals Earnings Management and Institutional Settings in Frontier Markets*", presented at the Academy of Finance CPA Australia Conference, Hanoi, Vietnam August 30 - 31 2018.

Martens, W.; Yapa, P.W.S.; Safari, M. (2018), "*Accruals Earnings Management and Institutional Settings in Frontier Markets*", presented at the Asia Conference on Business and Economic Studies (ACBES), Ho Chi Minh City, Vietnam, September 8 - 9 2018.

Martens, W.; Yapa, P.W.S.; Safari, M. (2019), "*Financial Statement Comparability and Earnings Management in Frontier Markets*", presented at Vietnam Symposium in Banking and Finance, Hanoi, Vietnam, October 24 - 26 2019.

Martens, W.; Yapa, P.W.S.; Safari, M. (2020), "*The impact of financial statement comparability on earnings management: Evidence from frontier markets*", presented at International Conference on Emerging Challenges (ICECH), Hanoi, Vietnam, November 2 -3 2020.

Martens, W.; Yapa, P.W.S.; Safari, M. (2020), *"The influence of earnings management on bank efficiency: Evidence from frontier markets"*, presented at International Conference on Emerging Challenges (ICECH), Hanoi, Vietnam, November 2 -3 2020.