Bank Income Smoothing and Loan Loss Provisioning Practices in Africa

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ABSTRACT

The primary objective of the thesis is to investigate whether African banks use loans loss provisions estimates to smooth reported earnings, and to determine the factors that influence the extent of earnings smoothing among African banks. Earnings smoothing via loan loss provision has been examined in several regions, but the case of Africa remain unexplored in the literature. In the thesis, earnings smoothing is viewed as an earnings management practice while loan loss provisions estimate is considered to be the tool used by African banks to smooth reported earnings.

Using African bank data obtained from Bankscope database, I test the earnings smoothing hypothesis for 370 African banks during the 2002 to 2014 period using the specific-accrual approach. The specific-accrual approach estimates a specific discretionary accrual as a function of its non-discretionary determinants and other factors that influence the manipulation of the specific accrual. The model specification expresses discretionary loan loss provisions as a function of earnings before provisions and tax, its non-discretionary determinants and other factors that influence the decision regarding the level of bank provisions for each period. The findings indicate that African banks manipulate loan loss provisions estimates to smooth reported earnings and this behaviour is influenced by bank differences, accounting disclosure differences and institutional differences across African countries.

The primary contribution to knowledge of the thesis is its extension of our understanding of the role of discretionary accruals in the bank financial reporting, focusing on African banks - a context that has not been extensively examined in the literature. Also, the thesis extends the bank earnings smoothing debate to the African context and the findings of this study are useful to bank regulators in Africa in their evaluation of whether bank loan loss provisions solely reflect credit risk considerations or whether bank loan loss provisions estimates reflect opportunistic considerations of African bank managers. Finally, the findings are useful to local accounting standard setters in the region in their evaluation of several accounting numbers that bank managers might use to manipulate reported earnings.

DEDICATION

This thesis is dedicated to my dad and family.

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DECLARATION

I declare that the material contained in this thesis is my own work. All secondary sources have been appropriately cited. This thesis has not been submitted for a degree at another university.

Chapter 1

Introduction

1.1. Background of the Study

Earnings (or income) smoothing is the process of reporting stable or smooth earnings over time. Earnings smoothing is a type of earnings management practice and is pervasive among non-financial firms[1]. Earnings smoothing has both positive and negative connotations. On the positive side, earnings smoothing reduces information asymmetry between firm owners and managers (Tucker and Zarowin, 2006), improves bank stability by smoothing out abnormal fluctuations in bank reported earnings (Wall and Koch, 2000), and improves the risk perception of banks from the perspective of bank regulators/supervisors (El Sood, 2012). On the negative side, earnings smoothing reduces the informativeness of reported earnings (Leventis et al, 2011), increases bank opacity (Bhattacharya et al, 2003) and lowers the quality of reported earnings (Ahmed et al, 2013); therefore, the question whether banks smooth reported earnings is topical and has attracted much debate in the banking literature.

In the banking literature, earnings smoothing is either associated with bank earnings management practices or bank stability objectives (Bushman and Williams, 2012; El Sood, 2012; Curcio and Hasan, 2015; Balla and Rose, 2015; Agenor and Zilberman, 2015). The former view earnings smoothing as the opportunistic manipulation of reported earnings to meet some financial reporting objectives (Anandarajan et al, 2007; Leventis et al., 2011) while the latter view earnings smoothing as a stability tool where the stability of each individual bank collectively contribute to the stability of the banking system and such stability objective can be achieved when all individual banks collectively smooth their earnings (Wall and Koch, 2000; El Sood, 2012).

[1] For example, Ashari et al. (1994), Pincus and Rajgopal (2002), Adibah et al. (2005), Markarian et al. (2008), Grant et al. (2009), Atik (2009), Prencipe et al. (2011) and Bouwman (2014).

Bank managers have significant discretion in financial reporting despite excessive regulation in the banking industry (Ahmed et al, 2013), and bank managers can exploit their discretion in financial reporting in ways that allow them to alter specific (or several) accounting number(s) to manage reported earnings depending on their opportunity (Wahlen, 1994). Such discretion allows bank managers to use accounting numbers to influence financial reporting outcomes to smooth the level of reported earnings over time (Fonseca and Gonzalez, 2008). Bank managers can use several financial (or accounting) numbers to smooth reported earnings including gains from securities sales (Karaoglu, 2005), realised gains and losses on available-for-sales (Barth et al., 2016), loan loss provisions (Ahmed et al., 1999), etc. This thesis focuses only on loan loss provisions. Why?

Loan loss provisions estimate is a credit risk management tool used by banks to mitigate expected losses on bank loan portfolio. This thesis focus on bank loan loss provisions as the main earnings smoothing tool because (i) banks' large amount of loans on their balance sheet makes them vulnerable to loan defaults arising from deteriorating economic conditions which in turn require adequate bank provisioning (Laeven and Majnoni, 2003), (ii) compared to other accounting numbers, loan loss provision is a significant bank accrual and bank managers have significant discretion in the determination of loan loss provisions estimates and such discretion can be exploited to meet opportunistic financial reporting objectives (Whalen, 1994), and because (iii) the banking literature document some evidence to suggest that banks' incentive to manipulate loan loss provisions estimates to smooth reported earnings depends on their opportunity and/or the unique condition the bank face (Laeven and Majnoni, 2003; Kanagaretnam et al, 2004; Anandarajan et al, 2007; Fonseca and Gonzalez, 2008).

According to Wahlen (1994), managerial discretion in the determination of loan loss provisions estimates create incentives for bank managers to influence loan loss provisions estimates in ways that allow them to either faithfully predict the expected level of loan losses or to opportunistically smooth reported earnings to meet some reporting objectives whose outcomes depend on the magnitude of loan loss provisions estimates. This suggests that reported loan loss provisions estimate in bank financial statements may not be driven solely by credit risk management considerations (Greenawalt and Sinkey, 1988; Wahlen, 1994; Beatty et al., 1995). Moreover, the way banks might use loan loss provisions to smooth earnings should

vary from country to country and across regions due to cross-country differences in accounting, institutional differences and other regional differences. For instance, Leuz et al (2003) show that institutional differences across countries significantly influence the earnings management behaviour of firms. Leuz et al (2003) argue that cross-country differences in the enforcement of rules intended to protect investors and the rule of law will affect the extent of earnings management among firms.

Overall, the factors mentioned above are the commonly cited factors influencing the use of loan loss provisions to smooth reported earnings and these factors are highly contextual to banks in a region. Given this background, there is scant knowledge about the earnings smoothing practices of banks in the African region, and it remains unclear whether African banks use loan loss provisions to smooth reported earnings and whether the extent of this behaviour is significantly influenced by institutional factors and regional characteristics in Africa that significantly differ from the characteristics in other regions.

1.2. Motivation and Importance of the Study

The African context presents an interesting setting to investigate the financial reporting practices of banks. The African continent[2] face a number of issues related to poverty, corruption, unemployment, etc., and these issues affect the level of financial development and the efficiency of the banking system which financial sector development depends on (Ashton, 2002). Additionally, although some African countries have abundant natural resources e.g. Angola, Algeria and Libya, the problem of corruption and environmental degradation by foreign companies still persist, and these problems are further worsened by the presence of weak political economy and legal institutions that should tackle corruption in these African countries (Asiedu, 2006; Kolstad and Soreide, 2009; Vicente, 2010; Bhattacharyya and Hodler, 2010) while other African countries such as Kenya, Ghana, South Africa, Mauritius and Tanzania have relatively better political economy and institutional systems that promote greater financial (and public) accountability at firm-level, state-level and federal government levels (Rossouw, 2005).

[2] The African continent consists of 48 countries and 6 island nations that are culturally and socio-economically diverse with significant natural resources. Of the 54 countries, 34 countries are less-developed from a global point of view while the remaining 19 countries fall further below the less-developed category.

Political economy differences, financial development differences and other institutional differences across African countries should significantly influence the financial reporting of African banks, hence, it is important to take into account these differences when undertaking accounting research that investigate banks in Africa because institutional, legal and political differences across African countries can create opportunities/incentives for African bank managers to distort the financial reporting process to meet their opportunistic financial reporting objectives. This is because political economy and institutional weaknesses in Africa can make regulators toothless in enforcing institutional rules and could reduce the extent of banks' compliance to institutional rules intended to protect investors.

Furthermore, Nobes and Parker (2008) argue that the institutions (mainly investor protection, legal institutions and local standard setters) that discourage opportunistic behaviour of managers may vary significantly in developed and non-developed countries, implying that the institutions that constrain bank behaviour across African countries should differ significantly from institutions that constrain bank earnings management behaviour across European countries or the US due to differences in the level of development, extent of enforcement and so on. Similarly, the quality of institutions established to constrain managerial behaviour will also differ across African countries. Because the African continent is often claimed to have weak institutions that constrain managerial behaviour and the enforcement level of these institutions is considered to be relatively low (see, Amidu and Kuipo, 2015; Outa et al, 2017), it is interesting to examine the influence of institutional factors on the earnings smoothing practices of banks across African countries. Further still, the growing need for African countries to establish institutions that promote better corporate governance which contributes to improved transparency of bank financial reporting, makes this study relevant and important.

Additionally, the question of whether African banks use loan loss provisions to smooth earnings is further motivated by four additional concerns. One, the growing need for African countries to establish effective firm ownership structures that constrain opportunistic managerial behaviour to improve the transparency of bank financial reporting also makes this study relevant and important. In the case of bank ownership, for instance, bank ownership in some African countries (e.g. Ethiopia, Congo, Togo, Libya and Mauritania) is characterised by substantial concentrated ownership: family ownership of banks by

wealthy and privileged families who may seek private benefits of control from bank managers. When this is the case, bank managers in several African countries may have some incentive to report fewer provisions (even when they face high credit risk) in order to report higher profits which allows them to influence reported earnings in ways that maximise managers' personal benefits as well as private control benefits to controlling shareholders. Hence, it is interesting to examine the influence of bank ownership concentration on bank earnings smoothing practices in Africa. To date, there is no cross-country African study in the literature that examine the influence of bank ownership concentration on bank earning smoothing practices using a sample of banks in African countries. Therefore, subsequent evidence for the influence of ownership on bank earnings smoothing would improve our understanding of how ownership affects bank earnings management in Africa.

Two, the International Monetary Fund (IMF, 2014) recently pointed out some important concern about the under-provisioning practices of banks in some African countries such as Kenya, Uganda and Nigeria. Precisely, the IMF undertook a recent assessment of the resilience of the banking and financial system in Africa and raise concern that banks in some African countries keep too little loan loss provisions. The case of Kenya is interesting. The IMF 2014 report shows that Kenyan banks were well-capitalised and profitable but kept insufficient loan loss provisions to mitigate its growing non-performing loans. The IMF 2014 report also reveal that a significant portion of bank non-performing loans originated from the construction industry, and the Kenyan government had guaranteed bank loans to the construction industry, justifying the lower loan loss provisions that Kenya banks had allocated for loans to the construction sector. The IMF advised the Kenyan Central Bank that the under-provisioning practices of Kenyan banks risk exposing Kenyan banks to financial difficulties that could arise from unexpected loan defaults and/or adverse economic shocks.[3] This case underlines the need to examine the influence of developmental factors on bank earnings smoothing practices via loan loss provisions. Thus, it is interesting to investigate whether developmental issues (e.g. financial development) influence the way African banks use financial numbers to distort their financial reporting outcomes.

[3] https://www.imf.org/external/pubs/ft/scr/2014/cr14302.pdf

Three, the political economy in Africa can influence bank behaviour in several African countries. The activity of politicians and the political system can influence the performance of banks (Szeftel, 1998; Figueira et al., 2006). There are wide political economy differences in countries across Africa, and this makes the African context an interesting setting to investigate the influence of political economy on the earnings smoothing behaviour of African banks. The relatively weak political economy in African countries (compared to US and Europe) commonly associated with weak enforcement issues, increased corruption and 'capture' of the banking system by politicians, is a strong motivation for the study. Compared to US and European banks, African banks in weak political economy environments may provide banking services to meet the needs of diverse bank customers while providing high-level financial accountability to wealthy investors and politicians to meet the information needs of investors and politicians, and providing low-level financial accountability to the general public via non-transparent financial statement disclosures to other financial statement users. Therefore, it is interesting to investigate the impact of political economy on bank earnings smoothing practices in the African context.

Four, there is a scant literature that test the earnings smoothing hypothesis using cross-country African bank data. The need to gain some insight into the earnings smoothing practices of African banks is important because insights gained from such study can improve our understanding of the earnings management strategy prevalent in the African region with particular focus on banks. Thus, if we accept the proposition that earnings smoothing is a type of earnings management strategy (DeFond and Park, 1997; Kirschenheiter and Melumad, 2002), then the analyses in this thesis can provide additional insight to how African banks smooth reported earnings.

1.3. Aim and Research Questions

The aim of the thesis is to investigate whether African banks use loans loss provisions estimates to smooth reported earnings, and to determine the factors that influence the extent of earnings smoothing among African banks.

The key research questions addressed in the thesis are:

Do African banks use loan loss provisions to smooth reported earnings?

Does foreign bank presence and financial development differences influence the extent of bank earnings smoothing via loan loss provisions?

Does investor protection differences in Africa have a significant influence on bank earnings smoothing via loan loss provisions?

Does political economy differences in Africa have a significant influence on bank earnings smoothing via loan loss provisions?

Does ownership concentration affect the earnings smoothing behaviour of African banks?

Does audit quality and accounting disclosure significantly influence the earnings smoothing behaviour of African banks?

Does financial structure (i.e., banking sector concentration, competition and stability) significantly influence the extent of earnings smoothing among African banks?

1.4. Findings of the Study

Using the fixed effect and GMM estimation techniques, the main findings of the thesis indicates that African banks use loan loss provisions to smooth reported earnings and this has not been documented in the extant literature for a wide sample of banks across several African countries. Also, the country-specific analyses of bank earnings smoothing behaviour show that there are cross-country variations in the use of loan loss provisions estimates to smooth reported earnings.

The findings also show that African banks use loan loss provisions to smooth bank earnings when they are more profitable during economic boom periods, and income smoothing is observed to be pronounced among (i) listed African banks when they are more profitable, (ii) among African banks that adopt local GAAP, (iii) among African banks with concentrated ownership, and (iv) bank earnings smoothing via loan loss provision is significantly and positively associated with forward-looking provisioning

discretion. On the other hand, earnings smoothing is significantly reduced among African banks with (i) dispersed ownership (ii) Big 4 auditor, and (iii) among African banks that adopt IFRS standards.

Additionally, the findings show that the use of loan loss provisions to smooth earnings is further reduced among banks in African countries that simultaneously have strong investor protection and political economy institutions, implying that better investor protection and strong political economy in Africa would work together to discourage earnings management behaviour that take the form of earnings smoothing among banks in African countries. Finally, bank earnings smoothing via loan loss provision is negatively associated with greater foreign bank presence, capital market development and banking concentration; and is positively associated with greater corruption control and greater political stability and absence of violence.

1.5. Contribution of the Study

The findings in the thesis contribute to the literature in the following ways. One, the analyses in the thesis contributes to prior studies that examine earnings management in the broader context as well as prior studies that examine bank earnings management (see Cohen et al, 2014; Barth et al, 2016; Norden and Stoian, 2014; Stubben, 2010; Shen and Huang, 2013). These studies show that managers have some incentive to manage reported earnings in other regions; however, these studies did not examine the case of African firms using a large sample. With the exception of Ozili (2015) and Amidu and Kuipo (2015), studies that investigate bank earnings management in Africa are scant. By investigating the context of African banks, the analyses in this thesis provides some insight to improve our understanding of bank earnings smoothing practices in developing countries - an emerging theme in the recent bank earnings smoothing literature, and to shed some light on the debate about whether earnings smoothing by banks in developing economies is used as a tool to make banks appear stable when they are in fragile, fragmented and unstable banking environments.

Two, this study contributes to the literature that examines the influence of investor protection on managerial discretion to manage reported earnings. Studies such as Klapper et al (2004), Chih et al (2008)

and Leuz et al (2003), show that strong investor protection discourages earnings management among managers due to the presence of strong legal systems established to protect minority shareholders and investors. This thesis contributes to the above studies by taking into account the level of investor protection in Africa and its impact on earnings smoothing by African bank managers. By focussing on banks and controlling for investor protection levels across African countries, the analyses in this thesis can provide insights to understand the association between investor protection and earnings management in Africa, particularly, earnings management that take the form of earnings smoothing among African banks.

Three, the thesis contributes to the firm ownership literature that examines the impact of ownership concentration on managerial discretion in financial reporting. Klein (2002), Park and Shin (2004), La Porta et al. (1998) Jensen and Meckling (1976), Shleifer and Vishny (1986), Grossman and Hart (1988), Shleifer and Wolfenzon (2002), Aghion and Bolton (1992) and Bouvatier et al. (2014) show some consensus that the ownership structure of firms may impose additional monitoring on firm managers to constrain them from engaging in opportunistic financial reporting behaviour; however, how this would work out in practice will differ across countries and regions. Therefore, the analyses in this thesis contribute to this strand of literature by taking into account the influence of ownership structure on bank earnings smoothing. By controlling for ownership concentration in this thesis, some insight can be gained to improve our understanding about whether the level of firm ownership in Africa discourages or encourages earnings management practices among African banks

Four, the analysis in the thesis also contribute to the literature that investigates the impact of accounting disclosure regulation on earnings quality. The significant studies in this literature include Teoh and Wong (1993), Francis et al (1999), Huang and Li (2009), Beatty (1989), and Blackwell et al (1998). A major debate in the literature argues that the use of Big 4 auditors and the adoption of strong accounting disclosure rules can discourage the manipulation of reported earnings intended to achieve earnings management; however, the effect of accounting disclosure quality (via Big 4 auditors and IFRS adoption) on bank earnings income smoothing in Africa is not clear and has not been empirically tested using loan loss provisions. Therefore, the analyses in this thesis contribute to this debate to provide some insight on

how accounting quality affects the use of loan loss provisions to smooth earnings in Africa. Moreover, by distinguishing between banks that use IFRS and banks that do not use IFRS, the analyses in this thesis provides some insight on whether IFRS adoption improves bank earnings quality in the form of reduced earnings smoothing.

Five, the analyses in the thesis also contribute to the policy debate in the literature which argues that the current incurred-loss model of loan loss provisioning contributes to bank instability (see Bikker and Hu, 2002; Laeven and Majnoni, 2003; Bikker and Metzemakers, 2005; Bouvatier and Lepetit, 2008). The incurred-loss provisioning model is often criticised for its backward-looking characteristic and its potential to reinforce the current state of the economy particularly a recession. Bank supervisors in developed and developing countries continue to raise concern that the current incurred-loss provisioning model allow banks to delay provisioning until it is too late which makes bank provisioning procyclical with fluctuations in the economy. The analyses in this thesis can help verify whether the provisioning behaviour of banks in Africa also exhibit such procyclical characteristic.

Finally, this study can provide some insight to help bank supervisors/regulators in several African countries in their evaluation of whether loan loss provisions reflects credit risk considerations only or other considerations unrelated to credit risk, while also taking into account political economy factors in the country.

1.6. Structure of the Thesis

The remainder of the thesis is organised as follows. Chapter 2 presents an overview of banking in Africa, financial reporting and accounting quality in Africa. This chapter also discuss the loan loss provisioning practices in some African countries and the rationale for the inclusion of loan loss provisions in international bank capital regulation. Chapter 3 presents the theoretical and conceptual framework for earnings management. More specifically, Chapter 3 discusses positive accounting theory as an explanation for why firm managers manage reported earnings. The conceptual framework for earnings management and the role of institutional factors in encouraging or discouraging earnings management

behaviour among firms are also presented. Chapter 4 present a review of the empirical findings on earnings smoothing in the banking literature. The review identifies several advances in loan loss provisions research, factors influencing bank earnings smoothing behaviour, gaps in the literature and possible directions for future research. Chapter 5 develops the hypotheses, presents the data, sample selection criteria and the research methodology for the thesis. The research design is based on GMM and fixed effect regression models. Chapter 6 present the empirical results for bank-level factors that influence earnings smoothing behaviour among African banks while Chapter 7 present the empirical results for the influence of institutional and other cross-country factors on the earnings smoothing behaviour of African banks in the region. Chapter 8 summarise the findings of the thesis and provide some implication for standard-setting and bank supervision in the African region. Finally, the chapter highlights some limitation of the study and some suggestions for future research.

Chapter 2

Banking in Africa, Financial Reporting and Loan Loss Provisioning in Africa

2.0. Introduction

This chapter presents an overview of banking, financial reporting and accounting disclosure and loan loss provisioning practices in Africa. The chapter begins with a discussion of banking in Africa. The chapter then proceed to discuss financial reporting and accounting quality in Africa. The chapter also discuss the loan loss provisioning practices of banks in some African countries and the rationale for the inclusion of loan loss provisions in Basel capital regulation.

2.1. Banking in Africa

Compared to the 1980s where government-owned banks dominated the banking system of most African countries, today banking in Africa has undergone dramatic changes.[4] Most African countries in recent times have deeper financial systems and relatively stable banking systems although the challenges of high bank concentration, limited competition, high costs, short maturities and limited financial inclusion still persist (Beck and Cull, 2013). Banking (or financial) systems in African countries exhibit significant

[4] Prior to the 1980s reform, the financial system of many African countries was dominated by commercial banks that were largely owned by the government. During this period, government-owned banks offered greater banking services to government clients and offered fewer banking services to the informal and private sector of the economy (Beck and Cull, 2013). After the 1980s reform, some African countries witnessed mergers and consolidation activities intended to strengthen the financial system in several African countries. The bank merger and consolidation process also led to significant changes in bank ownership to permit ownership by wealthy families, institutional investors and wealthy individuals in several African countries. Prior to financial liberalisation, financial sector development in Africa was hindered by governments' influence on financial markets through selective credit controls and fixed interest rates (Beck and Cull, 2013). After the 1980s reform, the government in some African countries undertook several financial liberalisation initiatives to reduce government's control of the economic and financial system by permitting foreign bank entry. The opening of African economies to foreign bank entry led to reduced government influence on credit supply and interest rate controls; thus encouraging competition among banks in the domestic country (Beck and Cull, 2013). While this was the case in some African countries like South Africa, Nigeria, Mauritius and Egypt, this was not the case in other African countries.

variations that are worth noting. Beck and Cull (2013) did an extensive review of banking in Africa and made several observations which are highlighted below.

One, there are uneven levels of banking sector and capital market development across African countries. For instance, Beck et al (2011) show that South Africa, Nigeria and Mauritius have fairly developed banking systems and capital markets while other smaller and poorer African countries including Central African Republic, Seychelles and South Sudan have shallow banking systems that offer only the most rudimentary financial services to bank clients. Also, only few African countries have stock exchanges and only few of them are liquid, for example, South Africa, Mauritius, Kenya, Ghana, etc.

Two, most African countries have highly concentrated banking systems while few African countries have less concentrated banking systems e.g., South Africa and Mauritius. Beck and Cull (2013) show that some African countries have five banks that make up the whole banking system assets in the country, e.g. Cape Verde, Gambia, Lesotho, Swaziland and Togo, indicating that some African countries have highly concentrated banking systems, and higher banking sector concentration will reduce competition among banks in the banking sector.

Three, banking systems in African countries tend to be more prone to banking crisis due to excessive reliance on exports and foreign direct investments that depend heavily on bank financing and exchange rate fluctuation (Beck and Cull, 2013). A sudden increase in foreign exchange rate often leads to currency depreciation, funding risk and liquidity problems for African banking sectors that have significant exposure in foreign investments and exports, thus increasing the likelihood of banking crises.

Also, a loss of confidence in the banking system of an African country can increase the risk of a banking crisis in the region. Loss of confidence in the banking system can arise from distrust among banks, distrust among bankers and depositors, and distrust among investors and creditors, which could lead to a bank run or a run on the bank if depositors' lack of trust makes them feel the need to quickly withdraw their money from banks. A bank run (or run on a bank) is a situation where all depositors want to withdraw all their money at the same time and banks do not have enough liquidity to meet the demands of depositors at once (Diamond and Dybvig, 1983). Bank runs are common among banks in African

countries (Beck and Cull, 2013), as depositors rush to withdraw their money particularly when the take-over of a failing bank by a stronger bank is announced with public notice.

Four, financial system development in the region is largely uneven. While financial systems in Africa or sub-Saharan Africa are considered to be relatively less developed and less diversified compared to other regions of the world (World Bank, 1994), some African countries have well-developed financial systems compared to other African countries that have a less-developed financial system. Beck and Cull (2013) show that South Africa and Mauritius have higher levels of financial development in the African region although it remains shallow in comparison to the banking system of developed countries.

For instance, the World Bank statistics (median values) documented in Beck and Cull (2013) show that 'access to, and use of financial services' aggregate indicator is 15 bank accounts for every 100 adults in the African country and 42 bank accounts for every 100 adults for countries outside Africa. Also, in terms of 'access to finance', there are 3.1 branches per 100,000 adults in Africa while there are 9.6 branches per 100,000 adults outside Africa. In terms of bank efficiency and profitability, the World Bank statistic also show that banks in Africa are on average, less efficient, but more profitable and operate in less competitive environments. Return on assets (ROA) was 2.1 percent of total assets for banks in African countries and 1.5 percent for banks in countries outside Africa. Net interest margin is 5.9 per cent in 2011 for banks in African country and 4.7 percent for banks in non-African countries. In terms of overhead cost, African financial system had 5.5 percent of total assets and was 3.4 percent for non-African financial system (Beck and Cull, 2013). The above statistics confirm that banking in Africa is shallow compared to banking in developed nations.

In addition to the above issues, there are other characteristics that make banking in Africa more difficult to assess and to evaluate compared to other developed countries of the world. One, Beck and Cull (2013) argue that the small size of many African economies do not allow banks to reap the benefits of scale economies, and this situation is worsen by the limited demand for savings, insurance, credit or payment services among large parts of the population in African countries, implying that parts of the rural population have fewer access to banking services compared to parts of the urban population in African countries. Two, Beck and Cull (2013) also stress that a significant number of economic agents in African

countries operate in the informal sector and do not have the necessary formal documentation required to facilitate financial transactions in the formal sector of many African economies. Consequently, this increases cost and risk for banks due to the exclusion of large portion of economic agents from the informal financial services market. Finally, Beck and Cull (2013) point out that there are significant governance problems that hinder the effectiveness of many private and public governance institutions throughout the African continent. Weak governance (both corporate governance or state governance) further undermines not only the market-based provision of banking services, but also undermine reform attempts and government interventions aimed at correcting or fixing market failures across African countries (Honohan and Beck, 2007; Beck et al., 2011; Beck and Cull, 2013). Taken together, these issues should influence the profitability and performance of African banks, and should also have some influence on the financial reporting behaviour of banks in African countries. While these issues make banking in Africa a challenging context to evaluate, it also creates some interesting gaps for further research into banking in Africa.

2.2. Accounting Disclosure Quality and Financial Reporting

There is the debate about whether Africa needs International Financial Reporting Standards (IFRS), and this debate is centred on whether IFRS has higher disclosure quality than local GAAPs or national accounting standards in African countries (Outa, 2013; Sy and Tinker, 2013). In this section, I discuss accounting disclosure quality and present a concise overview of the state of IFRS adoption in Africa.

Accounting disclosure quality is the extent to which financial statement information reflects the true underlying economic reality of the firm (Chen et al., 2010, p.222). Financial statements have higher accounting quality when accounting information has increased value relevance, reliability and comparability (Soderstrom and Sun, 2007; Barth et al., 2008). This view is consistent with the objective of International Financial Reporting Standards (IFRS) which is to improve the transparency and comparability of financial statements for the effective working of equity markets around the world (Pope

and McLeay, 2011). Recently, there have been significant accounting developments in some African countries although these developments are uneven across countries in Africa.

One major phase of accounting development in the region is the convergence and harmonisation of local standards to international accounting standards. Some African countries have adopted IFRS accounting standards e.g., Kenya, Nigeria, South Africa, Mauritius, Ghana, Libya, Malawi, Namibia and Sierra Leone while other African countries are in the process of doing so by first encouraging voluntary adoption for example Egypt. Other African countries, for example, Benin, Burkina Faso, Mali, Niger and Senegal prefer to retain the use of their local GAAPs and claim that their local GAAPs are 'based on' or 'similar to' converge IFRS[5]. Moreover, only few African countries continue to adopt the accounting standards (i.e., IAS) introduced to them by their British or French colonial masters.

Financial reporting in several African countries also face a number of problems which include weak incentive of preparers of financial statements, poor training and development for preparers of financial statement information, weak legal enforcement mechanisms, political factors, poor corporate governance structures and weak auditor incentives (Owolabi and Iyoha, 2012; Mutiso and Kamau, 2013). Another issue is the problem of label and serious adopters (Daske et al., 2013). For instance, some African countries may claim to adopt or converge to IFRS while the extent of IFRS adoption in such countries is rather low and sometimes enforcement of such standards is almost non-existent (hence, label adopters). Only few African countries, for example South Africa, Kenya, Mauritius adopt IFRS with evidence of strong enforcement.

African studies that examine the accounting quality of financial reports show mixed evidence for whether IFRS adoption improves the quality of accounting information in financial reports in the region. For instance, Outa (2011) examine whether the adoption of IFRS is associated with improved accounting quality among listed companies in Kenya and did not find evidence for improved earnings quality after IFRS adoption and concludes that weak compliance to IFRS rules is responsible for the observed decline in earnings quality after IFRS adoption. To complement Outa (2011), Mutiso and Kamau (2013) observe

[5] http://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs

that management interference, lack of guidance on the interpretation of financial reports and frequent revisions of accounting standards contribute to the increased complexity of financial reporting in Kenya which also affects earnings quality and accounting disclosure quality among Kenyan firms. Ames (2013) finds that mandatory IFRS adoption did not improve accounting disclosure and earnings quality among listed firms in South Africa. Hessayri and Saihi (2015) did not find evidence for reduced earnings management or improved earnings quality after the switch to IFRS reporting standards among firms in United Arab Emirates, Morocco, South Africa and the Philippines during an eight-year period. Taken together, these studies suggest that low enforcement partly explains the weak accounting disclosure quality among African firms despite IFRS adoption. These issues also raise controversy about the suitability of applying IFRS to the African context, and the effectiveness of IFRS to improve accounting quality in the African region.

2.3. Loan Loss Provisioning Practices: Africa and International Basel Rules

2.3.1. Loan Loss Provisioning Practices

There is little publicly available information about the loan loss provisioning practices of banks in African countries. For most African countries, the traditional accounting for loan loss provisions used by African banks follows the 'accounting textbook' approach, a practice also adopted by banks in developed countries. The traditional accounting procedure involves creating a provision for estimated losses on bank loan portfolio. Periodically, provision for loan losses are increased or decreased in response to expected credit risk to bank loan portfolio (White et al., 2003). In reality, bank provisions tend to be higher during a recession because the probability of loan defaults are higher during such periods while bank provisions are lower during periods of economic prosperity because loan defaults are less likely to occur in such periods (Wall and Koch, 2000). The estimated level of provision for loan loss is then charged against bank interest income in the income statement as 'provisions for bad debt' or 'loan loss provisions' or 'impairment for credit risk'.

For African countries that adopt IFRS, the method used by banks to derive loan loss provisions estimate is the IAS 39 incurred loss provisioning model which require banks to set aside a provision for loan losses only when there is objective evidence that losses have been incurred or when losses are highly probable. For micro-prudential regulation, bank supervisors (or Central Banks) in several African countries want sufficient bank provisioning that is commensurate with the credit risk associated with bank loan portfolio in a timely manner to minimise loan losses particularly during bad economic periods. To achieve this, some bank supervisors in the region require banks to adopt BASEL's guidelines on bank loan loss provisions or require a compromise between the loan loss provisions estimate derived from IAS 39 and the loan loss provisions estimate derived from Basel rules.

2.3.2. Some Provisioning Practices in Africa

This section presents an overview of the loan loss provisioning practices of banks in some African countries where such information is publicly available.

NIGERIA. In 2011, the Central Bank of Nigeria require Nigerian banks to allocate loan loss provisions for expected losses, and loan loss provisions should be recognised in the profit and loss account based on IFRS incurred loss model. Also, the Central Bank also requires banks to ensure that non-distributable reserve is classified under Tier 1 as part of core capital. The Central Bank also require Nigerian banks to compare the provisions estimates from prudential guidelines with provisions estimates from IFRS requirements. If prudential provisions estimates are greater than IFRS provisions estimates, the difference is transferred from the general reserve account to a non-distributable regulatory reserve account. If prudential loan loss provision estimates are less than IFRS provisions estimates, the difference is transferred from the regulatory reserve account to the general reserve account to the extent of the non-distributable reserve previously recognized (CBN, 2010).

SOUTH AFRICA. The South Africa Reserve Bank (SARB) implemented Basel III capital framework in 2013 to ensure the soundness and capital adequacy of the South African banking system. Prior to Basel III adoption, the SARB introduced Basel II in 2004 and require major banks in South Africa to include eligible provisions to Tier II capital. Eligible provisions include specific provisions, partial write-offs, country risk provisions and general provisions.

In addition to prudential provisioning requirements, the adoption of IAS 39 incurred loss model is a significant step to ensure sufficient bank loan loss provisioning in African countries that adopt IFRS. However, the IAS 39 incurred loss model is criticised as backward-looking mainly because it delays provisions until it is too late (Laeven and Majnoni, 2003). For instance, the IAS 39 incurred loss provisioning model require banks to set aside provisions for bad debt only (i) when loan losses or defaults are incurred, or (ii) when there is objective evidence of loan impairment, or (iii) when loan losses are highly probable to occur (Gaston and Song, 2014), and this approach to bank provisioning delays bank provisions until it is too late because it does not anticipate loan loss or loan defaults early before it occurs (Gaston and Song, 2014). Regardless of these criticisms, bank supervisors in African countries impose additional loan loss provisioning (and loan loss reserve) requirements on banks to encourage the build-up of loan loss provisions as reserves during good economic periods in anticipation of bad economic periods.

The Central Bank of Nigeria, for instance, require Nigerian banks to continuously adjust bank provisions to reflect the changing asset quality of bank loan portfolio over time (CBN report, 2010).[6] However, if banks must provide sufficient bank provisions, bank managers need to exercise discretion to decide how much loan loss provision to allocate for each period. Permitting managerial discretion in bank provisioning also raises concern that provisions estimates might be manipulated by bank managers so that the level of provisions is driven by opportunistic considerations rather than by credit risk considerations (Wall and Koch, 2000). For instance, a PWC (2010) report states that a significant reduction in bank loan loss provisions contributed to increased profitability of the biggest four banks in South Africa (PWC, 2010).[7]

KENYA. Focussing on bank loan loss provisions, the International Monetary Fund (IMF) undertook a consultative assessment of the resilience of the banking system of some African countries and made several observations. The case of Kenya is interesting. The IMF reported that Kenya banks were well-capitalised and profitable but had insufficient loan loss provisions to mitigate its growing non-performing

6 http://www.cenbank.org/OUT/2010/PUBLICATIONS/BSD/PRUDENTIAL%20GUIDELINES%2030%20JUNE%202010%20FINAL%20%20_3_.PDF

7 The big 4 banks are Absa, FirstRand, Nedbank and Standard Bank. PriceWatersCooper (PWC) report is available at: https://www.pwc.co.za/en/assets/pdf/major-banks-analysis-march-2011.pdf

loans. The IMF observed that a significant portion of bank non-performing loans originated from the construction industry and that the government had guaranteed bank loans to the construction industry, justifying the fewer provisions that were set aside for losses on loans to the construction industry. The case of Kenya demonstrates that bank provisioning decisions in several African countries is not solely driven by credit risk considerations but can be influenced by government guarantees and developmental factors.[8]

MAURITIUS. In 2014, bank regulators in Mauritius require external auditors to submit an opinion to each Mauritian bank on whether their loan loss provisions estimates are adequate.[9] For inclusion in tier 2 capital, banks are not required to include loan loss provisions for known liabilities or real assets but rather are required to include loan loss provisions (or reserves) for future losses in the determination of Tier 2 capital.[10]

UGANDA. According to the 2005 statutory guidelines for bank provisioning in Uganda[11], bank supervisors ensure that Ugandan banks comply with capital adequacy requirements by apportioning loan loss provisions for possible impairments arising from bad and doubtful accounts. In Uganda, bank loan facilities are classified as: substandard loan, doubtful loan or loan loss, and are subject to specific provisions regardless of whether a subjective or objective criteria was used in determining the classification. For instance, specific provisions for substandard assets are at least 20% of the outstanding balance of the loan facility. Specific provisions for doubtful loans are at least 50% of the outstanding balance of the loan facility. Specific provisions of loan loss is maintained at 100% of the outstanding balance of the loan facility which is subsequently written off against accumulated provisions within ninety days of being identified as loss. In addition to specific provisions, banks are required to maintain a general loan loss provision of at least 1% of their total outstanding loan facilities net of specific provisions and interest in suspense.

[8] http://www.businessdailyafrica.com/IMF-says-Kenyan-banks-exposed-to-bad-loans-danger/-/539552/2613532/-/apcc8h/-/index.html
[9] https://www.bom.mu/sites/default/files/Guideline_BaselII.pdf
[10] https://www.bom.mu/sites/default/files/Guideline_BaselII.pdf
[11] https://www.bou.or.ug/bou/bou-downloads/acts/supervision_acts_regulations/FI_Regulations/FI_CreditClassificationRegulatns2005.pdf

NAMIBIA. In a guideline on bank provisioning issued in 2007,[12] bank regulators in Namibia require banks to compute loan loss provisions estimate using 'IAS 39 provisioning guidelines' and the 'Determination on Asset Classification, Provisioning and Suspension of Interest' (BID-2) guidelines. Specific impairments computed in terms of IAS 39 should not be less than the amount of specific provisions computed in terms of BID-2. If the former provisions amount is less than the latter provisions amount, additional specific provisioning should be raised to eliminate the shortfall. Also, total impairments, consisting of specific and portfolio impairments, computed in terms of IAS 39 should not be less than total regulatory provisioning (specific and general) computed in terms of BID-2. If the former impairments amount is less than the latter provisions amount, an additional general loan loss provisions, on a pre-tax basis equal to or exceeding the shortfall, should immediately be created through an appropriation of distributable reserves to eliminate the shortfall. If the IAS 39 specific impairment and/or portfolio impairment provisions is greater than the regulator's provisions amount calculated in terms of BID-2 and are considered to be material, the bank regulator encourages all banks to provide for the greater amount (p.1-2, Paraphrased).

Overall, the above analyses confirm that the actual level of loan loss provisions of African banks is determined by multiple factors other than credit risk factors alone, and these factors include managerial provisioning decisions, differences in regulatory guidelines on bank provisioning, differences in the accounting for bank loan loss provisions across countries in Africa, etc.; therefore, the peculiarity of each African banking system should be taken into account when investigating bank loan loss provisioning practices in Africa. Finally, given the commonalities in the loan loss provisioning practices for the African countries discussed above, we can reasonably expect that similar practices is prominent in other African countries. Apart from the 6 African countries examined above, information for bank loan loss provisioning guidelines for other African countries is not publicly available remotely.

2.3.3. Basel Rules and Bank Loan Loss Provisions

BASEL I. Basel I require banks to keep regulatory capital equal to at least 8% of risk-weighted assets and also require banks to include loan loss provision (or reserve) in the computation of regulatory capital of

[12] https://www.bon.com.na/CMSTemplates/Bon/Files/bon.com.na/1d/1df704cc-a2e7-4764-bc10-6246f540e187.pdf

banks. [13,14] More precisely, loan loss reserves (or provisions) accounts for 1.25% of risk-weighted assets in Tier 2 capital under Basel I.

Under Basel 1, loan loss provisions (or reserves) for US banks are about 1.25 per cent of risk-weighted assets and bank regulators in other countries can exercise their own discretion to exceed the 1.25 per cent rule to meet the perceived regulatory needs of the banking industry in each country. The inclusion of loan loss provisions (or reserves) in the computation of regulatory capital imply that bank managers with low regulatory capital can increase loan loss provisions estimates to compensate for low regulatory capital ratios which constitutes regulatory capital management (Ahmed et al., 1999). Basel 1 is criticised for its procyclical behaviour in response to business cycle developments (Jackson, 1999). During bad economic times, banks would avoid risky activities (and risky lending) which would make them keep low regulatory capital. Because their low regulatory capital during bad times might be unacceptable to regulators and could attract unintended regulatory scrutiny, banks would keep higher loan loss provisions (or reserves) when they have low regulatory capital to compensate for their low regulatory capital ratio. This was the procyclical effect of Basel 1 capital regulation. Moreover, Bikker and Metzemakers (2005) points out that during a recession, banks would significantly increase loan loss provisions estimates to compensate for their low regulatory capital level but the increased loan loss provisions would further decrease bank profits, depleting bank capital and reinforcing the existing recession, hence, the need for a revised bank capital standard.

BASEL II. Basel I was revised and became Basel II in 2001 and 2003, and was implemented by bank supervisors across several countries in 2007 (BCBS, 2004). According to BCBS (2004), Basel II is based

[13] The 1988 Basel I Accord was the first attempt to establish international standards for bank capital adequacy. Since 1988, bank capital regulation has evolved as new Basel regulations modify and replace previous Basel capital regulations.

[14] The Basel Committee for Banking Supervision (BCBS) report in 2004 require banks to set aside capital for three types of risk: credit risk, market risk and operational risk. Credit risk is the risk that counterparties to a loan or derivative transaction may default in fulfilling their obligations. Credit risk requires the highest regulatory capital because it is the biggest risk banks face due to their lending activities. Market risk is the risk arising from banks' trading operations. It is the risk that a sudden change in price would lead to a significant loss on the market value of its trading securities. Operational risk is the risk a bank faces arising from failed systems, people, internal processes and other external factors (BCBS, 2004). Bank capital has two components: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of equity (goodwill is subtracted from equity) and non-cumulative perpetual preferred stock. Tier 2 capital includes instruments such as cumulative perpetual preferred stock and subordinated debt. Basel I accord requires at least 50% of regulatory capital (that is, 4% of risk-weighted assets) to be Tier 1 capital. Basel I also require 2% of risk weighted assets to be common equity (Hull, 2012).

on three pillars: minimum capital requirements, supervisory review and market discipline.[15] Pillar 1 describes the methodology for calculating minimum capital requirements. Pillar I maintained minimum capital requirement at 8 percent of risk-weighted assets. Under Pillar 1, the determination of the minimum capital requirement for banks is based on three approach: the internal risk-based (IRB) approach, the standardised approach and the advanced measurement approach. The internal risk-based (IRB) approach requires banks to rely on their own risk assessment of borrowers' credit risk to determine their risk weights. Under the IRB approach, banks must ensure that expected losses are fully covered via loan loss provisions. When expected losses are greater than provisions, banks have to deduct the difference from capital on the basis of 50% deduction from Tier 1 capital and 50% from Tier 2 capital. If expected losses are less than provisions, banks should recognise the difference in Tier 2 capital up to a maximum of 0.6 percent of risk-weighted assets. The standardised approach requires the determination of risk weights based on external credit ratings. Under the standardised approach, banks should include loan loss reserves up to a maximum of 1.25% risk-weighted assets. The advanced measurement (AMA) approach require banks to choose their own methodology for assessing risk provided it is thoroughly comprehensive and systemic. Overall, Basel II Pillar 1 is designed to ensure that bank capital covers unexpected losses while loan loss provisions cover expected loan losses.[16] Basel II was also criticised for being procyclical with fluctuations in the economy (e.g. Turner, 2000; Borio et al., 2001; Danielsson et al., 2001; Segaviano and Lowe, 2002).

BASEL III. Basel III capital accord proposes a new provisioning model - the 'expected through-the-cycle loan loss provisioning system' to be introduced in June 2018. This provisioning system is similar to Basel II because it also anticipates loan losses before it materialises. However, the main criticism of Basel II's loan loss provisioning system was that it allows provisioning only at one point in time, say, at the

[15]Pillar 2 'supervisory review' involves the supervision of banks to ensure that bank capital is commensurate with the level of risk banks take. Basel II Pillar 3 'market discipline' aim to foster market transparency so that market participants and bank counterparties can better assess bank capital adequacy and bank risks, and Central bankers or bank regulators/supervisors have full responsibility to ensure that all banks disclose sufficient information about the way they allocate capital for the risks they take.

[16] The distinction between loan losses covered by bank capital and loan losses covered by loan loss provisions is sometimes blurred because (i) bank capital is derived partly from loan loss provisions (or reserves), and also (ii) general provision is included in Basel's definition of bank capital (Hull, 2012). Therefore, regulatory capital requirements should include sufficient loan loss provisions due to the close relation between loan loss provisions and capital (Cavallo and Majnoni, 2002; Banque de France, 2001).

beginning of the reporting year or quarterly or semi-annually (Wezel et al., 2012). Basel III improves on Basel II by introducing a loan loss provisioning system that require banks and financial institutions to set aside specific provisions on newly-originated loans based on individual borrower characteristics that drives the performance of the loan (Wezel et al., 2012)[17]. This means that the level of loan loss provisions to be associated with a specific loan will be determined from the outset based on a set of bank-specific and borrower-specific criteria even though the loan impairment has not occurred yet, or is unlikely to occur in the near future (Wezel et al., 2012). Under Basel III, a bank manager will retain full discretion on the exact estimates of specific provisions and bank managers must ensure that the application of Basel III provisioning standards are driven by sound credit risk management considerations (Wezel et al., 2012). Some policy researchers argue that the expected through-the-cycle provisioning system is a purer method to anticipate loan losses and that it has the merits of being in line with Basel II principles (e.g. Blundell-Wignall and Atkinson, 2010; Wezel et al., 2012; Angelini et al., 2015).

2.4. Conclusion

This chapter presented an overview of banking in Africa, financial reporting and accounting disclosure quality in Africa. The chapter highlighted some issues associated with banking in Africa and as well as some obstacles to accounting developments in the region, particularly, enforcement issues and weak incentive to preparers of financial statement information. The chapter also discuss loan loss provisioning practices in some African counters and also provide a discussion on the role of bank provisions in international bank capital regulation. In the next chapter, I discuss the theoretical framework that explains why bank managers may manipulate specific accounting numbers to meet manage or smooth earnings and to meet other opportunistic financial reporting objectives.

[17] One major distinction between the 'expected through-the-cycle provisioning system' and 'dynamic loan loss provisioning system' is that dynamic provisioning gradually builds a pool of general provisions (not specific provisions) to cover eventual losses while the expected through-the-cycle provisioning systems makes specific provisions on each loan made to individuals or corporations.

Chapter 3

Positive Accounting Theory, Earnings Management and Institutions

3.0. Introduction

This chapter discuss positive accounting theory as the main theoretical framework to explain why firm manage reported earnings. Positive accounting theory presents three hypotheses as alternative explanations for earnings management among firms. The chapter then proceed to define earnings management and highlight the types, techniques and methods used to detect earnings management among firms. The chapter then proceed to discuss some institutional factors that influence the earnings management behaviour of firms. Finally, a discussion of earnings smoothing and the theoretical motivations to smooth reported earnings, are presented. For the rest of the thesis, the term 'earnings smoothing' and 'income smoothing' are used interchangeably to mean the same thing.

3.1. Positive Accounting Theory

Why do managers engage in earnings management practices? Positive accounting theory argues that managers manage reported earnings because of explicit contracts given to them which are tied to accounting numbers. Positive accounting theory has its foundation in agency theory from the contracting literature. The starting point of agency theory is that managers are motivated by their own self-interest. According to Jensen and Meckling (1976), in the absence of monitoring, managers of firms will take certain actions that maximise their compensation even though these actions may hurt bondholders and equity holders. Also, the presence of compensation-based contract will motivate the manager to take actions that further his interest as well as the interest of firm owners if such action increases the likelihood of receiving the contractual compensation. Lambert (1984) show that, under certain assumptions, the compensation scheme offered to managers can motivate managers to manage reported earnings. He argues that: (i) the unobservability of managerial actions and (ii) the need to maximise the principal's utility and the agent's compensation jointly provide some incentive for managers to influence reported earnings, and the incentive is stronger if managed earnings jointly maximises shareholders' wealth and

increases the manager's likelihood of receiving the contractual compensation. Greenawalt and Sinkey (1988) criticise Lambert (1984)'s agency theory perspective because Lambert (1984) did not consider earnings management using accounting numbers; thus, Lambert's study was criticised for not having any implication for financial reporting among firms. Nonetheless, Lambert (1984) suggests that future research could extend his framework to accounting earnings management practices. Later on, Greenawalt and Sinkey (1988) extended Lambert's work to earnings management using accounting numbers.

Positive accounting theory (PAT) goes beyond agency theory to ask the question: what motivates managers to act in ways to maximise their self-benefit? What are the incentives? Why do managers influence or manipulate accounting numbers? What motivates managers to make certain accounting choices? Positive accounting theorists, pioneered by the work of Watts and Zimmerman (1978, 1986), focus on how accounting information generated by management depend on the choice of accounting methods used to generate accounting information.

According to Watts and Zimmerman (1986), the main premise of positive accounting theory is that the accounting information generated by a firm is not merely a result of a firm's actions or operational activities but rather depends on the choice of accounting methods used to generate that information which in turn depends on explicit contracts to firm managers. They argue that the explicit contracts given to firm managers motivate them to use specific accounting methods/techniques to manage reported earnings to meet financial reporting objectives that depend on the reported earnings number. Watts and Zimmerman (1986) therefore conclude that the accounting information generated by management in financial reports reflect several factors that were taken into consideration when generating financial reports such as how resources are allocated, management compensation, regulatory requirements, debt covenant restrictions, financing decisions, investment decisions and other considerations (White et al., 2003), implying that reported earnings in the financial report of firms reflect both accounting and non-accounting decisions of managers.

Positive accounting theory then proceeds to provide three competing explanations or hypotheses or regularities that explain why managers use several accounting procedures to influence the level of

reported earnings. These hypotheses or explanations include: the bonus plan hypothesis, debt violation hypothesis and the political cost hypothesis. The merits of these competing explanations have become the foundation for much research on earnings management to date. One notable reason for this is because the three hypotheses can be empirically tested with publicly available data of firms.

3.2.1. Bonus Plan Hypothesis

Positive accounting theory's bonus plan hypothesis states that, if the compensation or bonus to managers is attached to how well the firm perform at the end of each period, it is in the best interest of managers to use accounting methods, choices and accrual decisions that improves firm performance which in turn would improve the compensation to management (Watts and Zimmerman, 1986; 1990). More specifically, the hypothesis state that "ceteris paribus, managers of firms with bonus plans are more likely to choose accounting procedures that shift reported earnings from future periods to the current period" (Watts and Zimmerman 1986: p.208), implying that if reported earnings in financial statements are the benchmark for firm performance, the manager will have some incentive to use accounting procedures that will improve reported earnings in the current period which then increases the probability of receiving the promised management compensation that depend on the level of reported earnings (Watts and Zimmerman, 1986; 1990).

However, the relationship between management compensation and the size of reported earnings is not necessarily linear. Watts and Zimmerman (1990) identified some complexities in the relationship between the bonus plan and the size of reported earnings. They stress that the existence of a bonus plan, no matter how attractive, may not necessarily lead to increases in reported earnings. Rather, they argue that "…a bonus plan does not always give managers some incentive to increase earnings. If, in the absence of accounting changes, earnings are below the minimum level required for payment of a bonus, managers have some incentive to reduce earnings this year because no bonuses are likely to be paid. Taking such an 'earnings bath' increases expected bonuses and profits in future years… " (Watts and Zimmerman, 1990: p.139). In other words, if managers perceive that they are not likely to receive any bonus in the current period, they will engage in income-decreasing strategies (i.e., earnings bath) in the current year in

anticipation of increased earnings in subsequent years and increased likelihood of receiving the associated bonus in the next period.

The bonus plan hypothesis is considered to be the first well established hypothesis in the empirical earnings management literature. Examples of studies that find evidence to support the bonus plan hypothesis include Healy (1985), McNichols and Wilson (1988), Gaver et al. (1995), Holthausen et al. (1995), Guidry et al. (1999), Dechow et al. (1996) and Bergstresser et al. (2006). For instance, Bergstresser et al. (2006) observe that earnings management practices are more pronounced in firms where CEO's total compensation is closely tied to the value of stock and option holdings. Healy (1985) demonstrates how the incentive to manage reported earnings derives from the promise of some pre-specified bonus or compensation plan to firm managers. Healy (1985) analyse three compensation scenarios: (i) no bonus if earnings fall below a specified lower bound, (ii) a fixed bonus if reported earnings are above a specified upper bound, and (iii) a bonus that depends on the level of reported earnings when reported earnings is within the specified lower and upper bound limits. Healy (1985) observes that managers tend to adopt income-increasing strategies when earnings are predicted to fall below targets and that managers engage in income-decreasing strategies when earnings are unusually high. Overall, the evidence above suggests that the existence of bonus plans can induce managers to manage earnings to increase their compensation.

3.2.2. Debt Covenant Hypothesis

Creditors provide funds to firms to finance their activities and in exchange for their investments creditors want repayment of both principal and interest. Watts and Zimmerman (1978; 1986) argue that, to protect themselves, creditors and other lenders will impose restrictions on borrowers to minimise the likelihood of default on the principal or interest repayment. Therefore, the debt covenant hypothesis argues that the existence of debt covenants and/or the closeness of the firm to debt covenant violation will induce managers to use accounting procedures that minimise the likelihood of violating specified debt covenants. More specifically, the debt covenant hypothesis states that "ceteris paribus, the larger a firm's debt-equity ratio, the more likely the firm's manager is to select accounting procedures that shift reported earnings from future periods to the current period." (Watts and Zimmerman, 1986: p.216).

Some studies show that managers tend to make income-increasing accounting choices to avoid violating debt covenant agreements and make income-decreasing accounting choices if the debt is to be restructured or renegotiated (e.g. Sweeney, 1994; Jaggi and Lee, 2002). DeFond and Jiambalvo (1993) argue that even if default cannot be avoided by manipulating accounting information, managers are still likely to make income-increasing accounting choices hoping to improve their bargaining position in the event of debt renegotiation. DeAngelo et al (1994) show that financially-distressed firms have incentives to engage in discretionary write-offs to convince creditors of their willingness to deal with their financial difficulties. Bartov (1993) documents that managers sell fixed assets in order to avoid negative earnings growth and debt covenant violations.

The debt covenant hypothesis is another well-tested hypothesis in the financial accounting literature. Studies that test this hypothesis use debt to equity ratio as a proxy for the existence of debt covenants or as a proxy for the closeness to debt covenant violation; hence, the hypothesis is also known as the debt/equity hypothesis or leverage hypothesis and such studies include Ayres (1986), Daley and Vigeland (1983), Zmijewski and Hagerman (1981).

DeFond and Jiambalvo (1994) point out that one reason for using debt to equity ratio as a proxy for the existence of debt covenant is due to the difficulty to access firms' actual debt covenant information, and the high cost of accessing firms' actual debt covenant information even if such information is accessible. DeFond and Jiainbalvo (1994) and Sweeney (1994) find evidence to support the debt-covenant hypothesis but both studies did not use debt-equity ratio as a proxy for the existence and tightness of debt covenants rather both studies test the debt covenant hypothesis by examining a sample of firms that actually violated debt covenants. DeAngelo (1994) did not find evidence to support the debt-covenant hypothesis.

3.2.3. Political Cost (or Size) Hypothesis

Watts and Zimmerman (1986) use the size of a firm as a proxy for a firm's political cost. By political cost, they refer to the sensitivity of a firm to regulatory scrutiny or political scrutiny. White et al. (2003) stress that the way the general public, politicians and regulators view extremely high earnings of a firm differ from the way shareholders perceive high earnings, particularly, if there is a reason to believe that a firm or group of firms are taking advantage of the public by making obscene profits. Watts and

Zimmerman (1986) argue that, because extremely high earnings could attract political criticism and regulatory scrutiny and such scrutiny is costly to firms, firm managers have incentive to use accounting procedures that reduce high earnings in the current period. This is the argument of the political cost hypothesis.

With regard to large firms and small firms, Watts and Zimmerman (1986) also argue that managers of large firms will use accounting procedures that decrease the size of current earnings if earnings are too high in order to avoid scrutiny of profit by firm regulators compared to smaller firms. The larger the firm, the more likely the manager will select accounting procedures that decreases high earnings in the current period. This is the size hypothesis based on the political cost hypothesis.

Many studies use the size of the firm as a proxy for a firm's political cost to test for the sensitivity of firms to political/regulatory scrutiny. Such studies include Alchian and Kessel (1962), Zimmerman (1983), Jones (1991), Guenther (1994), Bowen et al. (1995), Hunt et al. (1996), Key (1997) and Han and Wang (1998).

3.2.4. Political Cost versus Earnings Smoothing? – Critical Perspective

Political cost hypothesis is similar to the earnings smoothing hypothesis because both hypotheses focus on decreasing high earnings in the current period. However, the only difference between the two hypotheses is that, for the earnings smoothing hypothesis, firm managers can decrease high earnings and increase low earnings to stabilise firm earnings over time. In other words, managers can decrease high earnings during good years possibly to save surplus earnings in anticipation of bad times, and increase low earnings during bad years to possibly avoid reporting a loss. On the other hand, the political cost hypothesis differ from the earnings smoothing hypothesis in the sense that the political cost hypothesis only focus on decreasing high earnings to avoid the scrutiny and political cost associated with reporting too high earnings.

Moreover, it is important to stress that the earnings smoothing hypothesis and the political cost hypothesis are not mutually exclusive. This is because firms could smooth earnings to avoid the associated political cost of reporting too high earnings; therefore, the political cost hypothesis can explain why firms smooth

earnings - although it is not the only explanation. On the other hand, earnings smoothing can explain the political cost argument. For instance, firms can smooth losses by increasing earnings upward when they expect losses to avoid sending a signal to firm regulators that the firm might fail if such signal could attract scrutiny of the firm's earnings by regulators and political commentators. In this case, the earnings smoothing hypothesis explains why firms seek to avoid regulatory or political scrutiny. Additionally, firms can use earnings (or earnings) smoothing as a method which achieves both objectives, that is, to reduce earnings in good years and increase earnings in bad years so that reported earnings never seem to be too high or too low to attract regulatory or political scrutiny.

3.2. Earnings Management

3.2.1. What is Earnings Management?

The term 'earnings management' encompasses a wide range of accounting procedures and techniques that managers employ to alter reported accounting numbers in order to meet some pre-defined earnings target. There are three definitions of earnings management that stands out in the theoretical accounting literature.

The first definition view earnings management as "the process of taking deliberate steps within the constraints of generally accepted accounting principles to bring about a desired level of reported earnings" (Davidson et al., 1987) cited in Schipper (1989: p.92). This definition suggests that the flexibility allowed within the constraints of generally accepted accounting principles allow managers to use accounting numbers to alter reported earnings; however, this definition ignores the fact that earnings management behaviour can exceed the constraints of generally accepted accounting principles. The second definition view earnings management as "a purposeful intervention in the external financial reporting process with the intent of obtaining some private gain (as opposed to say, merely facilitating the neutral operation of the process)" (Schipper, 1989: p.92). This definition has its foundation in agency theory and suggests that managers manage earnings to obtain private gains. The demerit of these two definitions is that they view earnings management as an opportunistic behaviour by firm managers to seek

private gains but do not take into account how the incentive to manage reported earnings may be influenced by external factors which managers do not have control over.

The third definition states that earnings management occurs "when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reporting accounting numbers" (Healy and Wahlen, 1999: p.368). In this thesis, I use Healy and Wahlen (1999)'s definition of earnings management to conceptualise bank earnings management for the following reasons.

One, Healy and Wahlen (1999)'s definition suggests that managers can exercise judgement in financial reporting in a number of ways, implying that flexibility in financial reporting is necessary to allow managers choose accounting methods that meet the expectations of firm owners and external stakeholders. Two, Healy and Wahlen (1999)'s definition provides a better explanation for earnings management among banks because bank earnings are significantly affected by external factors such as unpaid loans, non-performing loans and bad economic conditions and these factors affect the underlying economic performance of banks, requiring banks to manage reported earnings to mitigate such effects while meeting the expectations of stakeholders at the same time.

Some aspects of Healy and Wahlen (1999)'s definition have merits and demerits. One merit of Healy and Wahlen (1999)'s definition is that they suggest that managers can exercise judgement in financial reporting in a number of ways to allow managers choose accounting methods that meet the expectation of firm owners. Another merit is that Healy and Wahlen (1999)'s definition emphasise that managers manipulate earnings to influence contractual outcomes that depend on accounting numbers. This is consistent with the positive accounting theory's bonus plan hypothesis, implying that managers can manage reported earnings to increase the likelihood of receiving the bonus that depend on the reported earnings number (see. Watt and Zimmerman, 1986). The third merit of Healy and Wahlen's definition is that it explains earnings management in banks, which is the context of this thesis.

However, one demerit of Healy and Wahlen's definition is that they conclude that the purpose of earnings management is to mislead investors or stakeholders, and this is a weakness of their definition because they did not acknowledge that not all earnings manipulation (or management) is aimed at misleading stakeholders. On the contrary, earnings management may be used to communicate private information about firms' future earnings that would not be communicated if earnings were not managed. For instance, managers may manage earnings by smoothing reporting earnings to signal earnings stability, or to signal improved stock returns to investors.

3.2.2. Types of Earnings Management

Generally, the literature shows that firm managers manipulate reported earnings either through accrual-based earnings management strategies or real activity-based earnings management strategies or a combination of both (see. Healy, 1985; Guidry et al., 1999; Defond and Jiambalvo, 1994; Teoh et al., 1998; Kasznik, 1999; Gunny, 2005; Roychowdhury, 2006; Zang, 2011). Gunny (2005) further expands the accrual and real earnings management category to include a third category: accrual earnings management, real earnings management and fraudulent accounting. By fraudulent accounting, Gunny (2005) refers to earnings management that involves accounting choices that violate generally accepted accounting principles (GAAP) and is often accomplished by changing the choice of accounting methods used to represent the underlying activities of firms. In contrast to fraudulent accounting earnings management, accrual earnings management (AEM) and real activity-based earnings management (REM) techniques involves the use of accounting choices within the limits allowed by generally acceptable accounting practices (GAAP) in order to manipulate reported earnings.

Accrual-based earnings management (AEM) involves manipulating or influencing the size and timing of accruals to achieve some desired level of reported earnings (Gunny, 2005; Zang, 2011). Accruals are commonly defined as the difference between operating profit and operating cash flow while discretionary accruals are accruals that cannot be explained by a change in sales and the level of fixed assets (Hall et al., 2013). However, the components of accruals that get manipulated vary by firm context and in predictable ways for firms in some industries (Marquardt and Wiedman, 2004). In the banking industry, for instance, there is some degree of predictability in the way banks use certain accruals to influence

reported earnings particularly when such accruals have a direct impact on banks' reported earnings, e.g., loan loss provisions.

Real earnings management (REM), on the other hand, occurs when managers take actions that disguise as normal operational activities in order to manipulate the level of reported earnings (Roychowdhury, 2006; Cohen et al., 2008; Cohen and Zarowin, 2010). Unlike accrual earnings management, real earnings management is often accomplished by changing the firm's underlying operations (Gunny, 2005). For instance, Burgstahler and Dichev (1997) observe that US industrial firms use changes in cash flow from operations and changes in working capital to increase earnings to meet earnings target. Bartov (1993) shows that managers sell-off fixed assets to avoid negative earnings growth and to avoid debt covenant violations while Graham et al. (2005) interviewed chief financial officers (CFOs) and find that 80 per cent of CFOs would decrease R&D expenditure, advertising and maintenance expenditure in order to meet earnings target for the current period while 55 per cent of CFOs admit that they would postpone or delay new projects to meet target earnings. Roychowdhury (2006) shows that managers manipulate sales, reduce discretionary expenditure and inventory overproduction to decrease cost of goods sold in order to increase reported earnings to avoid reporting annual losses or missing analyst forecast. Gunny (2010) finds that firms that meet earnings benchmarks by engaging in real activities earnings manipulation have better operating performance in the subsequent three years than firms that do not engage in real activities manipulation to meet earnings target.

Moreover, firms may use a combination of accrual or real activities based earnings management strategies to manage reported earnings to: avoid reporting a loss or loss avoidance (Hayn, 1995; Burgstahler and Dichev, 1997; DeGeorge et al., 1999), engage in income-increasing earnings management (Rangan, 1998; Healy, 1985; Barth et al., 1999) and to smooth reported earnings over time (see. Kirschenheiter and Melumad, 2002; Bhattacharya et al., 2003; Lapointe-Antunes et al., 2006).

Finally, the literature provides some discussion on the trade-offs between using accrual and real earnings management strategies. However, an in-depth discussion of the trade-offs is beyond the scope of this thesis. Discussions of the trade-offs are presented in Healy and Wahlen (1999) and Zang (2011).

Table 3.1. Earnings Management (EM) Strategies			
	Accrual EM	Real EM	Fraudulent EM
Technique	Manipulate the size and timing of accruals to achieve some desired level of reported earnings.	Change the firm's underlying operations to disguise as normal operational activities in order to manipulate the level of reported earnings.	Change the choice of accounting methods used to represent the underlying activities of firms in ways that violate GAAP.
Within GAAP limits?	Yes	Yes	No
Supporting Evidence	Ahmed et al (1999), Marquardt and Wiedman (2004) Gunny (2005), Zang 2011), Hall et al (2013).	Bartov (1993), Burgstahler and Dichev (1997), Graham et al (2005), Roychowdhury (2006), Cohen et al (2008), Cohen and Zarowin (2010).	Gunny (2005).
*GAAP = Generally Accepted Accounting Principles.			

3.2.3. Accounting Numbers Employed to Manage Earnings

Early studies focus on earnings management through the use of single accounting numbers and in contexts where earnings management is likely to occur (e.g. Healy, 1985; Jones, 1991; Dechow and Sloan, 1991). Subsequent studies examine earnings management through the use of multiple accounting numbers (Beatty et al., 1995; Hunt et al., 1996; Gaver and Paterson, 1999; Cohen et al., 2008; Cohen and Zarowin, 2010; Badertscher, 2011). Given the portfolio of earnings management strategies available to managers in industrial firms and in the financial services industry, the common accounting procedures and numbers used to manage earnings in firms include: changes to pension assumptions, inventory methods, depreciation method and estimates (Sweeney, 1994); available-for-sale securities (Barth et al., 2016); loan charge-offs (Beatty et al., 1995); provision for loan loss (Ahmed et al., 1999); gains from the timing of asset sales (Bartov, 1993; Hermann et al., 2003); pension costs (Thomas and Tung, 1992; Bergstresser and Phillipon, 2006); reduction in advertising and R&D expense (Baber et al., 1991; Dechow and Sloan, 1991; Perry and Grinaker, 1994; Bushee, 1998; Graham et al., 2005; Gunny, 2005; Cohen et al., 2010); use of sales discounts (Graham et al., 2005; Roychowdhury, 2006); inventory overproduction (Thomas and Zhang, 2002; Gunny, 2005; Roychowdhury, 2006); stock repurchase (Hribar et al., 2006); derivative hedging (Barton, 2001; Pincus and Rajgopal, 2002); and securitization (Dechow and Shakespeare, 2009; Dechow et al., 2010; Hunton et al., 2006; and Van Beest, 2009).

Table 3.2. Portfolio of Earnings Management Techniques		
S/N	Accounting Numbers	Supporting Evidence
1	Changes to pension assumptions, inventory methods, depreciation method and estimates.	Sweeney (1994).
2	Available-for-sale securities	Barth et al (2016).
3	Loan charge-offs	Beatty et al (1995).
4	Provision for loan loss or loan loss provisions	Ahmed et al (1999).
5	Gains from the timing of asset sales	Bartov (1993), Hermann et al (2003).
6	Pension costs	Thomas and Tung (1992), Bergstresser and Phillipon (2006).
7	Reduction in advertising and R&D expense	Baber et al (1991), Dechow and Sloan (1991), Perry and Grinaker (1994), Bushee (1998), Graham et al (2005), Gunny (2005), and Cohen et al (2010)
8	Use of sales discounts	Graham et al (2005) and Roychowdhury (2006)
9	Inventory overproduction	Thomas and Zhang (2002), Gunny (2005) and Roychowdhury (2006)
10	Stock repurchase	Hribar et al (2006)
11	Derivative hedging	Barton (2001), Pincus and Rajgopal (2002)
12	Securitisation	Dechow and Shakespeare (2009), Dechow et al (2010), Hunton et al (2006) and Van Beest (2009)

3.2.4. Detecting Earnings Management (EM) in EM Research

There are three quantitative approaches to detect earnings management in the empirical earnings management literature.

The first approach involves the use of total accruals where total accrual is divided into its discretionary accrual and non-discretionary accrual components. Discretionary accruals reflect abnormal (or managed) accruals which are interpreted to indicate earnings manipulation or earnings management while non-discretionary accruals are the component of total accruals that is normal or unmanaged (Peasnell et al., 2000). Some studies, for instance, Jones (1991) use regression technique to separate discretionary accruals from total accruals to test for earnings manipulation. This method is extensively used in the literature.

The second technique is based on the distribution of earnings after earnings have been managed. This technique was introduced by Brughstahler and Dichev (1997) and is considered to be more appropriate when there is a reason to believe that managers are motivated to manage earnings in order to meet some predefined earnings benchmarks or thresholds. In their study, Burgstahler and Dichev (1997) investigate the distribution of earnings and find that managers prefer to report positive earnings rather than reporting losses or significant decrease in earnings.

The third approach is the specific accrual approach. This technique is commonly used to test for earnings management among firms in industries where a particular accrual is significant (Sun and Rath, 2010). McNichols (2000) points out that the use of this technique is based on knowledge from theory or practice about the discretionary and non-discretionary factors that influence the size and timing of specific accruals in an industry. This suggests that, in order to apply the specific accrual approach, the researcher has to be knowledgeable about specific accruals that are likely to be manipulated in the industry and the factors that influence the specific accruals. In the banking industry, for example, the most significant accrual in the banking industry is provision for loan losses or loan loss provision (LLP), and there is evidence in the banking literature that bank managers can use loan loss provisions estimates - an accrual, to manage reported earnings (McNichols and Wilson, 1988; Sun and Rath, 2010). I adopt the specific accrual approach to measure earnings management among banks in this thesis. However, the specific accrual approach has two disadvantages. One, the researcher cannot adopt the specific accrual approach without having specialised knowledge about the industry and knowledge about institutional factors that may influence the behaviour of the specific accrual (McNichols, 2000). Two, generalisations cannot be made from the findings derived from a specific accrual approach because the approach narrowly focus on one accrual rather than a combination of many accruals.

Finally, while no single approach is perfect because each approach has its own weakness; McNichols (2000) maintain that one fundamental issue in testing for earnings management is the difficulty to capture managerial discretion in reported earnings. Stolowy and Breton (2004) also note that this difficulty is more pronounced when distinguishing between normal and abnormal accruals.

3.3. Institutions

This section examine the influence of institutional factors on the earnings management behaviour of firms in order to identify how the presence of certain institutions encourage or limit managers' ability to distort the financial reporting process of firms they are affiliated to.

3.3.1. Institutional Factors

Institutional factors, simply put, are set of rules or principles that restrain the behaviour of firms (La Porta and Lopez-de-Silanes, 1998). Each country has a number of institutions that influence corporate behaviour or the behaviour of firms in the country, and these institutions include, but not limited to, legal institutions, capital market institutions, investor protection institutions, regulatory agencies, etc. Nobes and Parker (2008) posit that the effectiveness of these institutions and their ability to constrain firm behaviour vary across countries due to differences in legal systems, differences in the demand for accounting, differences in corporate governance structures, differences in capital market development, etc. They also stress that cross-country differences in the demand for accounting which includes differences in financial reporting goals, differences in accounting rules, differences in the extent of financial statement disclosures and differences in the key users of financial statements; taken together, will have some consequence on the financial reporting behaviour of firms.

From an agency theory perspective, Jensen and Meckling (1976) posit that the incentive for managers to pursue their self-interest is reduced by strong monitoring of firm management and that certain institutions can perform the monitoring role by effectively discouraging the manipulation of the financial accountability process of firms. Leuz et al. (2003) show that strong institutional factors are associated with lower earnings management among industrial firms while other studies show that institutional factors are responsible for the dissimilar earnings management practices among firms across countries (e.g., Ball et al., 2000; Ball et al., 2003; Bushman and Piotroski, 2006, etc.).

3.3.2. Capital Market Institutions

Capital markets can influence the way managers of publicly traded (or listed) firms report earnings either through the imposition of strict disclosure requirements for publicly traded firms or through the need for

managers to meet the expectations of capital market participants such as investor analysts' earnings forecast. Capital market institutions are established to ensure that firms disclose relevant and reliable information to aid investment decisions of investors and other capital market participants. Beatty et al. (2002) argue that, because publicly traded firms have more outsiders, their earnings announcements and other financial statement disclosures should have greater signalling effect to capital market participants compared to non-publicly traded (or unlisted) firms. Therefore, the additional disclosure requirements imposed on publicly traded firms (or listed) firms by capital market institutions or the SEC ensures that publicly traded firms provide transparent disclosures while discouraging earnings management in the financial reporting.

Although strict disclosure requirements for publicly traded (or listed) firms set out by capital market regulators should discourage the misrepresentation of financial and non-financial disclosures of listed firms, there is the argument that a firm's relation with the capital market create incentives for managers to manipulate reported earnings to signal private information to the market or to meet the expectations of some capital market participants including investor analysts and shareholders (Healy and Palepu, 1993), and this claim is supported by evidence in the capital market-based accounting literature.

For instance, Bartov (2002) shows that listed firms use discretionary accruals to manage reported earnings to meet the expectations of investor analysts while Roychowdhury (2006) documents that managers manipulate sales, reduce discretionary expenditures and engage in inventory overproduction to decrease cost of goods sold in order to increase earnings to avoid reporting annual losses or to avoid falling below analyst forecasts. Cohen et al. (2008) observe that firms use real activity-based earnings management techniques to meet investor analyst forecasts. Kasznik (1999) observes that, to avoid falling below investor analyst expectations, managers use abnormal or unexpected accruals to increase reported earnings while Moehrle (2002) finds that firms use restructuring accrual reversals to manage reported earnings to exceed analysts' earnings forecasts. Subramanyam (1996) suggests that firms manage reported earnings to communicate private information to investors while Neill et al. (1995) suggest that firms adopt accounting methods that can signal firm value to the capital market. Friedlan (1994) and Aharony et al. (1993) find that earnings are managed prior to or around initial public offerings. Teoh et al. (1998) and

Cohen and Zarowin (2010) find that earnings are managed before seasoned equity offerings. Erickson and Wang (1999), Bergstresser and Phillipon (2006) and Botsari and Meeks (2008) observe that firms manage earnings upward before share-for-share corporate acquisitions. Perry and Williams (1994) show that firms manage earnings downward prior to management buyouts to lower stock prices and thus increasing the price of the buyout. Taken together, the studies above show that a firm's relation with the capital market can create incentives for managers to manipulate reported earnings to meet the expectations of capital market participants. Finally, firms' relation with the capital market in the literature is commonly captured by distinguishing between publicly traded (or listed) firms and non-publicly traded (or unlisted) firms, with a focus on the financial reporting properties of publicly traded (or listed) firms.

3.3.3. Regulatory Institutions

Regulatory institutions impose constraints on managers' ability to opportunistically distort the financial accountability process of firms. Watts and Zimmerman (1986) posit that the presence of regulatory institutions that impose taxes, regulatory rate and frequent investigation create incentives for managers to influence their financial reporting characteristics in ways that meet the requirements of regulators, implying that the way firm managers might influence financial reports to manage reported earnings when they face strict regulation, monitoring and supervision will differ from the way they would manage reported earnings in the absence of such regulatory constraint.

Among banks, for example, Beatty et al. (1995) and Shrieves and Dahl (2003) show that greater restriction on bank activities reduce the opportunities for bank managers to use discretionary accruals to manage or smooth reported earnings. Fonseca and Gonzalez (2008) argue that if bank supervisors have greater powers to intervene in banks to discipline bank managers and to reduce the incentive to take excessive risks, the greater supervisory powers to bank supervisors will discourage bank managers from using discretionary accruals to manipulate reported earnings. Accordingly, regulatory constraint on firm managers by industry regulators should discourage the opportunistic manipulation of accruals to manage reported earnings.

3.3.4. Political Economy

Political economy factors can limit managers' ability to opportunistically distort the financial accountability process of firms. The political economy school of thought began with Karl Marx in the 19th century. Karl Marx was concerned about how class (and power) struggle influence economic development in a capitalist society that emphasise economic freedom in the presence of perfect competition (Marx et al, 1976). Concerned by class struggle, Karl Marx in Marx et al (1976) conclude that class struggle play a central role in understanding economic oppression of the poor by the rich (or bourgeois) in a capitalist society, and when class struggle is taken into account by the State, a transition from capitalism to communism is inevitable.

Building on Karl Marx's ideology, the concept of political economy was subsequently applied to macroeconomic policy making in the 20th century and was later applied to several academic discipline in the 21st century. For instance, Pagano and Volpin (2001) use the concept of political economy to explain policy interventions such as bailouts in financial markets during a financial crisis. With regard to financial development, Haber and Perotti (2007) applied the idea of political economy to highlight the impact of political economy on access to finance among firms and individuals, the size of capital markets and banking systems in an attempt to understand the impact of political economy on financial development. In the corporate governance discipline, Pagano and Volpin (2005) adopt the concept of political economy to explain how politics can weaken legal rules intended to minimise the exploitation of investors in firms. They argue that politics is the main reason why different countries grant different degrees of protection to investors because political decision makers respond to different incentives as well as incentives from firms they are affiliated to. In corporate control, Pagano and Volpin (2001) and Hellwig (2000) demonstrate that politics can affect the balance of power between firm insiders (managers and controlling shareholders) and outsiders (non-controlling shareholders) by designing the rules intended to protect minority shareholders as well as the rules that influence the contestability of corporate control. In financial regulation, Demirguc-Kunt and Detragiache (1998) show that respect for the rule of law, lower corruption levels and strong legal enforcement are crucial for the effective functioning of a financial system while Hellmann et al. (2000) stress that good political governance ensures that the financial

system is regulated and supervised so that savers do not lose their savings in the event of banking failure. Acemoglu et al. (2003) show that the existence of poor political institutions better explains macroeconomic instability across countries than actual macroeconomic policies themselves. Haber and Perotti (2007) also point out that if weak political institutions fail to restrain the opportunistic behaviour of bank managers and owners, they will increase the risk of financial/banking crises or worsen the consequences. Taken together, these views argue that the presence of, and quality/strength of political economy play a critical role in banking and financial stability.

There are two dimensions to political economy in finance. The first dimension relate political economy to the extent of government participation in financial firms (La Porta et al., 2002) while the second dimension relate political economy to empowering existing institutions with enforcement powers to monitor firms and to discipline rule-breaker firms (Kaufmann et al., 2011).

3.3.4.1. Political Economy via Government Participation

The first dimensions that relate political economy to government participation in firms argue that the government participate in firms for either developmental reasons or for self-serving reasons. In the former, the government could choose to work through, or to partner, with firms in order to meet crucial developmental needs in the economy (La Porta et al., 2002). Gerschenkron (1962) shows that when economic institutions in a country are not well developed, government ownership of firms is necessary to foster development. Also, Shleifer (1998) argues that government ownership of firms is necessary to deal with market failures and other market imperfections such as monopoly power or externalities; and the government may nationalise a failing or poorly performing firm for the benefit of society if the firm's role is crucial for economic development. La Porta et al. (2002) also point out that government ownership of firms may be aimed at developing the local economy and to stabilise the economic system. Following these arguments, and in the context of banks, a government may choose to have part or full ownership of banks to (i) show their interest to promote banking sector stability, (ii) to discourage opportunistic bank behaviour for the greater good of society and (iii) to ensure that banks channel financial resources to developmental projects that managers of private banks are unwilling to channel funds to, thus improving the efficient allocation of bank credit to sectors of the economy that need funding for capital projects. The

implication of this, according to Bushman and Piotroski (2006), is that if firms perceive that government participation is intended to improve the efficiency of inefficient or poorly-performing firms, managers of such firms would apply aggressive accounting techniques to make the firm appear healthier and profitable to discourage government participation or interference.

On the other hand, governments may participate in firms for self-serving or selfish reasons. For instance, North (1990) and Olson (1993) demonstrate that those in power mainly politicians and government officials, shape government policies to remain in power and to enrich themselves. La Porta et al. (2002) and Shleifer and Vishny (1994) further argue that these government officials and politicians may participate through firm ownership and/or control in order to provide employment, subsidies, resource reallocation and other benefits to government supporters, who in return will provide votes, contributions, and bribes to support the existing regime. Sapienza (2004) shows that Italian-state owned banks charge substantially lower interest rates relative to privately-owned banks, and lend more to areas where the government has a large client base,[18] implying that politicians use banks as an instrument to fulfil their own political agenda. The implication of this view according to Bushman and Piotroski (2006) is that when firms perceive that politicians and government officials are seeking for evidence that a firm is profitable in order to expropriate the wealth of firm owners, managers will have incentives to report conservative profit levels to make the firm appear less profitable to discourage politicians from interfering with the firm.

The two arguments for government participation above also give rise to another question. The question of whether politicians, politically-connected individuals and government officials care about reported accounting numbers of firms. Do they care about reported accounting numbers? The answer to this question is not straightforward. Bushman and Piotroski (2006) suggest that politicians may be interested in accounting numbers because detailed information reflected in stock price is not freely available to

[18]Also, state-owned banks tend to perform poorly than banks without state ownership. For instance, Micco et al. (2007) show that state-owned banks operating in developing countries have lower profitability than private banks and the lower profitability is due to lower net interest margins and higher overhead costs of state-owned banks. Similarly, Cornett et al. (2009) show that state-owned banks are less profitable particularly for banks in countries with greater government involvement and political corruption in the banking system.

politicians but are freely available to investors and firm owners; consequently, politicians would rely on accounting numbers of firms in addition to other firm information when making expropriation or intervention decisions in firms.

3.3.4.2. Political Economy via Empowering Institutions

The second dimension of political economy focus on the creation of strong political economy that empower institutions to monitor and supervise firm behaviour and to discipline firms that engage in corporate reporting malpractices. Kaufmann et al. (2011) demonstrate that one important factor that explains differences across countries even when countries have similar legal systems is the political economy differences across countries, that is, the political system through which decisions about economic policies are made.

For the purpose of this thesis, the concept of political economy is used to describe how existing political economy in a country empower or weaken the ability of institutions to monitor and supervise firm behaviour and to discipline firms that engage in corporate reporting malpractices. In Africa, for instance, most African countries have similar but weak legal systems although the political economy system that shape banking regulation, financial development and economic policies differ significantly across African countries.

If establishing a strong political economy that empower institutions to discipline firms increase the risk of exposing corrupt politicians affiliated to such firms, corrupt politicians in power will oppose or delay any policy aimed at strengthening the disciplinary powers of such institutions while they remain in power (North (1990) and Olson (1993)), and this potentially explains why some countries continue to have weak political economy. The presence of weak political economy encourages corruption among firms (including banks) in the private and public sector due to low accountability levels which in turn encourage firms to opportunistically distort the financial reporting process.

With regard to banking supervision, I argue that if the presence of a strict supervisory authority reflect the presence of strong political economy in a country, then strong political economy will empower bank supervisors and regulators to effectively supervise, monitor and discipline banks that attempt to

opportunistically distort their financial reporting, implying that strong political economy should discourage the opportunistic distortion of bank financial reporting because the political system empowers bank supervisors to discipline banks that opportunistically alter their financial reporting disclosures. On the other hand, if the presence of a weak supervisory authority reflect the presence of weak political economy in a country, then weak political economy will weaken bank supervisors' ability to effectively supervise, monitor and discipline banks that attempt to opportunistically distort their financial reporting, implying that weak political economy will encourage the opportunistic distortion of bank financial reporting because the political system do not empower bank supervisors to discipline banks that opportunistically alter their financial reporting disclosures.

Further still, from a critical dimension, one could argue that the effectiveness of a strong political economy depends on interest groups that lobby the political process. Pagano and Volpin (2001) show that political intervention in financial markets occur when pressure groups and the career concerns of politicians combine to produce specific political interventions in financial markets such as nationalizations, privatizations, bailouts, etc. Following Pagano and Volpin (2001) argument, if banks with strong interest groups lobby the political process to ensure that the political economy and its institutions do not significantly limit banks' discretion to behave opportunistically in financial reporting, then the political economy in the country is less likely to discourage opportunistic financial reporting practices of banks. On the other hand, if minority shareholders' interest groups and depositor protection interest groups lobby the political process to ensure that the political economy and its institutions significantly constrain bank opportunistic behaviour in financial reporting, then the political economy in the country will significantly discourage opportunistic financial reporting behaviour of banks.

3.3.5. Investor Protection

Investor protection is defined as the power to expropriate minority shareholders and creditors within the constraints imposed by law (La Porta et al., 2002). Shleifer and Vishny (1997) and La Porta et al. (2000) identify investor protection as a key institutional factor affecting corporate policy decisions. The presence of institutions that protect the rights of minority shareholders should discourage the distortion of the financial reporting process and financial accountability system of firms. Ball (2001) suggests that the

presence of institutions that protect stockholders should act as an effective deterrent against earnings management among firms in countries with strong investor protection compared to firms with low investor protection. Leuz et al. (2003) point out that strong investor protection constrain the earnings management behaviour of firm managers because the presence of institutions or rules that protect investors' rights reduce the ability of firm insiders to acquire private control benefits, and mitigate the incentive to manipulate accounting earnings because there is little or nothing to conceal from outsiders. The implication of Leuz et al. (2003)'s argument is that managers in environments with strong investor protection levels are more likely to provide more transparent reported earnings to avoid the risk of litigation arising from concealing important information to outsiders.

Several studies build on the above argument and show that strong investor protection improves the quality of financial reporting disclosures by discouraging earnings manipulation. Leuz et al. (2003) use 'protection of minority shareholder' and 'strength of legal enforcement' as proxies for investor protection obtained from La Porta et al. (1998), and show that earnings management is more pervasive for commercial and industrial firms in countries where legal protection of minority shareholders and legal enforcement are weak relative to firms in countries with strong investor protection. Tendeloo and Vabstraelen (2008) show that firms with Big 4 auditor and in strong investor protection environments exhibit lower levels of earnings management compared to firm with non-Big 4 auditor in weak investor protection environments. In banks, Shen and Chih (2005) observe that strong protection of the rights of minority shareholders discourages earnings management among banks while the quality of legal enforcement did not discourage bank earnings management. Fonseca and Gonzalez (2008) use three proxies from La Porta et al. (1998) to represent investor protection: rights of minority shareholders, creditor rights and legal enforcement, and show that bank earnings smoothing behaviour, a type of earnings management behaviour, decreases with strong investor protection levels.

Overall, the evidence to support the theoretical argument that strong investor protection should discourage earnings management depend on the investor protection proxy used, which possibly explains why a combination of investor protection proxies are used among empirical studies. However, the use of several investor protection proxies depends on the availability of data for the proxies used. Finally, other

studies that view investor protection as an important institutional factor that deter earnings management among firms include Del Guercio and Hawkins (1999), La Porta et al. (2002), Nabar and Boonlert-U-Thai (2007), DeFond et al. (2007), Chih et al. (2008) and Francis and Wang (2008).

3.4. Earnings Smoothing: Conceptual Framework

Earnings smoothing is a type of earnings management practice aimed at making reported earnings appear stable over a period of time. Beidleman (1973) views earnings smoothing as "managers' attempt to use their discretion in financial reporting to intentionally dampen the fluctuation of firms' earnings" (p.653). Fudenberg and Tirole (1995) view earnings smoothing as the manipulation of the time profile of earnings to make reported earnings less variable so that reported earnings is never too high or too low. Greenawalt and Sinkey (1988) suggest that earnings smoothing is the practice of decreasing high earnings in good years and increasing low earnings in bad years in order to report stable earnings. From the definitions above, the process of making reported earnings 'never too high or too low' distinguishes earnings smoothing from income-increasing earnings management techniques. So, why do firms smooth reported earnings?

3.4.1. Earnings Smoothing: Motivations

Early studies provide some explanations for earnings smoothing among firms. For instance, Fudenberg and Tirole (1995) use a model of earnings management and demonstrate that, in the presence of managerial compensation scheme, managers have incentive to smooth reported earnings during bad times to lengthen their job tenure, and smooth reported earnings during good times to save earnings for future times or to save for the rainy day. Lambert (1984) use optimal contracting theory and show that managers have greater incentive to smooth earnings when reported earnings are expected to be high because investors prefer stable earnings rather than earnings surprises. Gordon (1964) points out that as long as managers have discretion over accounting choices, they will smooth reported earnings as well as the rate of growth in earnings. Gordon (1964) argues that firm managers can smooth reported earnings to maximise their own earnings under the assumption that shareholders prefer earnings stability more than

higher average earnings with high variability. Healy (1985) suggests that managers smooth reported earnings to meet earnings targets when they have bonus plans.

Dye (1988) suggests two reasons for earnings smoothing. Dye (1988) argues that managers will smooth earnings when they face external pressure to increase expected cash flow to investors or will smooth reported earnings when managers are unable to communicate all relevant information to the principal; hence, manipulated or smoothed earnings provides a vehicle for managers to hide information from firm owners. Kirschenheiter and Melumad (2002) use a theoretical equilibrium model to show that firms prefer to smooth earnings when they anticipate good news, and the extent of their earnings smoothing behaviour will depend on the current level of cash flow of the firm. Also, Arya et al. (1998) argue that managers may smooth reported earnings to protect their job, and DeFond and Park (1997) provide empirical evidence to support Arya et al (1998)'s claim. DeFond and Park (1997) show that managers that have concerns about their job security will borrow earnings from the future for use in the current period when current earnings are low, and conversely, save current earnings for future use when current earnings are good. Vander Bauwhede (1998) shows that managers can smooth reported earnings to: avoid shareholder interference, avoid tax, improve the terms of trade and to pursue a fixed dividend pay-out ratio. Trueman and Titman (1988) suggest that managers can smooth reported earnings to convince potential debtholders that earnings volatility is low, implying low risk. Koch (1981) undertook an experiment and observe that earnings smoothing is greater (i) when smoothing is achieved through the use of artificial (accounting or accruals) variables compared to when it is achieved using real (transactional) variables and when (ii) ownership is not dispersed. However, they observe that less earnings smoothing occurs when the cost of smoothing is high.

3.4.2. How Firms Smooth Reported Earnings: Method

White et al. (2003) identify two types of earnings smoothing practice: inter-temporal earnings smoothing and classificatory earnings smoothing. According to White et al. (2003), inter-temporal earnings smoothing involves influencing the timing of expenditures such as research and development (R&D) expenditures, repairs and maintenance expense, asset disposals, loan loss provisions estimates; so that

reported earnings is never too high or too low. This type of earnings smoothing can also be achieved by choosing accounting methods/procedures that allocate expenditure or expenses over time.

Classificatory earnings smoothing, on the other hand, involves "choosing to classify an item as either earnings from continuing operations or extraordinary earnings" (White et al., 2003: p.60). For instance, managers may report lump-sum losses when earnings are expected to be high in order to smooth earnings. Fudenberg and Tirole (1995: p.76) argue that earnings smoothing can be achieved by two methods. The first method involves exploiting the flexibility allowed in generally accepted accounting principles to alter reported earnings without changing the underlying cash flow. This view suggests that firms may delay or accelerate the timing of expenses or revenues to a later period or accelerate future cost to the current period. The second method by which a manager may smooth earnings is to change operations to smooth the underlying cash flow (See. Fudenberg and Tirole, 1995: p.76). Fudenberg and Tirole (1995) points out that the former method of earnings smoothing do not have real economic consequence for firms because it does not require the use of additional resources to achieve earnings smoothing while the latter method has real economic consequence on the firm because it require the use of additional accounting resources.

3.4.3. Effect of Earnings Smoothing

With respect to the effect of earnings smoothing on firms, Demski (1998) shows that, in the absence of an incentive, efficient contracting partially communicate information about future earnings and managers use information about future earnings to decide whether they should smooth current earnings or not. Sankar and Subramanyam (2001) demonstrate that managers smooth earnings to smooth consumption as a way to communicate private information about future earnings. Tucker and Zarowin (2005) point out that, while earnings smoothing may improve earnings informativeness if managerial discretion to smooth earnings is aimed at communicating managers' assessment of future earnings, earnings smoothing can make earnings noisier if managers intentionally distort reported earnings just for the sake of it (Tucker and Zarowin, 2005).

3.5. Summary and Conclusion

This chapter discussed positive accounting theory as the main theoretical explanation for earnings management in firms although it is not the only explanation. Positive accounting theory conclude that the presence of explicit contracts (that is, bonus plan, debt covenant and political cost) motivate managers to influence reported earnings to meet explicit contracts that depend on reported accounting numbers. While positive accounting theory is not the only theory that explains the financial reporting choice of managers, I use positive accounting theory as a more appropriate theoretical lens to explain the earnings management behaviour of managers because it explains earnings smoothing behaviour among firms which can also be extended to the case of banks.

The main message of this chapter is that the earnings management among firms is influenced by explicit contracts given to managers, the choice of accounting numbers used to manipulate earnings, the firm context, industry context, and institutional factors that work together to influence the extent of earnings management among firms. Moreover, certain institutional factors such as strong investor protection, capital market institutions, regulatory institutions and political economy can deter managers from engaging in earnings management and earnings smoothing practices in firms. The next chapter reviews the empirical literature on earnings smoothing.

Chapter 4

Factors Influencing Earnings Smoothing: Evidence

4.0. Introduction

Firms manage reported earnings and this practice is well documented in the broad earnings management literature. Earnings smoothing is a type of earnings management practice and prior studies document evidence that non-bank companies smooth reported earnings under specific conditions. For instance, Ashari et al. (1994) examine 153 listed companies in Singapore to identify factors associated with earnings smoothing. They find that listed companies smooth earnings when they are in risky industries and such earnings smoothing behaviour make them relatively less profitable. Grant et al. (2009) investigate whether CEOs engage in risky activities to increase the likelihood of receiving executive stock option. They argue that earnings smoothing provides a means by which a manager may reduce the unintended consequences of risk-taking without reducing its intended consequences. After examining 7,000 firm-year observations, they find that CEO risk-taking incentives are positively related to earnings smoothing behaviour particularly for firms whose risks and risk-taking behaviour are high. They conclude that CEOs smooth reported earnings to mask the underlying risks they take in an attempt to increase the likelihood of receiving the executive stock option. Prencipe et al. (2011) investigate whether earnings smoothing behaviour differ among family-controlled companies and non-family controlled families. They find that earnings smoothing is not pronounced among family-controlled companies relative to non-family-controlled companies. Their finding supports the view of agency theory and stewardship theory, and implies that the owner-manager agency problem is more pronounced in non-family-controlled companies and is less pronounced in family-controlled companies because family-controlled companies tend to choose managers that will support the interest of the owners of family-owned companies. Bouwman (2014) investigates how CEO optimism affects earnings smoothing and earnings surprises and find that optimistic managers smooth reported earnings more than rational managers.

The techniques used to smooth reported earnings may be divided into 'real' and 'accrual' earnings smoothing techniques. With regard to 'real' earnings smoothing techniques, Pincus and Rajgopal (2002) observe that managers in oil and gas firms use hedging in derivatives to smooth reported earnings because hedging the derivatives helps to lower the volatility of cash flows which in turn increases overall earnings. Markarian et al. (2008) find that Italian companies capitalise research and development (R&D) costs to smooth reported earnings while Adibah et al. (2005) find that firms manipulate the reporting of extraordinary items to smooth reported earnings. With regard to 'accrual' earnings smoothing techniques, Atik (2009) documents that Turkish firms use discretionary accruals to smooth earnings.

Banks are different from industrial (or non-bank) firms and the tools available to bank managers to manipulate earnings would differ significantly from those available to managers of non-bank companies. There are two common techniques identified in the empirical literature that banks might use to manage earnings: realised (and unrealised) gains and losses on the sale of securities and loan loss provisions estimates. With respect to realised security gains or losses, studies such as Beatty et al. (1995) and Beatty et al. (2002) demonstrate that banks use their discretion to sell an investment security, delay the recognition of losses on security sales and/or accelerate gains on security sales in order to increase bank earnings, because it is unlikely that auditors, regulators or shareholders will have an issue with a manager's decision to sell an investment security that subsequently leads to increase or decrease in earnings. This makes realised security gains and losses the second most important way that bank managers may manage earnings or smooth earnings after loan loss provisions. Prior to SFAS 157, Beatty et al. (2002) observe that publicly traded US banks use realised securities gains and losses and loan loss provisions to eliminate small decreases in earnings. In 2007, the US introduced SFAS 157 to increase the scrutiny of banks' reported earnings in order to discourage bank earnings management that take the form of overstating gains and understating losses on the sale of bank securities. Barth et al. (2016) investigate whether US banks use realised gains or loss from available-for-sale securities to manage earnings and regulatory capital. They find that US banks use realised gains and losses on available-for-sale securities to smooth earnings and regulatory capital. They also find that US banks with negative earnings take a big-bath when their unrealised gains are insufficient to offset negative earnings. Compared to the US, the

reporting of realised gains and losses on securities portfolio is not well-developed, highly regulated or scrutinised in developing countries, e.g. Africa. African countries do not have a well-developed derivatives and securities market that could create strong incentives for African banks to use realised securities gain and loss to influence the level of reported earnings.

The second technique employed by banks to smooth reported earnings is loan loss provisions estimates or provisions for bad debt. Banks have a loan portfolio that require adequate loan loss provisioning, and there is the argument that loan loss provision estimates may be used by bank managers to meet other financial reporting objectives rather than its intended credit risk management purpose. One of such financial reporting objective is the need to smooth reported earnings. Therefore, in this chapter, I focus the literature review on studies that examine earnings smoothing and loan loss provisions.

The remainder of this chapter review the loan loss provisions empirical literature. More specifically, the chapter review the literature that investigate the use of loan loss provisions to smooth bank earnings while noting that loan loss provision estimate is a significant discretionary accrual for banks. The discussions aim to highlight factors that influence bank earning smoothing practices in the extant empirical literature in order to identify some gaps in the literature.

4.1. Loan Loss Provisions: Empirical Literature

Research into loan loss provisions so far has focused on banks and credit institutions and still remains a fruitful and interesting area of banking research for three reasons. One, because bank loan loss provision is the most significant discretionary accrual at the disposal of bank managers; two, because of the direct impact of loan loss provision estimates on bank interest margin and overall earnings and; three, because of the availability of bank-year data on loan loss provisions estimates. While loan loss provisioning research might be criticised for being complicated by: (i) the process that determines the loan loss provisioning estimates (i.e., the assumptions, methodology and other unobservable managerial choices taken into consideration); and the (ii) differences in the accounting for loan loss provisions across countries; however, the empirical literature continue to exploit these variations to deepen our

understanding of various manifestations of managerial discretion in the way banks report loan loss provisions estimates in financial statements.

Broadly, there are four strands of literature in loan loss provisions research. The first strand of literature relate to studies that test the capital management hypothesis commonly referred to as the capital management literature. The second strand of literature relates to studies that test the signalling hypothesis commonly referred to as the signalling literature. The third strand of literature relate to studies that test the earnings smoothing hypothesis commonly referred to as the earnings smoothing literature. The fourth strand of literature relate to studies that test for procyclical behaviour of bank provisions commonly referred to as the procyclicality literature or the cyclical hypothesis.

Hereafter, the term 'loan loss provisions' and 'LLP' are used interchangeably for the rest of this chapter.

4.1.1. LLP and Capital Management Hypothesis

The first strand of literature examine whether banks use loan loss provision estimates to manage the level of bank capital or regulatory capital. With regard to regulatory capital management, the literature argue that, because bank regulators require banks to keep minimum regulatory capital for the risk they take, bank managers may have incentive to influence the level of loan loss provisions estimates in a way that allow them to meet minimum regulatory capital requirements if loan loss provisions is included in the computation of minimum regulatory capital ratios (Moyer, 1990; Ahmed et al., 1999). When this is the case, the capital management hypothesis state that the inclusion of (general) provisions in the computation of regulatory capital ratios will motivate bank managers to manipulate loan loss provisions estimates in order to influence the level of regulatory capital above the minimum limit (Scholes et al., 1990; Ahmed et al., 1999). Bank managers' awareness of the costs associated with violating minimum regulatory capital requirements is argued to create an incentive for bank managers to use their discretion to lower loan loss provisions estimates to increase the bank's regulatory capital ratio above the minimum limit (Ahmed et al., 1999). This is the capital management hypothesis.

Kilic et al. (2012) and Bonin and Kosak (2013) suggest an alternative view to the capital management hypothesis. In the absence of minimum regulatory capital ratios, Kilic et al. (2012) and Bonin and Kosak

(2013) argue that banks view loan loss provision as a form of bank capital. They argue that, when bank equity capital is low banks will overstate loan loss provisions to compensate for their low capital level and will understate loan loss provisions when they have sufficient equity capital, reflecting banks' use of loan loss provisions for capital management purposes.

Empirical studies that test the capital management hypothesis examine the statistical relationship between discretionary loan loss provisions and Tier 1 capital before loan loss provisions or equity capital (e.g. Kim and Kross, 1988; Collins et al., 1995; Ahmed et al., 1999; Lobo and Yang, 2001). A negative (and significant) relationship between discretionary loan loss provisions and Tier 1 capital (before provisions) is considered as evidence to support the capital management hypothesis. Notably, the work of Ahmed et al. (1999) is core to this strand of literature. Ahmed et al. (1999) examine 113 US banks during the 1986 to1995 period and find that banks use loan loss provisions to manage minimum regulatory capital levels. Recent studies including Anandarajan et al. (2007), Leventis et al. (2011) and Curcio and Hasan (2015) also find similar evidence. In contrast, Collins et al. (1995) use two-stage regression (from a first-stage least square regression model) and find a positive relation between provisions and minimum regulatory capital. Their finding did not support the capital management hypothesis. While there are mixed conclusions in the literature to support the capital management hypothesis, most empirical studies that investigate bank earnings smoothing practices commonly control for capital management incentives by incorporating Tier 1 capital ratio or total equity to total asset ratio into the model (e.g. Kilic et al., 2012; Bonin and Kosak, 2013). I follow a similar approach in the empirical analysis in this thesis.

4.1.2. LLP and Signalling Hypothesis

The second strand of literature examine whether banks use loan loss provision estimates to signal private information to firm outsiders about the quality of bank loan portfolio (e.g. Beaver et al., 1989; Griffin and Wallach, 1991; Wahlen, 1994; Liu and Ryan, 1995; Beaver and Engel, 1996; Ahmed et al., 1999; Kanagaretnam et al., 2005). Abnormal loan loss provisions estimate is often considered to signal some information about bank non-performing loans or to signal information about a firm's future earnings prospect. Studies that test the signalling hypothesis examine the statistical relationship between discretionary loan loss provisions and one-year ahead earnings. Conclusions to support the signalling

hypothesis derives from the positive (and significant) relationship between discretionary loan loss provisions and one-year ahead (future) earnings after controlling for non-discretionary loan loss provisions determinants and other external influences.

For instance, Kanagaretnam et al. (2003) find that managers of undervalued banks use loan loss provisions to increase the level of earnings to signal banks' future earnings prospects. Eng and Nabar (2007) investigate loan loss provisions for three Asian countries: Hong Kong, Malaysia and Singapore during the 1993 to 2000 period. They find that abnormal (or unexpected) loan loss provisions are positively related to bank stock returns and future cash flows indicating that Asian bank managers increase loan loss provisions to signal favourable cash flow prospects. Also, they find that bank investors bid stock prices up when unexpected loan loss provisions are positive. Wahlen (1994) find similar results for US banks. In contrast, Ahmed et al. (1999) did not find evidence to support the signalling hypothesis. Kanagaretnam et al. (2005) examine the determinants of signalling among banks and document evidence that banks use loan loss provisions to signal future earnings prospects of banks. They conclude that the propensity to signal private information about firms' future prospects vary across banks because banks face different conditions and have different incentives for doing so. Beaver and Engel (1996), Liu et al. (1997) and Kanagaretnam et al. (2005) also show some consensus that the motivation to use loan loss provisions to signal firm future prospects depend on: the degree of information asymmetry, differences in managerial incentive to signal and the extent to which investors interpret high loan loss provisions as a signal for improved loan quality or as a signal in anticipation of large non-performing loans.

4.1.3. LLP and Procyclicality

The third strand of literature is the literature that investigates the behaviour of bank loan loss provisions in relation to fluctuations in the economic cycle or business cycle. The literature argue that bank provisioning behaviour is procyclical because it reinforce the current state of the economy (Bikker and Hu, 2002; Laeven and Majnoni, 2003; Bikker and Metzemakers, 2005; Bouvatier and Lepetit, 2008). By procyclical, they mean that when banks enter a recessionary period, the rational response of bank managers is to decrease lending and increase loan loss provisions. Increase in bank provisioning during the recessionary period will further reduce bank net interest margin and decrease bank overall profit and

worsen the state of banks during the recession. If the recession is sustained, bank capital can be completely wiped out. This is the argument for the procyclical behaviour of bank provisions. To support this argument, Borio et al. (2001) find a strong negative relationship between bank provisioning and the business cycle for 10 OECD countries while Beatty and Liao (2009) observe that banks delay the timing of loan loss provisions until recessionary periods set in, reinforcing the current state of the economy.

Studies that test the procyclicality argument examine the statistical relationship between discretionary loan loss provisions and real gross domestic product growth rate - a proxy for economic cycle fluctuation. Also, conclusions to support the procyclicality hypothesis derives from the negative (and significant) relationship between discretionary loan loss provisions and real gross domestic product growth rate after controlling for non-discretionary loan loss provisioning determinants and other external influences. Empirical evidence to support the view that loan loss provisioning is procyclical with changing economic conditions are well documented in the literature (e.g. Greenawalt and Sinkey, 1988; Arpa et al., 2001; Borio et al., 2001; Biker and Hu, 2002; Pain, 2003; Beatty and Liao, 2009; Floro, 2010; Packer and Zhu, 2012, etc.). Most empirical studies that investigate bank earnings smoothing practices commonly control for the procyclical behaviour of bank loan loss provisions by incorporating real gross domestic product growth rate into the model. Accordingly, I include real gross domestic product growth rate into the model to detect whether loan loss provisioning is procyclical among African banks.

The growing evidence that bank provisioning behaviour is procyclical with fluctuating economic conditions particularly in Europe and US continue to motivate policy researchers to advocate the need for a counter-cyclical or dynamic loan loss provisioning system. A dynamic loan loss provisioning system is a loan loss provisioning system where banks report higher loan loss provisions during good economic times and report fewer loan loss provisions estimates during economic downturns so that the surplus loan loss provisions accumulated during good economic times are used to mitigate bank losses during economic downturns (Saurina, 2009). Following this view, bank regulators in Spain compelled Spanish banks to adopt a dynamic loan loss provisioning system in year 2000 (Saurina, 2009). Since the adoption of a dynamic loan loss provisioning in Spain, Spanish banks have become the laboratory for academic and policy researchers to test the effectiveness of a dynamic provisioning model as a solution to eliminate

or reduce loan loss provisions' procyclical behaviour. So far, studies emerging from Spanish banks show that, after adopting a dynamic provisioning system, bank provisioning is driven more by credit risk considerations rather than by earning smoothing and capital management considerations (see. De Lis et al., 2001; Perez et al., 2008; Saurina, 2009; Fillat and Montoriol-Garriga, 2010; Jiménez et al., 2012, for more on this).

Nonetheless, there are three criticism against a dynamic loan loss provisioning. One, dynamic loan loss provisioning research so far is biased towards a single country analysis - Spain. Two, the ability of a dynamic loan loss provisioning system to generate sufficient provision buffers in anticipation of stressed periods depends on the severity and the time lag of the existing crisis or recession (Fillat and Montoriol-Garriga, 2010), therefore, a dynamic provisioning system is unlikely to be sustainable when there is a prolonged recession. Three, there are concerns that dynamic loan loss provisioning is only workable if the transition from a recession into an economic boom, and vice versa, is easy for policy makers to detect (Bikker and Metzemakers, 2005); in practice, it is difficult to detect this transition because 'business cycle developments are hard to foresee, given their erratic duration and amplitude' (Bikker and Metzemakers, 2005: 144).

4.1.4. LLP and Earnings Smoothing

The fourth strand of literature is the earnings smoothing literature which argue that banks use loan loss provisions to smooth banks' reported earnings over time (Greenawalt and Sinkey, 1988). This argument is commonly referred to as the earnings smoothing hypothesis. The earnings smoothing hypothesis predicts that banks will use loan loss provisions to smooth reported earnings to make reported earnings appear stable over time (Greenawalt and Sinkey, 1988), or to meet some defined opportunistic financial reporting objectives (Wahlen, 1994).

The earnings smoothing literature began three decades ago. Early studies such as Barnea et al (1975) and Ronen and Sadan (1981) view earnings smoothing as a signalling device. Later, Greenawalt and Sinkey (1988) and Ma (1988) test the earnings smoothing hypothesis for US banks. Greenawalt and Sinkey (1988) demonstrate that when bank earnings are high, it makes sense to regulators for banks to set aside some of those earnings as provisions in anticipation of loan losses during bad years - the notion of saving

for a rainy day. They argue that when earnings are low, banks will keep fewer loan loss provisions in the current period and draw up from the loan loss provisions or reserve accumulated in the previous period to cover for actual loan losses in the current period. They test the earnings smoothing hypothesis for a sample of 106 large bank holding companies for the period 1976 to 1984. They model loan loss provisions as the dependent variable with bank earnings, regional and national economic activity as the independent variable and find that the use of loan loss provisions to smooth reported earnings was more aggressive among regional banks relative to money-centred banks.

A decade later, the argument that too high earnings attracts political and regulatory scrutiny while too low earnings could encourage shareholders to divest from the firm or bank, was argued to be a motivation for earnings smoothing among bank managers (Moyer, 1990; Wahlen, 1994). Several studies also test the earnings smoothing hypothesis during the Basel 1989 capital accord period. Basel 1989 capital accord is the international standard for bank capital regulation. For example, Hasan and Hunter (1994) examine 334 thrift societies and document evidence that thrift societies use loan loss provisions to smooth reported earnings. Wetmore and Brick (1994) examine 82 US banks over the 1986 to 1990 period and did not find evidence to support the earnings smoothing hypothesis. Bhat (1996) examine 148 banks from 1981 to 1991 and find that poorly-capitalised banks smooth earnings to a greater extent relative to financially-healthy banks. Later, the post-1989 Basel regulation eliminated loan loss provisions from the computation of regulatory capital ratio. After the elimination of loan loss provisions, emerging studies investigate bank earnings smoothing in the pre-and post-Basel 1989 period. For example, Lobo and Yang (2001) examine 705 US banks from1978 to 1997, and find evidence that bank use loan loss provisions to smooth reported earnings. In contrast, Ahmed et al. (1999) investigate earnings smoothing practices in 113 U.S bank holding companies from 1986 to 1995, but did not find evidence for earnings smoothing among US banks. Similarly, Kim and Kross (1998) did not find evidence for earnings smoothing in the post-Basel 1989 period but find evidence for capital management. Anandarajan et al. (2007) investigate banks in Australia and divide the bank sample into pre-Basel period (1991-1995) and post-Basel period (1996-2001) and document evidence for aggressive earnings smoothing in the post-Basel period among publicly traded banks. Overall, evidence to support the earnings smoothing hypothesis is mixed in the literature.

Generally, studies that investigate the earnings smoothing hypothesis examine the statistical relationship between discretionary provisions and pre-provision and pre-tax earnings (e.g. Ahmed et al., 1999; Laeven and Majnoni, 2003; Hasan and Wall, 2004; Kanagaretnam et al., 2004; Bikker and Metzemakers, 2005; Liu and Ryan, 2006; Anandarajan et al., 2007; Perez et al., 2008; Fonseca and Gonzalez, 2008; Leventis et al., 2011; El Sood, 2012; Curcio and Hasan, 2015; Skala, 2015), and most of these studies show a positive association between discretionary loan loss provisions and pre-provision and pre-tax earnings. Therefore, conclusions to support the earnings smoothing hypothesis derives from the positive (and significant) relationship between discretionary loan loss provisions and pre-tax and pre-provision earnings after controlling for non-discretionary provisioning and other country-specific differences. Recent empirical studies focus on country-specific contexts, cross-country contexts and the influence of institutional factors on bank earnings smoothing practices as shown in section 4.3 and 4.4.

4.2. Motivation for Earning Smoothing: Empirical Evidence

4.2.1. Capital Market Incentives

Some studies show that listed (or publicly traded) banks have incentive to use loan loss provisions to smooth reported earnings possibly to minimise fluctuation in stock prices (Anandarajan et al., 2007; Leventis et al., 2011). Anandarajan et al. (2007) demonstrate that if smoothed earnings can reduce earnings variability, then lower earnings variability would translate to lower stock price fluctuation and reduce the volatility of stock return. This view assumes that investors view stable stock prices as a good signal for high stock return. If this view holds true then bank managers will have incentive to smooth reported earnings to improve stock return in the short term. Anandarajan et al. (2007) investigate bank earnings smoothing practices among Australian banks during the 1991 to 2001 period and find that listed Australian banks aggressively use loan loss provisions to smooth earnings compared to non-listed Australian banks. Similarly, Leventis et al. (2011) investigate bank earnings smoothing practices among 91 listed European banks from 18 countries during the 1999 to 2008 period. They observe that European banks use loan loss provisions to smooth reported earnings but the earnings smoothing behaviour of listed European banks is significantly reduced after mandatory IFRS adoption.

One criticism of using listed and unlisted bank comparison to test for capital market incentive is that the use of stock returns data of listed banks is more appropriate to capture capital market incentives rather than using bank earnings data for listed and unlisted banks.[19] However, the usual justification for using bank earnings data as opposed to stock returns data is that, although it is easy to obtain the daily stock return or stock price data of firms, it is practically impossible to obtain data for daily earnings or daily loan loss provisions for the purpose of empirical modelling.

4.2.2. Regulation and Regulatory Scrutiny

Regulation can create incentives for regulated firms to smooth reported earnings when the cost associated with regulatory scrutiny is perceived to be higher for firms that report excessive profits (Burgstahler and Dichev, 1997, cited in Shen and Chih, 2005). Similarly, banks will smooth reported earnings when they expect high earnings to avoid the cost associated with excessive scrutiny of bank profit by bank regulators/supervisors. Moreover, if there are additional benefits to be derived from deliberately smoothing reported earnings other than the need to avoid excessive scrutiny of bank earnings, bank managers are likely to do so to take advantage of such benefits. For instance, Kilic et al. (2012) investigate the impact of SFAS 133 on the reporting behaviour of US commercial banks. SFAS 133 is the FASB's accounting for derivative instruments and hedging activities. They argue that the strict recognition and classification requirements of SFAS 133 reduced US banks' ability to smooth earnings through the use of derivatives; therefore, banks that were affected by SFAS 133 could rely more on loan loss provisions to smooth reported earnings rather than relying on derivatives. To test this argument, they examine 119 US banks and divide their sample into pre-SFAS 133 period (1999-2000) and post-SFAS 133 period (2001-2002). Their explanation for the choice of the narrow sample period was to capture the changes occurring around the enactment of SFAS 133 and to avoid possible contamination from other events. Consistent with their argument, Kilic et al. (2012) find evidence that US banks use loan loss provisions to smooth reported earnings when disclosure regulation made it difficult to use derivatives to smooth bank earnings. They conclude that the use of loan loss provisions to smooth reported earnings implies declining informativeness of reported loan loss provisions estimates. Ashraf and Hassan (2014)

[19] This viewpoint was received from conference discussants at the British Accounting and Finance Association (BAFA), Sussex, 2015.

investigate whether changes in accounting standards and prudential regulatory regime affects the use of loan loss provisions to smooth reported earnings in a cross-country context. They examine 7343 banks from 118 countries during the 1999 to 2010 period. They find that banks use loan loss provisions to smooth reported earnings but the earnings smoothing behaviour of banks did not change significantly after the change in accounting regime. Furthermore, they observe that banks under rule-based accounting standard regime exhibit higher levels of earnings smoothing compared to banks under a principles-based accounting regime. Taken together, these studies suggest that regulation can create incentives for bank to use loan loss provisions to smooth reported earnings.

4.2.3. Corruption

Barth et al. (2009) relate corruption in a country to banks in the country. They stress that, although banks are important to any society because they are an important source of external finance to business firms and governments and help to reduce poverty and income inequality, the ability of banks to fulfil this role to society is limited because banks are susceptible to corruption. Barth et al. (2009) point out that the general lack of adequate laws, objective courts, prudential regulations, and other appropriate institutions to sufficiently contain corruption is a cause for the increase in corruption in developing countries. Bhattacharya et al. (2003) argue that another important consequence of corruption largely ignored in the economic and accounting literature is the impact of corruption on accounting quality as well as the impact of corruption on bank reporting behaviour. They stress that one obvious manifestation of low accounting quality is high levels of earnings opacity. They posit that accounting quality in a given country can be measured by three dimensions of earnings opacity: loss avoidance, earnings smoothing and earnings aggressiveness. They associate increased earnings smoothing with higher earnings opacity and posit that higher earnings smoothing lower the transparency of reported earnings, thereby increasing earnings opacity. Bhattacharya et al. (2003) find that earnings are opaque because a) bank managers have an incentive to manipulate earnings, b) accounting standards are too loose and, c) the enforcement of standards is very lax. Interestingly, Riahi-Belkaoui (2003) builds upon Bhattacharya et al. (2003)'s argument. Riahi-Belkaoui (2003) examines the impact of corruption on earnings opacity among 'firms' not 'banks'. The study argues that earnings management or earnings opacity is conditional on the level of

corruption prevailing in a particular country. Following the view that earnings opacity is a measure of accounting quality, the main premise of the study is that lack of corruption will decrease earnings opacity, improving accounting quality. Riahi-Belkaoui (2003) find a significant negative relationship between the level of corruption and the level of earnings opacity after controlling for economic development, human development, economic freedom and size of government. To date, the impact of corruption on bank earnings smoothing via loan loss provisions behaviour has not been explored in the banking literature. Going forward, one way to think about the impact of corruption on bank earnings smoothing is that the existence of high level corruption also communicates the existence of weak accountability systems that bank managers can exploit and take advantage of, to opportunistically manipulate reported earnings. Accordingly, bank managers in corrupt environments can smooth earnings to hide the true economic reality of bank earnings to mislead bank owners or financial statement users. Loan loss provisions estimate is one possible tool that bank managers might use to make reported earnings appear stable over time while perpetuating fraud.

4.2.4. Competition

Market competition is considered to be an effective instrument for solving agency problems and improving corporate governance among firms (Fama, 1980). Marciukaityte and Park (2009) points out that earnings management in competitive environments may help firms prosper in a short-run but reduce firms' ability to compete in the long-run. Francis et al. (2004) observe that earnings smoothing help firms to reduce the cost of capital by reducing information asymmetry between managers and investors and increase the firm's ability to compete while Marciukaityte and Park (2009) find that industrial firms report higher earnings smoothing ratios and that the informativeness of stock price is higher for firms in more competitive markets and conclude that while firms in more competitive industries are less likely to engage in earnings management measured as the absolute value of discretionary accruals, firms are more likely to engage in earnings smoothing to improve earnings informativeness.

From a different context, Dou et al. (2014) examine the relationship between bank competition and bank provisioning behaviour and argue that credit competition may influence the level of discretionary loan loss provisions. They argue that banks that have low loan underwriting quality in a given credit market

and face the threat of new entry into the market may increase their underwriting quality to leave fewer profitable lending opportunities for potential entrants. Dou et al. (2014) exploited the variation in interstate branching deregulation across contiguous counties from 1994 to 2005 in the US to investigate how increased threat of entry affects resident banks' reported loan loss provisions. They find that resident banks in the counties record lower loan loss provisions than banks resident in other states. To date, it remains unknown or unclear whether differences in cross-country banking competition significantly influence bank earnings smoothing via loan loss provisions.

4.3. Constraints to Earnings Smoothing: Empirical Evidence

4.3.1. Disclosure Regulation

There is evidence that strict accounting disclosure regulation reduce bank managers' opportunities to manipulate loan loss provisions estimates to smooth reported earnings. For instance, Leventis et al. (2011) investigate the impact of IFRS on bank managers' incentive to use loan loss provisions to smooth reported earnings among listed European commercial banks. They note that some listed EU commercial banks adopted IFRS earlier than other banks and posit that early-adopter banks may have different incentive and motivation for adopting IFRS compared to late-adopter banks. After examining 91 banks, Leventis et al. (2011) find that early and late adopter banks use loan loss provisions to smooth reported earnings but this behaviour is reduced after the implementation of IFRS in Europe. They conclude that the implementation of IFRS improves the informativeness of loan loss provisions estimates. Similarly, Ashraf and Hassan (2014) find evidence for reduced earnings smoothing among banks that adopt a principles-based accounting disclosure standards. Balla and Rose (2015) examine whether accounting constraints introduced by the US SEC in 1998 limit the ability of US banks to use loan loss provisions to manage reported earnings. They find evidence that shortly after the SEC action, the relationship between loan loss provisions and earnings weakened for publicly-held banks but not for privately-held banks. They therefore conclude that the accounting constraints introduced by the US SEC reduced earnings management among publicly-held banks. Abdul Adzis et al. (2016) investigate the impact of IAS 39 on the use of loan loss provisions to smooth reported earnings among banks in Hong Kong during the 2000

to2009 period. They find that earnings smoothing is reduced after adoption and compliance with IAS 39. They conclude that IAS 39 improved the quality of financial information disclosures in Hong Kong. Overall, evidence from these studies show that strict disclosure regulation can discourage the use of loan loss provisions to smooth reported earnings. Notwithstanding, the influence of disclosure regulation on bank earnings smoothing behaviour may depend on the extent of enforcement of disclosure rules particularly in countries where enforcement levels are generally low.

4.3.2. Audit Quality

DeAngelo (1981) argue that the presence of Big 4 auditor in firms reflects superior audit quality, and their presence should discourage opportunistic earnings manipulation.[20] There is evidence in the literature that firm monitoring by external auditors, i.e., Big 4 auditors, can discourage the use of loan loss provisions to manipulate earnings. Kanagaretnam et al. (2010) applied DeAngelo's idea to the context of banks. Kanagaretnam et al. (2010) investigate the impact of auditor type and auditor industry specialisation on bank earnings management. They examine banks from 29 countries and find that both auditor type and auditor-industry specialization moderates bank managers' incentive to use loan loss provisions to smooth reported earnings in order to beat a benchmark.

4.3.3. Investor Protection

Leuz et al. (2003) argue and document evidence that the presence of institutions or rules that protect investors' rights reduce the ability of firm insiders to acquire private control benefits and mitigate the incentive to manipulate accounting earnings because there is little or nothing to conceal from outsiders. Fonseca and Gonzalez (2008) examine cross-country determinants of bank earnings smoothing via loan loss provisions after controlling for investor protection differences. They find that the use of bank loan loss provisions to smooth reported earnings decreases with stronger investor protection. Similarly, Shen and Chih (2005) find that strong protection of the rights of minority shareholder discourages earnings

[20] Several studies complement DeAngelo's argument by pointing out that Big 4 auditors have higher independence (e.g. Huang and Li, 2009), higher expertise and are more willing to devote extra resources to specialised staff training and peer reviews relative to non-big 5 auditors (e.g. Dopuch and Simunic, 1982; Craswell et al., 1995). Also, the reputation of Big 4 auditors is considered to reflect superior audit quality and should discourage opportunistic financial reporting practices (Beatty, 1989).

management among banks while the quality of legal enforcement did not discourage bank earnings management.

4.3.4. Dispersed vs Concentrated Ownership Structure

Fan and Wong (2002) investigate the relationship between earnings informativeness and ownership structure for 977 companies in seven East Asian economies and find that concentrated ownership is associated with low earnings informativeness. They conclude that controlling owners prevent the leakage of proprietary information about the firms' rent-seeking activities to outsiders. Leuz et al. (2003) find that industrial firms with a more disperse ownership structure engage in less earnings management. Gebhardt and Novotny-Farkas (2011) investigate the implication of mandatory IFRS adoption on the accounting quality of banks in 12 EU countries, and find that earnings smoothing is more pronounced among listed European banks that are widely held. Another study, Bouvatier et al. (2014) examines the impact of ownership concentration on bank earnings smoothing practices. Bouvatier et al. (2014) investigate whether the way a bank might use loan loss provisions to smooth earnings is influenced by bank ownership concentration and the regulatory environment. They find that European commercial banks with concentrated ownership use discretionary loan loss provisions to smooth reported earnings but this behaviour is less pronounced among banks with disperse ownership. Also, they observe that earnings smoothing is less pronounced among banks in European countries with stronger banking supervision. Overall, empirical studies on the impact of ownership concentration on bank earnings smoothing practices are scant in the literature and Bouvatier et al (2014) confirms this.

4.4. Regional Studies: Evidence

4.4.1. US studies

For instance, El Sood (2012) investigates the incentive to use loan loss provisions to smooth reported earnings during the 2007 to 2009 financial crisis period. The study examine 878 US banks over the 2001 to 2009 period and find that US banks accelerate loan loss provisions to smooth earnings when (1) they hit the regulatory minimum target, (2) are in non-recessionary periods, and (3) are more profitable. For

the pre and post crisis period, El Sood (2012) find that US banks use loan loss provisions more extensively during the 2008 financial crisis period to smooth reported earnings upward. Balbao et al. (2013) argue that the incentive for US banks to smooth reported earnings and the practical way of doing so partly depends on the size of pre-provision earnings. To support their argument, they examine 15,268 US banks during 1996 to 2011 period and find that bank managers use loan loss provisions to smooth reported earnings when earnings are positive and substantial. They did not find evidence to support the earnings smoothing hypothesis for the entire earnings distribution. However, when they modified their static model to a dynamic model specification, they find that loan loss provisions appear to have some non-linear relation with earnings. Their result did not support the earnings smoothing hypothesis for the full sample, hence, they conclude that the relationship between accruals (provisions) and earnings may be influenced by non-linear patterns. The implication drawn from the non-linearity in Balbao et al. (2013)'s study are three-fold. One, the specific accounting number used to smooth earnings is a function of the magnitude (size) of earnings. Two, loan loss provisions may be used to smooth reported earnings when earnings are positive and large. Three, the neglected nonlinear patterns in provisioning research can affect the results from standard analyses, which may explain some of the contradictory findings observed among prior studies. Other US studies include: Kilic et al. (2012), Balla and Rose (2015), etc. To sum up, the findings from US studies suggest that the propensity for banks to use loan loss provisions to smooth reported earnings depends on (i) the size of earning or the earnings distribution, (ii) the state of economy particularly during recessions or crisis periods, and also depends on (iii) accounting disclosure rules intended to discourage the manipulation of bank accruals.

4.4.2. European studies

Some European studies show some evidence to support the earnings smoothing hypothesis among European banks and financial institutions (e.g., Leventis et al., 2011; Bouvatier et al., 2014; Curcio and Hasan, 2015; Skala, 2015). Leventis et al. (2011) investigate earnings smoothing among European banks that adopt IFRS standards and find evidence that both early and late-adopters of IFRS both use loan loss provisions to smooth their earnings. Curcio and Hasan (2015) investigate the relationship between loan loss provisions and bank earnings management among credit institutions in the Euro and non-Euro Area

during the 1996 to 2006 period. They find evidence that non-Euro Area credit institutions use loan loss provisions to smooth reported earnings and did not find similar evidence for earnings smoothing among Euro Area credit institutions. Skala (2015) investigates the context of Central European banks. After building upon Greenawalt and Sinkey (1988)'s idea of saving for the rainy day, Skala (2015) finds that Central European banks use loan loss provisions to smooth earnings when they have high earnings possibly to save for the rainy day. Bouvatier et al. (2014) find that European commercial banks with concentrated ownership use loan loss provisions to smooth reported earnings. Bonin and Kosak (2013) investigate the procyclical behaviour of loan loss provisions among banks in 11 emerging European countries and find evidence that banks in the emerging European region use loan loss provisions to smooth reported earnings. Country-specific European studies such as Norden and Stoian (2013) examine how bank earnings management relate to bank risk management. They examine Dutch (German) banks using quarterly data of 85 banks from 1998 to 2012. They find that (i) Dutch banks use loan loss provisions to lower earnings volatility. They also find that Dutch banks increase loan loss provisions when earnings are high and lower loan loss provisions when they have low regulatory capital ratios. Also, Caporale et al. (2015) examine the context of Italian banks. They examine 400 Italian banks for the period 2001 to 2012. They did not find evidence to support the earnings smoothing hypothesis. They observe that loan loss provisioning by Italian banks is driven by its non-discretionary components especially during the recession of 2008-2012 relative to its discretionary component. In the case of Spain, Perez et al. (2008) was motivated to investigate whether dynamic (or statistical) provisioning system adopted in Spain had an impact on the earnings smoothing and capital management behaviour of Spanish banks. They find that Spanish banks use loan loss provisions to smooth earnings but not to manage capital during the period of analysis. Similarly, Anandarajan et al. (2003) examine the behaviour of loan loss provisions among Spanish banks after the implementation of capital adequacy regulations in the Spanish banking industry in 1992. They find that Spanish commercial banks use loan loss provisions to smooth reported earnings but not to manage regulatory capital. They explain that the findings was due to the fact that the capital adequacy regulation of 1992 removed any capital constraint that discouraged earnings smoothing. Taken together, these studies suggest that the use of loan loss provisions to smooth reported earnings is widespread among European banks. To sum up, the findings from European studies suggest

that the propensity for European banks to use loan loss provisions to smooth reported earnings is influenced by (i) procyclical macroeconomic conditions except for Spain, (ii) mandatory IFRS adoption, and (iii) bank regulation and supervision in the region. Nonetheless, findings to support the earnings smoothing hypothesis among European banks are mixed in the literature.

4.4.3. Asian and Australian Studies

Other studies examine banks in Australia and Asia. For instance, Anandarajan et al. (2007) examine whether Australian banks use loan loss provisions to smooth reported earnings, manage regulatory capital or to signal private information. They find that evidence for aggressive earnings smoothing in the post-Basel period among publicly traded banks. Parker and Zhu (2012) examine the loan loss provisioning practices of Asian banks while controlling for earnings smoothing incentives. They examine 240 banks from 12 countries: Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand during the 2000 to 2009 period. Their sample period of analysis was intended to capture the effect of the Asian debt crisis. They find evidence for earnings smoothing as well as evidence for countercyclical loan loss provisioning among Asian countries particularly in India. Wu et al. (2015) examine the impact of foreign investor ownership on bank earnings smoothing. They claim that in 2004 the Chinese government required local banks to invite foreign financial institutions to become shareholders in the local banks. They referred to these foreign financial institutions as the 'foreign strategic investors (FSIs)'. They investigate whether Chinese banks with zero, one or two foreign strategic investor have more or less incentive to use loan loss provisions to smooth reported earnings. They examine 102 banks in China during the 2006 to 2011 period and find evidence that banks with more foreign strategic investors use loan loss provisions to smooth reported earnings. Curcio et al. (2014) test the earnings smoothing hypothesis and capital management hypothesis in China during the financial crisis. They find evidence that Chinese banks use discretionary loan loss provisions to smooth bank earnings but not to manage capital levels. They also observe that listed Chinese banks exhibit less earnings smoothing behaviour compared unlisted banks. Bryce et al. (2015) test the earnings smoothing hypothesis, capital management hypothesis and the cyclical hypothesis using data for banks in Vietnam and did not find evidence for earnings smoothing among Vietnamese banks. Acar and Ipci (2015)

investigate the role of loan loss provisions in capital and earnings management in the Turkish banking sector during the 2005 to 2011 period. They examine 28 commercial banks and find evidence for earnings smoothing but this behaviour is reduced during the global financial crisis (2007-2009 period). They also find that loan loss provisions is used to signal private information about Turkish banks' future prospects. Abdul Adzis et al. (2016) find that banks in Hong Kong use loan loss provisions to smooth earnings but this behaviour is reduced after the adoption of IAS 39. Taken together, these studies show that the use of loan loss provisions to smooth reported earnings is widespread among Asian banks depending on the conditions that banks face. However, there are mixed evidence to support the earnings smoothing hypothesis.

4.4.4. International/Cross-country Studies

Cavallo and Majnoni (2002), concerned about the pro-cyclical effect of loan loss provisions on bank capital regulation, investigate whether banks provision for bad loans in good times while controlling for banks' incentive to use loan loss provisions to smooth reported earnings. They examine 1176 commercial banks divided into 804 banks from G10 countries and 372 from non-G10 over the 1988 to1999 period. After controlling for different country-specific macroeconomic and institutional factors, they find evidence for earnings smoothing among G10 banks but not for non-G10 banks. Fonseca and Gonzalez (2008) examine an international bank sample from 41 countries including Brazil, Chile, Denmark, Egypt, Italy, Kenya, Korea, Peru, Philippines, Portugal, Spain, Sweden, USA and Venezuela, Colombia, Greece, Malaysia, Pakistan, Thailand, United Kingdom. They find evidence for bank earnings smoothing via loan loss provisions after controlling for unobservable bank effects and for the endogeneity of explanatory variables. Also, Kar (2015) undertook a cross-country analysis and investigate the use of loan loss provisions to smooth reported earnings among 1294 microfinance institutions (MFIs) from 103 countries during the 1996 to 2013 period. The study finds that microfinance institutions use loan loss provisions to smooth reported earnings. The study also observes that the loan loss provisioning behaviour of microfinance institutions is procyclical with business cycle fluctuations. Bushman and William (2012) investigate the case of forward-looking loan loss provisioning among banks across 27 countries. They find that banks exploit their forward-looking provisioning discretion in order to use loan loss provisions

to smooth bank earnings. To sum up, the findings from the above cross-country studies suggest that the propensity for banks to use loan loss provisions to smooth reported earnings is influenced by cross-country differences such as macroeconomic differences and banking supervision differences across countries among other factors.

4.4.5. African Studies

Country-specific studies on earnings smoothing via loan loss provisions in Africa are scant in the bank earnings smoothing literature and there is yet no regional analysis of banks in Africa. Single country studies in Africa, for instance, Ahmed et al. (2014) examine the case of earnings management rather than earnings smoothing. Ahmed et al. (2014) examine earnings management through the use of loan loss provision among deposit money banks in Nigeria. They examine 8 banks during the 2006 to 2011 period and find that banks use loan loss provisions to manage earnings and conclude that banks in Nigeria use loan loss provisions to manage earnings. Ali (2015) documents similar evidence. Yahaya et al. (2015) investigate the effect of IFRS adoption on the earnings management behaviour of listed banks in Nigeria. They focus their study on how the change in the recognition and measurement of banks' loan loss provision affects bank earnings management behaviour. They examine 15 listed banks pre-IFRS (2004 to 2008) and post-IFRS (2009 to 2013) and did not find evidence for earnings management via loan loss provisions. They conclude that IFRS significantly reduce the ability of listed banks to engage in earnings management via loan loss provisions. Taken together, these studies do not test the earnings smoothing hypothesis with the exception of Ozili (2015). Ozili (2015) investigates 11 listed banks in Nigeria during the 2004 to 2013 period and find evidence of earnings smoothing during the voluntary adoption of IFRS. To sum up, the findings from the above country-specific African studies suggest that Nigerian banks use loan loss provisions to smooth (or to manage) reported earnings.

4.1. Summary of Regional Literature Review of Earnings Smoothing via Loan Loss Provisions					
Region	Study	Earnings smoothing tool?	Do banks smooth earnings?	Motivators	Constraints
US	El Sood (2012)	LLPs	Yes	When (i) banks meet/exceed minimum regulatory capital requirements (ii) are in non-recessionary periods (iii) are more profitable, and (iv) during the 2008 financial crisis period.	None
	Kilic et al. (2012)	LLPs	Yes	When SFAS 133 disclosure regulation discouraged the use of derivatives to smooth earnings	None
	Balbao et al. (2013)	LLPs	Yes	When US banks are more profitable	None
	Balla and Rose (2015)	LLPs	Yes	None	Accounting disclosure regulation imposed by US SEC in 1998
Europe	Leventis et al. (2011)	LLPs	Yes	Early and late adopters prior to mandatory adoption	Mandatory IFRS adoption implemented in 2004
	Curcio and Hasan (2015)	LLPs	Yes	Euro-Area credit institutions use LLPs to smooth earnings than non-Euro Area credit institutions	(i) Higher creditors right protection (ii) Euro area credit institutions did not smooth earnings during crisis period
	Skala (2015)	LLPs	Yes	When Central European banks are more profitable	None
	Bouvatier et al. (2014)	LLPs	Yes	Concentrated bank ownership	Dispersed ownership, strong supervisory regime and high audit quality
Australia	Anandarajan et al. (2007)	LLPs	Yes	Post-Basel 1 period	None
Asia	Packer and Zhu (2012)	LLPs	Yes	During the 1997 Asian sovereign debt crisis	None
Africa	No study yet	None	None	None	None

4.5. Gap in the Literature addressed in the thesis

To date, there is no regional African study that examines how the use of bank loan loss provision to smooth reported earnings is influenced by political economy, financial development, capital market development, audit quality, disclosure regulation, investor protection and financial structure differences

across African countries. The absence of such regional study makes it difficult to make any generalisation about whether (and how) banks in Africa use of loan loss provisions to smooth their reported earnings and the factors that influence this behaviour.

Therefore, there is the need for a regional African study as well as country-specific studies for each African country to shed light into how bank managers in Africa use discretionary loan loss provisions to smooth bank earnings compared to banks in developed countries, and how this behaviour differ across African countries. In this thesis, I shed some light into the bank earnings smoothing via loan loss provisions practices of banks in Africa by undertaking a regional analysis while narrowly investigating bank earnings smoothing behaviour for each African country in a country-specific analysis. This is the gap I intend to fill. To fill this gap, I follow prior US, European, Australian and Asian regional studies that investigate bank loan loss provisioning practices after controlling for cross-country differences and then make generalisations about the loan loss provisioning practices of banks in the region examined. I follow a similar approach in this thesis.

The question I address in this thesis is whether African banks use loan loss provisions to smooth reported earnings. An African context to the study of bank earnings smoothing practices is important because African banks face different financial reporting incentives due to regional differences, unique banking system characteristics, different country-specific economic systems, institutional and political economy differences. Accordingly, I expand the research objective of the thesis to investigate whether ownership concentration, investor protection levels, extent of financial development, political economy and other factors influence the way African banks might the use of loan loss provisions to smooth bank reported earnings.

The growing need for African countries to establish strong institutions that protect investor's rights, establish effective corporate governance mechanisms, ensure greater accountability and improved accounting disclosure rules to ensure transparent bank financial reporting disclosures highlight the significance of the study in this thesis as well as its contribution to the bank earnings smoothing empirical literature that has not examine the African context to date. The need to understand how the presence of these institutions affects bank earnings management behaviour in Africa is important. Also, the analysis

in this thesis allow us to empirically test the vague claim that African countries have weak investor protection, corporate governance and legal institutions simply because they are a developing region compared to US and European region.

4.6. Future direction

One obvious direction for future research is the need to investigate the use of loan loss provisions to smooth bank earnings in the African context.

Two, it is unknown or unclear whether African banks that adopt IFRS, IAS or local GAAP exhibit greater or reduced earnings smoothing via loan loss provisions. Future studies can provide some insight on the impact of accounting disclosure quality on bank earnings smoothing behaviour in the African region. Listed banks in some African countries are required to adopt IFRS while unlisted banks do not have to mandatorily adopt IFRS. In other African countries, IFRS is not permitted as firms are required to use local GAAP. Given this understanding, the earnings smoothing literature do not provide insights on whether the propensity for African banks to use loan loss provisions to smooth bank earnings is stronger or weaker among banks that adopt IFRS compared to banks that adopt local GAAP. If we assume that IFRS has higher disclosure quality compared to local GAAP, then it is interesting to investigate whether African banks that adopt IFRS standards exhibit reduced earnings smoothing via loan loss provisions which in turn should improve earnings quality and the informativeness of the loan loss provisions estimates of banks in Africa.

Three, much is not known about the impact of investor protection on firm financial reporting in Africa. Strong investor protection is claimed to discourage opportunistic behaviour of firm managers (Leuz et al., 2003). Future research could investigate whether investor protection has an impact on the extent to which African banks use loan loss provisions to smooth earnings to see if Leuz et al. (2003)'s argument holds true for African banks as well.

Four, the impact of ownership structure on African banks' earnings smoothing behaviour has not been explored. The ownership structure of African banks exhibit characteristics that significantly differ from the ownership structure of US and European firms.

Five, another interesting analysis is to investigate how dispersed ownership control or concentrated ownership impacts the financial reporting of banks in Africa. The need to investigate whether certain ownership characteristics constrain or encourage African banks to distort financial reporting disclosures, is also imperative.

Six, future research could also investigate whether the level of financial development and political economy in the African region have some direct or indirect impact on African banks' incentive to smooth reported earnings.

Seven, it is also interesting to investigate the impact of religiosity on bank earnings smoothing practices. Some countries in Africa are highly religious, moderately religious and less religious, and very little knowledge is known about how religiosity affects the financial reporting characteristics of banks in Africa, hence, it is interesting to investigate whether African banks in strongly-religious, moderately-religious and less-religious environments exhibit more or less earnings smoothing behaviour, and future research can provide some insights on this. Future study can also investigate the impact of corruption on bank earnings smoothing practices which offers another direction for future research.

Eight, Basel capital regulation continues to provide opportunities for future LLP research. Basel (Basel II and III) has, in recent times, made several changes to bank capital regulation which also affects banks' provisioning behaviour and these changes will probably take years for its full effect to be felt. The impact of Basel I on bank provisioning decisions has been investigated for banks in developed countries (Ahmed et al, 1999; Anandarajan et al, 2007) while the impact of Basel II and III on bank provisioning behaviour has not been explored in the literature which offers another direction for future research. Future research can also extend such study to African countries that adopt Basel capital rules. This is another fruitful direction for future research.

Nine, with regard to the debate to adopt a dynamic loan loss provisioning system, future research is needed to demonstrate how existing or new supervisory models would guide bank regulators/supervisors in implementing a dynamic loan loss provisioning system. Future research could clarify how supervision will guide the dynamic loan loss provisioning process and not interfere with the accounting and audit role. However, it is worth noting that the willingness of bank regulators to supervise the details of bank loan loss provisioning decisions may also depend on (i) whether regulators/supervisors believe they should supervise accounting practices; (ii) the extent to which regulators/supervisors believe auditors should perform the supervisory role; and (iii) whether an independent supervisory body should be created to perform this role even if it further complicates the already complex accounting, fiscal and prudential regulatory network.

4.7. Summary and Conclusions

To summarise, this chapter reviewed the empirical literature on loan loss provisions and bank earnings smoothing and conclude that the use of loan loss provisions to smooth bank reported earnings smoothing behaviour is encouraged by capital market incentives, the need to avoid scrutiny of bank earnings by regulators/supervisors, corruption and competition while bank earnings smoothing behaviour is discouraged by strong investor protection, audit quality, religiosity, banking supervision, accounting disclosure rules and ownership structure. Moreover, the findings from the literature review indicate that the extent to which these factors influence bank earnings smoothing behaviour also depend on country-specific differences and regional differences where the bank operates in. Some gaps in the literature were identified and show that the case of African banks has not been explored in the banking literature, therefore, this thesis examine earnings smoothing via loan loss provisions among African banks. This chapter also suggests some possible direction for future research on bank earnings smoothing. The next chapter develops the hypotheses, presents the sample data and methodology.

Chapter 5

Hypothesis, Data and Methodology

5.0. Introduction

This chapter develops the hypotheses from prior literature and presents the data and research method employed to investigate whether African banks use loan loss provisions to smooth reported earnings and the factors that influence this behaviour. The description of all variables, the justification for each variable included and the test procedure are also provided.

5.1. Hypothesis Development

5.1.1. Financial Development via Foreign Bank Presence

The banking literature to date has not examined the influence of financial development[21] and financial liberalisation[22] on the earnings smoothing behaviour of banks.

According to positive accounting theory, Watts and Zimmerman (1986) show that the accounting information generated by management in financial reports reflect several factors that were taken into consideration when generating financial reports such as choice of accounting methods, how resources are allocated, management compensation, regulatory requirements, debt covenant restrictions, financing decisions, investment decisions and other considerations. This implies that reported earnings in the financial report of firms reflect both 'accounting' and 'non-accounting' decisions of managers (Watts and Zimmermann, 1986). Foreign bank presence is a 'non-accounting' decision which managers can take into account in generating reported accounting numbers because large foreign bank presence in the country can lower the profit margin for all banks due to fierce competition; managers concerned about the lower

[21] By financial development, I mean access to finance, the amount of transaction services provided by the financial system and the ability of the financial system to channel funds through banks from depositors to investors for investment purposes (Hasan and Marton, 2003).

[22] By financial liberalization, I refer to the contribution of foreign bank presence to financial system development and economic growth.

profit margins can use accounting methods (e.g. income smoothing) to generate expected profit levels, that would increase managers' likelihood of receiving promised compensation. This suggest that large foreign bank presence which potentially lower the profit margins for all firms is itself an explanation for why firms choose certain accounting methods, and supports the positive accounting theory argument that reported earnings in the financial report of firms reflect both 'accounting' and 'non-accounting' decisions of managers that influence them to choose certain accounting methods.

In the finance and growth literature, Bencivenga and Smith (1991) and Levine (1997) show that banks play a key role in financial sector development by providing funds to support the development of existing financial infrastructures in the country they operate in. The role of banks in financial development include savings mobilisation, risk management, gathering information about investment opportunities, monitoring borrowers and facilitate the exchange of goods and services; thus, the role of banks in financial development cannot be overemphasized (Levine, 1997).

Bank financial reporting behaviour can be influenced by issues related to financial development in a country. Rajan and Zingales (2003) show that some interest groups in the banking and financial services industry have incentive to oppose greater 'access to finance' and to oppose greater foreign bank entry that could lead to greater competition in the financial sector because greater 'access to finance' and greater competition would lower their market share and profit margins. They argue that when the economy is open to international capital inflow and open to the entry of foreign financial institutions, these powerful interest groups would have no choice but to change their behaviour in ways that promote greater financial development or financial sector development. They further argue that the entry of foreign firms will compel domestic banks to improve their accounting disclosure standards and contract enforcements which in turn would improve financial reporting transparency, increase competition among banks, reduce barriers to entry in financial markets, improve access to finance which in turn would improve the level of financial development in the country or region.

With regard to foreign bank presence, Hermes and Lensink (2004) suggest that foreign banks may introduce new financial services and stimulate domestic banks to develop new services to improve the

efficiency of financial intermediation in the domestic financial system. Also, they argue that foreign bank presence may stimulate domestic banks to reduce costs, increase efficiency, and increase the availability and diversity of financial services through competition. Claessens et al. (2001) investigate banks from 80 countries during the 1988 to1995 period, and show that increased foreign bank presence is associated with reduced profitability, reduced non-interest income and reduced expenses for domestic banks, implying that foreign bank presence improves the functioning of the banking sector of a country through increased market competition and improved efficiency of domestic banks.

In Africa, there are substantial numbers of foreign banks allowed to operate in some African countries to provide services that improve the extent of financial intermediation, thereby leading to greater financial development. However, financial system development in the region is still largely uneven due to restrictions on foreign bank entry. Foreign bank presence in Africa can help improve financial development levels by increasing competition between domestic and foreign banks which can compel all banks to either report competitive earnings which encourage earnings smoothing or to improve their accounting disclosure quality which discourages earnings smoothing; and this view is consistent with positive accounting theory which argues that the accounting information generated by management in financial reports reflect several factors that were taken into consideration when generating financial reports such as how resources are allocated, management compensation, regulatory requirements, debt covenant restrictions, financing decisions, investment decisions and other considerations such as competition arising from foreign bank entry.

Considering these issues as well as the views of Claessens et al. (2001) and Lensink and Hermes (2004), I argue that greater foreign bank presence - an indicator of financial development[23], would lead to greater competition among African banks which can motivate African banks to report competitive earnings, and competitive earnings can be achieved by smoothing earnings upward. When this is the case, African banks in more financially-developed environments are more likely to have lower profit margins, and will face greater pressure to report competitive earnings by smoothing earnings upwards to appear profitable

[23] Cho (1990) and Lensink and Hermes (2004) suggest that higher levels of financial development via greater foreign bank presence should lead to greater competition which in turn would lower interest margins and profit for all banks.

over time due to fierce competition from rival banks. Therefore, I predict a positive association between foreign bank presence and bank earnings smoothing via loan loss provisions. On the other hand, following the argument of Rajan and Zingales (2003), greater financial development via greater foreign bank presence may lead to reduced earnings manipulation if greater foreign bank presence compels banks to improve their accounting disclosure standards, thus, discouraging earnings manipulation that may take the form of earnings smoothing. When this is the case, African banks in more financially-developed economies should have less incentive to smooth reported earnings. Therefore, I predict a negative association between foreign bank presence and bank earnings smoothing via loan loss provisions.

H1: Bank earnings smoothing via significantly influenced by foreign bank presence.

5.1.2. Investor Protection

Positive accounting theory show that the accounting information generated by management in financial reports reflect several factors that were taken into consideration when generating financial reports such as how resources are allocated, management compensation, regulatory requirements, debt covenant restrictions, financing decisions, investment decisions and other considerations - when determining the choice of accounting methods to adopt, which implies that reported earnings in the financial report of firms reflect both 'accounting' and 'non-accounting' decisions of managers (Watts and Zimmermann, 1986). Another non-accounting decision that managers have to take into account is investor protection as a regulatory requirement for businesses owned by shareholders. Investor protection is a regulatory requirement and firms have to comply with regulatory requirements; most importantly, they have to comply with rules designed to protect investors and minority shareholders from exploitation by firm managers. Therefore, managers will have incentives to take into account the level of investor protection in their financial reporting process and can choose accounting methods that helps them achieve their financial reporting objectives. The strength of investor protection can increase or limit managers' choice of accounting methods in influencing financial reports, and supports the positive accounting theory argument that the choice of accounting method used to generate reported earnings reflects several considerations including non-accounting considerations that were taken into account by managers.

In the theoretical literature, Shleifer and Vishny (1997) and La Porta et al (2000) identify investor protection as a key institutional factor affecting corporate policy decisions. Leuz et al. (2003) point out that investor protection is an important institutional factor that constrains earnings management behaviour because the presence of institutions or rules that protect investors' rights can reduce the ability of firm insiders to acquire private control benefits, and mitigates the incentive to manipulate accounting earnings because there is little or nothing to conceal from outsiders.

In the context of banks, Shen and Chih (2005) investigate whether investor protection discourage bank earnings management behaviour, and observe that strong protection of minority shareholder rights discourage earnings management among banks while the quality of legal enforcement did not discourage bank earnings management. Fonseca and Gonzalez (2008) follow the argument of Leuz et al. (2003) and applied the same reasoning to investigate bank earnings smoothing practices in their cross-country analysis and argue that investor protection should discourage the use of loan loss provisions to smooth bank earnings. They use three proxies from La Porta et al. (1998) to capture investor protection: rights of minority shareholders, creditor rights and legal enforcement. They find that earnings smoothing via loan loss provisions decreases with strong investor protection levels. With regard to the strength of legal enforcement in a country, a proxy for investor protection, Demirguc-Kunt and Detragiache (2002) theoretically demonstrate that a sound legal system with strong enforcement of rules should reduce the adverse effect of deposit insurance on bank risk-taking behaviour which in turn should diminish the incentive of banks to smooth earnings. Shen and Chih (2005) did not find evidence to support Demirguc-Kunt and Detragiache (2002)'s argument while Fonseca and Gonzalez (2008) find evidence to support their argument. To develop the hypothesis, I follow the reasoning of Leuz et al. (2003), Shen and Chih (2005) and Fonseca and Gonzalez (2008), and hypothesise that strong investor protection should discourage the use of loan loss provisions to smooth reported earnings by African banks.

In Africa, and with the exception of Kenya, South Africa and Mauritius, most African countries have little or no protection for minority shareholders from managers who seek to exploit investors to maximise their bonus or compensation. The lack of strong legal institutions suggests that African managers may not be legally disciplined for manipulating earnings for their own benefits at the expense of minority

shareholders, implying weak protection for investors in Africa; therefore, earnings management should be more pronounced among firms (and banks) that operate in African countries that have weak investor protection. Comparatively, this suggests that the investor protection characteristics in Africa are similar to those of other developing regions, and this expectation for investor protection supports the theoretical literature (see, Nobes and Parker, 2008) which demonstrates that the effectiveness of investor protection institutions and their ability to constrain firm behaviour would vary across countries due to differences in legal systems and differences in corporate governance structures. Therefore, I predict a negative association between investor protection and bank earnings smoothing via loan loss provisions.

Hypothesis 2: Bank earnings smoothing is inversely associated with investor protection.

The analysis in this thesis is different from Fonseca and Gonzalez (2008) in two ways. One, Fonseca and Gonzalez (2008) did not include a large sample of African banks in their cross-country analysis, hence, the impact of investor protection on earnings smoothing by African banks is not clear. Two, in contrast to Fonseca and Gonzalez (2008), I use investor protection proxies that are available for African countries in the sample. The investor protection proxies used by Fonseca and Gonzalez (2008) are not available for most African countries.

5.1.3. Political Economy Factors

Positive accounting theory posits that the accounting information generated by management in financial reports reflects several accounting and non-accounting decisions that were taken into consideration by managers when generating financial reports such as regulatory requirements and other considerations. Political economy is another non-accounting decision/factor that firm managers can take into account in generating reporting earnings (Watts and Zimmermann, 1986). Positive accounting theory's political cost hypothesis predict that firms can use accounting methods that lower the political cost associated with reporting abnormal earnings which are sensitive to scrutiny by regulators or political commentators; nonetheless, the magnitude of the political costs associated with reporting abnormal losses or profits by firms also depends on the strength of political economy institutions which can empower regulators with the appropriate enforcement powers to monitor firms (Watts and Zimmermann, 1986). Thus, political

economy is another explanation for why managers choose specific accounting methods in financial reporting.

The political economy literature suggest a relationship between politics and firm corporate control but do not provide insight on the impact of political economy on the earnings smoothing practices of firms. For instance, Pagano and Volpin (2001) and Hellwig (2000) demonstrate that politics can affect the balance of power between firm insiders (managers and controlling shareholders) and outsiders (non-controlling shareholders) by designing the rules intended to protect minority shareholders as well as rules that influence the contestability of corporate control. Kaufmann et al. (2011) argue that political economy differences across countries can significantly explain differences across countries even when countries have similar legal systems. By political economy, they mean the political system in which decisions about economic policies are made[24]. To date, the literature has not examined the influence of political economy on bank earnings smoothing via loan loss provisions. For the purpose of this thesis, the concept of political economy is used to describe how the existing political economy of a country empower or weaken the ability of institutions to monitor and supervise firm behaviour and to discipline firms that engage in corporate reporting malpractices. In Africa, for instance, most African countries have similar (but weak) legal systems but the political economy system differ significantly across African countries.

North (1990) and Olson (1993) argue that if establishing strong political economy risk exposing the misappropriation of funds from firms by corrupt politicians and public officials, corrupt politicians and public officials will oppose or delay policies intended to strengthen the country's political economy while they remain in power. This view possibly explains why many countries have weak institutions and a weak political economy system, particularly, in developing countries. In the case of banks, Haber and Perotti (2007) argue that if the weak political economy fails to empower bank regulatory institutions with the necessary disciplinary powers to restrain bank managers from engaging in opportunistic behaviour, then bank managers will have incentive to act in ways that increase the likelihood of banking/financial crises

[24] The same political system that make economic policies also make policies that influence banking regulation, financial development and other policies in many countries.

or worsen the consequences of an existing crisis, implying a positive association between strong political economy and banking system stability (i.e. fewer banking crises).

Some studies relate weak political economy to higher corruption levels. Barth et al. (2009) relate higher corruption levels to weak political economy in the sense that corruption thrives in economies that have weak political economy. Bhattacharya et al (2002)[25] show that bank financial reporting is opaque when banks are in highly corrupt countries. They point out that the opacity of the reported earnings of banks commonly manifest through increased earnings smoothing, implying a positive association between higher corruption (or weak political economy) and bank earnings smoothing. Following the argument of Bhattacharya et al. (2002), I argue that weak political economy would increase the scope of corruption in the private and public sector, and reduce the level of accountability in firms' financial reporting which in turn would create opportunities for firms, including banks, to engage in opportunistic financial reporting practices that may take the form of earnings smoothing.

In Africa, most African countries have weak political economy, which affects the ability of bank supervisors to discipline rule-breaking banks particularly if such banks are affiliated with high-ranking government officials. Weak political economy can make regulators toothless in enforcing rules that improves accounting quality. Moreover, if establishing strong political economy that empower regulators to discipline banks increases the risk of exposing corrupt politicians affiliated to such banks, corrupt politicians in power will oppose or delay any policy aimed at increasing the disciplinary powers of bank regulators while they remain in power in Africa. This explains why political economy can influence the level of accountability in banks which in turn may encourage banks to distort their financial reporting process. More specifically, banks in weak political economy environments such as Africa may have greater incentive to smooth reported earnings if the political economy/political system do not actively empower bank supervisors/regulators with the appropriate enforcement and disciplinary powers to discipline banks that opportunistically distort the financial reporting process. When this is the case, bank

[25] Bhattacharya et al (2002) argue that corruption in banks is manifested through the opacity of bank financial reporting due to loose accounting standards and lax enforcement of accounting standards, and that bank opacity can be manifested either through increased loss avoidance, increased earnings smoothing and/or increased earnings aggressiveness.

earnings smoothing would be more pronounced in weak political economy environments, and vice versa. Therefore, I predict an inverse association between political economy and bank earnings smoothing via loan loss provisions.

Hypothesis 3: Bank earnings smoothing via loan loss provision is inversely associated with political economy.

Six variables are employed as proxies to capture political economy differences across African countries in this thesis: control of corruption (COC) index; voice and accountability (VA) index; government effectiveness (GT) index; regulatory quality (RQ) index; political instability and absence of voice (PS) index; and safety and rule of law (RS) index. The first five variables are obtained from Kaufman's World Governance Indicators while the last variable is obtained from the MO Ibrahim Foundation Database. Higher values of each variable indicate stronger political economy[26]. By testing this hypothesis, the analysis contributes to the existing literature that examines the role of politics on bank behaviour (e.g. Sapienza, 2004; Micco et al., 2007; Cornett et al., 2009). I add to this literature by investigating whether the way African banks use loan loss provisions to smooth reported earnings is influenced by political economy differences in the African region.

5.1.4. Bank Ownership Concentration

The literature that examine the relationship between corporate governance and earnings management mostly focus on firms in developed countries with relatively little focus on banks[27] and there is yet no evidence for African banks to date.

Positive accounting theory has implication for the ownership structure of firms due to the agency conflict between managers and firms. Managers can choose accounting methods that allow them to hide the misappropriation of funds from owners or shareholders to improve their personal utility. Klein (2002) and Park and Shin (2004) show that the agency problems between firm owners and management can be

[26] It is important to note that these variables do not measure the lobbying of various economic interest groups, minority shareholder interest groups and other pressure groups that work together to shape political decisions and political economy institutions in each country.

[27] Bouvatier et al. (2014) confirm that the empirical literature analysing the relationship between the level of ownership concentration and earnings management among firms is scant.

reduced through internal corporate governance mechanisms; however, La Porta et al. (1998) argue that when large shareholders are involved in firm decision making as is commonly the case in Europe and Asia; the conflict of interest becomes centred on controlling owners versus minority shareholders rather than manager versus shareholders.

There are two main theoretical arguments on the influence of ownership structure on managerial opportunistic behaviour. Jensen and Meckling (1976) and Shleifer and Vishny (1986) argue that controlling shareholders impose greater monitoring on firm management and use their influence to compel managers to make decisions that increase overall shareholder value and thereby benefit all shareholders. This view suggests that concentrated firm ownership can align the interests of controlling shareholders with those of non-controlling shareholders to discourage opportunistic behaviour of managers; however, Grossman and Hart (1988) and Shleifer and Wolfenzon (2002) show that this is not case if there are private benefits of control. In fact, Harris and Raviv (1988) and Aghion and Bolton (1992) demonstrate that some shareholders enjoy the feeling or value attached to being in control and these feeling/values/benefits are not shared by minority shareholders. Jensen and Meckling (1976) further stress that when controlling shareholders can extract corporate resources for private benefits to increase their personal utility, then non-controlling shareholders would be affected through a reduction in firm value arising from private extraction of corporate benefits by controlling shareholders.

Furthermore, Bouvatier et al. (2014) suggest that controlling shareholders can capture the production of accounting information of firms in an attempt to conceal private benefits appropriated to them by encouraging managers to smooth or manage earnings to hide losses that could attract the attention of non-controlling shareholders and stakeholders. They further suggest that large investors with large shareholding can elect their representative(s) to the board of directors who will appoint managers that will act in the interest of these controlling shareholders; however, they point out that the decision to manipulate earnings would also depend on the trade-off between the shared benefits of control and private benefits to controlling shareholders. Taken together, these theoretical arguments show that the extent to which dispersed or concentrated ownership can limit opportunistic behaviour of managers depend on the trade-off between shared and private benefits of control.

Empirical studies such as Leuz et al. (2003) find that industrial firms with a dispersed ownership structure engage in lower earnings management while Fan and Wong (2002) investigate the case of listed non-financial firms in East Asian non-financial firms and find that high ownership concentration and large separation of ownership and control are associated with lower levels of earnings informativeness. Bouvatier et al. (2014) investigate European commercial banks and find that banks with concentrated ownership use loan loss provisions to smooth earnings while European banks with dispersed ownership structure do not use loan loss provisions to smooth earnings. On the other hand, Gebhardt and Novotny-Farkas (2011) find that earnings smoothing is more pronounced among listed European banks that are widely held. So far empirical findings are mixed with few studies on the topic.

In Africa, bank ownership in some African countries (e.g. Ethiopia, Congo, Togo, Libya and Mauritania, etc.) is characterised by substantial concentrated ownership: family ownership of banks by wealthy and privileged families who may seek private benefits of control from bank managers. Bank managers in these African countries may have some incentive to report fewer provisions (even when they face high credit risk) in order to report higher profits which allows them to influence reported earnings in ways that maximise their personal benefits as well as private control benefits to controlling shareholders. Given this characteristic in Africa as well as the argument of Fan and Wong (2002), Leuz et al (2003) and Bouvatier et al. (2014), I expect that earnings smoothing would be more pronounced in banks with concentrated ownership and less pronounced in banks with dispersed ownership. This is expectation is consistent with agency theory which argue that, in the presence of strong monitoring via dispersed ownership, managers are less likely to take actions that maximise their compensation at the expense of shareholders (see, Jensen and Meckling, 1976; Shleifer and Vishny, 1986).

Hypothesis 4: Earnings smoothing via loan loss provision is reduced among African banks with dispersed ownership, and is more pronounced among African banks with concentrated ownership.

Bouvatier et al. (2014) examine three levels of ownership concentration: dispersed ownership (i.e. majority shareholders with less than 50 direct equity holding), moderate ownership concentration (i.e. two shareholders holding controlling stake) and strong ownership concentration (i.e. majority shareholder

with at least 70% direct equity holdings). In contrast to Bouvatier et al (2014), I examine 6 levels of ownership concentration among African banks: dispersed ownership (i.e. majority shareholders with less than 40% direct equity); moderately-weak ownership concentration (i.e. one majority shareholder with at least 50% but less than 70% direct equity holdings); moderately-strong ownership concentration (i.e. two shareholders have at least 70% direct equity holding); strong ownership concentration (i.e. one majority shareholder with at least 70% direct equity holdings), weak government ownership (i.e. state shareholder with less than 40% direct equity holdings); and strong government ownership[28] (i.e. state shareholder with more than 50% direct equity holdings).

5.1.5. Audit Quality and Accounting Disclosure (IFRS) Quality

Audit and accounting disclosure quality in Africa is improving although some challenges still persist. For instance, some African countries have adopted IFRS accounting standards e.g., Kenya, Nigeria, South Africa, Mauritius, Ghana, Libya, Malawi, Namibia and Sierra Leone while other African countries are in the process of doing so by first encouraging voluntary adoption for example Egypt. Other African countries, for example, Benin, Burkina Faso, Mali, Niger and Senegal prefer to retain the use of their local GAAPs and claim that their local GAAPs are 'based on' or 'similar to' converge IFRS . Moreover, only few African countries continue to adopt the accounting standards (i.e., IAS) introduced to them by their British or French colonial masters. Moreover, financial reporting in several African countries also face a number of problems which include management interference, lack of guidance on the interpretation of financial reports, frequent revisions of accounting standards, weak incentive of preparers of financial

[28] There are two views on the purpose of government ownership of banks: the developmental view and the political view (La Porta et al., 2002). La Porta et al. (2002) demonstrate that the developmental role of government ownership of banks is to show the government's interest to discourage opportunistic bank behaviour and to ensure that banks channel financial resources to developmental projects that bank managers of private banks are unwilling to channel funds to. The political view of government ownership of banks, on the other hand, stress that politicians use banks as an instrument to fulfil their own political agenda. In support of the political view, Sapienza (2004) show that Italian state-owned banks charge substantially lower interest rates relative to privately-run banks, and lend more to areas where the government have a large client base. Micco et al. (2007) examine the relationship between bank ownership and bank performance, and test whether politics play any role in this relationship. They find that state-owned banks operating in developing countries have lower profitability than private banks, and the lower profitability is due to lower net interest margins and higher overhead costs of state-owned banks. Cornett et al. (2009) investigate how government ownership and involvement in a country's banking system influence the performance of banks. They find that state-owned banks are less profitable particularly when they are in countries with greater government involvement and political corruption in the banking system.

statements, poor training and development for preparers of financial statement information, weak legal enforcement mechanisms, political factors, poor corporate governance structures and weak auditor incentives (Owolabi and Iyoha, 2012; Mutiso and Kamau, 2013). Another issue is the problem of label and serious adopters (Daske et al., 2013) where some African countries appear to adopt or converge to IFRS while the extent of IFRS adoption in these countries is rather low and sometimes enforcement of IFRS standard is almost non-existent (hence, label adopters). Only few African countries, for example South Africa, Kenya, Mauritius adopt IFRS with evidence of strong enforcement. These issues can lower the accounting quality of firms (and banks) in African countries. Moreover, the theoretical literature (see, Nobes and Parker, 2008) also posit that accounting quality depends on cross-country differences in the demand for accounting which includes differences in financial reporting goals, differences in accounting rules, differences in the extent of financial statement disclosures and differences in the key users of financial statements. These factors differ across each African country and can influence the financial reporting behaviour of firms (and banks) in African countries.

Positive accounting theory has implication for audit/accounting quality because the effective use of accounting in contracting requires monitoring which can be performed by standard setting bodies and/or the external professional auditor. Moreover, regulation can affect the nature of audit because it can expand the audit or it can reduce the audit, which in turn can affect auditing's contracting role and reduce its effectiveness as a monitoring device to discourage the distortion of reported earnings that lowers accounting and audit quality (Watts and Zimmermann, 1986)

In the literature, accounting disclosure quality is commonly associated with IFRS adoption and the presence of Big 4 auditor (e.g. Teoh and Wong, 1993; Francis et al., 1999, Huang and Li, 2009). With respect to accounting disclosure quality, IFRS adoption is often claimed to have higher disclosure quality compared to domestic accounting standards or local GAAP (Ahmed et al., 2013). Leventis et al. (2011) investigate the impact of mandatory IFRS adoption on bank managers' incentive to smooth earnings and manage capital via loan loss provisions. They find that early and late IFRS adopter banks use loan loss provisions to smooth earnings. However, they also observe that bank earnings smoothing behaviour is reduced after mandatory IFRS adoption. In contrast, Ahmed et al (2013) find that firms that adopt IFRS

firms use accruals to smooth reported earnings. Ozili (2015) finds that IFRS adoption did not reduce the incentive to smooth earnings among listed banks in Nigeria. Following the evidence of Kanagaretnam et al. (2010) and Leventis et al. (2011), I expect IFRS adoption to improve accounting disclosure quality for African banks. Accordingly, I hypothesise:

Hypothesis 5a[29]: a negative relationship between earnings smoothing via loan loss provisions and disclosure quality (i.e. IFRS adoption).

With respect to audit quality, for instance, Beatty (1989) and Blackwell et al (1998) stress that a firm would choose the services of a Big 4 auditor than non-Big 4 auditor if they believe that the reputation of Big 4 auditor reflects superior audit quality which in turn improves the quality of accounting information in financial reports. DeAngelo (1981) and Huang and Li (2009) suggest that Big 5 auditor are able to detect material misstatements in financial statements and are more willing to report what they find compared to non-Big 5 auditor because Big 5 auditors have greater independence, higher expertise and are more willing to devote extra resources to specialised staff training and peer reviews compared to non-big 5 auditors (see, Craswell et al., 1995; Teoh and Wong, 1993; Francis et al., 1999; for more on this); while Autore et al. (2009) stress that the choice of external auditor is important for firms in industries that have higher information uncertainty. Kanagaretnam et al. (2010) applied Autore et al. (2009)'s idea to the context of banks and argue that the type of auditor is important for banks because information uncertainty is relatively higher in the banking industry. Kanagaretnam et al. (2010) examine two aspects of auditor reputation: auditor type and auditor industry specialization, to investigate the influence of auditor reputation on bank earnings management. They investigate banks from 29 countries and find that both auditor type and auditor industry specialization moderates the extent of bank earnings management behaviour to beat a benchmark. Bouvatier et al. (2014) also find that earnings smoothing among European commercial banks is reduced in European countries with higher external audit quality. Following the above arguments, I predict a negative association between audit quality and earnings smoothing via loan loss provisions by African banks.

[29] However, this hypothesised relationship may not hold true if weak enforcement of IFRS affects the effectiveness of IFRS standards to discourage earnings manipulation among banks in African countries.

Hypothesis 5b[30]: Bank earnings smoothing via loan loss provision is inversely associated with audit quality (measured as Big 4 auditor presence).

5.1.6. Financial Structure: Competition, Concentration and Banking System Stability

In positive accounting theory, financial structure is a potential non-accounting factor that managers of financial firms can take into account for financial reporting. Financial structure can affect the profitability and performance of financial firms, and such managers would have incentives to choose accounting methods that allow them to report competitive profits or to minimise losses. In the theory of firms, Fama (1980) argues that market competition is an effective tool to solve the agency problem between managers and firm owners, and competition improves the corporate governance of firms. Francis et al. (2004) observe that earnings smoothing increases firm's ability to compete, and help firms to reduce the cost of capital by reducing information asymmetry between managers and owners. Marciukaityte and Park (2009) examine the relationship between market competition and earnings management. They find that industrial firms in more competitive industries are less likely to engage in earnings management but are more likely to engage in earnings smoothing to improve earnings informativeness.

In Africa, most African countries have highly concentrated banking systems while few African countries have less concentrated banking systems e.g., South Africa and Mauritius. For instance, some African countries have five banks that make up the whole banking system assets in the country, e.g. Cape Verde, Gambia, Lesotho, Swaziland and Togo, indicating that some African countries have highly concentrated banking systems, and higher banking sector concentration will reduce competition among banks in the banking sector, which could lower the incentive to report competitive earnings by smoothing income. Also, banking systems in African countries tend to be more prone to banking crisis due to excessive reliance on exports and foreign direct investments that depend heavily on bank financing and exchange rate fluctuation (Beck and Cull, 2013). Such fluctuations could lead banking crises which can make bank accounting numbers become volatile. To minimise excessive fluctuations, bank managers will take

[30] Also, if Big 4 auditors lower their monitoring and quality standards to allow them penetrate the market for audit services in Africa, then the presence of Big 4 auditor in African banks may not reduce the extent of earnings smoothing, contrary to theoretical expectations.

actions to reduce abnormal fluctuations in reported earnings and one strategy that African banks can employ to reduce such fluctuations in reported earnings is income smoothing.

Given these commonalities in Africa, and following the argument of Marciukaityte and Park (2009), I predict a positive association between bank earnings smoothing and bank competition because African banks in competitive environments may face greater pressure to remain profitable and can use loan loss provisions estimates to smooth earnings to appear profitable when they are in competitive environments.

Hypothesis 6a: Bank earnings smoothing via loan loss provision is positively associated with bank competition.

Also, as discussed in Chapter 2, the banking industry in most African countries is highly concentrated. Claessens and Laeven (2004) show that greater banking concentration discourages competition. Greater bank concentration in several African countries should reduce competition among banks and should reduce the incentive to use loan loss provisions to report smooth (or competitive) earnings. Therefore, I predict that earnings smoothing is less pronounced among banks in African countries that have concentrated banking sectors.

Hypothesis 6b: Bank earnings smoothing via loan loss provision is negatively associated with bank concentration.

With respect to bank stability, one way to view the relationship between banking system stability and earnings smoothing is to consider the insolvency risk of the banking sector (Boyd and Runkle, 1993; Beck et al., 2013). When the banking system has low risk of insolvency, the likelihood of panic among market participants, depositors and bank creditors will be low. Low insolvency risk indicates that the banking (and financial) system is stable because there is no cause for panic among financial market participants, and vice versa. Banks in such environments will have weak incentive to smooth earnings because there is no threat in the banking system that would make bank earnings volatile or unstable. On the other hand, when the banking system has high insolvency risk, there will be panic among financial market participants (including banks) and earnings would be relatively volatile and unstable, thus, creating strong incentive for banks to smooth earnings to reduce earnings fluctuation during volatile and

unstable periods. Following this reasoning, earnings smoothing should be more pronounced among banks in unstable banking environments (i.e. environments with high risk of insolvency), and less pronounced among banks in stable banking environments. Thus, an inverse association between earnings smoothing and banking system stability is expected.

Hypothesis 6c: Bank earnings smoothing is negatively associated with banking system stability.

The Z-score is a common proxy to measure banking system stability in the banking literature (e.g. Boyd and Runkle, 1993; Beck et al., 2013). The Z score indicates the number of standard deviations that a bank's return on asset has to drop below its expected value before equity is depleted (Laeven and Levine, 2009). A higher z-score indicates lower insolvency risk, implying higher banking system stability (Boyd and Runkle, 1993).

5.1. Summary of Hypotheses and Findings		
	Hypothesis	Expected Relationship
Hypothesis: 1	Foreign bank presence (and financial development) is associated with bank earnings smoothing via loan loss provisions	Positive or Negative
Hypothesis: 2	Strong investor protection is inversely associated with earnings smoothing via loan loss provisions	Negative
Hypothesis: 3	Strong political economy is inversely associated with earnings smoothing via loan loss provisions	Negative
Hypothesis: 4a	Higher disperse ownership is inversely associated with earnings smoothing via loan loss provisions	Negative
Hypothesis: 4b	Higher concentrated ownership is positively associated with earnings smoothing via loan loss provisions	Positive
Hypothesis: 5a	Higher audit quality is inversely associated with earnings smoothing via loan loss provisions	Negative
Hypothesis: 5b	Strict disclosure quality is inversely associated with earnings smoothing via loan loss provisions	Negative
Hypothesis: 6a	Banking sector competitiveness is positively associated with earnings smoothing via loan loss provisions.	Positive
Hypothesis: 6b	Banking sector concentration is inversely associated with earnings smoothing via loan loss provisions.	Negative
Hypothesis: 6c	Banking sector stability is negatively associated with earnings smoothing via loan loss provisions.	Negative

5.2. Data and Sample

The sample includes banks from African countries.[31] Data was obtained from Bankscope database mainly balance sheet and income statement information for African banks (in US dollars) from Bankscope database.[32] The sample period covers the 2002 to 2014 period. The sample period is sufficient to cover at least a full economic cycle in order to capture economic downturns (i.e., recessionary periods) and economic booms in each African country.

To control for macroeconomic conditions across African countries, I obtain data for real gross domestic product growth rate from World Economic Forum archived in World Bank database. To control for institutional characteristics across African countries, I obtain investor protection data from 'doing business project' indicators in the World Bank database. Political economy data was obtained from World Governance Indicators and the Mo Ibrahim foundation also archived in World Bank database.

Bankscope provides data for 54 African countries. Of these, twenty-three (23) countries were excluded due to unavailable data for institutional characteristics for each African country. These countries include: Swaziland, Lesotho, Sudan, South Sudan, Mali, Libya, Ivory Coast, Mauritania, Congo, Gambia, Benin, Burkina Faso, Sierra Leone, Zimbabwe, Burundi, Cape Verde, Chad, Comoros, Djibouti, Eritrea, Madagascar, Seychelles, and Sao Tome and Principe. This leaves us with 31 countries. Also, 10 African countries that had fewer than five (5) banks in Bankscope database were also excluded from the sample. This ensures that each African country included in the final sample has substantial number of banks for the analysis.

The resulting sample is made up of 21 African countries for which institutional, macroeconomic and other cross-country information are available. The countries include: South Africa, Ghana, Egypt, Tunisia,

[31] One reason for the paucity of cross-country research for African banks is partly due (i) non-availability or non-accessibility of bank-year data for crucial variables; (ii) the short history of reporting crucial variables; and (iii) when such data is reported, it is reported for some years and not reported for other years. Given this constraint, I restrict the sample to African banks with available data in Bankscope database and to African countries with available institutional data.

[32] Up until 2016, Bankscope database is considered to have the widest coverage of bank data for banking organizations around the world and is more reliable and widely used by banking studies in the literature. Although collecting bank data from Bankscope database does not fully eliminate the problem of non-availability of data, it minimises this problem. In 2017, Bankscope database was discontinued and was acquired by Fitch connect, a US data management company.

Morocco, Kenya, Uganda, Zambia, Tanzania, Ethiopia, Togo, Angola, Cameroun, Algeria, Mauritius, Namibia, Botswana, Senegal, Nigeria, Malawi and Mozambique. Table 5.2 present the summary of the selection of African countries.

5.2. Selection of African Countries

S/N	Total African Countries	First-Level Exclusion	Second-Level Exclusion	Final Sample
1	South Africa			South Africa
2	Ghana			Ghana
3	Egypt			Egypt
4	Tunisia			Tunisia
5	Morocco			Morocco
6	Kenya			Kenya
7	Uganda			Uganda
8	Zambia			Zambia
9	Tanzania			Tanzania
10	Ethiopia			Ethiopia
11	Togo			Togo
12	Angola			Angola
13	Cameroun			Cameroun
14	Algeria			Algeria
15	Mauritius			Mauritius
16	Namibia			Namibia
17	Botswana			Botswana
18	Senegal			Senegal
19	Nigeria			Nigeria
20	Malawi			Malawi
21	Mozambique			Mozambique
22	Swaziland		Swaziland	
23	Lesotho		Lesotho	
24	Sudan		Sudan	
25	South Sudan		South Sudan	
26	Mali		Mali	
27	Libya		Libya	
28	Ivory Coast		Ivory Coast	
29	Mauritania		Mauritania	
30	Congo		Congo	
31	Gambia		Gambia	
32	Benin	Benin		
33	Burkina Faso	Burkina Faso		
34	Sierra Leone	Sierra Leone		

35	Zimbabwe	Zimbabwe		
36	Burundi	Burundi		
37	Cape Verde	Cape Verde		
38	Chad	Chad		
39	Comoros	Comoros		
40	Djibouti	Djibouti		
41	Eritrea	Eritrea		
42	Madagascar	Madagascar		
43	Sao Tome and Principe	Sao Tome and Principe		
44	Seychelles	Seychelles		
45	Rwanda	Rwanda		
46	Niger	Niger		
47	Liberia	Liberia		
48	Guinea-Bissau	Guinea-Bissau		
49	Guinea	Guinea		
50	Gabon	Gabon		
51	Equatorial Guinea	Equatorial Guinea		
52	Djibouti	Djibouti		
53	Burundi	Burundi		
54	Central African Republic	Central African Republic		
	Total African Countries	First-Level Exclusion	Second-Level Exclusion	Final Sample
Total Bank	53			
Number of Excluded Countries		(10)		
Number of Excluded Countries			(23)	
Final Country Sample				21

To be included in the bank sample, the African bank must meet two criteria. First, the African bank must have time series annual data for loan loss provisions (the main dependent variable) in Bankscope database. Banks that did not have any reported data for loan loss provisions in Bankscope were excluded from the sample. Second, the bank should have at least four years consecutive data for crucial variables, particularly, loan loss provisions in order to control for quality of bank financial reporting. Hence, African banks with fewer than four years consecutive data for crucial variables were excluded. The resulting sample after this process yields 370 African banks.

To clean up the data, I first trim the data by eliminating outliers at the 1% and 99% percentile around the full sample mean for variables in order to eliminate/reduce measurement bias due to outliers. Two, I did

not eliminate 2008-2009 observations to control for the global financial crisis because there is no reason to believe that 2007-2008 global financial crisis had a significant impact on the balance sheet of all African banks at the time. Three, where appropriate, I take the natural logarithm of variables whose distribution appear to be significantly skewed such as bank size (SIZE) and bank concentration (BCON) variables.

Finally, some African banks in the sample have unique characteristics. By unique characteristics, I mean that some African banks are listed and unlisted while some African banks have Big 4 and non-Big 4 auditors. Also, some African banks have varying levels of ownership structure ranging from dispersed ownership, strong ownership concentration and government ownership. Table 5.3 presents a summary of bank characteristics.

Table 5.3. Sample Distribution

Country	# No of banks	Listed banks	Unlisted banks	Big-4 auditor banks	Non-Big 4 auditor banks	Banks with disperse Ownership (<40%) (DISP)	Banks with two controlling shareholder (≥70%) (CN2)	Banks with a majority shareholder (50-69%) (CN1)	Banks with a majority shareholder (≥70%) (CN3)	Banks with govt. owner (≥50%) (GS)	Banks with govt. owner (<40%) (GW)
South Africa	30	10	20	27	3	7	0	4	13	0	1
Ghana	21	8	13	19	2	4	0	4	8	0	1
Egypt	21	11	10	15	6	8	1	1	12	2	2
Tunisia	27	12	15	3	23	12	0	10	4	0	4
Morocco	15	7	8	9	6	4	0	4	2	1	0
Kenya	31	10	21	25	4	7	0	6	6	0	3
Uganda	20	3	17	16	4	2	0	1	12	1	0
Zambia	17	3	14	17	0	2	0	0	8	0	1
Tanzania	28	3	25	21	7	7	0	5	6	0	1
Ethiopia	11	0	11	0	11	0	0	0	1	0	0
Togo	10	1	9	1	9	1	0	2	3	0	0
Angola	17	0	17	13	4	5	1	5	6	1	1
Cameroun	11	1	10	6	5	1	0	2	1	0	1
Algeria	17	0	17	0	16	2	2	4	8	1	0
Mauritius	14	1	13	9	5	4	1	0	7	0	0
Namibia	10	2	8	9	1	1	0	3	4	0	0
Botswana	14	3	11	14	0	1	0	3	6	1	0
Senegal	11	1	10	3	8	3	1	3	3	0	0
Nigeria	21	9	12	20	1	11	0	2	4	0	0
Malawi	10	3	7	8	2	1	1	2	2	0	0
Mozambique	14	0	14	14	0	2	3	3	6	0	0
Total	370	88	282	249	[b]121	85	10	64	127	7	15

*Of the 282 unlisted banks, 3 banks were delisted. [b] Non-Big-4 category exclude 4 banks that do not have auditor information, resulting in 117 (121-4) banks

5.3. Methodology

5.3.1. Baseline Model

The approach used in the bank earnings smoothing literature to test the earnings smoothing hypothesis or to detect the presence of smoothed earnings among banks is the 'specific accrual' approach (McNichols, 2000). The 'specific accrual' approach divides total loan loss provisions into two components: discretionary loan loss provisions and non-discretionary loan loss provisions, and express a specific discretionary accrual (in this case, loan loss provisions) as a function of its non-discretionary determinants and other factors that influence decisions regarding the specific accrual (Greenawalt and Sinkey, 1988; Wahlen, 1994), implying that discretionary loan loss provision is expressed as a function of its non-discretionary determinants, earnings and other factors (Kanagaretnam et al., 2004; Liu and Ryan, 2006; Anandarajan et al., 2007; Curcio and Hasan, 2015; Kilic et al., 2012). Discretionary loan loss provision is the portion of total loan loss provisions that is subject to manipulation by management. The earnings variable is included in the model to account for bank provisioning that depend on earnings considerations.

The baseline model employed in this thesis is similar to the model employed in previous studies (e.g. Kanagaretnam et al., 2004; Liu and Ryan, 2006; Curcio and Hasan, 2015; Bushman and William, 2012; Kilic et al., 2012); and is expressed as:

Discretionary Provisions = f (Non-discretionary provisions, Earnings, Macroeconomic factors, Institutional factors and other control variables).

Model Specification: Equation 1 below estimates the propensity to use loan loss provision to smooth earnings after controlling for differences in nonperforming loans, loan growth, loan to asset ratio, capital management incentive, bank size and macroeconomic fluctuation. The model includes the main theoretical determinants of bank provisions commonly used in the bank earnings smoothing literature while EBTP is the earnings smoothing variable of interest.

The model specification of the model is stated as:

$$LLPi,j,t = \beta 0 + \beta 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4LOTAi,j,t + \beta 5CAPi,j,t + \beta 6SIZEi,j,t + \beta 7\Delta GDPj,t + \beta nBANKdummies + \beta nYEARdummies + \beta nCOUNTRYdummies + \varepsilon i,t. \; Equation\,(1)$$

Equation 1 is modified in Equation 2 to allow for dynamic adjustment to bank loan loss provisions similar to Fonseca and Gonzalez (2008) and Bouvatier et al. (2014). Dynamic adjustment to loan loss provisions capture bank provisioning that extends beyond a one-year period. This adjustment is done by incorporating the lagged dependent variable as an explanatory variable into the main model as shown below:

$$LLPi,j,t = \beta 1LLPi,j,t-1 + \beta 2EBTPi,j,t + \beta 3NPLi,j,t + \beta 4LOANi,j,t + \beta 5LOTAi,j,t + \beta 6CAPi,j,t + \beta 7SIZEi,j,t + \beta 8\Delta GDPj,t + \beta nBANKdummies + \beta nYEARdummies + \beta nCOUNTRYdummies + \varepsilon i,t. \; Equation\,(2)$$

Where

'i' = bank

't' = year

'j' = country

'n' = number of coefficients

LLP = total loan loss provisions scaled by beginning total assets.

EBTP = earnings before profit and tax scaled by beginning total assets.

NPL = non-performing/impaired loans scaled by beginning total assets.

LOAN = loan growth or change in gross loan outstanding

CAP = total equity scaled by beginning total assets.

LOTA = total loan scaled by beginning total assets.

SIZE = natural logarithm of total asset.

ΔGDP = real gross domestic product growth rate

BANKdummies = bank level dummies to be interacted with EBTP variable

COUNTRYdummies = country level dummies to be interacted with EBTP variable.

5.3.2. Description of Main Theoretical Variables and Justification

5.3.2.1. Loan Loss Provisions (LLP)

LLP is the dependent variable (Leventis et al., 2011; Bushman and Williams, 2012; Curcio and Hasan, 2015), which is deflated by beginning total assets (i.e., LLPit/TAi,t-1) following the approach of Kilic et al. (2012) and Bushman and William (2012) to take into account known values of bank characteristic. Data for loan loss provisions is obtained from Bankscope database.

5.3.2.2. Earnings before tax and loan loss provisions (EBTP)

The earnings variable (EBTP) is the ratio of earnings before tax and loan loss provisions divided by beginning total assets. The earnings before tax and loan loss provisions variable is mechanically derived by adding-back loan loss provisions to the profit before tax number. The literature commonly focuses on the relation between LLP and EBTP to detect whether banks use loan loss provisions to smooth reported earnings. A positive (and significant) relationship between LLP and EBTP is commonly taken as evidence to indicate smoothed earnings (see. Kanagaretnam et al., 2004; Liu and Ryan, 2006; Curcio and Hasan, 2015; Kilic et al., 2012; Bushman and William, 2012), and imply that banks lower loan loss provisions to increase low earnings and increase loan loss provisions to decrease high earnings in the current period.

I perform additional sensitivity test based on the earnings distribution of African banks to detect whether African banks use loan loss provisions to smooth specific earnings pattern rather than the entire earnings

distribution. In other words, I test whether African banks use loan loss provisions to smooth earnings when they are more profitable. El Sood (2012) observe that US banks use loan loss provisions to smooth earnings when banks are more profitable, that is, when they have high earnings. I extend El Sood (2012) by introducing two proxies to capture 'higher profitability', i.e., non-negative earnings and above-the-median earnings. I introduce POS dummy variable that take the value of one if EBTP ratio is positive and zero otherwise, and HIGH dummy variable that take the value of one if EBTP ratio is above-the-median EBTP and zero otherwise. The latter is consistent with El Sood (2012). POS and HIGH dummies are then interacted with EBTP to detect whether African banks use loan loss provisions to smooth reported earnings when they are more profitable. Finally, data for bank earnings is also obtained from Bankscope database.

5.3.2.3. Non-Performing Loan (NPL)

Non-performing loan (NPL) is the ratio of impaired loans to beginning total asset (Bushman and William, 2012). NPL captures specific loan loss provisions that banks set aside for loan losses that are highly probable to occur or that are 90-days past due. Beaver and Engel (1996) and Ahmed et al. (1999) posit that non-performing loans is an ex-post measure of the quality of bank loan portfolio because banks will generally increase loan loss provision when they expect higher loan default, implying a positive relation between loan loss provisions and non-performing loans. Beaver and Engel (1996) and Curcio and Hasan (2015) also predict and find a positive relation for the NPL coefficient. Other studies use change in NPL to control for the quality of bank loan portfolio (e.g. Ahmed et al., 1999; Bushman and William, 2012). A closer look at the NPL data for African banks in the data shows that the time series data for NPLs has some missing values. The missing values reduce the number of NPL observations for the analysis. An attempt to take the change in NPL values would further reduce the observations and reduce the degree of freedom in the econometric analysis. For this reason, I did not incorporate change in NPL variable as an explanatory variable in the model in the analysis. Finally, data for non-performing loan is obtained from Bankscope database.

5.3.2.4. Loan growth (LOAN)

The relationship between loan loss provisions and loan growth (or change in gross loan outstanding) is often used to capture loan loss provisioning decisions that depend on contemporaneous credit risk arising from increased bank lending. Increase in bank lending may give rise to credit risk arising from changing economic conditions that affects the credit quality of bank loans which would require higher provisioning (Laeven and Majnoni, 2003). To support this view, Laeven and Majnoni (2003) find a positive relationship between loan loss provisions and loan growth. Lobo and Yang (2001), on the other hand, suggest that a negative relation between loan loss provision and loan growth may be expected because improved quality of incremental loans would require fewer loan loss provisions. Also, Cavallo and Majnoni (2002) and Bikker and Hu (2002) suggest that, during periods of economic prosperity commonly associated with increased bank lending (i.e., loan growth), banks may underestimate credit risk by keeping fewer loan loss provisions due to aggressive lending practices and lax loan screening standards, implying a negative association between provisions and bank lending. Given these mixed arguments, I do not have a definite prediction for the LOAN variable for the case of African banks. Data for loan growth is obtained from Bankscope database.

5.3.2.5. Capital Adequacy Ratio (CAP)

CAP ratio is the ratio of total equity to beginning total asset. The CAP variable is included to control for capital management incentives to manipulate provisions estimate. Bonin and Kosak (2013) and Kilic et al. (2012) argue that bank managers can increase loan loss provisions when they have low capital levels to compensate for their weak capital levels, and reduce loan loss provisions when they have higher capital levels. The link between loan loss provisions and bank capital is expected to be stronger if banks view loan loss provisions as a form of capital to compensate for weak bank capitalization. Hence, a negative relation between LLP and CAP is predicted.

Additionally, I test whether earnings smoothing behaviour is pronounced when African banks are under-capitalised or well-capitalised. To do this, I use a simple criterion and introduce UC dummy variable that take the value of one if CAP ratio is less than 25% and zero otherwise, and WC dummy variable that take

the value of one if CAP ratio at least 50% and zero otherwise. Other studies use regulatory capital to risk-weighted asset ratio rather than equity to asset ratio, to capture capital management or regulatory capital management. While regulatory capital to risk-weight assets ratio is considered to be a better measure to capture capital management incentives (e.g. Ahmed et al., 1999; Leventis et al., 2011), many African banks in the sample do not report time series data for regulatory capital ratio because some African countries in the sample do not adopt Basel capital regulation or do not follow Basel rules strictly. For African banks that report data on regulatory capital ratio, data for this ratio is not reported for some years, and when reported it yields a relatively small number of observations which drastically reduce the degree of freedom for the econometric analysis. Rather, I use equity to asset ratio because it offers a better coverage of African banks and yield almost twice as many observations as the regulatory capital ratio. Bonin and Kosak (2013) also use the ratio of total equity to total asset variable. Data for equity to total asset ratio and regulatory capital to risk-weight asset are obtained from Bankscope database.

5.3.2.6. Bank Size (SIZE)

Prior studies commonly control for bank size to take into account bank loan loss provisioning that depend on the size of the bank (e.g. Anandarajan et al., 2003, 2007; Kilic et al., 2012). Anandarajan et al. (2003) suggest that large banks may keep higher loan loss provisions when they have higher levels of business activities and would ensure that the level of loan loss provision is commensurate with their level of activities. The natural logarithm of bank total asset is commonly used to control for provisioning that depends on bank size. Consistently, I take the natural logarithm of total assets. Data for total asset is obtained from Bankscope database.

5.3.2.7. Loan to asset ratio (LOTA)

The literature demonstrate that bank loan to asset ratio reflects the default risk of bank loan portfolio (e.g. Bouvatier and Lepetit, 2008; El Sood, 2012; Bouvatier et al., 2014). For instance, Bouvatier and Lepetit (2008) suggest that banks with high loan to asset ratio would have high default risk and will keep higher loan loss provisions to compensate for the increase in default risk on the loan portfolio, implying a positive relationship between LLP and LOTA. For instance, Bouvatier and Lepetit (2008) report a

positive relation between loan loss provisions and loan to asset ratio while Bikker and Metzemakers (2005) report a positive relationship for banks in OECD countries but the relation is not significant for European banks. Consistently, I expect a positive relation between loan loss provisions and bank loan to asset ratio for African banks.

5.3.2.8. Growth in real gross domestic product (ΔGDP)

Growth in real gross domestic product captures macroeconomic fluctuation. The literature demonstrate that banks keep higher loan loss provisions during economic downturns or recession and keep fewer loan loss provisions during periods of economic prosperity (e.g. Cavallo and Majnoni, 2002; Laeaven and Majnoni, 2003; Bikker and Metzemakers, 2005). Consistently, I control for bank provisioning that depend on fluctuation in the economic cycle.

I perform additional sensitivity test to detect whether African banks use loan loss provisions to smooth earnings when they are going through a recession or when they are going through periods of economic boom or prosperity. Beatty and Liao (2009) and El Sood (2012) observe that US banks delay provisions during recessionary periods in order to smooth earnings upward during recessionary periods while Liu and Ryan (2006) find that US banks smooth earnings to lower too high earnings during economic boom periods. I extend these studies by incorporating two dummy variables: REC and BOOM. REC dummy variable take the value of one if ΔGDP is negative and zero otherwise, reflecting economic downturns or recessionary periods; and BOOM dummy variable take the value of one if ΔGDP is above-the-median ΔGDP for the full sample and zero otherwise, reflecting periods of economic prosperity. The interaction of REC with EBTP detect whether African banks use loan loss provisions to smooth reported earnings when they are in recessionary periods while the interaction of BOOM with EBTP detect whether African banks use loan loss provisions to smooth reported earnings during economic boom periods. Finally, data on real gross domestic product growth rate is obtained from World Economic Forum archived in World Bank database.

5.3.2.9. Lagged Loan Loss Provisions (LLPt-1)

Lagged loan loss provision is beginning loan loss provisions (or loan loss provisions in the previous period). The lagged provisions variable captures the dynamic behaviour of bank provisioning. Laeven and Majnoni (2003) argue that banks adjust loan loss provisions to account for non-performing loans that take more than one year to be fully realised. Several studies including Laeven and Majnoni (2003), Fonseca and Gonzalez (2008), Bikker and Metzemakers (2005), Bonin and Kosak (2013) and Bouvatier et al. (2014) also use this adjustment to control for dynamic bank provisioning. Laeven and Majnoni (2003), Bikker and Metzemakers (2005), Fonseca and Gonzalez (2008) and Bonin and Kosak (2013) use one-year and two-year lag of the dependent variable (LLP) and find that the dynamic adjustment of loan loss provisions is concentrated only in the one-year lag (i.e. the first year), therefore, I use the one-year lag of the dependent variable in the analysis for the thesis. A positive sign on the coefficient of the lagged loan loss provisions variable would indicate that higher loan loss provisions in the previous period is accompanied by higher loan loss provisions in the subsequent period while a negative sign on the coefficient of the lagged loan loss provisions variable would indicate that higher loan loss provisions in the previous period is accompanied by lower loan loss provisions in the subsequent period. I do not have a definite prediction for the coefficient sign of the lagged LLP variable for African banks.

5.3.3. Description of Control Variables and Justification

5.3.3.1. Ownership Concentration Variables

I test whether different degrees of ownership control have an impact on the use of loan loss provisions to smooth reported earnings by African banks. A look at the ownership structure of banks in African countries in the dataset show varying degree or level of ownership control. I follow six approaches to classify African banks by the degree of concentration in their ownership structure. This approach extends the approach used by Bouvatier et al. (2014). First, I use a simple criterion reflecting whether the African bank has a disperse ownership structure, that is, where no single shareholder has direct equity holding up to 40%. Put differently, an African bank has dispersed ownership if the largest direct equity held by a majority shareholder is less than 40%. The dummy variable ‘DISP’ take the value of one if there is no

majority shareholder that holds at least 40% direct equity holding, representing African banks with a more disperse ownership structure.

The second level of bank ownership control is whether one majority shareholder has above 50% but below 70% direct equity holdings. The dummy variable 'CN1' take the value of one if there is such shareholder, representing banks with moderately-weak ownership control.

The third level of bank ownership is whether two majority shareholders jointly have at least 70% direct equity holding, that is, whether the sum of their separate direct equity holdings equals 70% to 100% direct equity holdings (such that the direct equity holding of either of the two shareholders must be at least 35% for each shareholder). The implication of this criterion, for example, is that it excludes the case where one shareholder has 65% equity holding and the other shareholder has 10% equity shareholding. This allows us to minimise the bias of double-counting for the previous category of bank ownership. The dummy variable 'CN2' take the value of one if there are two majority shareholders that jointly have at least 70% direct equity holdings, representing African banks with moderately-strong ownership control.

The fourth level of ownership control is whether a majority shareholder has at least 70% direct equity holdings (i.e. 70% to 100%). 'CN3' dummy variable take the value of one if there is such shareholder and zero otherwise, representing banks with concentrated ownership.

The fifth level of ownership control is whether or not a government/public authority holds more than 50% direct equity holdings in an African bank. The dummy variable 'GS' is introduced that take the value of one if there is such government/state shareholder, representing banks with strong government control.

The sixth level of ownership control is whether or not a government/public authority holds less than 40% direct equity holdings in an African bank. The dummy variable 'GW' is introduced that take the value of one if there is such government/state shareholder and zero otherwise, representing banks with weak government control. The extended model is given as:

$$LLPi,j,t = \beta 0 + \beta 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4CAPi,j,t + \beta 5SIZEi,j,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,j,t + \beta 8DISPi * EBTPi,j,t + \beta 9CN1i * EBTPi,j,t + \beta 10CN2i * EBTPi,J,t + \beta 11CN3i * EBTPi,j,t + \beta 12GWi * EBTPi,j,t + \beta 13GSi * EBTPi,j,t + \varepsilon i,t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots Equation\ 3$$

5.3.3.2. Financial Development and Foreign Bank Presence

To test whether the way African banks use loan loss provisions to smooth reported earnings is influenced by the level of financial development in the region, I use four variables commonly used to capture financial development in the finance and growth literature. The first variable is the ratio financial system deposits to gross domestic product (FINGDP) which is a measure of financial sector development. Financial system deposits to GDP ratio is defined as all checking, savings and time deposits in banks and other financial institutions in a country, and is commonly used as an indicator of deposit resources available to the financial sector for its lending activities to promote financial development, reflecting financial sector development (Beck et al, 2000; 2007; 2009). The second variable is the stock market capitalisation to GDP ratio (the SG variable), reflecting the level of capital market development (Claessens et al., 2001) while the last two variables are measures of 'foreign bank presence' in a country: that is, the ratio of foreign banks to total banks in the host country, which is captured by the 'FG1' variable (Beck et al., 2000; Hermes and Lensink, 2004); and the 'number of foreign bank assets to total banking assets in the host country', which is captured by the 'FG2' variable. Claessens et al. (2000) and Lensink and Hermes (2004) also use these ratios in their study. The expanded model is given as:

$$LLPi,j,t = \beta 0 + \beta 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4CAPi,j,t + \beta 5SIZEi,j,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,j,t + \beta 8FG1j,t + \beta 9FG1j,t * EBTPi,j,t + \beta 10FG2j,t + \beta 11FG2j,t * EBTPi,j,t + \beta 12FINGDPj,t + \beta 13FINGDPj,t * EBTPi,j,t + \beta 14SGj,t + \beta 15SGj,t * EBTPi,j,i + \varepsilon i,t \ldots\ldots\ldots Equation\ 4$$

5.3.3.3. Investor Protection Variables

I employ four measures of investor protection: 'strength of investor protection index' (INVPRO), 'extent of director liability index' (EDL), 'ease of shareholder suits index' (INVSUIT) and 'rule of law index' (LEGAL). The first three investor protection proxies are developed based on the methodology of Djankov,

La Porta and others (see. Djankov et al., 2008) and is obtained from Doing Business Project indicator archived in the World Bank Database while the fourth proxy is developed based on the methodology of Kaufmann et al. (2011) and is obtained from World Governance Indicators database. The 'strength of investor protection index' (INVPRO) measures the extent of minority shareholder protection against the misuse of corporate assets by company directors for personal gain. The 'ease of shareholder suit' index (INVSUIT) measures the extent to which minority shareholders have the right to inspect transaction documents of the firm and to recover their legal expenses from the company in the face of illegal dealings. The 'extent of director liability index' (EDL) measures director's liability for self-dealing and captures the extent to which directors are held liable for the actions of the firm. The INVPRO, INVSUIT and EDL indices range from 0 to 10 with higher values indicating greater investor protection. Rule of law (LEGAL) measures the extent of legal enforcement or legal enforcement quality across African countries and capture perceptions of the extent to which agents (employees, citizens, managers, etc.) have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence (Kaufman et al., 2011). Higher values of this index indicates higher rule of law or higher quality of the legal system.

All investor protection variables are interacted with EBTP to capture the influence of investor protection on bank earnings smoothing via loan loss provisions. The main rationale for using these three investor protection variables is because time-series data for these proxies are available for all African countries in the sample. I did not use some investor protection proxies employed by Leuz et al. (2003) and Fonseca and Gonzalez (2008) because country-level data for those investor protection proxies are mostly unavailable for some African countries in the sample, and when available, it covers a very short period. However, the investor protection proxies I use for this study have been used by prior studies. For instance, Demirguc-Kunt and Detragiache (2002), Fonseca and Gonzalez (2008), Leuz et al. (2003) and Shen and Chih (2005) use 'rights of minority shareholders right protection' and 'legal enforcement' and show that earnings management decreases with strong investor protection levels. The extended model is given as:

$$LLPi,j,t = \beta0 + \beta1EBTPi,j,t + \beta2NPLi,j,t + \beta3LOANi,j,t + \beta4CAPi,j,t + \beta5SIZEi,j,t + \beta6\Delta GDPj + \beta7LOTAi,j,t + \beta8INVPROj,t + \beta9INVPROj,t * EBTPi,j,t + \beta10INVSUITj,t + \beta11INVSUITj,t * EBTPi,j,t + \beta12EDLj,t + \beta13EDLj,t * EBTPi,j,t + \beta14LEGALj,t + \beta15LEGALj,t * EBTPi,j,t + \varepsilon i,t. Equation\ 5$$

5.3.3.4. Political Economy Variables

I use several political economy variables from Kaufmann's World Governance Indicators, to capture the influence of political economy on bank earnings smoothing behaviour. The variables include: voice and accountability index (VA), control of corruption index (COC), political stability and absence of violence/terrorism index (PS), government effectiveness index (GT), regulatory quality index (RQ) and the safety and rule of law index (RS). VA reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. PS reflects perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. GT reflects perceptions of 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. RQ reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. COC reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. RS reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

I take the natural logarithm of RS variable as a normalisation for the skewness in the time series distribution of the RS variable. All country-level political economy variables are obtained from Kauffman (2011)'s World Governance Indicators EXCEPT the rule and safety variable obtained from the MO Ibrahim Foundation. All political economy proxies range from -2.5 to +2.5 (except RS) with higher values indicating stronger political economy. These political economy proxies have been widely used in

the political economy literature including Treisman (2000), Jong-Sung and Khagram (2005), Bird et al. (2008), Dreher and Schneider (2010) and Mathur and Singh (2013). I interact each political economy proxy with the EBTP variable to test for bank earnings smoothing incremental to political economy factors. The extended model is given as:

$$LLPi,j,t = \beta 0 + +\beta 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4CAPi,j,t + \beta 5SIZEi,j,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,j,t + \beta 8VAj,t + \beta 9VAj,t * EBTPi,j,t + \beta 10COCj,t + \beta 11COCj,t * EBTPi,j,t + \beta 12RSj,t + \beta 13RSj,t * EBTPi,j,t + \beta 14PSj,t + \beta 15PSj,t * EBTPi,j,t + \beta 16GTj,t + \beta 17GTj,t * EBTPi,j,t + \beta 18RQj,t + \beta 19RQj,t * EBTPi,j,t + \varepsilon i,t..Equation\ 6$$

5.3.3.5. Accounting Disclosure and Audit Quality

A look at the accounting standards adopted by banks in African countries show that some banks adopt IFRS; some banks adopt IAS while other banks adopt their local GAAP. Bankscope database provides information about IFRS, IAS and local GAAP adoption for African banks. Based on these accounting disclosure differences, I test for three levels of accounting disclosure quality by introducing three dummy variables that capture African banks that adopt any of the three accounting standards: local GAAP, IAS and IFRS. DISC1 equal one if the African bank adopt local GAAP of its country, and zero otherwise. DISC2 equal one if the African bank adopt IAS standards and zero otherwise. IAS is the early accounting standards used by African countries during the British colonisation of some African countries and some African countries retained the IAS standards after the end of the British colony in those African countries; hence, the DISC2 dummy variable capture whether an African bank adopt the IAS accounting standards in their financial reporting. DISC3 equal one if the African bank adopt IFRS standards and zero otherwise. EBTP variable is then interacted with DISC1, DISC2 and DISC3 to detect the impact of these accounting disclosure standards on banks' provisions-based earnings smoothing behaviour.[33] Moreover, because the earnings quality (or earnings management) literature document mixed conclusions on the impact of IFRS

[33] Please note that these dummy variables do not capture banks' actual compliance with each of the accounting standards. While data for African banks' adoption of specific accounting standard is available (in Bankscope), data on whether African banks strictly comply with specific standards is not publicly available; hence, I exercise caution in the interpretation of the results that these constructs measure.

adoption on the earnings quality of African firms as previously discussed in Section 5.1.5, therefore I do not have a definite prediction for the interaction variables. The extended model is given as:

$$LLPi,j,t = \beta 0 + 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4CAPi,j,t + \beta 5SIZEi,j,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,j,t + \beta 8DISC1i + \beta 9DISC1i * EBTPi,j,t + \beta 10DISC2i + \beta 11DISC2i * EBTPi,j,t + \beta 12DISC3i + \beta 13DISC3i * EBTPi,j,t + \varepsilon i,t \ldots Equation\ 7$$

With regard to firm monitoring, listed firms are considered to be more visible to capital market participants, and consequently, their financial reporting will be subject to greater scrutiny by shareholders, potential investor, regulators and other capital market participants (Healy and Palepu, 2001). Also, some studies argue that the monitoring of firms by external auditors (i.e. Big 4) can provide additional monitoring and scrutiny of the financial accounting and reporting practices of firms, including banks. Therefore, I test whether listed banks and banks with Big 4 auditor engage in earnings smoothing behaviour to a greater extent compared to unlisted banks and banks with non-Big 4 auditor. To do this, I introduce two additional dummy variables: BIG4 and LISTED. BIG4 is a dummy variable that take the value of one if the African bank is audited by a Big 4 audit firm and take the value of zero if the African bank is audited by a non-Big 4 audit firm. The Big 4 auditor firms in the analysis refer to four audit firms: KPMG, Ernst and Young, PriceWaterhouseCoopers and Deliotte, only. Auditors that are not included in the four audit firms listed above are considered as non-Big 4 auditors. LISTED dummy take the value of one if the African bank is listed on a recognised stock exchange and take the value of zero if the African bank is not listed on a recognised stock exchange. Bankscope database provides information about whether a bank is listed or unlisted, and whether an African bank has a Big 4 or non-Big 4 auditor. Anandarajan et al. (2007), Fonseca and Gonzalez (2008) and Kanagaretnam et al. (2010) adopt similar technique for Australian banks, European and US banks, respectively. EBTP variable is then interacted with BIG4 and LISTED dummy variables to detect whether earnings smoothing is significantly associated with listed African banks and African banks with Big-4 auditors. The extended model is given as:

$$LLPi,j,t = \beta 0 + \beta 1EBTPi,j,t + \beta 2NPLi,j,t + \beta 3LOANi,j,t + \beta 4CAPi,j,t + \beta 5SIZEi,j,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,j,t + \beta 8LISTEDi + \beta 9LISTEDi * EBTPi,j,t + \beta 10BIG4i + \beta 11BIG4i * EBTPi,j,t + \beta 12DISC3i + \beta 13LISTEDi * DISC3i * EBTPi,j,t + \varepsilon i,t \ldots\ldots\ldots Equation\ 8$$

5.3.3.6. Financial Structure: Banking Competition, Concentration and Stability

Lerner index (LERNER) is employed to measure cross-country banking competitiveness. Bank concentration (BCON) index measures cross-country bank concentration. I take the natural logarithm of bank concentration proxy because the distribution for banking concentration data is skewed. Z-score (SB) index measures cross-country banking system stability. Prior studies use Z-score proxy (e.g. Boyd and Runkle, 1993; Laeven and Levine, 2009; Beck et al., 2013). The Z score indicates the number of standard deviations that a bank's return on asset has to drop below its expected value before equity is depleted (Laeven and Levine, 2009). EBTP is then interacted with BCON, LERNER and SB. World Bank database provide information about cross-country financial system variables.

$$LLPi,J,t = \beta 0 + \beta 1EBTPi,J,t + \beta 2NPLi,J,t + \beta 3LOANi,J,t + \beta 4CAPi,J,t + \beta 5SIZEi,J,t + \beta 6\Delta GDPj,t + \beta 7LOTAi,J,t + \beta BCONj,t + \beta 9BCONj,t * EBTPi,J,t + \beta 10LERNERj,t + \beta 11LERNERj,t * EBTPi,J,t + \beta 12SBj,t + \beta 13SBj,t * EBTPi,J,t + \varepsilon i,t \ldots\ldots\ldots Equation\ 9$$

5.3.3.7. Error term

The error term is included to account for unexplained variation in the model. Variable description is presented in Table 5.2. Finally, the presence of multiple control variables requires the use of separate regressions rather than the use of a single regression with sandwiched variables.

5.4. Definition of Main Variables		
Variable	Description	Source
LLP	Ratio of loan loss provisions to beginning total assets.	Bankscope database
NPL	Ratio of non-performing loans to beginning total assets.	Bankscope database
CAP	Ratio of total equity to beginning total assets.	Bankscope database
EBTP	Ratio of earnings before provisions and taxes to beginning total assets.	Bankscope database
SIZE	Natural logarithm of total assets.	Bankscope database
LOAN	Loan growth is change in gross loan outstanding.	Bankscope database
LOTA	Ratio of total loans to beginning total assets.	Bankscope database
ΔGDP	Growth in real gross domestic product	World Economic Forum
VA	Voice and accountability index measures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Higher values indicate strong voice and accountability attribute.	Worldwide Governance Indicators
COC	Control of corruption index measures perceptions of the extent to which public power is exercised for private gain, corruption, and capture of the state by elites and private interests'. Higher values indicate strong corruption control.	Worldwide Governance Indicators
INVPRO	Strength of investor protection index measure the strength of minority shareholder protection against the misuse of corporate assets by directors for personal gain. The index ranges from 0 to 10 with higher values indicating stronger minority shareholders protection.	Doing Business Project, World Bank. Djankov, La Porta et al (2008)
INVSUIT	Ease of shareholder suit index measures the extent to which minority shareholders have the right to inspect transaction documents of the firm and to recover their legal expenses from the company in the face of illegal dealings. The index ranges from 0 to 10 with higher values indicating stronger minority shareholders protection.	Doing Business Project, World Bank. Djankov, La Porta et al (2008)
EDL	Extent of director liability index measure liability for self-dealing, and ranges from 0 to 10 with higher values indicating greater liability of directors.	Doing Business Project, World Bank. Djankov, La Porta et al (2008)
LEGAL	Rule of Law (LEGAL) capture perceptions of the extent to which agents (employees, citizens, managers, etc.) have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Higher values indicate strong legal enforcement.	Worldwide Governance Indicators, Kaufmann et al (2011)
RQ	Regulatory quality, and reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Higher values indicate strong regulatory quality.	Worldwide Governance Indicators, Kaufmann et al (2011)
GT	Government effectiveness, and reflects perceptions of 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. Higher values indicate strong government effectiveness.	Worldwide Governance Indicators, Kaufmann et al (2011)
PS	Political stability and absence of violence/terrorism index, and measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Higher values indicate greater political stability and absence of violence/terrorism.	Worldwide Governance Indicators, Kaufmann et al (2011)
RS	Safety and rule of Law index measures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. RS is the natural logarithm of the 'safety and rule of law index'. Higher values indicate greater safety and rule of law.	Mo Ibrahim Index archived in World bank database
SG	Stock market capitalisation to gross domestic ratio, reflecting capital market development.	World bank database
SB	Z-score. Higher z-score values indicate greater banking system stability.	World bank database
BCON	Banking concentration.	World bank database
LERNER	Lerner index measures banking competition. Higher values indicate greater banking competitiveness.	World bank database
FINGDP	Financial system deposit to GDP ratio measures financial development. Higher values reflect greater financial development	World bank database
SG	Stock market capitalization to GDP (%) measures capital market development.	World bank database
FG1	Ratio of foreign banks to total banks, representing foreign bank presence.	World bank database
FG2	Ratio of foreign bank assets to total banking assets, representing foreign bank presence.	World bank database

5.3.4. Test Procedure

The main estimation techniques employed to estimate the model are the fixed effect ordinary least square (OLS) regression estimation and the Arellano and Bond (1991) GMM first difference estimator. The OLS estimation includes country, bank and year fixed effects (Petersen, 2009). This approach is also consistent with prior studies such as Bushman and William (2012), Lobo and Yang (2001), Anandarajan et al. (2007) and Leventis et al. (2011). The fixed effect regression estimation controls for unobservable bank-specific and period differences that varies across banks in each period year, and also avoids over-stating the t-statistics - a common problem associated with pooled OLS estimation. Another rationale for using the

fixed effect OLS estimator is the need to compare the OLS findings of this thesis with the OLS findings of prior studies (e.g. Bushman and William, 2012; Kilic et al., 2012; El Sood, 2012). However, in some analysis in this thesis, bank fixed effect in the OLS estimator is dropped to more appropriately capture the impact of bank characteristics that do not vary over time in the model, particularly, for bank dummy variables that take the value of '1' and '0'. One demerit of panel OLS square estimation is that it ignores the autoregressive process of bank loan loss provisions, implying that it ignores the dynamic nature of bank loan loss provisioning. This means that the panel ordinary least square estimation do not take into account the fact that current provisions estimate may be significantly influenced by previous provisions estimate. To adjust for this, I also employ dynamic panel estimation – the GMM method.

The dynamic panel estimation employed is the Arellano and Bond (1991) Generalized-Method-of-Moments (GMM) fist-difference estimator. The GMM first difference estimator based on Arellano and Bond (1991) addresses three relevant econometric issues. One, the presence of unobserved bank-specific effects, which is eliminated by taking first-differences of all variables; two, the autoregressive process in the data regarding the behaviour of loan loss provisions (i.e., the need to use a lagged dependent variable(s) as an explanatory variable to capture the dynamic nature of bank provisions); and three, the likely endogeneity of the explanatory variables with the error term. Among recent empirical studies, Laeven and Majnoni (2003), Perez et al. (2008), Fonseca and Gonzalez (2008) and Bonin and Kosak (2013) use this estimator. In the GMM estimation, I use instrumental variables corresponding to the lagged endogenous variable, up to two-year lag. The Sargan test for the validity of GMM instruments (or the exogeneity of GMM instruments) is reported. The AR(1) and AR(2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, are also reported. Although, I expect evidence for first-order serial correlation in the differentiated residuals due to the first-difference in the model, I do not expect evidence for second-order correlation in models. Finally, to interpret the regression results, most studies in the bank earnings smoothing literature draw inference from the statistical significance of the coefficients derived from the t-test statistics, rather than the R^2 or adjusted R^2 in the model. In coefficient significance testing, an accounting number is significant if its estimated regression

coefficient is significantly different from zero as indicated by the t-value and its associated probability values (Jones, 1991). Hence, I interpret the results using the coefficient significance test.

5.4. Summary

To summarise, this chapter developed the hypotheses to identify the determinants of bank earnings smoothing via loan loss provisions in Africa. The chapter presents a comprehensive analysis of the sample selection process which yields 21 African countries while the final bank sample for the study consists of 370 African banks that report data for loan loss provisions during the 2002 to 2014 period. A significant portion of the chapter describes, explain and justify the dependent variables, explanatory variables and control variables. Finally, the research methodology is presented including the model specification and the test procedure to estimate the model. The next chapter presents and interpret the results.

Chapter 6

Bank Earnings Smoothing in Africa: Bank-Level Evidence

6.0. Introduction

This empirical chapter investigates whether African banks use loan loss provisions to smooth reported earnings. The chapter test for earnings smoothing behaviour at bank level. The chapter begins by outlining the descriptive statistics and correlation analysis. The descriptive analysis presents a comprehensive analysis of the pooled sample and country-specific analysis. Pearson correlation analysis is reported with the p-values of the correlation coefficients and also checks for the presence of multicollinearity, i.e., highly correlated explanatory variables. The chapter then present the regression results for the pooled African bank sample as well as the results for country-specific analysis.

The main estimation technique adopted in this chapter is a combination of fixed effect regression estimation and the GMM first difference estimation. For the GMM estimator, the GMM instruments are only applied to the lagged dependent variable while other explanatory variables are considered as strictly exogenous. The analyses in this chapter do not include institutional variables because this chapter only focus on bank-level incentives and economic incentives that influence the earnings smoothing behaviour of African banks. However, real gross domestic product growth rate, a macroeconomic variable, is the only country-level variable included in the analyses in this chapter. The inclusion of real gross domestic product growth rate variable allows us to test for economic incentive to influence loan loss provision estimates. Additionally, some explanatory variables, e.g., commission and fee income to total asset ratio and net charge-off ratio were dropped from the analysis to ensure that the explanatory variables are not highly correlated. The correlation statistics reported in Table 6.2 confirm that multicollinearity is not an issue in the analysis. Finally, the coefficient of each interaction term measures the influence of each bank-level variable on bank earnings smoothing behaviour. The extensive number of bank-level dummy variables and the incorporation of interaction terms in the model is the main rationale for doing separate regression analysis rather than a single regression analysis with sandwiched variables.

6.1. Descriptive Statistics

Table 6.1 reports the summary of the descriptive statistics of the main theoretical variables. The sample is an unbalanced panel and has between 2113 and 4810 bank-year observations during 2002 to 2014 due to missing values for some variables and the effect of taking the lagged values of the dependent variable. NPL variable also has substantial missing values for many African banks in Banksope database which further reduces the total number of observations. For the full sample, loan loss provisions (LLPs) on average are 1.1% of total assets. LLPs are higher for banks in South Africa, Mozambique, Botswana, Angola and Ghana, and are lower for banks in Cameroun, Mauritius, Togo and Ethiopia. Non-performing loans (NPLs) on average are 5.6% of gross loan for the full bank sample while banks in Tunisia and Ethiopia report double-digit NPLs of 12.8% and 10.3%, respectively. The high NPLs for Ethiopian and Tunisian banks suggest that banks in North Africa (e.g. Ethiopia and Tunisia) have declining credit quality over the period examined. Comparatively, NPLs are single-digits and are much lower for banks in Nigeria and Angola. Loan growth (LOAN) is about 19.2% on average for the full bank sample but exhibit substantial differences across African countries. For instance, LOAN is much lower in Morocco (10.4%), Tunisia (11.9%) and Egypt (11.6%) while LOAN is relatively higher for banks in Ghana and Angola at 34.20% and 32.5%, respectively. On average, capital adequacy ratio (CAP) is 18.01% for the full sample, and is higher for banks in Mozambique, Malawi and Botswana, and lower for banks in Cameroun and Senegal. With respect to bank size, SIZE on average is 13.19 and is higher for banks in Nigeria and Morocco, and lower for banks in Malawi and Mozambique. This indicates that there are significant differences in the size of banks across African countries in the sample. EBTP on average is 3.7% and is lower for banks in Senegal, Tunisia, Mauritius and Mozambique, and is higher for banks in Nigeria and Tanzania. These differences suggest that there are cross-country differences in bank profitability in the African region. Loan to asset ratio (LOTA), on average, is 64.0%, and is lower for banks in Cameroun and Egypt, and higher for banks in Tunisia and Namibia, indicating cross-country variation in bank loan to asset composition in the African region. Economic cycle fluctuation (ΔGDP) is on average 5.5% and is much lower for banks in South Africa and Togo, implying that the economy of South Africa and Togo

experienced a relatively lower economic growth over the sample period while ΔGDP is higher for Ethiopia, Angola and Nigeria implying that the economy of Ethiopia, Angola and Nigeria experienced significant average economic growth over the sample period. Overall, the results from the descriptive statistics suggest that the bank-level characteristics vary across banks in African countries.

Table 6.1. Summary of Descriptive statistics

Table 6.1 reports the descriptive statistics for 370 sample banks from 21 countries over the 2002 to 2014 period. LLP is loan loss provision. NPL = non-performing loans. EBTP = earnings before taxes and provisions. LOAN = change in gross loan outstanding. CAP = capital adequacy ratio measured as total equity divided by total assets. LOTA = loan to asset ratio. ΔGDP = gross domestic product growth rate. SIZE = natural logarithm of bank total asset.

	LLP	EBTP	NPL	LOTA	LOAN	CAP	SIZE	ΔGDP	#
Country	Means	Means	Means	Means	Means	Means	Means	Means	No of banks
South Africa	0.022	0.056	0.055	0.707	0.172	0.215	14.70	0.032	30
Ghana	0.014	0.054	0.057	0.583	0.342	0.174	12.87	0.068	21
Egypt	0.008	0.027	0.057	0.127	0.116	0.127	14.84	0.041	21
Tunisia	0.012	0.025	0.128	0.844	0.119	0.178	12.94	0.036	27
Morocco	0.008	0.029	0.047	0.728	0.104	0.128	15.54	0.044	15
Kenya	0.013	0.044	0.079	0.714	0.213	0.212	12.50	0.047	31
Uganda	0.012	0.047	0.034	0.609	0.237	0.199	11.89	0.067	20
Zambia	0.011	0.031	0.048	0.502	0.289	0.213	11.83	0.072	17
Tanzania	0.009	0.164	0.037	0.636	0.279	0.164	11.83	0.068	28
Ethiopia	0.006	0.048	0.103	0.589	0.253	0.143	13.08	0.092	11
Togo	0.006	0.030	0.088	0.729	0.210	0.176	12.27	0.033	10
Angola	0.018	0.041	0.028	0.436	0.325	0.180	13.82	0.101	17
Cameroun	0.003	0.029	0.052	0.098	0.145	0.098	12.76	0.037	11
Algeria	0.009	0.036	0.029	0.568	0.197	0.210	14.23	0.037	17
Mauritius	0.005	0.025	0.033	0.630	0.124	0.128	13.72	0.038	14
Namibia	0.007	0.040	0.021	0.835	0.153	0.202	13.77	0.053	10
Botswana	0.014	0.045	0.082	0.678	0.205	0.273	12.78	0.051	14
Senegal	0.008	0.025	0.056	0.727	0.162	0.115	12.70	0.038	11
Nigeria	0.007	0.161	0.022	0.452	0.216	0.161	15.20	0.083	21
Malawi	0.010	0.829	0.037	0.501	0.246	0.226	11.18	0.052	10
Mozambique	0.015	0.016	0.033	0.573	0.282	0.242	11.49	0.073	14
Total									370
Full sample									
Mean	0.011	0.037	0.056	0.640	0.200	0.181	13.19	0.055	
Median	0.006	0.032	0.031	0.619	0.164	0.138	13.05	0.052	
Standard deviation	0.026	0.045	0.086	0.262	0.237	0.159	1.92	0.037	
Maximum	0.464	0.409	0.875	1.659	0.992	3.688	19.12	0.337	
Minimum	-0.605	-0.045	0.002	0.005	-0.816	-0.490	2.22	-0.077	
observation	3161	3110	2113	3226	3152	3233	3657	4810	

Note: The statistics may be expressed in percentages for expositional convenience

6.2. Correlation Analysis

Table 6.2 reports the Pearson correlation coefficients and the associated p-values. LLPs are positive and significantly correlated with EBTP (0.323***), and indicate that bank loan loss provisions are positively associated with reported earnings for African banks. LLPs are negative and significantly correlated with SIZE (-0.082), and suggest that loan loss provisions decreases as the size of African banks increases. LLPs are positive but insignificantly correlated with ΔGDP (0.004). The weak correlation between LLP and ΔGDP suggests that bank loan loss provisioning among African banks is not correlated with fluctuations in the economy. NPL, LOAN and LOTA are positive and significantly correlated with LLPs, indicating that bank loan loss provisions are strongly correlated with credit risk on the loan portfolio of African banks, implying that increase in loan loss provision is correlated with increase in the credit risk of bank loan portfolio. CAP is positively correlated with LLPs and indicates that loan loss provisions increases as capital adequacy ratio increases for African banks. Overall, the correlation among the explanatory variables is sufficiently low and suggests that multicollinearity is not an issue in the analyses.

Table 6.2. Correlation Matrix of Full Sample

	LLP	EBTP	NPL	LOTA	LOAN	CAP	SIZE	ΔGDP
LLP	1.000							
EBTP	0.323***	1.000						
	0.000							
NPL	0.242***	0.0126	1.000					
	0.000	0.578						
LOTA	0.157***	0.140***	0.289***	1.000				
	0.000	0.000	0.000					
LOAN	0.066***	0.185***	-0.063***	0.190***	1.000			
	0.004	0.000	0.006	0.000				
CAP	0.161***	0.300***	0.148***	0.229***	0.126***	1.000		
	0.000	0.000	0.000	0.000	0.000			
SIZE	-0.082***	0.001	-0.165***	-0.115***	-0.183***	-0.320***	1.000	
	0.000	0.949	0.000	0.000	0.000	0.000		
ΔGDP	0.004	0.100***	-0.029	-0.090***	0.304***	0.006	-0.187***	1.000
	0.877	0.000	0.187	0.000	0.000	0.789	0.000	

6.3. Main Results: Earnings Smoothing Incentives

6.3.1. Earnings Smoothing Hypothesis

The result is reported in Table 6.3. The EBTP coefficient is positive and significant at the 1% level in Column 1 and 2, and indicates that African banks use loan loss provisions to smooth reported earnings. This finding implies that African banks on average use lower loan loss provisions estimates to increase low earnings and increase loan loss provisions to reduce high earnings possibly to report stable or smooth earnings over time. The finding also supports the earnings smoothing hypothesis and is consistent with prior findings for banks in developed countries, e.g., Lobo and Yang (2001), Laeven and Majnoni (2003), Bikker and Metzemakers (2005) and Fonseca and Gonzalez (2008).

The findings also support the argument of positive accounting theory which argues that managers would make certain accounting choices that allow them report earnings that are tied to explicit contracts given to managers. The findings suggest that income smoothing is a possible accounting choice that African bank managers can adopt to report earnings in order to increase their likelihood of receiving bonuses or rewards that depend on reported earnings or other reported accounting numbers. The implication of the finding for prudential banking supervision in African countries is that reported loan loss provisions estimates are significantly influenced by earnings considerations rather than solely by credit risk considerations.

For the control variables, NPL coefficient is positively significant, and confirms that African banks increase loan loss provisions when they expect higher problem loans, and this is consistent with Beaver and Engel (1996) who argue that banks often set aside specific provisions for actual loan losses.

LOAN coefficient is negatively significant indicating that African banks with higher loan growth keep fewer loan loss provisions. This finding supports the view of Cavallo and Majnoni (2002), Laeven and Majnoni (2003) and Bikker and Hu (2002) who suggest that, during periods of economic prosperity often associated with increased bank lending, banks are likely to underestimate credit risk by keeping fewer loan loss provisions during periods of increased bank lending due to aggressive lending and lax loan screening standards.

LOTA coefficient is positively significant in Column 1, indicating that African banks increase loan loss provision estimates when default risk on the loan portfolio increases.

CAP coefficient is negatively significant, indicating that African banks keep higher loan loss provisions to compensate for their low capital levels and vice versa. This finding is consistent with the findings of Bonin and Kosak (2013).

SIZE coefficient is negatively significant in Columns 1 and 2, and indicates that larger African banks generally report fewer loan loss provisions, and is inconsistent with the argument of Anandarajan et al. (2003).

ΔGDP coefficient is statistically insignificant in Columns 1 and 2, and implies that bank provisioning is not procyclical with economic cycle fluctuations, and this finding is inconsistent with the procyclicality debate which argues that banks will significantly lower loan loss provisions during economic boom periods and increase loan loss provisions during recessionary periods (see. Laeven and Majnoni, 2003; Bikker and Metzemakers, 2005).

Finally, the lagged LLP coefficient is negatively significant, and implies that African banks report fewer loan loss provisions in the current period when they reported higher loan loss provisions in the previous period.

6.3.2. Audit and Disclosure Quality Hypothesis

The result is reported in Table 6.3. DISC1*EBTP coefficient is positively significant, implying that the use of loan loss provisions to smooth reported earnings is pronounced among African banks that adopt their local GAAP. DISC1 coefficient is negatively significant, implying that African banks that adopt local GAAP report fewer loan loss provisions.

DISC2*EBTP coefficient is negatively significant, implying that the use of loan loss provisions to smooth reported earnings is reduced among African banks that adopt IAS reporting standards. DISC2 coefficient is insignificant.

DISC3*EBTP coefficient is negatively significant, implying that the use of loan loss provisions to smooth reported earnings is reduced among African banks that adopt IFRS standards, and this finding supports the view of Leventis et al. (2011) who find that IFRS adoption discourages the use of loan loss provisions to smooth reported earnings among European banks. DISC3 coefficient is positively significant, implying that African banks that adopt IFRS report higher loan loss provisions. The implication of the finding for accounting standard-setting in Africa is that IFRS adoption can improve the informativeness of loan loss provisions and discourages earnings management that take the form of earnings smoothing among African banks.

Also, the BIG4*EBTP coefficient is negatively significant, indicating that the use of loan loss provisions to smooth reported earnings is reduced among African banks that have a Big 4 auditor. This suggests that the presence of Big 4 auditor discourages the use of loan loss provisions to manipulate reported earnings particularly earnings manipulation that take the form of earnings smoothing among African banks.

The LISTED*EBTP coefficient is positively significant, indicating that listed African banks use loan loss provisions to smooth reported earnings to a greater extent than non-listed African banks, and this finding supports the argument of Anandarajan et al. (2007) who argue that listed banks have incentives to smooth reported earnings to minimise stock price volatility if smoothed earnings helps to reduce earnings variability which translates to lower variability in stock price and stock return.

In Column 8 of Table 6.3, the interaction variables for accounting disclosure quality are re-run together in a single model[34]. The DISC1*EBTP coefficient is positively significant, and confirms that African banks that adopt local GAAP use LLPs to smooth reported earnings. However, the DISC3*EBTP and BIG4*EBTP coefficients are not positively significant, and suggest that income smoothing via loan loss provisions is not pronounced among African banks that adopt IFRS and among banks that have a Big-4 auditor, which suggests that IFRS standards is of higher accounting quality than local GAAP

[34] DISC2*EBTP interaction is dropped due to perfect collinearity in column 8 of Table 6.3. Similarly, the binary dummies (DISC1, DISC2, DISC3, BIG4, LISTED are excluded from the model due to perfect collinearity.

Table 6.3. Main Regression: Income Smoothing Hypothesis									
		Earnings Smoothing		Audit and Accounting Disclosure Quality					
	Exp. Sign	OLS (1)[a]	GMM (2)[a]	(3)	(4)	(5)	(6)	(7)	(8)
c		0.053*** (2.87)		0.008** (2.40)	0.009** (2.51)	0.005 (1.32)	-0.005 (-1.22)	0.0001 (0.03)	0.017 (1.13)
EBTP	+	0.182*** (4.05)	0.518*** (7.67)	0.128*** (11.08)	0.158*** (13.82)	0.197*** (8.46)	0.436*** (11.67)	0.157*** (10.27)	0.079 (1.27)
LLPt-1	+/-		-0.137*** (-3.54)						
NPL	+	0.116*** (14.88)	0.386*** (12.32)	0.066*** (13.96)	0.061*** (12.95)	0.065*** (13.75)	0.057*** (10.33)	0.055*** (9.89)	0.082*** (13.06)
LOAN	+/-	-0.004** (-2.28)	-0.013* (-1.82)	-0.0007 (-0.39)	0.0001 (0.07)	-0.0008 (-0.43)	0.0005 (0.26)	0.001 (0.61)	-0.005*** (-3.10)
LOTA	+	0.011*** (3.38)	-0.038*** (-3.02)	0.004** (2.27)	0.003* (1.79)	0.004** (2.19)	0.006*** (2.87)	0.004** (2.18)	0.0001** (2.21)
CAP	-	-0.057*** (-8.82)	-0.184*** (-7.92)	0.0006 (0.19)	0.001 (0.44)	0.0009 (0.25)	-0.0005 (0.14)	0.0003 (0.07)	-0.019*** (-3.80)
SIZE	+	-0.004** (-2.88)	-0.037*** (-5.34)	-0.0005** (-2.16)	-0.001*** (-3.03)	-0.001*** (-3.07)	-0.001** (-2.50)	-0.00004 (-0.16)	-0.001 (-1.02)
ΔGDP	-	0.014 (0.96)	-0.050 (-1.35)	-0.029** (-2.15)	-0.011 (-0.84)	-0.027** (-2.01)	-0.027* (-1.67)	-0.009 (-0.62)	-0.012 (-1.02)
DISC1				-0.009*** (-6.32)					
DISC1*EBTP				0.154*** (4.95)					0.156** (2.57)
DISC2					0.00001 (0.002)				
DISC2*EBTP					-0.087** (-2.20)				
DISC3						0.007*** (5.43)			
DISC3*EBTP						-0.059** (-2.34)			-0.056 (-1.14)
BIG4							0.014*** (8.30)		
BIG4*EBTP							-0.284*** (-7.32)		0.021 (0.45)
LISTED								-0.009*** (-5.85)	
LISTED*EBTP								0.145*** (5.12)	0.065** (2.21)
Adjusted R^2		60.32		21.35	20.45	21.41	19.16	18.44	65.53
F-statistic		10.02		26.98	25.61	27.07	23.88	22.86	12.03
Durbin Watson		1.89		0.72	0.72	0.73	0.86	0.87	1.81
Sarjan Test			44.99						
P-value (Sarjan)			0.556						
Instrument rank			65						
AR(1)			0.002						
AR(2)			0.092						
Observations		1954	1398	1915	1915	1915	1932	1935	1881

T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. [a] OLS regression include country, bank and year fixed effect. OLS standard error is clustered by year and is consistent with Bushman and William (2012). [b]GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. The GMM panel estimator controls for potential endogeneity by using instruments based on lagged values of the explanatory variables in the model. The GMM standard errors are not clustered. Column 3 to 8 is estimated using OLS with period fixed effect, bank fixed effect is not included because bank fixed effect dummies are perfectly collinear with the bank-level binary variables. LLP = loan loss provisions to beginning total asset. NPL = non-performing loan to beginning total asset ratio. EBTP = Earnings before profit and tax to beginning total asset ratio. LLPt-1 = one-year lagged loan loss provisions to beginning total asset ratio. CAP = total equity to beginning total asset ratio. LOTA = total loan to beginning total asset ratio. LOAN = loan growth rate. ΔGDP = real gross domestic product growth rate. SIZE = natural logarithm of total asset. DISC1 = dummy variable that take the value 1 if the bank adopt local GAAP and zero otherwise. DISC2 = dummy variable that take the value 1 if the bank adopt IAS standards and zero otherwise. DISC3 = dummy variable that take the value 1 if the bank adopt IFRS standards and zero otherwise. LISTED = dummy variable that take the value 1 if the African bank is listed on a recognised stock exchange and zero otherwise. BIG4 = dummy variable that take the value 1 if the African bank is audited by a Big 4 auditor and zero otherwise.

6.3.3. Ownership Concentration Hypothesis

The result is reported in Table 6.4. DISP*EBTP coefficient is negatively significant, implying that earnings smoothing via loan loss provisions is reduced among African banks that have a disperse ownership structure, and this finding is consistent with the findings of Bouvatier et al. (2014) who find that European banks with dispersed ownership have reduced earnings smoothing via provisions.

The CN1*EBTP coefficient is also negatively significant, indicating that earnings smoothing via loan loss provision is reduced among African banks where a majority shareholder holds between 50% to 69% direct equity, representing moderate ownership concentration. The CN2*EBTP coefficient is insignificant.

CN3*EBTP coefficient is positively significant at the 1% level, indicating that earnings smoothing via loan loss provision is pronounced among African banks where a majority shareholder holds at least 70% direct equity, representing banks with concentrated ownership. This finding suggest that controlling shareholders can possibly capture the production of accounting information of African banks in an attempt to conceal private benefits appropriated to them, by encouraging managers to smooth or manage earnings to hide losses that could attract the attention of non-controlling shareholders and stakeholders (Bouvatier et al, 2014). GW*EBTP and GS*EBTP coefficients are insignificant.

In Column 7 of Table 6.4, the interaction variables for bank ownership are re-run together in a full model[35], and CN3*EBTP coefficient remains positively significant, and confirms that African banks with concentrated ownership use LLPs to smooth reported earnings. However, the CN1*EBTP, CN2*EBTP and DISP*EBTP coefficients are not positively significant, which suggests that income smoothing via loan loss provisions is not pronounced among African banks with a more dispersed ownership structure and with government ownership.

The findings support the argument of positive accounting theory and agency theory which argues that monitoring by dispersed shareholders can affect managers' ability to influence financial reporting outcomes (see, Jensen and Meckling, 1976; Shleifer and Vishny, 1986; Grossman and Hart, 1988; Shleifer and Wolfenzon, 2002; Harris and Raviv, 1988; Aghion and Bolton, 1992). Overall, the findings

[35] DISC2*EBTP interaction is dropped due to perfect collinearity in column 8 of Table 6.3. Similarly, the binary dummies (DISP, CN1, CN2, CN3, GW and GS) are excluded from the model due to perfect collinearity.

suggest that income smoothing is associated with African banks that have concentrated ownership. The implication of the findings for prudential banking supervision in African countries is that regulators should encourage banks to have a more dispersed ownership structure that helps to reduce managers' ability to opportunistically influence financial reporting outcomes in ways that hurt minority shareholders.

Table 6.4. Ownership Concentration and Interaction Effect							
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
LLPt-1	0.004 (0.14)	0.051** (2.05)	0.003 (0.10)	0.097*** (2.90)	-0.133*** (-3.32)	-0.138*** (-3.75)	0.097 (1.19)
EBTP	0.115*** (2.69)	0.126*** (3.48)	0.088** (2.52)	-0.356*** (-4.69)	0.536*** (7.22)	0.447*** (6.95)	-0.952 (-1.56)
NPL	0.081*** (4.32)	0.091*** (4.85)	0.085*** (4.67)	0.029 (1.55)	0.385*** (11.98)	0.412*** (13.74)	0.063** (2.40)
LOAN	-0.022*** (-6.52)	-0.019*** (-4.99)	-0.021*** (-6.20)	-0.022*** (-5.27)	-0.012* (-1.71)	-0.0004 (-0.06)	-0.023*** (-4.72)
LOTA	0.006 (1.23)	0.0002 (0.02)	0.004 (0.89)	0.013** (2.15)	-0.036*** (-2.76)	-0.048*** (-4.47)	0.001** (2.25)
CAP	-0.076*** (-6.25)	-0.083*** (-6.99)	-0.080*** (-6.92)	-0.083*** (-6.53)	-0.186*** (-8.02)	-0.192*** (-7.83)	-0.016 (-0.64)
SIZE	-0.011*** (-2.94)	-0.009** (-2.26)	-0.009** (-2.47)	-0.009** (-2.04)	-0.039*** (-5.43)	-0.027*** (-4.10)	-0.009* (-1.65)
ΔGDP	-0.195*** (-6.29)	-0.181*** (-5.54)	-0.190*** (-5.99)	-0.183*** (-5.37)	-0.054 (-1.35)	-0.107*** (-2.94)	-0.105** (-2.11)
DISP*EBTP	-0.175* (-1.69)						0.949 (1.63)
CN1*EBTP		-0.473*** (-3.49)					0.416 (0.85)
CN2*EBTP			-0.159 (-1.03)				0.058 (0.20)
CN3*EBTP				0.598*** (6.05)			1.238** (2.11)
GW*EBTP					-0.183 (-0.46)		0.042 (0.11)
GS*EBTP						-16.249 (-1.00)	0.284 (0.91)
J-Statistic	48.57	38.61	46.07	41.01	45.03	41.82	33.69
P(J-Statistic)	0.369	0.772	0.469	0.681	0.513	0.648	0.784
AR(1)	0.001	0.0003	0.001	0.0001	0.002	0.001	-
AR(2)	0.889	0.969	0.928	0.366	0.121	0.071	0.966
Observations	1091	1094	1094	1094	1398	1398	1096

T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. The GMM panel estimator controls for potential endogeneity by using instruments based on lagged values of the explanatory variables in the model. GMM standard errors are not clustered. All bank-level variables remain as previously defined. DISP = dummy variable that equal one if no majority shareholder that holds at least 50% direct equity and zero otherwise, representing African banks with a more dispersed ownership structure. CN1 = dummy variable equal one if a majority shareholder that holds 50% but below 70% and zero otherwise, representing banks with moderately-weak ownership control. CN2 = dummy variable that equal one if there are two majority shareholders that jointly hold at least 70% direct equity holdings and zero otherwise, representing African banks with moderately-strong ownership control. CN3 = dummy variable that equal one if one majority shareholder holds at least 70% direct equity and zero otherwise, representing banks with concentrated ownership. GS = dummy variable that equal one if there is a government/state shareholder holds at least 50% direct equity and zero otherwise, representing banks with strong government ownership control. GW = dummy variable that equal one if there is a government/state shareholder holds less than 40 direct equity and zero otherwise, representing banks with weak government ownership control.

6.4. Country-specific Analysis: Earnings Smoothing Hypothesis

Next, I test the earnings smoothing hypothesis for each African country to take into account other unobservable national characteristics that might influence the use of loan loss provisions to smooth reported earnings. The result is reported in Table 6.5.

The EBTP coefficient for each country is the variable of interest. The result in Table 6.5 confirms that there are significant variations in the earnings smoothing behaviour across African countries. As can be observed, EBTP coefficient reports a positive sign for banks in 14 African countries (i.e., South Africa, Ghana, Egypt, Morocco, Kenya, Ethiopia, Togo, Angola, Cameroun, Algeria, Mauritius, Namibia, Botswana and Nigeria), and is significant for banks in 7 African countries (i.e., South Africa, Egypt, Morocco, Ethiopia, Angola, Algeria and Botswana). On the other hand, the EBTP coefficient reports a negative sign for banks in 7 African countries (i.e., Tunisia, Uganda, Zambia, Tanzania, Senegal, Malawi and Mozambique), and is significant for banks in Uganda only.

Overall, the observed differences in earnings smoothing across African countries have two implications. First, it highlights the importance of country-specific analysis to better understand the incentives that motivate banks to use loan loss provisions to smooth reported earnings in each African country. Second, the observed country-specific differences in earnings smoothing behaviour points out the estimation bias of using pooled regional bank data to test for earnings smoothing. The bias is such that (i) it ignores national aspects that affect bank earnings smoothing practices, and (ii) it can over-emphasise bank financial reporting patterns that are similar across countries.

Table 6.5. Country specific Pooled regression

Table 6.5 reports the country-specific regressions for 21 countries. Regression is estimated using pooled OLS regression and include White's robust standard error correction. LLP = loan loss provisions to beginning total asset. NPL = non-performing loan to beginning total asset ratio. EBTP = Earnings before profit and tax to beginning total asset ratio. LLPt-1 = one-year lagged loan loss provisions to beginning total asset ratio. CAP = total equity to beginning total asset ratio. LOTA = total loan to beginning total asset ratio. LOAN = loan growth rate. ΔGDP = real gross domestic product growth rate. SIZE = natural logarithm of total asset. Adj R^2 = adjusted R-square, and c = constant.

	c	EBTP	NPL	LOTA	LOAN	CAP	SIZE	ΔGDP	Adj R^2
South Africa	-0.005	0.397***	0.201***	0.009	0.007	-0.046***	-0.0001	-0.132***	78.79
	(-0.43)	(5.28)	(3.74)	(1.35)	(0.93)	(-2.63)	(-0.09)	(-2.71)	
Ghana	0.059	0.052	0.175***	0.016**	-0.008*	-0.016	-0.005	-0.029	30.81
	(1.39)	(0.76)	(4.99)	(2.39)	(-1.79)	(-0.71)	(-1.52)	(-0.81)	
Egypt	-0.004	0.203*	0.051***	0.013***	-0.002	-0.04***	-0.00001	0.026	32.95
	(-0.47)	(1.67)	(3.45)	(3.59)	(-0.68)	(-2.68)	(-0.01)	(0.63)	
Tunisia	0.0009	-0.227	0.118**	-0.009	-0.022*	0.132	0.0007	-0.056	28.00
	(0.02)	(-1.17)	(2.05)	(-0.36)	(-1.66)	(1.55)	(0.14)	(-0.32)	
Morocco	0.071***	0.418***	0.005	-0.019	-0.013***	-0.061**	-0.003***	-0.025	51.26
	(3.87)	(5.44)	(0.09)	(-0.17)	(-2.67)	(-2.03)	(-3.71)	(-1.12)	
Kenya	0.024*	0.142	0.095***	0.008**	-0.011	-0.017*	-0.002**	-0.057	36.58
	(1.78)	(1.56)	(6.33)	(1.97)	(-1.30)	(-1.71)	(-2.05)	(-1.61)	
Uganda	0.029	-0.097**	0.117**	0.017*	-0.005	-0.015	-0.001	-0.126**	25.83
	(1.51)	(-2.30)	(2.36)	(1.78)	(-0.96)	(-0.83)	(-0.96)	(-2.47)	
Zambia	-0.003	-0.019	0.029	0.022***	-0.003	-0.029	0.001	0.304***	14.99
	(-0.13)	(-0.26)	(0.76)	(2.98)	(-0.74)	(-1.28)	(-0.75)	(4.58)	
Tanzania	0.005	-0.011	0.204***	-0.0005	-0.006	0.020	-0.0002	-0.009	38.27
	(0.39)	(-0.31)	(6.37)	(-0.11)	(-1.20)	(1.09)	(-0.27)	(-0.16)	
Ethiopia	-0.030**	0.149**	0.009	0.033***	-0.012***	-0.011	0.001*	-0.039	57.07
	(-2.31)	(2.03)	(1.40)	(12.55)	(-3.54)	(-0.33)	(1.83)	(-1.22)	
Togo	-0.199*	1.419	-0.033	0.157	-0.025	-0.246	0.005	0.490	47.38
	(-1.89)	(1.60)	(-0.30)	(1.12)	(-0.35)	(-1.07)	(1.45)	(1.13)	
Angola	-0.014	0.386***	0.082**	0.203**	-0.008	-0.016	0.0004	-0.055**	68.68
	(-0.72)	(5.12)	(1.97)	(2.09)	(-1.26)	(-0.52)	(0.29)	(-2.29)	
Cameroun	0.027	0.308	0.098	-0.032	-0.006	0.172**	-0.003	0.199	64.88
	(0.45)	(1.24)	(1.27)	(-0.95)	(-0.56)	(1.94)	(-0.69)	(1.63)	
Algeria	-0.008	0.103***	0.209***	-0.003	0.008	-0.018	-0.0001	0.313***	58.55
	(-0.13)	(3.09)	(2.92)	(-0.36)	(1.20)	(-0.52)	(-0.02)	(2.64)	
Mauritius	0.003	0.038	0.040***	0.0005	0.002	0.002	-0.0003	0.049	17.91
	(0.32)	(0.74)	(2.65)	(0.15)	(0.83)	(0.22)	(-0.64)	(1.31)	
Namibia	0.025*	0.035	0.008	0.002	-0.006*	0.014***	-0.002**	0.020***	63.53
	(1.91)	(1.22)	(0.75)	(0.97)	(-1.65)	(4.07)	(-2.01)	(2.99)	
Botswana	-0.017	0.291***	-0.015***	0.010	0.007	0.039***	0.0002	-0.006	57.26
	(-0.91)	(2.76)	(-4.97)	(1.31)	(0.59)	(3.90)	(0.17)	(-0.40)	
Senegal	-0.022	-0.001	0.034	0.015	-0.008	-0.151***	0.002	0.099	15.29
	(-0.75)	(-0.02)	(0.95)	(1.37)	(-0.89)	(-3.18)	(1.21)	(1.08)	
Nigeria	0.009	0.033	0.252	0.028***	-0.005	-0.038	-0.0005	-0.088	19.03
	(0.34)	(0.33)	(1.38)	(2.97)	(-1.28)	(-0.78)	(-0.29)	(-0.71)	
Malawi	0.0009	-0.227	0.118**	-0.009	-0.022*	0.132	0.0007	-0.056	28.00
	(0.02)	(-1.17)	(2.05)	(-0.36)	(-1.66)	(1.55)	(0.14)	(-0.32)	
Mozambique	0.067**	-0.022	0.162***	0.006	-0.004	-0.0007	-0.004***	-0.117	47.64
	(2.56)	(-0.58)	(2.65)	(1.04)	(-0.70)	(-0.04)	(-3.42)	(-0.76)	

Pooled Regression OLS with Standard errors clustered by year.

6.5. Sensitivity Analysis

6.5.1. Transient Economic Cycle and Earnings Distribution

As discussed previously in section 5.3.2.2, I test whether the incentive to use loan loss provisions to smooth bank earnings is pronounced when African banks are more profitable. The result is reported in Table 6.6.

POS*EBTP coefficient is negatively significant, indicating that African banks do not use loan loss provisions to smooth earnings when they are profitable, i.e., when they have positive (non-negative) earnings in the current period. The HIGH*EBTP coefficient is also positively significant, indicating that loan loss provisions is not used to smooth reported earnings when African banks are more profitable, i.e., when they have above-the-median earnings. Taken together, the findings suggest that African banks do not use loan loss provisions to smooth reported earnings when they are more profitable in the current period.

Next, I test whether the propensity to use loan loss provisions to smooth reported earnings depend on the state of the economy. The REC*EBTP coefficient is not significant while the BOOM*EBTP coefficient is positively significant, indicating that African banks use loan loss provisions to smooth reported earnings during economic boom periods.

Furthermore, from hindsight, we understand that banks are generally considered to be more profitable during economic boom periods. Accordingly, I test whether the propensity to use loan loss provisions to smooth reported earnings simultaneously depend on the state of the economy and on the size of bank earnings. Table 6.6.1 reports the regression results. The POS*BOOM*EBTP and HIGH*BOOM*EBTP coefficients are positively significant, indicating that African banks use loan loss provisions to smooth reporting earnings when they are more profitable during economic boom period. Liu and Ryan (2006) also find similar result for US banks. In Column 7 of Table 6.6, all the interaction variables are run together in a single model, and the POS*BOOM*EBTP coefficient is positively significant and further confirms that African banks use loan loss provisions to smooth reporting earnings when they are profitable during economic boom period.

Table 6.6. Transient Economic Cycles and Earnings Distribution (Full Sample)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
LLPt-1	-0.143***	-0.278***	-0.165***	-0.235***	-0.217***	-0.232***	-0.027
	(-3.37)	(-5.26)	(-5.20)	(-7.21)	(-4.73)	(-5.10)	(-0.58)
EBTP	0.525***	0.059	1.646***	1.081***	0.284***	0.253**	2.964***
	(6.61)	(0.54)	(9.05)	(6.70)	(2.70)	(2.39)	(6.77)
NPL	0.388***	0.451***	0.329***	0.324***	0.413***	0.396***	0.203***
	(10.18)	(11.08)	(12.09)	(9.73)	(10.21)	(10.41)	(5.81)
LOAN	-0.014*	-0.019**	-0.014***	-0.018***	-0.014*	-0.018**	-0.019*
	(-1.85)	(-2.53)	(-2.76)	(-2.69)	(-1.77)	(-2.23)	(-1.79)
LOTA	-0.039***	-0.036**	0.010	-0.001	-0.049***	-0.048***	-0.0003
	(-2.92)	(-2.16)	(1.07)	(-0.11)	(-2.93)	(-2.85)	(-1.21)
CAP	-0.166***	-0.254***	-0.152***	-0.157***	-0.238***	-0.234***	-0.182***
	(-6.56)	(-8.78)	(-10.59)	(-7.63)	(-6.54)	(-6.46)	(-5.46)
SIZE	-0.039***	-0.039***	-0.039***	-0.038***	-0.036***	-0.034***	-0.031***
	(-3.59)	(-4.00)	(-6.23)	(-6.26)	(-3.69)	(-3.31)	(-3.51)
ΔGDP	-0.076	-0.034	-0.040	-0.049	-0.040	-0.072	0.053
	(-1.26)	(-0.56)	(-1.09)	(-1.19)	(-0.64)	(-1.07)	(0.64)
REC	-0.004						0.014
	(-0.34)						(0.78)
BOOM		-0.051***			-0.046***	-0.032***	-0.024***
		(-7.38)			(-5.53)	(-4.81)	(-3.19)
POS			-0.029***		-0.007		-0.029**
			(-3.11)		(-0.67)		(-2.39)
HIGH				0.040***		0.002	0.014**
				(6.54)		(0.34)	(2.36)
REC*EBTP	-0.079						-0.006
	(-0.65)						(-0.07)
BOOM*EBTP		0.655***					-2.313***
		(6.29)					(-4.27)
POS*EBTP			-1.433***				2.328***
			(-6.90)				(-4.51)
HIGH*EBTP				-1.052***			0.014**
				(-5.51)			(2.36)
POS*BOOM*EBTP					0.548***		2.151***
					(4.51)		(3.35)
HIGH*BOOM*EBTP						0.442***	0.384
						(4.26)	(1.27)
J-statistic	45.16	35.14	43.94	41.82	9.18	35.77	31.54
P(J-Stat)	0.465	0.854	0.517	0.607	0.845	0.807	0.722
AR(1)	0.002	0.000	0.003	0.001	0.000	0.000	0.000
AR(2)	0.086	0.008	0.997	0.375	0.001	0.011	0.204
Observations	1398	1398	1398	1398	1398	1398	1403

T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. The GMM panel estimator controls for potential endogeneity by using instruments based on lagged values of the explanatory variables in the model. GMM standard errors are not clustered. POS = dummy variable that take the value 1 if EBTP is positive and zero otherwise. HIGH = dummy variable that take the value 1 if EBTP is above-the-median EBTP and zero otherwise, reflecting high earnings. REC = dummy variable that take the value 1 if ΔGDP is negative and zero otherwise, reflecting recessionary periods or economic downturns. BOOM = dummy variable that take the value 1 if ΔGDP is above-the-median ΔGDP and zero otherwise, reflecting economic booms or periods of economic prosperity. Bank level variables remain as previously defined.

6.5.2. Forward-looking Bank Provisioning

Some bank supervisors and accounting standard setters in several countries raise concern that the IAS 39 incurred loss provisioning model is backward looking because it delays provisioning until it too late, and have encouraged banks to consider a forward-looking provisioning approach (FSF, 2009). In several African countries, bank supervisors, for instance, the Central Bank of Nigeria raise this concern, and urge banks to be forward-looking in their loan loss provisioning practices to encourage early provisioning and the timely recognition of loan losses. A forward-looking provisioning approach in principle would allow banks to set aside sufficient loan loss provisions before loan losses materialise; however, there are two problems associated with any forward-looking provisioning system.

One, there is no defined way for banks to follow to adopt a forward-looking provisioning system, and two, managers will retain full discretion in forward-looking provisioning and such forward-looking discretion can be exploited to manipulate reported earnings opportunistically (Bushman and Williams, 2012); therefore, in this section, I test whether African banks can exploit their forward-looking discretion in an attempt to use loan loss provisions to smooth reported earnings. To do this, I adopt a modified version of the model of Bushman and William (2012) and take the lagged values (or beginning values) of all bank-level variables except the earnings smoothing variable (EBTP) and the loan loss provisions (LLP) variable. According to Bushman and William (2012), taking the beginning (or lagged) values of the explanatory variables ensures that reported loan loss provisions are solely driven by the level of earnings without reference to information about the loan portfolio and other bank characteristics. The modified model is given below and is estimated using with the GMM regression:

$$GMM: LLPi,j,t = LLPi,j,t-1 + NPLi,j,t-1 + EBTPi,j,t + CAPi,j,t-1 + SIZEi,j,t-1 + LOANi,j,t-1 + LOTAi,j,t-1 + \Delta GDPj,t + ei,t \ldots\ldots\ldots\ldots Equation\ 10$$

The relationship between LLP and EBTP is the focal relationship of interest, and the result is reported in Table 6.7. The EBTP coefficient is positively significant, indicating that African banks use loan loss provisions to smooth reported earnings under a forward-looking provisioning system. This implies that African banks can use loan loss provisions to smooth earnings when current information about bank loan

portfolio and other characteristics are ignored. This finding is consistent with the findings of Bushman and William (2012), and implies that African bank managers can exploit forward-looking discretion in bank provisioning to manipulate reported earnings.

6.5.3. Stress-testing Bank Capital Adequacy

Next, I test whether the propensity to use loan loss provisions to smooth earnings depend on the level of banks' capital adequacy ratio. UC*EBTP and WC*EBTP coefficients are the variables of interest. The result is reported in Table 6.7.

UC*EBTP coefficient is negatively significant, indicating that African banks do not use loan loss provisions to smooth reported earnings when they are undercapitalised. This suggests that loan loss provisions estimates are possibly used for capital management purposes to compensate for their low capital levels rather than for earnings smoothing purposes when African banks are undercapitalised.

WC*EBTP coefficient is positively significant, indicating that African banks use loan loss provisions to smooth reported earnings when they are well-capitalised. This implies that loan loss provisions estimates are used for earnings smoothing purposes rather than for capital management purposes when African banks are well-capitalised.

6.5.4. Bank Leverage and Risk-taking

Further, I test whether the incentive to use loan loss provisions to smooth reported earnings depends on bank leverage in the balance sheet of African banks. Bouvatier et al. (2014) suggest that the decision to use loan loss provisions to smooth reported earnings increases bank opacity and should be undesirable to stakeholders including debtholders. Also, Shleifer and Vishny (1997) argue that debtholders can exert considerable power to monitor firms, and such monitoring should discourage opportunistic earnings management practices among firms. Since African banks also have high leverage like US and European banks, one would expect incremental changes in bank leverage to influence the reporting choices of African bank managers. In fact, the presence of sophisticated bank debtholders should deter and discourage bank managers from opportunistic behaviour that take the form of earnings management or earnings smoothing. However, there is also the argument that the presence of bailout packages to banks

may also reduce the incentive for debtholders to monitor banks which in turn would reduce monitoring of bank management thus increasing the opportunities for banks to take more risks and to distort their financial reporting process (e.g. Brunnermier et al., 2009).

Building on these arguments, I test these arguments for African banks by using 'beginning debt to asset ratio' to capture monitoring by debt-holders.[36] The interaction between the lagged debt to asset ratio and EBTP variables capture the extent to which earnings smoothing via LLP is driven by known values of bank leverage. Also, I use 'change in debt to asset ratio' to capture bank's sensitivity to leverage. To derive the debt to asset ratio, I take one minus the equity to total asset ratio of bank i at time t. To measure change in debt to asset ratio (ΔDA), I use this formulation: $[(DA_1-DA_0)/DA_0]$ where DA = debt to total asset ratio at time t for bank i. I interact the two variables (DAt-1 and ΔDA) with EBTP to detect whether earnings smoothing via loan loss provision is sensitive to bank leverage and changes in bank leverage respectively. The result is reported in Table 6.7.

The ΔDA*EBTP coefficient is not significant, indicating that the use of loan loss provisions to smooth earnings is not sensitive to a change in bank leverage for African banks. The DAt-1*EBTP coefficient is negatively significant, indicating that the use of loan loss provisions to smooth earnings is reduced when African banks are highly leveraged, implying that post-debt considerations (e.g. greater monitoring by debtholders) can influence the incentive for African banks to use loan loss provisions to smooth reported earnings

6.5.5. Funding Risk (or Bank's Sensitivity to Bank Runs)

Also, African banks may witness liquidity problems due to the shallow depth and breadth of financial markets and instruments in the region, and such liquidity problems may give rise to funding risk. Funding risk is the inability of banks to settle their obligations with immediacy (Drehmann, 2010).

Funding risk also convey the idea that a bank may not be able to meet deposit withdrawals immediately. When this is the case, African banks that have liquidity problems due to high funding risk may report smoother earnings to mask their funding problems (or risks) until they are able to find alternative

[36] To do this, I use beginning (or lagged) debt-to-asset ratio (to avoid correlation with the equity-to-asset ratio variable).

funding/liquidity to meet sudden withdrawals needs of depositors. The incentive to smooth bank earnings to hide or mask banks' funding risk will be stronger if African banks fear that the general public's awareness of their liquidity problems may initiate a run on the bank by depositors.

Following this reasoning, I test whether the incentive to use loan loss provisions to smooth earnings is influenced by bank funding (or liquidity) risk. Prior studies (e.g. Cerrato et al, 2012) use bank 'liquid assets to customer deposits and short term funding ratio' (LD) to capture bank funding (or liquidity risk). The higher the LD ratio, the more liquid the bank is and the less vulnerable it is to a run on the bank. I adopt a modified construct by taking the change in the value of this ratio (ΔLD) and interact it with EBTP to detect whether propensity to use loan loss provisions to smooth earnings is associated with changes in bank funding (or liquidity) risk. The result is reported in Table 6.7.

The ΔLD*EBTP coefficient is positively significant, indicating that the use of loan loss provisions to smooth earnings is significantly associated with changes in bank funding risk and imply that African banks use loan loss provisions to smooth earnings when there are significant changes in bank funding risk possibly to hide their funding problems (or risks) from financial reports.

6.5.6. Banking Crisis

Beck and Cull (2013) suggest that the African region is prone to frequent banking crises. I check whether the use of loan loss provisions to smooth reported earning is significantly associated with banking crises in the African region. El Sood (2012) show that US banks lower loan loss provisions to increase earnings during the 2007 to 2009 global financial crisis. To capture banking crisis, I use a dummy variable 'CRISIS' that take the value of one for periods where an African country witness a major banking crisis and zero otherwise. World Bank database provide information about countries that witness a major banking crisis. I consider this approach to be more appropriate to test the effect of banking crisis on bank earnings smoothing behaviour rather than using the usual pre-and post-financial crisis period classification since many African banks were not affected by the 2007-2008 financial crisis and were not systematically connected to the global financial system at that time. The result is reported in Table 6.7.

The CRISIS*EBTP coefficient is insignificant, indicating that earnings smoothing via loan loss provisions among African banks is not pronounced during banking crisis periods across African countries.

6.5.7. Signalling

Furthermore, I check whether African banks use loan loss provisions estimates to signal information about firms' earnings prospects. Prior literature suggests that loan loss provisions may be used to signal private information to firm outsiders about the firm's future earnings prospects. Liu and Ryan (1995) and Beaver and Engel (1996) argue that banks or financial institutions can use loan loss provisions to signal firm's future prospects or intentions to clients and potential investors while Kanagaretnam et al. (2003) observe that managers of undervalued banks use loan loss provisions to signal banks' future earnings prospects. Kanagaretnam et al. (2005) find similar evidence while Ahmed et al. (1999) did not find evidence to support the signalling hypothesis. Taken together, these studies suggest that the incentive to use loan loss provisions to signal loan quality or firm future prospects depends on: the degree of information asymmetry, differences in managerial incentive to signal (see Kanagaretnam et al., 2005), and the extent to which investors interpret high provisions as a signal for loan quality or as a signal in anticipation of large non-performing loans (see Beaver and Engel, 1996; Liu et al., 1997). The result is reported in Table 6.7. SIGNAL coefficient is negatively significant, indicating that African banks do not appear to use loan loss provisions estimates to signal information about banks' future earnings prospects.

Table 6.7. Bank-Level Extended and Additional Analysis								
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LLPt-1	0.592*** (7.79)	-0.095** (-2.23)	-0.374*** (-9.80)	-0.307*** (-6.89)	-0.087*** (-2.91)	-0.155*** (-3.53)	-0.243*** (-7.20)	-0.160*** (-3.66)
EBTP	0.094** (2.27)	0.563*** (7.57)	0.775*** (4.59)	0.278*** (4.87)	0.539*** (7.23)	0.721*** (8.01)	0.310*** (4.42)	
NPL		0.313*** (9.13)	0.424*** (18.26)	0..439*** (13.87)	0.338*** (8.89)	0.403*** (12.63)	0.442*** (14.09)	0.407*** (11.14)
NPLt-1	-0.228*** (-4.71)							
LOAN		-0.017** (-2.28)	-0.005 (-0.99)	-0.013* (-1.87)	0.006 (0.92)	-0.011* (-1.76)	-0.009* (-1.71)	-0.007 (-0.97)
LOANt-1	-0.032*** (-5.99)							
LOTA		-0.001 (-0.11)	0.015 (1.48)	-0.017 (-1.20)	-0.027** (-2.28)	-0.013 (-0.95)	-0.016 (-1.18)	-0.019 (-1.58)
LOTAt-1	-0.002 (-0.27)							
CAP		-0.208*** (-6.94)	-0.115*** (-4.49)	-0.169*** (-8.56)	-0.129*** (-5.64)	-0.211*** (-8.60)	-0.279*** (-10.68)	-0.159*** (-6.81)
CAPt-1	0.039* (1.75)							
SIZE		-0.038**** (-4.61)	-0.009** (-2.49)	-0.044*** (-5.80)	-0.033*** (-3.51)	-0.031*** (-4.16)	-0.037*** (-2.89)	-0.048*** (-6.49)
SIZEt-1	-0.013* (-1.66)							
ΔGDP		-0.051 (-0.98)	-0.119*** (-3.71)	-0.077* (-1.87)	-0.060 (-1.06)	-0.053 (-1.52)	-0.149*** (-2.89)	-0.092** (-2.11)
ΔDA		-0.0002 (-0.25)						
ΔDA*EBTP		0.009 (0.81)						
DAt-1			-0.059** (-2.11)					
DAt-1*EBTP			-0.827*** (-3.99)					
ΔLD				-0.002** (-2.29)				
ΔLD*EBTP				0.036*** (2.94)				
CRISIS					0.004* (1.64)			
CRISIS*EBTP					0.007 (1.53)			
UC						0.017** (2.29)		
UC*EBTP						-0.416*** (-3.91)		
WC							0.003 (0.25)	
WC*EBTP							0.533*** (4.76)	
SIGNAL								-0.205*** (-5.74)
J-statistic	50.19	46.82	33.89	42.24	33.15	40.81	38.21	45.99
P(J-statistic)	0.348	0.398	0.887	0.589	0.834	0.649	0.753	0.514
AR(1)	0.000	0.000	0.008	0.003	0.005	0.000	0.001	0.009
AR(2)	0.953	0.299	0.259	0.108	0.404	0.315	0.022	0.085
Observations	1490	1341	1163	1357	950	1398	1398	1384

GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. The GMM panel estimator controls for potential endogeneity by using instruments based on lagged values of the explanatory variables in the model. GMM standard errors are not clustered. ΔDA = change in debt to asset ratio, and measure the incentive to smooth earnings incremental to sensitivity to bank leverage. DAt-1 = lagged debt to asset ratio. ΔLD = change in liquid Assets to customer deposit and short term funding ratio. Δ LD*EBTP = measure the incentive to smooth earnings incremental to sensitivity of bank short term funding, measured as $[(LD_2 - LD_1)/LD_1]$. T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. CRISIS = dummy variable that equal one for periods of major banking crisis in the African country and zero otherwise. WC = dummy variable that equal one if CAP ratio is at least 50%, representing periods when African banks are well-capitalised. UC = dummy variable that equal one if CAP ratio is less than 25%, representing periods when African banks are under-capitalised. SIGNAL = one-year ahead EBTP. Other bank level variables remain as previously defined.

6.5.8. Further Robustness Checks: Sub-Sample Analysis

Finally, the full sample is divided into bank sub-samples to detect the extent of earnings smoothing via loan loss provisions in each bank category. The results are reported in Table 6.8, 6.9 and 6.10 and EBTP is the variable of interest. Table 6.8 confirms that listed African banks use loan loss provisions to smooth reported earnings to a greater extent than non-listed African banks. Also, the results in Table 6.8 confirm that African banks with Big 4 auditor use loan loss provisions to smooth reported earnings less aggressively compared to African banks with non-Big 4 auditors. Moreover, the results show that African banks with dispersed ownership use loan loss provisions to smooth earnings less aggressively compared to African banks with concentrated ownership.

Table: 6.8. Subsample Regression: Ownership Concentration and Earnings Smoothing (GMM)

	Disperse Ownership (DISP)	Moderate Concentration (CONTROL1)	Strong Concentration (CONTROL3)	Listed Banks	Non-listed Banks	Big 4 Auditor Banks	Non-Big 4 Auditor Banks
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
LLPt-1	0.089***	0.086***	0.210***	0.126***	-0.147***	0.156***	-0.434***
	(4.91)	(8.95)	(6.58)	(13.02)	(-4.69)	(8.72)	(-14.94)
EBTP	0.378***	0.007	0.376***	0.500***	0.651***	0.385***	0.906***
	(13.36)	(0.65)	(15.03)	(27.38)	(12.39)	(12.09)	(38.89)
NPL	0.114***	0.077***	0.012	0.041***	0.341***	0.009	0.216***
	(26.77)	(9.96)	(0.75)	(20.96)	(13.09)	(1.09)	(49.54)
LOAN	-0.009***	-0.004**	-0.025***	0.003**	-0.019**	-0.022***	-0.019***
	(-6.16)	(-2.07)	(-18.43)	(6.18)	(-2.40)	(-7.65)	(-11.54)
LOTA	0.004	-0.019***	0.088***	-0.003	0.0001	0.022***	-0.030***
	(1.26)	(-6.68)	(40.05)	(-1.27)	(0.01)	(7.65)	(-10.46)
CAP	-0.071***	-0.092***	-0.347***	-0.100***	-0.227***	-0.066***	-0.163***
	(-10.77)	(-19.67)	(-22.15)	(-16.47)	(-8.30)	(-9.78)	(-17.81)
SIZE	-0.005**	0.008***	-0.015***	-0.002**	-0.042***	-0.009***	-0.006**
	(-2.36)	(3.36)	(-12.38)	(-2.24)	(-5.48)	(-6.03)	(-2.33)
ΔGDP	-0.010	-0.028***	-0.159***	-0.077***	-0.065**	-0.035**	0.027***
	(-0.68)	(-3.02)	(-12.38)	(-6.95)	(-2.03)	(-1.96)	(3.05)
J-Statistic	22.30	25.91	37.96	34.20	54.71	58.12	45.86
P(J-Statistic)	0.843	0.679	0.471	0.646	0.205	0.128	0.277
AR(1)	0.999	0.091	0.026	0.894	0.001	0.001	0.028
AR(2)	0.998	0.246	0.463	0.908	0.172	0.264	0.115
Observation	481	287	472	413	985	995	403

GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. GMM standard errors are clustered by year. Column 1 = is the regression for the sub-sample of African banks with dispersed ownership, that is, no majority shareholder holds at least 50% direct equity. Column 2 = is the regression for the sub-sample of African banks with moderate concentration, that is, one majority shareholder with at least 50% but less than 70% of direct equity. Column 3 = is the regression for the sub-sample of African banks with concentrated ownership, that is, one majority shareholder have at least 70% equity (i.e. 70% to 100%). Column 4 = regression for listed African banks. Column 5 = regressions for non-listed African banks. Column 6 = regressions for African banks with Big 4 auditor. Column 7 = regressions for African banks with non-Big 4 auditor.

Also, I perform additional tests to determine whether African banks in each bank category smooth earnings when they are more profitable. The result is reported in Table 6.9 and HIGH*EBTP coefficient is the focal variable of interest.

The HIGH*EBTP coefficient is positively significant in Column 1 and 2 indicating that African banks with dispersed ownership use loan loss provisions to smooth reported earnings when they are more profitable while HIGH*EBTP coefficient is negatively significant in Column 3 indicating that African banks with concentrated ownership do not use loan loss provisions to smooth earnings when they are more profitable. Column 4 and 5 show that listed African banks and African banks with Big 4 auditor does not use loan loss provisions to smooth earnings when they are more profitable.

Table: 6.9. Subsample Regression: Earnings Smoothing Incremental To Substantial Earnings (GMM)

	Disperse Ownership (DISP)	Moderate Concentration (CONTROL1)	Strong Concentration (CONTROL3)	Listed Banks	Big-4 Auditor bank
	Column 1	Column 2	Column 3	Column 4	Column 5
LLPt-1	0.043***	0.155***	0.166***	0.123***	0.108***
	(2.67)	(7.49)	(4.57)	(5.61)	(4.88)
EBTP	-0.046	-0.830***	1.014***	0.556***	0.595***
	(-1.53)	(-8.06)	(12.67)	(19.89)	(9.75)
NPL	0.135***	0.016	0.004	0.055***	0.022*
	(21.72)	(1.15)	(0.19)	(10.44)	(1.89)
LOAN	-0.007***	0.0002	-0.032***	0.008***	-0.019***
	(-4.96)	(0.10)	(-13.37)	(5.66)	(-6.44)
LOTA	-0.021***	-0.013***	0.099***	-0.005*	0.028***
	(-11.04)	(-3.25)	(24.12)	(-1.75)	(5.37)
CAP	-0.105***	-0.089***	-0.262***	-0.105***	-0.066***
	(-16.41)	(-16.27)	(-16.16)	(-12.82)	(-8.72)
SIZE	0.0007	0.004	-0.021***	-0.003**	-0.009***
	(0.47)	(1.15)	(-11.65)	(-2.49)	(-4.59)
ΔGDP	-0.044**	-0.058***	-0.207***	-0.108***	-0.017
	(-2.51)	(-6.06)	(-11.87)	(-10.01)	(-1.06)
HIGH	-0.015***	-0.013***	0.033***	0.018***	0.004*
	(-9.54)	(-9.95)	(7.76)	(9.34)	(1.82)
HIGH*EBTP	0.682***	1.025***	-1.066***	-0.129***	-0.345***
	(17.43)	(9.93)	(-9.04)	(-4.81)	(-4.36)
J-Statistic	24.87	28.69	39.37	40.83	51.11
P(J-statistic)	0.63	0.428	0.364	0.266	0.246
AR(1)	0.919	0.125	0.050	0.893	0.002
AR(2)	0.968	0.461	0.094	0.945	0.267
Observation	344	287	472	413	995

GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. GMM standard errors are clustered by year.

I perform additional sensitivity tests to detect whether each bank category smooth earnings when they are more profitable and during economic boom periods. The result is reported in Table 6.10. The focal variable of interest is the BOOM*HIGH*EBTP coefficient. The BOOM*HIGH*EBTP coefficient in all columns confirm that each bank subsample use loan loss provisions to smooth reported earnings when

they are more profitable during economic boom periods. This confirms the earlier result that African banks use loan loss provisions to smooth reported earnings when they are more profitable during economic boom period.

Table: 6.10. Subsample Regression: Earnings Smoothing Incremental To Substantial Earnings During Economic Booms					
	Disperse Ownership (DISP)	Moderate Concentration (CN1)	Strong Concentration (CN3)	Listed Banks	Big-4 Auditor bank
	Column 1	Column 2	Column 4	Column 5	Column 6
LLPt-1	0.113***	0.091***	0.202***	0.113***	0.149***
	(4.56)	(7.17)	(5.85)	(5.38)	(4.05)
EBTP	0.299***	-0.023	0.269***	0.427***	0.297***
	(8.08)	(-0.79)	(7.49)	(21.37)	(6.00)
NPL	0.133***	0.066***	-0.003	0.060***	0.034*
	(16.65)	(7.29)	(-0.13)	(11.29)	(1.68)
LOAN	-0.006***	-0.003	-0.023***	0.009***	-0.020***
	(-3.03)	(-0.94)	(-10.23)	(7.03)	(-4.73)
LOTA	0.002	-0.018***	0.079***	-0.008**	0.023***
	(0.82)	(-4.37)	(13.27)	(-2.09)	(2.99)
CAP	-0.087***	-0.085***	-0.287***	-0.118***	-0.091***
	(-7.57)	(-8.33)	(-12.32)	(-12.45)	(-7.26)
SIZE	-0.003	0.008***	-0.014***	-0.002	-0.014***
	(-1.20)	(3.54)	(-12.50)	(-1.42)	(-4.17)
ΔGDP	-0.091***	-0.076***	-0.038	-0.128***	-0.017
	(-3.63)	(-4.24)	(-1.38)	(-11.11)	(-0.51)
BOOM	0.003**	-0.001	-0.013***	-0.001*	-0.019***
	(2.20)	(-1.13)	(-6.79)	(-1.73)	(-6.79)
HIGH	0.003	-0.004**	-0.001	0.014***	-0.009***
	(0.93)	(-2.55)	(-0.99)	(5.25)	(-3.32)
BOOM*HIGH*EBTP	0.058***	0.081***	0.089***	0.051***	0.191***
	(2.76)	(3.37)	(3.64)	(5.55)	(5.68)
J-Statistic	29.21	29.44	38.79	39.35	54.42
P(J-statistic)	0.351	0.339	0.345	0.281	0.135
AR(1)	0.044	0.098	0.009	0.985	0.0002
AR(2)	0.156	0.184	0.352	0.978	0.916
Observation	344	287	472	413	995
GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. GMM standard errors are clustered by year.					

6.6. Summary and Conclusion

This chapter presents the findings for bank-level and economic incentives to smooth reported earnings via loan loss provisions.

The findings in this chapter show that African banks use loan loss provisions to smooth bank earnings, however, this practice differ across African countries. Two, earnings smoothing is observed to be pronounced among (i) listed African banks than non-listed banks; (ii) among African banks that adopt local GAAP; (iii) among African banks with concentrated ownership. Also, the findings indicate that African banks use loan loss provisions to smooth bank earnings when they are more profitable during economic booms. Additionally, bank earnings smoothing is pronounced when African banks exercise forward-looking provisioning discretion and during changes in bank funding risk.

On the other hand, earnings smoothing is significantly reduced among African banks (i) with dispersed ownership; (ii) Big 4 auditors and (iii) among African banks that adopt IFRS standards. Moreover, African banks with dispersed ownership use loan loss provisions to smooth reported earnings when they are profitable during economic booms while African banks with concentrated ownership do not use to loan loss provisions to smooth reported earnings when they are profitable during economic boom. All the results are summarised in Table 6.11.

The next chapter presents the second empirical analysis that focus on several country-level, institutional and development factors influencing earnings smoothing via loan loss provisions.

6.11. Summary of the Bank-level Results					
	Main Hypothesis	Sample Analysis	Effect on Earnings Smoothing		
			Significant decrease	Significant increase	No Effect
	Income Smoothing	Full Sample	-	Yes	-
1.	Disclosure Regulation Audit Quality & Capital Market	Full Sample	IFRS adoption	Local GAAP adoption	IAS adoption
		Full Sample & Sub-sample	Banks with Big 4 auditor	Listed African banks	-
2.	Bank Ownership Concentration	Full Sample & Sub-sample	Disperse Ownership	Concentrated Ownership	Moderate Ownership
3.	Sensitivity Analysis				
3(i)	Transient Economic Analysis	Full Sample	-	Economic boom periods	Economic downturns.
3(ii)	Transient Earnings Analysis	Full Sample	When banks are more profitable	-	-
3(iii)	Forward-looking provisioning	Full Sample	-	During forward-looking provisioning	-
3(iv)	Stress-testing Capital Adequacy	Full Sample	When banks are undercapitalised	When banks are undercapitalised	-
3(v)	Bank Leverage	Full Sample	Monitoring by debtholders	-	Changes in bank leverage
3(vi)	Funding Risk	Full Sample	-	When banks have higher funding risk	-
3(vii)	Signalling		Earnings smoothing not for signalling purpose	-	-
3(viii)	Banking crises	Full Sample	-	-	During periods of major banking crises

Chapter 7

Institutional Factors Influencing Earnings Smoothing

7.0. Introduction

This chapter investigates the cross-country determinants of bank earnings smoothing in Africa to determine the institutional and country factors that influence the extent of bank earnings smoothing via loan loss provisions for the selected African countries. The diverse and uneven institutional, social-economic, developmental, legal and political economy differences across African countries makes it important to consider these issues when investigating bank financial reporting practices in Africa. The influence of institutional factors on the earnings smoothing practices of African banks remain unknown in the empirical literature therefore the analyses in this chapter aim to contribute to the scant empirical literature on bank earnings management in Africa.

This chapter begins by outlining the descriptive statistics for the institutional variables and other relevant country-level variables and presents the correlation analysis that check for the presence of highly-correlated variables (that is, multicollinearity among the country-level variables). The chapter then presents the regression results for the country-specific the cross-country analyses. The analyses in this chapter employ GMM first difference regression and the justification for using GMM is already provided in Chapter 5.

For the GMM first difference estimation, the GMM instruments are only applied to the lagged dependent variable while the other explanatory variables are considered as strictly exogenous. The GMM estimation also includes first-difference and year fixed effects, and the standard errors are not clustered.

Finally, the coefficients of each interaction term measure the influence of the country-level variable on bank earnings smoothing behaviour. The extensive number of country variables and the incorporation of

interaction terms is the main rationale for using separate regression models rather than a single regression model with sandwiched variables.

7.1. Country-Level Variable: Descriptive Statistics

Table 7.1a reports the summary of the mean for each country-level variable. For instance, the voice and accountability (VA) variable, on average, is higher in South Africa, Mauritius and Ghana and is much lower in Tunisia and Algeria. This indicates that South Africa and Mauritius have stronger institutions that promote freedom of speech, freedom of expression and a free media. Control of corruption index (COC) on average is higher for Botswana and Mauritius and is lower for Angola, Cameroun and Nigeria. This implies that Botswana, Mauritius and South Africa have strong institutions that improve the fight against corruption compared to Angola, Nigeria and Cameroun. Also, protection of minority shareholders rights (INVPRO) is higher in South Africa, Mauritius and Ghana and is lower in Senegal and Togo. The 'extent of director liability' (EDL) is higher for South Africa and Mauritius and much lower for Cameroun, Senegal and Togo. The 'quality of the legal system' index (LEGAL) is higher for Botswana and Mauritius and suggests that Botswana and Mauritius have stronger rule of law or legal enforcement systems compared to Cameroun and Angola. Overall, the statistics show substantial institutional variation across African countries. The correlation of the country variables is reported 7.1b.

Table 7.1A. Cross Country Means (Descriptive statistics)

Table 1 reports the means for each African country in the sample over the 2002 and 2014 period. INVPRO = strength of investor protection index. INVSUIT = ease of shareholder suit index. EDL = extent of director liability index. LEGAL = rule of law index. VA = voice and accountability index (estimate). PS = political stability and absence of violence/terrorism index (estimate). GT = government effectiveness (estimate). RQ = regulatory quality index (estimate). RS = safety and rule of law index (estimate). COC = control of corruption (estimate). FINGDP = financial system deposits to GDP ratio representing financial sector development. FG1 = ratio of foreign banks to total banks in the domestic country. FG2 = foreign bank assets to total bank assets ratio. BCON = bank concentration. SB = z-score index. LERNER = banking competition. SG = stock market capitalization to gross domestic ratio, representing capital (or stock) market development.

	INVPRO	EDL	INVSUIT	LEGAL	VA	COC	GT	RQ	RS	PS	FG1	FG2	FINGDP	SG	SB	LERNER	BCON
South Africa	8	8	8	0.09	0.61	0.19	0.50	0.52	71.85	-0.07	21.4	25.6	57.12	183.8	22.09	0.18	98.95
Ghana	6	5	6	-0.06	0.35	-0.11	-0.08	-0.07	72.58	0.01	53.3	63.5	19.31	12.45	10.13	0.38	79.43
Egypt	5.2	3	5	-0.09	-1.07	-0.56	-0.48	-0.42	60.90	-0.94	41.5	21	70.68	49.33	30.70	0.18	64.17
Tunisia	4.7	7	6	0.09	-0.84	-0.01	0.30	-0.09	62.85	-0.14	47.3	27.1	49.52	13.81	5.15	0.31	80.22
Morocco	3.5	2	2.3	-0.15	-0.71	-0.29	-0.13	-0.16	62.71	-0.44	37.3	18.6	76.44	55.90	19.19	0.24	93.05
Kenya	5	2	10	-0.95	-0.28	-0.96	-0.55	-0.22	51.47	-1.25	28.2	38.6	35.42	27.81	10.41	0.33	57.25
Uganda	4	5	5	-0.48	-0.56	-0.89	-0.49	-0.16	54.70	-1.11	77.4	87.7	16.08	10.32	15.51	0.32	66.22
Zambia	5.3	6	7	-0.50	-0.26	-0.59	-0.72	-0.52	64.47	0.30	80.3	89.2	15.44	10.8	11.60	0.22	70.66
Tanzania	4.9	4	8	-0.40	-0.24	-0.61	-0.51	-0.43	61.46	-0.31	62	61.4	21.59	4.57	11.17	0.34	60.63
Ethiopia	4.3	4	5	-0.75	-1.23	-0.65	-0.58	-1.01	46.14	-1.52	0	0	32.28	-	14.22	0.52	72.49
Togo	3.7	1	4	-0.93	-1.12	-0.95	-1.43	-0.85	52.60	-0.36	20	49.6	26.27	-	4.46	0.22	97.48
Angola	5.7	6	6	-1.38	-1.17	-1.31	-1.17	-1.12	38.10	-0.63	48.1	51.6	19.59	-	15.49	0.44	77.06
Cameroun	4.3	1	6	-1.13	-1.06	-1.05	-0.82	-0.83	48.10	-0.53	66.8	75.6	14.91	-	15.51	0.32	61.81
Algeria	5.3	6	4	-0.68	-0.97	-0.56	-0.55	-0.86	51.17	-1.28	55.8	8.4	41.12	-	14.95	0.53	76.77
Mauritius	7.7	8	9	0.94	0.85	0.49	0.77	0.72	86.49	0.87	66.2	61	86.26	47.64	19.51	0.45	67.30
Namibia	5.3	5	6	0.17	0.38	0.24	0.13	0.14	63.53	0.76	43	55.6	43.05	7.14	9.33	-	100
Botswana	5.4	5.8	3	0.62	0.52	0.94	0.53	0.60	87.37	0.99	59.2	86.8	36.15	31.55	20.27	0.22	82.85
Senegal	3	1	2	-0.21	-0.03	-0.29	-0.34	-0.24	61.73	-0.21	76.3	81.2	26.02	-	39.01	0.31	67.13
Nigeria	5.7	7	5	-1.28	-0.75	-1.13	-1.03	-0.88	43.26	-1.92	16.2	8.75	18.45	17.54	0.88	0.19	60.81
Malawi	5.3	7	5	-0.20	-0.31	-0.60	-0.61	-0.56	64.35	0.01	87.3	32.3	14.53	17.48	9.83	0.26	96.69
Mozambique	5.7	3.5	8.5	-0.61	-0.13	-0.54	-0.55	-0.46	64.79	0.19	30	98.1	27.41	-	1.89	0.24	91.01

Table 7.1B: Correlation of Country Variables

	BCON	CRISIS	COC	ΔDA	EDL	FINDEP	FG2	FG1	ΔGDP	GT	INVPRO	INVSUIT	LERNER	PS	RQ	LEGAL	RS	SG	VA	SB
BCON	1.000																			

CRISIS	-0.979	1.000																		
	0.000	---																		
COC	-0.032	0.088	1.000																	
	0.311	0.005	---																	
ΔDA	-0.009	0.004	-0.051	1.000																
	0.762	0.908	0.103	---																
EDL	0.752	-0.723	0.263	-0.045	1.000															
	0.000	0.000	0.000	0.143	---															
FINDEP	-0.128	0.164	0.343	0.012	-0.067	1.000														
	0.000	0.000	0.000	0.680	0.030	---														
FG2	0.393	-0.449	0.097	-0.024	0.307	-0.459	1.000													
	0.000	0.000	0.002	0.439	0.000	0.000	---													
FG1	0.089	-0.212	-0.241	0.016	-0.105	-0.315	0.761	1.000												
	0.004	0.000	0.000	0.612	0.000	0.000	0.000	---												
ΔGDP	-0.069	0.004	-0.229	-0.021	-0.224	-0.401	0.258	0.322	1.000											
	0.025	0.894	0.000	0.508	0.000	0.000	0.000	0.000	---											
GT	0.157	-0.104	0.850	-0.054	0.406	0.470	-0.058	-0.302	-0.315	1.000										
	0.000	0.001	0.000	0.083	0.000	0.000	0.059	0.000	0.000	---										
INVPRO	0.859	-0.837	0.188	-0.017	0.907	0.012	0.357	-0.035	-0.138	0.318	1.000									
	0.000	0.000	0.000	0.587	0.000	0.693	0.000	0.248	0.000	0.000	---									
INVSUIT	-0.977	0.996	0.101	0.001	-0.699	0.163	-0.442	-0.207	0.016	-0.084	-0.813	1.000								
	0.000	0.000	0.001	0.963	0.000	0.000	0.000	0.000	0.588	0.006	0.000	---								
LERNER	-0.977	0.995	0.096	0.003	-0.719	0.165	-0.437	-0.197	0.016	-0.088	-0.838	0.990	1.000							
	0.000	0.000	0.002	0.932	0.000	0.000	0.000	0.000	0.604	0.004	0.000	0.000	---							
PS	-0.975	0.993	0.122	-0.000	-0.711	0.163	-0.434	-0.197	0.011	-0.074	-0.827	0.996	0.983	1.000						
	0.000	0.000	0.000	0.992	0.000	0.000	0.000	0.000	0.702	0.016	0.000	0.000	0.000	---						
RQ	-0.977	0.997	0.116	0.002	-0.710	0.182	-0.445	-0.221	-0.012	-0.074	-0.826	0.992	0.995	0.988	1.000					
	0.000	0.000	0.000	0.947	0.000	0.000	0.000	0.000	0.676	0.017	0.000	0.000	0.000	0.000	---					
LEGAL	-0.977	0.993	0.122	0.001	-0.710	0.185	-0.445	-0.209	-0.021	-0.066	-0.828	0.992	0.984	0.995	0.994	1.000				
	0.000	0.000	0.000	0.965	0.0000	0.000	0.000	0.000	0.491	0.032	0.000	0.000	0.000	0.000	0.000	---				
RS	0.978	-0.993	0.005	-0.008	0.748	-0.130	0.480	0.209	-0.006	0.176	0.862	-0.989	-0.986	-0.985	-0.988	-0.986	1.000			
	0.000	0.000	0.867	0.796	0.000	0.000	0.000	0.000	0.836	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---			
SG	0.067	-0.045	-0.093	0.000	-0.047	-0.125	0.244	0.244	0.066	-0.139	0.037	-0.037	-0.046	-0.041	-0.050	-0.052	0.040	1.000		
	0.030	0.140	0.002	0.994	0.130	0.000	0.000	0.000	0.032	0.000	0.233	0.233	0.136	0.181	0.104	0.094	0.192	---		
VA	-0.183	0.252	0.635	-0.049	0.212	0.080	0.202	-0.194	-0.024	0.373	0.176	0.278	0.246	0.271	0.270	0.264	-0.172	0.011	1.000	
	0.000	0.000	0.000	0.114	0.000	0.009	0.000	0.000	0.426	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.705	---	
SB	0.348	-0.344	0.015	0.064	0.104	0.353	0.028	-0.033	0.0309	0.056	0.345	-0.345	-0.344	-0.347	-0.335	-0.340	0.367	-0.146	0.007	1.000

0.000	0.000	0.623	0.039	0.001	0.0000	0.365	0.281	0.319	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.809	-----

7.2. Investor Protection and Bank Earnings Smoothing

To determine the influence of investor protection on the earnings smoothing behaviour of African banks, the variables of interest are the INVPRO*EBTP, EDL*EBTP, INVSUIT*EBTP and LEGAL*EBTP interaction variables. The result is reported in Table 7.2.

INVPRO*EBTP coefficient is negatively significant at the 1% level, indicating that earnings smoothing via loan loss provision is reduced among banks in African countries with strong protection of minority shareholders rights. This result is consistent with the findings of Leuz et al. (2003) and Fonseca and Gonzalez (2008), and implies that banks in African countries that have strong institutions that protect minority shareholders rights have reduced incentive to use loan loss provisions to smooth reported earnings in order to avoid the risk of litigation associated with unlawful distortion of the financial reporting process to deceive investors.

EDL*EBTP coefficient is negatively significant at the 1% level, and indicates that earnings smoothing via loan loss provisions decreases among banks in African countries with greater director liability. This implies that the use of loan loss provisions to smooth reported earnings is significantly reduced in environments where African bank executives are held liable for corporate actions.

LEGAL*EBTP coefficient is positively significant, and indicates that earnings smoothing via loan loss provision is positively associated with greater rule of law. This implies that earnings smoothing via loan loss provision is pronounced among banks in African countries that have strong enforcement of rule of law. This finding is consistent with Shen and Chih (2005) who also find a positive but insignificant coefficient sign for the LEGAL variable in their study. Moreover, Demirguc-Kunt and Detragiache (2002) suggest that strong legal enforcement should reduce the adverse effects of deposit insurance on bank risk-taking behaviour which in turn would diminish bank's incentive to smooth earnings. Surprisingly, the

finding in the analysis does not support this claim in the context of African banks. INVSUIT*EBTP coefficient is not significant.

Moreover, the protection of minority shareholders rights (INVPRO), ease of shareholder suit (INVSUIT) and the extent of director liability (EDL) should depend on the legal system (LEGAL) because the legal system in the each African country can work together to formulate laws that protect investors from managers' manipulation of financial reporting outcomes against the interests of investors, thus implying some complimentary effect. Hence, I test for this complementary effect when the LEGAL variable is interacted with each investor protection variable which is then interacted with EBTP variable.

The result in Table 7.1 show that LEGAL*INVPRO*EBTP and LEGAL*EDL*EBTP coefficients are negatively significant for African banks, except for the LEGAL*INVSUIT*EBTP coefficient. The significant signs for the LEGAL*INVPRO*EBTP and LEGAL*EDL*EBTP coefficients confirm the expected complementarity, and imply that stronger investor protection and high-quality legal enforcement systems in African countries jointly work together to discourage bank earnings smoothing via loan loss provisions.

In Column 8 of Table 7.2, all the interaction variables are run together in a single model, and the INVTPRO*LEGAL*EBTP coefficient is negatively significant and indicate that strong investor protection and legal systems work together to reduce the extent of income smoothing via LLP among African banks.

Overall, the results indicate that strong investor protection and strong legal institutions can discourage and/or reduce the incentive for African banks to use loan loss provisions to smooth reported earnings. The findings support the argument in the theoretical literature (e.g., Leuz et al. (2003)) which argue that investor protection can constrain earnings management behaviour because the presence of institutions that protect investors' rights can reduce the ability of firm insiders to acquire private control benefits and mitigate the incentive to manipulate accounting earnings because there is little or nothing to conceal from outsiders. Furthermore, the findings that strong investor protection and legal systems reduces the extent of income smoothing among banks also support the argument of Nobes and Parker (2008) who argue that

institutional enforcement quality can affect accounting quality in financial reporting. Therefore, the implication for my findings is that strong investor protection can improve the quality of accounting numbers reported in bank financial statements in Africa.

Table 7.2. Investor Protection and Bank Earnings Smoothing (Dynamic Panel Estimation)								
Variables	1	2	3	4	5	6	7	8
LLPt-1	-0.036 (-1.06)	-0.016 (-0.48)	-0.133*** (-3.45)	0.0001 (0.002)	-0.011 (-0.33)	0.003 (0.09)	-0.009 (-0.31)	-0.062 (-0.75)
EBTP	0.589*** (8.64)	0.609*** (9.18)	0.454*** (6.23)	0.193*** (2.74)	0.201*** (3.19)	0.234*** (4.28)	0.212*** (3.51)	-0.217 (-0.21)
NPL	0.075*** (5.06)	0.066*** (4.99)	0.357*** (10.36)	0.203*** (5.46)	0.062*** (3.33)	0.064*** (3.93)	0.199*** (4.66)	0.379*** (3.91)
LOAN	-0.028*** (-8.28)	-0.025*** (-6.78)	-0.011 (-1.30)	-0.005 (-0.40)	-0.024*** (-6.09)	-0.021*** (-5.13)	-0.008 (-0.66)	0.022 (1.08)
LOTA	0.004 (0.87)	0.007 (1.34)	-0.041*** (-2.98)	0.037*** (-3.52)	0.003 (0.54)	0.003 (0.41)	-0.036** (-2.55)	-0.001 (-1.07)
CAP	-0.079*** (-5.21)	-0.088*** (-5.79)	-0.161*** (-6.44)	-0.046* (-1.93)	-0.086*** (-5.85)	-0.087*** (-6.34)	-0.054** (-2.03)	-0.057** (-1.96)
SIZE	-0.009** (-2.37)	-0.010*** (-2.62)	-0.026*** (-3.33)	0.0007 (0.08)	-0.008* (-1.72)	-0.011*** (-2.69)	-0.0005 (-0.06)	-0.031 (-1.42)
ΔGDP	-0.073* (-1.73)	-0.112** (-2.27)	-0.041 (-0.95)	-0.173*** (-2.76)	-0.166** (-2.44)	-0.198*** (-2.99)	-0.156** (-2.23)	-0.264** (-2.04)
INVPRO	0.003 (0.37)				0.003 (0.45)			-0.033 (-0.78)
INVPRO*EBTP	-0.059*** (-4.85)							-0.276 (-1.47)
EDL		0.0004 (0.08)				0.002 (0.37)		0.016 (0.51)
EDL*EBTP		-0.057*** (-4.77)						0.322 (1.33)
LEGAL			-0.0002 (-0.10)		-0.003 (-1.44)	-0.004* (-1.95)	0.0009 (0.27)	-0.008 (-1.22)
LEGAL*EBTP			0.024*** (3.62)					-0.117 (-0.53)
INVSUIT				0.002 (1.49)			0.002* (1.77)	-0.004 (-0.81)
INVSUIT*EBTP				0.004 (1.07)				0.002 (-0.03)
INVPRO*LEGAL*EBTP					-0.024*** (-6.23)			-0.245** (-2.11)
EDL*LEGAL*EBTP						-0.029*** (-6.32)		0.180 (1.53)
INVSUIT*LEGAL*EBTP							0.0003 (1.61)	
Sarjan (J-statistic)	29.79	29.01	40.52	14.63	30.38	29.69	14.06	10.56
P-value	0.794	0.823	0.662	0.949	0.732	0.762	0.945	0.878
AR(1)	0.887	0.762	0.049	0.001	0.958	0.569	0.004	0.057
AR(2)	0.958	0.992	0.137	0.612	0.993	0.966	0.539	0.468
Observations	1057	1057	1398	1011	1057	1057	1011	1016

GMM regression based on Arellano and Bond (1991) first difference estimator with standard errors are not clustered. Regression includes first difference and period effects. GMM instruments are only applied to the lagged dependent variable. Period fixed effects are not transformed in the GMM estimation. AR (1) and AR (2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, respectively. LLPt-1 = lagged dependent variable. All bank-level variables remain as previously defined. INVPRO = strength of investor protection index for each African country. EDL = extent of director liability index for each African country. INVSUIT = ease of shareholder suits index for each African country. LEGAL = extent of, and enforcement of, the rule of law. T-Statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% level, respectively.

7.3. Political Economy and Bank Earnings Smoothing

To detect the influence of political economy on bank earnings smoothing, the variables of interest are the VA*EBTP, COC*EBTP, RS*EBTP, PS*EBTP, RQ*EBTP and GT*EBTP interaction variables. The result is reported in Table 7.3.

VA*EBTP coefficient is insignificant indicating that bank earnings smoothing via loan loss provision is not significantly associated with voice and accounting levels across African countries. COC*EBTP coefficient is positively significant, indicating that bank earnings smoothing is significantly associated with corruption control, implying that the use of loan loss provisions to smooth reported earnings is pronounced among banks in African countries with greater corruption control. RS*EBTP coefficient is insignificant indicating that bank earnings smoothing is not significantly associated with safety and rule of law. PS*EBTP coefficient is positively significant, indicating that bank earnings smoothing via loan loss provision is significantly associated with political stability and absence of violence and terrorism levels in the African region. RQ*EBTP coefficient is insignificant; indicating that bank earnings smoothing is not significantly associated with regulatory quality. GT coefficient is insignificant, indicating that bank earnings smoothing is not significantly associated with government effectiveness.

Of the six political economy variables, only COC*EBTP and PS*EBTP coefficients are significant and imply that the use of loan loss provisions to smooth reported earnings is more pronounced among banks in African countries with greater corruption control and greater political stability and absence of violence. In Column 7, all the interaction variables are re-run together. The PS*EBTP and COC*EBTP coefficients are positively significant in Column 7 and confirm that bank income smoothing via loan loss provisions in Africa is positively associated with greater political stability and corruption control. However, VA*EBTP, RS*EBTP and GT*EBTP coefficients are negatively significant, and suggests that bank income smoothing via loan loss provisions in Africa is negatively associated with greater voice and accountability, legal protection and government effectiveness.

The implication of the findings is that political economy differences in African countries have some impact on bank earnings management behaviour that takes the form of earnings smoothing through the

use of loan loss provisions, depending on the political economy factor examined.[37] The findings support the argument in the theoretical literature (e.g., Leuz et al. (2003)) which argue that institutional factors (in this case, political economy institutions) can constrain earnings management behaviour because the presence of institutions that protect the legal right of investors can reduce the ability of firm insiders to acquire private control benefits and mitigate the incentive to manipulate accounting earnings because there is little or nothing to conceal from outsiders.

Furthermore, the findings that political economy factors such as greater accountability, government effectiveness and legal protection can reduce the extent of bank income smoothing via loan loss provisions suggests that any deliberate action taken by regulators to establish stronger political economy institutions in Africa can improve the accounting quality among African banks. This also supports the theoretical argument of Nobes and Parker (2008) who argue that institutional enforcement quality can affect accounting quality in financial reporting. Therefore, the implication for my findings is that strong political economy can improve the quality of accounting numbers reported in bank financial statements in Africa

[37] In a non-African study, Fonseca and Gonzalez (2008) study also use these political economy variables in their cross-country study and did not find any significant association between provisions-based earnings smoothing and political economy characteristics of each country; hence, they excluded the analysis from their final study published in the Journal of Banking and Finance.

Table 7.3. Impact of Political Economy on Earning Smoothing Incentives (Dynamic Estimation)							
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
LLPt-1	-0.189***	-0.130***	-0.073***	-0.066*	-0.127***	-0.138***	-0.061
	(-4.71)	(-3.32)	(-3.18)	(-1.92)	(-3.32)	(-3.72)	(-1.37)
EBTP	0.519***	0.558***	0.603***	0.422***	0.437***	0.544***	1.986
	(7.84)	(5.86)	(3.36)	(5.21)	(6.11)	(6.09)	(0.54)
NPL	0.273***	0.418***	0.392***	0.369***	0.366***	0.404***	0.469***
	(8.12)	(11.63)	(11.36)	(11.47)	(11.03)	(11.82)	(10.92)
LOAN	-0.009	0.009	0.013***	-0.001	-0.007	-0.011	0.014**
	(-1.18)	(1.57)	(3.21)	(-0.17)	(-1.01)	(-1.51)	(1.94)
LOTA	-0.016	-0.031**	-0.018***	-0.027***	-0.047***	-0.032**	-0.001**
	(-1.12)	(-2.51)	(-2.68)	(-2.86)	(-3.54)	(-2.39)	(-2.10)
CAP	-0.163***	-0.186***	-0.092***	-0.121***	-0.160***	-0.207***	-0.079***
	(-5.93)	(-7.79)	(-4.11)	(-5.43)	(-6.33)	(-8.37)	(-2.86)
SIZE	-0.021**	-0.036***	-0.019***	-0.023***	-0.024***	-0.044***	-0.014
	(-2.50)	(-5.16)	(-2.97)	(-3.19)	(-3.18)	(-6.02)	(-1.19)
ΔGDP	-0.109***	-0.086**	-0.104***	-0.064**	-0.052	-0.059	-0.073
	(-2.82)	(-2.02)	(-3.35)	(-2.41)	(-1.56)	(-1.41)	(-0.90)
VA	-0.044**						0.069***
	(-2.47)						(3.21)
VA*EBTP	-0.104						-0.799***
	(-0.86)						(-3.65)
COC		-0.021					-0.039**
		(-1.41)					(-2.16)
COC*EBTP		0.409***					1.060***
		(2.82)					(4.94)
RS			0.041				-0.184**
			(1.04)				(-2.52)
RS*EBTP			-0.022				0.407
			(-0.48)				(-0.47)
RQ				-0.001			0.006
				(-0.78)			(0.95)
RQ*EBTP				0.007			-0.101
				(1.40)			(-1.07)
PS					-0.0002		0.011
					(-0.09)		(1.41)
PS*EBTP					0.021***		0.129*
					(3.36)		(1.74)
GT						0.030	0.048**
						(1.57)	(2.23)
GT*EBTP						0.034	0.558***
						(0.23)	(-2.76)
Sarjan (J-statistic)	43.22	37.59	43.00	38.18	39.61	43.63	29.38
P-value	0.548	0.776	0.514	0.754	0.699	0.530	0.599
AR(1)	0.129	0.032	0.114	0.004	0.048	0.002	0.113
AR(2)	0.164	0.107	0.393	0.192	0.181	0.076	0.745
observations	1398	1344	917	1383	1398	1398	895

GMM regression based on Arellano and Bond (1991) first difference estimator with standard errors are not clustered. Regression includes first difference and period effects. GMM instruments are only applied to the lagged dependent variable. Period fixed effects are not transformed in the GMM estimation. AR (1) and AR (2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, respectively. LLPt-1 = lagged dependent variable. Other bank-level variables remain as previously defined. T-Statistics are reported in parentheses. Bank level variables remain as previously defined. VA = voice and accountability, and reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. PS = political stability and absence of violence/terrorism index, and measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. GT = government effectiveness, and reflects perceptions of 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. RQ = regulatory quality, and reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. RS = Safety and Rule of Law index, and measures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. RS is the natural logarithm of the 'safety and rule of law index'. COC = Control of corruption, and reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. All countries variables are obtained from Kauffman (2011)'s World governance indicators EXCEPT the rule and safety variable obtained from the MO Ibrahim foundation. T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

7.4. Financial Development, Concentration, Competition and Stability

To determine the influence of financial development on the earnings smoothing behaviour of African banks, the variables of interest are the FG1*EBTP, FG2*EBTP, FINGDP*EBTP and SG*EBTP interaction variables. The result is reported in Table 7.4.

The FINGDP*EBTP coefficient is insignificant; indicating that bank earnings smoothing is not significantly associated with the level of financial sector development. This finding is inconsistent with Fonseca and Gonzalez (2008) who find that bank earnings smoothing increases in environments with greater financial development. FG1*EBTP coefficient is negatively significant at the 1% level, indicating that the use of loan loss provisions to smooth reported earnings is reduced among banks in African countries with greater foreign bank presence. This finding support the argument of Rajan and Zingales (2003), and implies that greater foreign bank presence in African countries put pressure on all banks (in the country) to improve their accounting disclosures which in turn can discourage earnings smoothing. Rajan and Zingales (2003) show that the presence of foreign firms in developing countries may compel domestic firms to perform better and to improve their accounting disclosure quality and contract enforcement. FG2*EBTP coefficient is insignificant.

With regard to capital market development, the SG*EBTP coefficient is negatively significant at the 1% level, indicating that bank earnings smoothing is inversely associated with capital market development, implying that bank earnings smoothing via loan loss provision is reduced in African countries with well-developed capital markets. The LERNER*EBTP coefficient is positively significant and indicates that bank earnings smoothing is significantly associated with cross-country banking competition, implying that the use of loan loss provisions to smooth reported earnings is more pronounced among banks in competitive banking markets in Africa. The BCON*EBTP coefficient is negatively significant, and implies that the use of loan loss provisions to smooth reported earnings is reduced when banks are in concentrated banking markets in Africa. The SB*EBTP coefficient is insignificant; indicating that bank earnings smoothing is not significantly associated with cross-country banking system stability.

Finally, in Column 8, the interaction variables are re-run together. The BCON*EBTP and FG1*EBTP coefficients are negatively significant in Column 8 and further confirm that bank income smoothing via loan loss provisions in Africa is negatively associated with greater banking concentration and foreign bank presence. The implication of the findings is that banking concentration and foreign bank presence in African countries have some impact on bank earnings management behaviour that takes the form of earnings smoothing through the use of loan loss provisions. The findings support the theoretical arguments of Rajan and Zingales (2003) and Claessens and Laeven (2004).

Table 7.4. Financial Sector Development, Stability and Competition (Dynamic Estimation)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LLPt-1	-0.115***	-0.379***	-0.139***	0.026	-0.046	0.088**	-0.029	0.034
	(-2.91)	(-9.23)	(-2.93)	(1.58)	(-1.10)	(2.09)	(-1.27)	(0.45)
EBTP	0.378**	0.402***	0.552***	0.969***	1.162***	0.433***	0.218***	5.499**
	(2.49)	(8.05)	(3.91)	(3.98)	(5.46)	(3.57)	(8.91)	(2.10)
NPL	0.354***	0.345***	0.361***	0.219***	0.372***	0.127***	0.080***	0.288***
	(12.28)	(12.36)	(9.31)	(9.43)	(12.16)	(4.18)	(5.56)	(5.95)
LOAN	-0.009	-0.005	-0.011	0.009**	0.0005	-0.018***	-0.019***	0.0003
	(-1.28)	(-0.82)	(-1.40)	(2.49)	(0.08)	(-3.21)	(-8.84)	(0.04)
LOTA	-0.029**	-0.014	-0.023	-0.024***	-0.020	-0.005***	0.006	-0.0004**
	(-2.51)	(-1.08)	(-1.62)	(-4.45)	(-1.54)	(-0.43)	(1.46)	(-2.06)
CAP	-0.192***	-0.182***	-0.188***	-0.034***	-0.193***	-0.064***	-0.088***	-0.018
	(-8.40)	(-10.02)	(-7.77)	(-2.71)	(-8.02)	(-4.61)	(-9.01)	(-0.61)
SIZE	-0.030***	-0.034***	-0.042***	-0.004	-0.004***	-0.005	-0.012***	0.009
	(-4.29)	(-4.44)	(-5.29)	(-1.17)	(-4.84)	(-0.96)	(-3.70)	(1.19)
ΔGDP	-0.062*	-0.153***	-0.050	-0.135***	-0.121*	-0.052*	-0.084**	-0.201*
	(-1.67)	(-3.58)	(-0.93)	(-4.49)	(-1.91)	(-1.75)	(-2.52)	(-1.75)
FINGDP	-0.0003							-0.0008
	(-0.99)							(-0.87)
FINGDP*EBTP	0.006							0.006
	(1.58)							(1.49)
LERNER		-0.009***						0.024
		(-3.49)						(1.50)
LERNER*EBTP		0.045***						-0.306
		(2.87)						(-1.46)
SB			-0.002*					0.001**
			(-1.72)					(2.37)
SB*EBTP			-0.004					-0.038***
			(-0.37)					(-2.74)
BCON				0.009				0.041
				(0.78)				(1.34)
BCON*EBTP				-0.176***				-1.060*
				(-3.00)				(-1.88)
FG1					-0.0007**			0.0004
					(-2.04)			(0.78)
FG1*EBTP					-0.011***			-0.038***
					(-2.94)			(-6.43)
FG2						0.0001		-0.001***
						(0.48)		(-4.02)
FG2*EBTP						-0.001		0.023***
						(-0.69)		(4.88)
SG							-0.00001***	-0.0001
							(5.08)	(-0.26)
SG*EBTP							-0.00001***	0.0001
							(-4.27)	(0.16)
Sarjan (J-statistic)	42.74	40.23	43.28	40.36	48.69	31.38	41.22	18.23
P-value	0.568	0.674	0.545	0.668	0.056	0.688	0.41	0.51
AR(1)	0.000	0.032	0.042	0.015	0.448	0.000	0.002	0.071
AR(2)	0.041	0.107	0.112	0.232	0.18	0.735	0.097	0.823
observation	1348	1212	1344	1278	1357	1233	895	627

GMM regression based on Arellano and Bond (1991) first difference estimator. GMM standard errors are not clustered. Regression includes first difference and period effects. GMM instruments are only applied to the lagged dependent variable. Period fixed effects are not transformed in the GMM estimation. AR (1) and AR (2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, respectively. LLPt-1 = lagged dependent variable. Other variables remain as previously defined. FIN_GDP = measure the level of financial sector development. FG1 = ratio of foreign banks to total banks in the domestic country. FG2 = foreign bank assets to total bank assets ratio. BCON = natural logarithm of bank concentration. SB = z-score index that measure banking stability with higher values indicating greater banking stability (that is lower insolvency risk) and vice versa. CRISIS = country-level dummy variable that take the value one for countries have had a major banking crisis, and zero otherwise. LERNER = measure cross-country banking competition. Higher values indicate greater banking competitiveness. SG = stock market capitalisation to gross domestic ratio, reflecting capital market development. T-statistics are reported in parentheses. ***, **, * indicate significance at the

0.01, 0.05, and 0.10 level, respectively.

7.5. Sensitivity Analysis

7.5.1. Interaction: Investor Protection and Political Economy

Pagano and Volpin (2005) argue that the political process of a country can play a significant role in the formulation of laws that protect investors in the country because politicians and other interest groups contribute to the decision-making process that leads to the formulation of laws and creation of institutions intended to protect the right of minority shareholders across countries. This argument suggests some complementarity between investor protection and political economy. Accordingly, to test for this complementarity, I interact the investor protection proxies with the political economy variables to take into account the complementary effect of the political process and investor protection on bank earnings smoothing via loan loss provisions for African banks. The result is reported in Table 7.5.

The coefficient signs for all the two-way interaction terms are negatively significant, and confirm that stronger (or higher) investor protection and political economy work together to discourage the use of loan loss provisions to smooth reported earnings among banks in African countries.

Table 7.5. Interaction Analysis: Investor Protection and Political Economy								
Variables	1	2	3	4	5	6	7	8
LLPt-1	-0.023 (-0.57)	-0.051 (-1.43)	-0.015 (-0.54)	-0.045 (-1.13)	-0.012 (-0.30)	-0.043 (-1.23)	-0.002 (-0.09)	-0.041 (-1.03)
EBTP	0.358*** (7.69)	0.322*** (7.23)	0.262*** (4.66)	0.359*** (7.06)	0.369*** (7.53)	0.323*** (6.67)	-0.267*** (-4.95)	0.380*** (6.71)
NPL	-0.009 (-0.39)	0.058*** (2.84)	0.140*** (5.70)	0.062*** (2.97)	-0.006 (-0.23)	0.057*** (2.73)	0.139*** (5.55)	0.059*** (2.58)
LOAN	-0.028*** (-4.20)	-0.024*** (-4.91)	-0.013*** (-3.45)	-0.023*** (-3.94)	-0.028*** (-4.01)	-0.026*** (-5.21)	-0.012*** (-2.88)	-0.025*** (-3.86)
LOTA	0.023* (1.82)	0.008 (1.28)	-0.028*** (-3.70)	-0.0009 (-0.11)	-0.028* (-1.82)	0.009 (1.52)	-0.028*** (-3.67)	-0.001 (-0.13)
CAP	-0.058*** (-3.15)	-0.085*** (-4.73)	-0.045** (-2.21)	-0.086*** (-4.82)	-0.067*** (-3.50)	-0.088*** (-5.05)	-0.045** (-2.12)	-0.089*** (-5.27)
SIZE	-0.013** (-2.01)	-0.012* (-1.79)	0.006 (0.89)	-0.013* (-1.75)	-0.012* (-1.82)	-0.008 (-1.13)	0.005 (0.64)	-0.008 (-1.02)
ΔGDP	-0.091*** (-2.70)	-0.114** (-2.21)	-0.068 (-1.31)	-0.084 (-1.56)	-0.097*** (-2.64)	-0.103* (-1.93)	-0.064 (-1.19)	-0.086 (-1.50)
INVPRO	-0.019** (-2.15)	-0.012 (-1.37)	-0.005 (-0.82)	-0.008 (-0.87)				
EDL					-0.011* (-1.65)	-0.008 (-1.34)	-0.001 (-0.30)	-0.006 (-0.93)
VA	-0.081*** (-5.57)				-0.069*** (-4.49)			
COC		0.003 (0.22)				0.002 (0.14)		
RQ			-0.002* (-1.66)				-0.002* (-1.89)	
GT				0.046** (2.35)				0.048** (2.42)
INVPRO*VA*EBTP	-0.051** (-2.11)							
INVPRO*COC*EBTP		-0.021** (-2.41)						
INVPRO*RQ*EBTP			-0.010*** (-4.56)					
INVPRO*GT*EBTP				-0.049*** (-3.02)				
EDL*VA*EBTP					-0.047** (-2.15)			
EDL*COC*EBTP						-0.016** (-2.24)		
EDL*RQ*EBTP							-0.014*** (-4.39)	
EDL*GT*EBTP								-0.048*** (-3.12)
Sarjan (J-statistic)	42.93	30.09	21.37	27.56	42.06	30.01	22.32	26.09
P-value	0.199	0.745	0.941	0.843	0.225	0.748	0.920	0.887
AR(1)	0.039	0.000	0.000	0.001	0.053	0.000	0.001	0.001
AR(2)	0.200	0.872	0.819	0.154	0.573	0.724	0.977	0.138
observations	1057	10.57	1042	1057	1057	1057	1042	1057

GMM regression based on Arellano and Bond (1991) first difference estimator with standard errors clustered by bank and year. Regression includes first difference and period effects. GMM instruments are only applied to the lagged dependent variable. AR(1) and AR(2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, respectively. LLPt-1 = lagged dependent variable. All bank-level variables remain as previously defined. VA = extent of voice and accountability for each African country. PS = extent of political stability and absence of violence/terrorism for each African country. GT = extent of government effectiveness for each African country. RQ = regulatory quality for each African country. RS = safety and rule of law for each African country, measured as the natural logarithm of the 'safety and rule of law index'. COC = extent of corruption control. INVPRO = strength of investor protection index for each African country. EDL = extent of director liability index for each African country. INVSUIT = ease of shareholder suits index for each African country. LEGAL = extent of, and enforcement of, the rule of law. T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively.

7.5.2. Interaction: Foreign bank presence and Political Economy

Further, Acemoglu et al. (2003) show that the political process (and politicians) in developing countries (e.g. Mexico) can have some influence on financial development especially when the political environment encourages rent-seeking practices that allow politicians to unethically appropriate funds and channel funds from banks to areas that serve the greater interest of politicians, which negatively affects financial development in the country. Banks in such environment have incentives to distort the financial reporting process by smoothing reported earnings to hide their rent-seeking behaviour and their misappropriation of funds from scrutiny by regulators. When this is the case, banks in such environments may smooth reported earnings to appear stable over time while misappropriating funds; thus, I test whether earnings smoothing via loan loss provision among African banks is significantly associated with the level of financial development and political economy. The result is reported in Table 7.6.

The FG1*COC*EBTP, FG1*RQ*EBTP, FG1*GT*EBTP, FG2*COC*EBTP and FG2*GT*EBTP coefficients are all positively significant, and imply that earnings smoothing via loan loss provision is pronounced among banks in African countries that jointly have greater foreign bank presence, greater regulatory quality and greater government effectiveness. The FINGDP*COC*EBTP coefficient is also positively significant, implying that earnings smoothing via loan loss provision is pronounced among banks in African countries that jointly have greater financial sector development and greater corruption control.

Table 7.6. Interaction: Foreign Bank Presence and Political Economy (Dynamic Estimation)									
Variables	1	2	3	4	5	6	7	8	9
LLPt-1	-0.109***	-0.082**	-0.129***	-0.131***	-0.086**	-0.140***	0.024	0.034	0.074
	(-2.63)	(-2.44)	(-3.40)	(-2.99)	(-2.51)	(-3.31)	(0.61)	(0.25)	(1.40)
EBTP	0.608***	0.483***	0.568**	0.594***	0.393***	0.661***	0.381***	0.303***	0.498***
	(8.99)	(5.82)	(7.14)	(5.99)	(5.07)	(7.37)	(6.59)	(3.75)	(6.18)
NPL	0.407***	0.362***	0.371***	0.388***	0.351***	0.364***	0.168***	0.179***	0.144***
	(11.88)	(10.97)	(10.74)	(10.54)	(12.07)	(9.29)	(5.29)	(6.69)	(3.65)
LOAN	-0.001	0.0007	0.003	0.025***	0.008	0.016***	-0.008**	-0.014**	0.0001
	(-0.17)	(0.10)	(0.38)	(4.44)	(1.34)	(2.84)	(-2.11)	(-2.27)	(0.01)
LOTA	-0.025**	-0.031***	-0.034**	-0.008	-0.025***	-0.010	0.011	-0.014*	0.007
	(-2.01)	(-3.43)	(-2.46)	(-0.71)	(-3.31)	(-0.94)	(1.37)	(-1.86)	(0.81)
CAP	-0.203***	-0.130***	-0.198***	-0.172**	-0.132***	-0.186***	-0.041**	-0.073***	-0.046*
	(-7.84)	(-5.98)	(-7.24)	(-7.47)	(-6.30)	(-7.57)	(-1.97)	(-3.31)	(-1.85)
SIZE	-0.031***	-0.023***	-0.046***	-0.037***	-0.023***	-0.045***	0.0005	-0.007	-0.002
	(-4.25)	(-2.94)	(-6.90)	(-5.26)	(-3.00)	(-6.59)	(0.11)	(-1.07)	(-0.32)
ΔGDP	-0.069*	-0.083***	-0.111**	-0.111*	-0.155**	-0.158**	-0.037	-0.085***	0.002
	(-1.71)	(-3.19)	(-2.36)	(-1.66)	(-2.50)	(-2.35)	(-1.02)	(-3.18)	(0.03)
FINGDP	-0.001***	0.0001	0.0007**						
	(-2.80)	(0.26)	(1.97)						
FG1				-0.0006	-0.0004	-0.008			
				(-1.47)	(-1.08)	(-0.42)			
FG2							-0.00001	0.0002	0.0001
							(-0.04)	(1.39)	(0.69)
COC	-0.007			-0.031**			-0.028**		
	(-0.49)			(-2.40)			(-2.42)		
RQ		-0.001			-0.002**			-0.002	
		(-1.03)			(-2.30)			(-0.90)	
GT			0.053**			-0.009			-0.089***
			(2.36)			(-0.36)			(-3.86)
FINGDP*COC*EBTP	0.010**								
	(2.49)								
FINGDP*RQ*EBTP		0.0001							
		(1.12)							
FINGDP*GT*EBTP			-0.004						
			(-1.04)						
FG1*COC*EBTP				0.008**					
				(2.54)					
FG1*RQ*EBTP					0.0003**				
					(2.17)				
FG1*GT*EBTP						0.010***			
						(3.42)			
FG2*COC*EBTP							0.009***		
							(9.53)		
FG2*RQ*EBTP								0.00002	
								(0.01)	
FG2*GT*EBTP									0.009***
									(5.88)
Sarjan (J-statistic)	36.86	38.39	44.58	37.32	38.61	36.15	25.69	33.86	24.36
P-value	0.769	0.709	0.447	0.752	0.701	0.794	0.875	0.474	0.911
AR(1)	0.002	0.092	0.020	0.018	0.179	0.001	0.000	0.000	0.008
AR(2)	0.042	0.014	0.923	0.123	0.418	0.000	0.138	0.988	0.217
Observations	1294	1333	1348	1303	1342	1357	1179	1218	1233

GMM regression based on Arellano and Bond (1991) first difference estimator and GMM standard errors are not clustered. Regression includes first difference and period effects. GMM instruments are only applied to the lagged dependent variable. AR(1) and AR(2) test for the presence of first-order and second-order serial correlation in the first-difference residuals, respectively. Bank-level variables remain as previously defined. T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. FG1 = ratio of foreign banks to total banks in the domestic country. FG2 = foreign bank assets to total bank assets ratio. VA = extent of voice and accountability for each African country. PS = extent of political stability and absence of violence/terrorism for each African country. GT = extent of government effectiveness for each African country. RQ = regulatory quality for each African country. RS = safety and rule of law for each African country, measured as the natural logarithm of the 'safety and rule of law index'. COC = extent of corruption control.

7.5.3. Interaction: Foreign Bank Presence and Ownership Concentration

Finally, following Rajan and Zingales (2003) and Bouvatier et al. (2014), some complementarity between disperse ownership and greater foreign bank presence is expected in the sense that managers of widely-held banks can be further constrained from manipulating reported earnings when they are in environments with greater foreign bank presence. Therefore, I test whether earnings smoothing is pronounced or reduced among widely-held banks in African countries with greater foreign bank presence. The result is reported in Table 7.7.

The FG1*DISP*EBTP and FG1*CN1*EBTP coefficients are negatively significant and confirm the earlier result, implying that greater foreign bank presence and disperse bank ownership work together to put additional monitoring on African bank managers to discourage the use of loan loss provisions to smooth reported earnings in financial reports. The FG1*CN3*EBTP coefficient is positively significant and confirms the earlier result, implying that earnings smoothing via loan loss provision is pronounced among banks with concentrated ownership in African countries with greater foreign bank presence.

Table 7.7. Foreign Bank Presence and Ownership Concentration: Interaction Result.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
LLPt-1	0.004 (0.14)	0.051** (2.05)	0.003 (0.10)	0.097*** (2.90)	-0.133*** (-3.32)	-0.138*** (-3.75)	0.052* (1.67)	0.078*** (2.98)	0.034 (1.43)	0.089** (2.17)
EBTP	0.115*** (2.69)	0.126*** (3.48)	0.088** (2.52)	-0.356*** (-4.69)	0.536*** (7.22)	0.447*** (6.95)	0.142*** (3.98)	0.128*** (3.17)	0.104*** (3.05)	-0.428*** (-6.12)
NPL	0.081*** (4.32)	0.091*** (4.85)	0.085*** (4.67)	0.029 (1.55)	0.385*** (11.98)	0.412*** (13.74)	0.052*** (3.36)	0.051*** (3.26)	0.065*** (4.06)	-0.0003 (-0.02)
LOAN	-0.022*** (-6.52)	-0.019*** (-4.99)	-0.021*** (-6.20)	-0.022*** (-5.27)	-0.012* (-1.71)	-0.0004 (-0.06)	-0.023*** (-6.77)	-0.019*** (-5.21)	-0.022*** (-6.98)	-0.019*** (-3.70)
LOTA	0.006 (1.23)	0.0002 (0.02)	0.004 (0.89)	0.013** (2.15)	-0.036*** (-2.76)	-0.048*** (-4.47)	0.012** (2.15)	0.015** (2.14)	0.008 (1.42)	0.016** (2.21)
CAP	-0.076*** (-6.25)	-0.083*** (-6.99)	-0.080*** (-6.92)	-0.083*** (-6.53)	-0.186*** (-8.02)	-0.192*** (-7.83)	-0.075*** (-7.11)	-0.076*** (-6.61)	-0.072*** (-6.84)	-0.059*** (-3.32)
SIZE	-0.011*** (-2.94)	-0.009** (-2.26)	-0.009** (-2.47)	-0.009** (-2.04)	-0.039** (-5.43)	-0.027*** (-4.10)	-0.008*** (-2.61)	-0.008*** (-2.76)	0.006** (-2.24)	-0.011*** (-3.47)
ΔGDP	-0.195*** (-6.29)	-0.181*** (-5.54)	-0.190*** (-5.99)	-0.183*** (-5.37)	-0.054 (-1.35)	-0.107*** (-2.94)	-0.146*** (-5.58)	-0.154*** (-5.66)	-0.145*** (-5.89)	-0.179*** (-4.15)
DISP*EBTP	-0.175* (-1.69)									
CN1*EBTP		-0.473*** (-3.49)								
CN2*EBTP			-0.159 (-1.03)							
CN3*EBTP				0.598*** (6.05)						
GW*EBTP					-0.183 (-0.46)					
GS*EBTP						-16.249 (-1.00)				
FG1*DISP*EBTP							-0.005*** (-3.31)			
FG1*CN1*EBTP								-0.009*** (-3.55)		
FG1*CN2*EBTP									-0.003 (-1.33)	

FG1*CN3*EBTP										0.015*** (6.25)
J-Statistic	48.57	38.61	46.07	41.01	45.03	41.82	48.70	43.72	46.45	42.24
Prob(J-Statistic)	0.369	0.772	0.469	0.681	0.513	0.648	0.365	0.568	0.454	0.630
AR(1)	0.001	0.0003	0.001	0.0001	0.002	0.001	0.001	0.001	0.001	0.001
AR(2)	0.889	0.969	0.928	0.366	0.121	0.071	0.534	0.848	0.718	0.287
Observations	1091	1094	1094	1094	1398	1398	1080	1083	1083	1083

T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. GMM regression is based on Arellano and Bond (1991) first-difference GMM estimator and includes first-difference and period fixed effect. The GMM panel estimator controls for potential endogeneity by using instruments based on lagged values of the explanatory variables in the model. GMM standard errors are not clustered. All bank-level variables remain as previously defined. DISP = dummy variable that equal one if no majority shareholder that holds at least 50% direct equity and zero otherwise, representing African banks with a more dispersed ownership structure. CN1 = dummy variable equal one if a majority shareholder that holds 50% but below 70% and zero otherwise, representing banks with moderately-weak ownership control. CN2 = dummy variable that equal one if there are two majority shareholders that jointly hold at least 70% direct equity holdings and zero otherwise, representing African banks with moderately-strong ownership control. CN3 = dummy variable that equal one if one majority shareholder holds at least 70% direct equity and zero otherwise, representing banks with concentrated ownership. GS = dummy variable that equal one if there is a government/state shareholder holds at least 50% direct equity and zero otherwise, representing banks with strong government ownership control. GW = dummy variable that equal one if there is a government/state shareholder holds less than 40 direct equity and zero otherwise, representing banks with weak government ownership control. FG1 = ratio of foreign banks to total banks in the domestic country.

7.6. Robustness

7.6.1 Multicollinearity Checks

To check for multicollinearity, I use the mean-centring approach to test for multicollinearity. The mean-centring approach involves deducting the mean of the series from each observation in the series such that the sums of the mean-centred observations are zero. Using the mean-centred variables, I rerun the main regression results to detect whether the results are consistent. The results in Table 7.7 and Table 7.8 confirm the initial results and imply that multicollinearity is not an issue in the analysis. The results confirm that earnings smoothing is significantly reduced by (i) strong investor protection and institutional quality (ii) greater foreign bank presence; and is pronounced among listed African banks and among African banks that adopt local GAAP.

Table 7.8. Fixed Effect Regression (Multicollinearity Checks via mean-centring)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
c	0.022 (1.42)	0.022 (1.43)	0.025 (1.57)	0.027* (1.76)	0.033* (1.93)	0.034* (1.93)	0.016 (0.54)	-0.011 (-0.57)
EBTPmc	0.079 (1.27)	0.089*** (5.98)	0.098*** (6.74)	0.254*** (9.66)	0.391*** (9.62)	-0.032 (-0.38)	0.273*** (11.46)	0.252*** (3.44)
NPL	0.082*** (13.06)	0.089*** (14.49)	0.087*** (14.09)	0.089*** (14.48)	0.119*** (16.51)	0.082*** (11.93)	0.149*** (14.34)	0.085*** (10.06)
LOAN	-0.004*** (-3.10)	-0.004*** (-3.03)	-0.004*** (-3.07)	-0.005*** (-3.20)	-0.002 (-1.13)	-0.005*** (-3.10)	0.003 (1.28)	-0.004** (-2.24)
LOTA	0.0001** (2.21)	0.0001* (1.93)	0.0007** (2.02)	0.0001** (2.09)	0.0004 (0.91)	0.0001 (1.26)	-0.0001 (-1.05)	0.0001* (1.84)
CAP	-0.019*** (-3.80)	-0.024*** (-4.55)	-0.024*** (-4.62)	-0.024*** (-4.54)	-0.044*** (-7.19)	-0.027*** (-4.19)	-0.056*** (-6.31)	-0.021*** (-3.37)
SIZE	-0.001 (-1.02)	-0.001 (-0.98)	-0.001 (-1.17)	-0.002 (-1.34)	-0.003** (-2.35)	-0.002 (-1.45)	0.0003 (0.01)	0.001 (0.89)
ΔGDP	-0.012 (-1.02)	-0.011 (-0.93)	-0.006 (-0.48)	-0.015 (-1.20)	0.005 (0.33)	-0.014 (-1.02)	-0.037** (-2.16)	-0.011 (-0.92)
DISC1*EBTPmc	0.156** (2.57)	0.156*** (4.43)						
DISC2*EBTP			0.169*** (3.76)					
DISC3*EBTPmc	-0.056 (-1.14)			-0.186*** (-6.29)				
BIG4*EBTPmc	0.021 (0.45)				-0.256*** (-5.95)			
LISTED*EBTPmc	0.065** (2.21)							
DISP*EBTPmc						0.244*** (2.90)		
CN1EBTPmc						0.097 (1.15)		
CN2*EBTPmc						-0.183** (-2.32)		
CN3*EBTPmc						0.095 (1.12)		
VAmc*EBTPmc							-0.278*** (-4.37)	
COCmc*EBTPmc							0.451*** (4.61)	
RSmc*EBTPmc							0.035 (0.16)	
RQmc*EBTPmc							0.008 (0.75)	
PSmc*EBTPmc							-0.004 (-0.29)	
GTmc*EBTPmc							-0.501*** (-6.06)	
FG1mc*EBTPmc							-0.007*** (-6.36)	
INVPROmc*EBTPmc								0.105** (2.52)
LEGALmc*EBTPmc								0.061** (2.19)
EDLmc*EBTPmc								-0.091** (-2.27)
INVSUITmc*EBTPmc								0.001 (0.14)
INVPROmc*LEGALmc*EBTPmc								0.035** (2.12)
EDLmc*LEGALmc*EBTPmc								-0.027 (-1.61)
INVSUITmc*LEGALmc*EBTPmc								0.0003 (0.08)
Adjusted R^2	65.53	65.09	64.71	65.52	62.98	67.05	78.24	73.42
Observations	1881	1922	1922	1922	1939	1534	1134	1320

T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. Regression include country, bank and year fixed effect. All variables remain as previously defined except EBTP. EBTPmc = mean-centred EBTP where EBTP = Earnings before profit and tax to beginning total asset ratio. All institutional and country-level variables are all mean-centred

Table 7.9. GMM Regression (Multicollinearity Checks via mean-centring)			
	(1)	(2)	(3)
LLPt-1	0.092 (1.28)	-0.061 (-1.36)	-0.035 (-0.61)
EBTPmc	-0.101* (-1.68)	1.989** (2.42)	-1.019 (-1.24)
NPL	0.068** (2.47)	0.393*** (10.17)	0.357*** (4.89)
LOAN	-0.022*** (-4.88)	0.016 (1.73)	0.019 (1.28)
LOTA	0.0005** (2.16)	-0.0004* (-1.80)	-0.0008 (-1.47)
CAP	-0.018 (-0.76)	-0.109*** (-3.85)	-0.041 (-1.53)
SIZE	-0.009* (-1.66)	-0.011 (-1.22)	-0.018 (-1.15)
ΔGDP	-0.104** (-2.32)	-0.174** (-2.39)	-0.252** (-2.55)
DISP*EBTPmc	1.015* (1.73)		
CN1EBTPmc	0.463 (0.89)		
CN2*EBTPmc	0.042** (0.17)		
CN3*EBTPmc	1.287** (2.22)		
VAmc*EBTPmc		-0.651** (-2.54)	
COCmc*EBTPmc		1.254*** (5.79)	
RSmc*EBTPmc		-1.416* (-1.83)	
RQmc*EBTPmc		-0.097** (-1.95)	
PSmc*EBTPmc		0.012 (0.20)	
GTmc*EBTPmc		-0.614** (-2.49)	
FG1mc*EBTPmc		-0.372* (-1.74)	
INVPROmc*EBTPmc			-0.639* (-1.88)
LEGALmc*EBTPmc			-0.403 (-1.22)
EDLmc*EBTPmc			0.606** (2.09)
INVSUITmc*EBTPmc			-0.018 (-0.53)
INVPROmc*LEGALmc*EBTPmc			-0.232* (-1.66)
EDLmc*LEGALmc*EBTPmc			0.196* (1.94)
INVSUITmc*LEGALmc*EBTPmc			0.002 (0.49)
J-Statistic	34.29	42.19	17.97
Observations	1096	862	1016
T-Statistics are reported in parentheses. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 level, respectively. Regression include country, bank and year fixed effect. All variables remain as previously defined except EBTP. EBTPmc = mean-centred EBTP where EBTP = Earnings before profit and tax to beginning total asset ratio. All institutional and country-level variables are all mean-centred			

7.7. Conclusion

This chapter presented the analyses for the influence of institutional and country-level factors on bank earnings smoothing among African banks. Here is a summary of the main findings of this chapter.

One, the findings show that strong investor protection (i.e. protection of minority shareholders rights and greater director liability) discourage earnings smoothing via loan loss provisions among banks in African countries. Also, earnings smoothing is further reduced among banks in African countries with strong investor protection and political economy institutions. Bank earnings smoothing via loan loss provision is also inversely associated with foreign bank presence, capital market development and bank concentration.

On the other hand, earnings smoothing via loan loss provision is positively associated with political economy factors, particularly, greater corruption control and greater political stability and absence of violence. Also, the interaction results show that earnings smoothing via loan loss provision is positively associated with banks in African countries with greater foreign bank presence, greater regulatory quality and greater government effectiveness and banking competition. Finally, the correlation analysis of the country-level variables (see Appendix) show that the results are not biased due to highly correlated country-level variables. The results are summarised in Table 7.10. The next chapter provides the conclusion of the thesis.

7.10. Summary of Cross-Country and Institutional Factors Influencing Earnings Smoothing				
	Main Hypothesis	Effect on Earnings Smoothing		
		Significant decrease	Significant increase	No Effect
1.	Investor Protection	(i) Minority shareholders right protection, (ii) director liability (iii) Rule of law + director liability, (iv) Rule of law + minority shareholders right protection	Rule of Law	Ease of shareholder suit.
2.	Political Economy		(i) Corruption control, (ii) political stability and absence of violence and terrorism	(i) Government effectiveness, (ii) regulatory quality, (iii) voice and accountability, (iv) safety of rule of law.
3(i)	Financial sector development & foreign bank presence	Foreign bank presence		Financial sector development
3(ii)	Capital market development	Stock market development		
3(iii)	Banking sector competition		Higher banking sector competitiveness	
3(iv)	Banking sector concentration	Higher banking sector concentration.		
3(v)	Banking system stability			Banking system stability
	Sensitivity Analysis			
4(i)	Interaction (1) & (2)	Political economy and minority shareholder right protection		
4(ii)	Interaction (2) & (3)		(i) Financial sector development & corruption control (ii) Foreign bank presence + regulatory quality (iii) Foreign bank presence + government effectiveness	-
4(iii)	Interaction: Foreign bank presence + ownership concentration	Foreign bank presence + dispersed ownership	Foreign bank presence + concentration ownership	-

Chapter 8

Conclusion

8.0. Introduction

The final chapter begin by providing a summary of the research objective, empirical findings, conclusions and some implications of the study. Finally, the limitations of the study and direction for future research are presented.

8.1. Summary: Research Objective and Findings

The research question I address in the thesis is whether African banks use loan loss provisions to smooth reported earnings and whether this behaviour is influenced by institutional factors and other cross-country differences in Africa. The empirical model adopted in the study express discretionary loan loss provisions as a function of its non-discretionary determinants and other variables that influence the level of discretionary loan loss provisions. Fixed effect regression and GMM estimation techniques were used to estimate the model. The significant and main findings of the thesis are summarised below:

The findings indicate that African banks use loan loss provisions to smooth reported earnings and this has not been documented in the extant literature for a wide sample of banks across several African countries. The implication of the finding is that the practice of influencing the level of loan loss provision estimates in order to smooth bank reported earnings is wide-spread across several regions of the world including Africa. Similar findings have been documented for other regions of the world, for example, in Australia (see. Anandarajan et al, 2007), US (see. El Sood, 2012), Europe (see. Leventis et al, 2011) and Asia (see. Parker and Zhu, 2012). Also, the country-specific analysis of bank earnings smoothing behaviour show that there are cross-country variation in the use of loan loss provisions estimates to smooth reported earnings.

The findings also show that African banks use loan loss provisions to smooth bank earnings when they are more profitable during economic boom periods. After controlling for bank-level differences among African banks, the findings show that the use of loan loss provisions to smooth reported earnings by African banks is pronounced among (i) listed African banks when they are more profitable, (ii) among African banks that adopt local GAAP, and (iii) among African banks with concentrated ownership. Also, bank earnings smoothing via loan loss provision is also significantly and positively associated with forward-looking provisioning discretion.

On the other hand, earnings smoothing is significantly reduced among African banks with (i) dispersed ownership (ii) Big 4 auditor, and (iii) among African banks that adopt IFRS standards. Moreover, African banks with dispersed ownership appear to use to loan loss provisions to smooth earnings when they are profitable during economic booms while African banks with concentrated ownership do not use to loan loss provisions to smooth reported earnings when they are profitable during economic boom periods.

After controlling for institutional differences across African countries, the findings indicate that strong investor protection discourage the use of loan loss provisions to smooth reported earnings among African banks, implying that establishing better investor protection institutions across African countries would discourage the use of loan loss provisions to engage in opportunistic earnings management behaviour that take the form of earnings smoothing, and thus, improve the overall quality of reported earnings of banks in the region.

Additionally, the findings show that the use of loan loss provisions to smooth earnings is further reduced among banks in African countries that simultaneously have strong investor protection and political economy institutions, implying that better investor protection and strong political economy in Africa would work together to discourage earnings management behaviour that take the form of earnings smoothing among banks in African countries.

Furthermore, bank earnings smoothing via loan loss provision is negatively associated with greater foreign bank presence, capital market development and banking concentration; and is positively associated with greater corruption control and greater political stability and absence of violence. Finally,

bank earnings smoothing via loan loss provision is observed to be more pronounced among banks in African countries that simultaneously have greater foreign bank presence, greater government effectiveness and greater regulatory quality. The summary of the results in relation to each tested hypothesis is presented in Table 8.1.

8.1. Summary of Hypotheses			
	Hypothesis	Expected Relationship	Actual Finding
In Chapter 6			
Hypothesis: 1a	Higher audit quality is inversely associated with earnings smoothing via loan loss provisions	Negative	Negative
Hypothesis: 1b	Strict disclosure regulation is inversely associated with earnings smoothing via loan loss provisions	Negative	Negative
Hypothesis: 2	Earnings smoothing via loan loss provision is reduced among African banks with dispersed ownership, and is more pronounced among African banks with concentrated ownership.	Negative or Positive	Negative or Positive
In Chapter 7			
Hypothesis: 3	Strong investor protection is inversely associated with earnings smoothing via loan loss provisions	Negative	Negative
Hypothesis: 4	Strong political economy is inversely associated with earnings smoothing via loan loss provisions	Negative	Positive
Hypothesis: 5	Foreign bank presence (and financial development) is associated with bank earnings smoothing via loan loss provisions	Positive or Negative	Negative
Hypothesis: 6a	Banking sector competitiveness is positively associated with earnings smoothing via loan loss provisions.	Positive	Positive
Hypothesis: 6b	Banking sector concentration is inversely associated with earnings smoothing via loan loss provisions.	Negative	Negative
Hypothesis: 6c	Banking sector stability is negatively associated with earnings smoothing via loan loss provisions.	Negative	No Effect

8.2. Implications and Recommendations

Overall, the main message of the findings is that loan loss provisions estimates intended to reflect expected loan loss on bank loan portfolio is used to manipulate reported earnings (in the form of earnings smoothing) to meet some financial reporting objectives. The implication of the findings for accounting quality in Africa is that local GAAPs in several African countries do not discourage bank earnings management that take the form of earnings smoothing via loan loss provisions among banks in the region, and imply that local GAAPs do not improve the reliability or informativeness of loan loss provisions estimates in the region.

The findings are also useful to local standard setters in several African countries who are in the process of deciding whether or not to adopt foreign standards (e.g. IFRS or ASC) in their search for better accounting disclosure regulation. There are on-going debates about whether Africa really needs IFRS because some IFRS success stories have emerged in some African countries while IFRS has failed in other African countries.

With regard to international standard setting, the findings in the thesis are useful to international accounting standard setters because it provides some feedback to help standard setters evaluate the effectiveness of IFRS standards to improve accounting disclosure quality in developing countries that are considered to have weaker enforcement of accounting standards (or rules) compared to developed countries.

Also, the findings point to the need to establish stronger (or to improve existing) investor protection and political economy institutions in Africa that should work together to discourage the opportunistic manipulation of reported accounting numbers in bank financial reporting. Also, the finding that ownership concentration significantly influence the extent of the use of loan loss provisions to smooth reported earnings can provide feedback to bank regulators across African countries who are already in the process of enforcing bank ownership structures that would increase shareholders' monitoring of bank

managers' financial reporting behaviour in order to discourage the opportunistic manipulation of reported accounting numbers in bank financial reporting.

The findings also have implications for micro-prudential bank supervision across African countries. The findings that the bank loan loss provisioning is significantly influenced by the level of earnings rather than by credit risk considerations only, underline the need for bank supervisors to increase their monitoring and scrutiny of the loan loss provisioning practices of banks across African countries. I recommend that bank supervisors across African countries should require banks to provide additional information on their loan loss provisioning practices in order to improve the transparency of bank loan loss provisioning practices and the reliability of loan loss provisions estimates reported in bank financial statement. Such additional information may include providing information about the assumptions used in the determination of the loan loss provisions estimates, information about the model used to estimate loan losses, etc.

Finally, the findings have implications for financial development and financial liberation in Africa. Financial development in the region should be accompanied with strong investor protection and political economy institutions in order to improve the overall quality of bank financial reporting in the region.

8.3. Contribution of the Study

The findings in the thesis contribute to the literature in the following ways. One, the analyses in the thesis contributes to prior studies that examine earnings management in the broader context as well as prior studies that examine bank earnings management (see Cohen et al, 2014; Barth et al, 2016; Norden and Stoian, 2014; Stubben, 2010; Shen and Huang, 2013). These studies show that managers have some incentive to manage reported earnings in other regions; however, these studies did not examine the case of African firms using a large sample. The findings in this thesis confirm that bank earnings smoothing via loan loss provision is prevalent around the world even in Africa.

By investigating the context of African banks, this study provides some insight to improve our understanding of bank earnings smoothing practices in developing countries - an emerging theme in the recent bank earnings smoothing literature (Ozili, 2015; Amidu and Kuipo, 2015), and to shed some light on the debate about whether earnings smoothing by banks in developing economies is used as a tool to make banks appear stable when they are in fragile, fragmented and unstable banking environments.

Two, the study contributes to the literature that examines the influence of investor protection on managerial discretion to manage reported earnings. Studies such as Klapper et al (2004), Chih et al (2008) and Leuz et al (2003) show that strong investor protection discourages earnings management among managers because of the presence of strong legal systems established to protect minority shareholders and investors. This thesis contributes to the above studies by taking into account the level of investor protection in Africa and how it affects earnings smoothing by African bank managers. By focussing on banks and controlling for investor protection levels across African countries, the analyses in this thesis aim to provide insights to understand the association between investor protection and earnings management that take the form of earnings smoothing among African banks.

Three, the thesis contributes to the firm ownership literature that examines the impact of ownership concentration on managerial discretion in financial reporting. Klein (2002), Park and Shin (2004), La Porta et al. (1998) Jensen and Meckling (1976), Shleifer and Vishny (1986), Grossman and Hart (1988), Shleifer and Wolfenzon (2002), Aghion and Bolton (1992) and Bouvatier et al. (2014) show some consensus that the ownership structure of firms may impose additional monitoring on firm managers to constrain them from engaging in opportunistic financial reporting behaviour; however, how this would work out in practice will differ across countries and regions. Therefore, the analyses in this thesis contribute to this strand of literature by taking into account the influence of ownership structure on bank earnings smoothing. By controlling for ownership concentration in this thesis, some insight can be gained to improve our understanding about whether the level of ownership discourages or encourages earnings management practices by African banks

Four, the analysis in the thesis also contribute to the literature that investigates the impact of accounting disclosure regulation on earnings quality (Teoh and Wong, 1993; Francis et al, 1999; Huang and Li, 2009; Beatty, 1989; and Blackwell et al, 1998). A major debate in the theoretical literature argues that the use of Big 4 auditors and the adoption of strong accounting disclosure rules can discourage the manipulation of reported earnings intended to achieve earnings management. However, the effect of accounting disclosure quality (via Big 4 auditors and IFRS adoption) on bank earnings income smoothing in Africa is not clear and has not been empirically tested using loan loss provisions. Therefore, the analyses in this thesis contribute to this debate to provide some insight on how accounting quality affects the use of loan loss provisions to smooth earnings in Africa. Moreover, by distinguishing between banks that use IFRS and banks that do not use IFRS, the analyses in this thesis provides some insight on whether IFRS adoption improves bank earnings quality in the form of reduced earnings smoothing.

Five, the analyses in the thesis also contribute to the policy debate in the literature which argues that the current incurred-loss model of loan loss provisioning contributes to bank instability (see Bikker and Hu, 2002; Laeven and Majnoni, 2003; Bikker and Metzemakers, 2005; Bouvatier and Lepetit, 2008). The incurred-loss provisioning model is often criticised for its backward-looking characteristic and its potential to reinforce the current state of the economy particularly a recession. Bank supervisors in developed and developing countries continue to raise concern that the current incurred-loss provisioning model allow banks to delay provisioning until it is too late which makes bank provisioning procyclical with fluctuations in the economy. The analyses in this thesis can help verify whether the provisioning behaviour of banks in Africa also exhibit such procyclical characteristic.

Finally, this study can provide some insight to help bank supervisors/regulators in several African countries in their evaluation of whether loan loss provisions reflects credit risk considerations only or other considerations unrelated to credit risk, while also taking into account political economy factors in the country.

8.4. Limitations

The study has some limitations. One, the study considers loan loss provisions to be the only tool that African bank managers use to smooth reported earnings. In practice, this is not the case because African bank managers can use a combination of accounting/financial numbers to smooth reported earnings. In the thesis, I focus on loan loss provision because the banking literature (see. Chapter 4), find substantial evidence that loan loss provisions is more likely to be used by banks to smooth or to manage reported earnings for several reasons (already pointed out in Chapter 1 and 3). Going forward, future research on African banks could examine other accounting numbers that African banks might use to smooth reported earnings. For instance, future studies could investigate whether African banks use a combination of loan loss provisions and gains from the sale of securities to smooth reported earnings.

Two, the study focuses on earnings smoothing as a type of earnings management practice. In reality, earnings management practices can take several forms including earnings smoothing depending on the financial reporting objectives of bank managers at a particular time. In the thesis, I focus on earnings smoothing because the theoretical literature (in Chapter 3) argue that some firms, particularly banks, may prefer to smooth reported earnings because smoothed earnings are less likely to attract scrutiny from industry regulators compared to other aggressive forms of earnings management. Because this thesis has focused earnings smoothing, future studies on African banks could investigate whether other forms of bank earnings management exist among African banks or among banks in other developing country contexts. Other forms of earnings management include: income-increasing earnings management, big-bath earnings management, etc.

Three, another limitation of the study is the type of banks used in the analyses. I did not make any distinction between merchant banks, investment banks and other type of banks in Africa because the intended purpose of loan loss provisions should be the same for all African banks which is to mitigate expected loss on banks' loan portfolio. Regardless of whether the African bank is a commercial bank, merchant bank, investment bank or cooperative bank, if the African bank has a loan portfolio, the African bank will set aside loan loss provisions estimates for any expected loss on the loan portfolio. More so, merchant and investment banks in Africa also have a loan portfolio which requires adequate loan loss

provisioning while commercial banks have a relatively larger loan portfolio compared to merchant and investment banks. Furthermore, (i) the underlying economic reality guiding the determination of loan loss provisions estimate does not change with the type of African bank and (ii) the reported loan loss provisions estimates in financial statements is a common thread that cuts across African banks that have a loan portfolio regardless of whether they are merchant, commercial or investment banks, therefore, there is no reason to expect any substantial difference in the loan loss provisioning practices of merchant, investment and commercial banks in Africa. For this reason, in the empirical analyses in the thesis, I use all African banks that report loan loss provisions data without making any distinction between commercial, merchant or investment banks. However, for the sake of scepticism or curiosity, the future researcher may proceed to investigate bank loan loss provisioning practices in the context of merchant banks, commercial banks, investment banks and saving banks in Africa. While undertaking such task, the future researcher should be aware that the distinction between the types of African banks is not clear in some cases and may be difficult to identify.

8.5. Future direction

One obvious direction for future research is the need to investigate the use of loan loss provisions to smooth bank earnings in the African context.

Two, it is unknown or unclear whether African banks that adopt IFRS, IAS or local GAAP exhibit greater or reduced earnings smoothing via loan loss provisions. Future studies can provide some insight on the impact of accounting disclosure quality on bank earnings smoothing behaviour in the African region. Listed banks in some African countries are required to adopt IFRS while unlisted banks do not have to mandatorily adopt IFRS. In other African countries, IFRS is not permitted as firms are required to use local GAAP. Given this understanding, the earnings smoothing literature do not provide insights on whether the propensity for African banks to use loan loss provisions to smooth bank earnings is stronger or weaker among banks that adopt IFRS compared to banks that adopt local GAAP. If we assume that IFRS has higher disclosure quality compared to local GAAP, then it is interesting to investigate whether

African banks that adopt IFRS standards exhibit reduced earnings smoothing via loan loss provisions which in turn should improve earnings quality and the informativeness of the loan loss provisions estimates of banks in Africa.

Three, much is not known about the impact of investor protection on firm financial reporting in Africa. Strong investor protection is claimed to discourage opportunistic behaviour of firm managers (Leuz et al., 2003). Future research could investigate whether investor protection has an impact on the extent to which African banks use loan loss provisions to smooth earnings to see if Leuz et al. (2003)'s argument holds true for African banks as well.

Four, the impact of ownership structure on African banks' earnings smoothing behaviour has not been explored. The ownership structure of African banks exhibit characteristics that significantly differ from the ownership structure of US and European firms.

Five, another interesting analysis is to investigate how dispersed ownership control or concentrated ownership impacts the financial reporting of banks in Africa. The need to investigate whether certain ownership characteristics constrain or encourage African banks to distort financial reporting disclosures, is also imperative.

Six, future research could also investigate whether the level of financial development and political economy in the African region have some direct or indirect impact on African banks' incentive to smooth reported earnings.

Seven, it is also interesting to investigate the impact of religiosity on bank earnings smoothing practices. Some countries in Africa are highly religious, moderately religious and less religious, and very little knowledge is known about how religiosity affects the financial reporting characteristics of banks in Africa, hence, it is interesting to investigate whether African banks in strongly-religious, moderately-religious and less-religious environments exhibit more or less earnings smoothing behaviour, and future research can provide some insights on this. Future study can also investigate the impact of corruption on bank earnings smoothing practices which offers another direction for future research.

Eight, Basel capital regulation continues to provide opportunities for future LLP research. Basel (Basel II and III) has, in recent times, made several changes to bank capital regulation which also affects banks' provisioning behaviour and these changes will probably take years for its full effect to be felt. The impact of Basel I on bank provisioning decisions has been investigated for banks in developed countries (Ahmed et al, 1999; Anandarajan et al, 2007) while the impact of Basel II and III on bank provisioning behaviour has not been explored in the literature which offers another direction for future research. Future research can also extend such study to African countries that adopt Basel capital rules. This is another fruitful direction for future research.

Nine, with regard to the debate to adopt a dynamic loan loss provisioning system, future research is needed to demonstrate how existing or new supervisory models would guide bank regulators/supervisors in implementing a dynamic loan loss provisioning system. Future research could clarify how supervision will guide the dynamic loan loss provisioning process and not interfere with the accounting and audit role. However, it is worth noting that the willingness of bank regulators to supervise the details of bank loan loss provisioning decisions may also depend on (i) whether regulators/supervisors believe they should supervise accounting practices; (ii) the extent to which regulators/supervisors believe auditors should perform the supervisory role; and (iii) whether an independent supervisory body should be created to perform this role even if it further complicates the already complex accounting, fiscal and prudential regulatory network.

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