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INFORMATION DISCLOSURE AND BANK STABILITY; EVIDENCE FROM SUB-SAHARAN AFRICA

Abstract:

The heavily dependence of virtually all economies on banks for their financial intermediation cannot be overemphasize. The soundness of the banking sectors has positive association with the development of the financial markets and the economy. The banking sector and its governance reforms has gain prominence given the global financial crisis and the adverse impact on most economies. In view of this, there is an ongoing debate among policy makers, regulators, academia pursuing appropriate measures to foster banking sector stability. The aftermath of the financial crises identify inadequate information disclosure as one of the other factors resulting in the market failure. Hence, the surging debate on appropriate measures for disclosure of banking information to enhance corporate transparency and financial stability.

The banking sector needs effective corporate governance at the firm level to mitigate agency problems and promote managerial discipline via improving disclosure of corporate information. The complexity of the banking sector makes it unique in terms of its corporate governance framework and information disclosure measures appropriate for its soundness and development hence the relevance of this study. The study explores bank scope data of Sub- Saharan Africa banks spanning for 2007 – 2012.

This study aims to contribute to the debate by focusing of quality corporate governance measures and financial disclosure effect on bank stability. The paper examines the uniqueness of the banking sector in term of corporate governance and financial disclosures with the aim to establish the appropriate governance measures to enhance disclosure and bank stability for policy direction.

Keywords:

Corporate governance, Information Disclosure, Bank Stability, Sub-Saharan Africa

1. Background and Motivation

Corporate disclosure has gain prominence in public policy discussion as result of financial scandals recorded in the case of Enron, WorldCom, Lehman Brothers Group and the financial crisis in the year 2007 – 2008 (S&P, 2008 and Erkens and Hung, 2012). This crisis severely dented confidence in financial disclosures in the financial markets which account for tougher regulatory reforms corporate disclosure practices (Sarbanes-Oxley Act of 2002 -SOX, King Reports (2002 -2009).

The impact of corporate disclosure on bank stability has always been an issue of concern among academics and policy makers. However, this topic has been intensified after the global financial crisis, where academics as well as policy makers are interrogating to what extent corporate disclosure could have improve monitoring in an ever increasing and complex financial market to attain market stability. The aftermath of the global financial crisis reveals that banks continue to find new ways to seek out profit using high risk products and instruments (Stephanou, 2010). While bank regulatory agencies are primarily responsible for monitoring and regulating bank risk, improving corporate disclosure can ignite market disciplinary measures to control banks risk taking behavior.

The stability of banking system is critical to the well-functioning of the Sub-Saharan Africa economies. As most economies rely on the banking sector for capital in almost all economic activity due to the marginal development of the financial market. The sector is characterize with uncertain financial environment, high inadequate information market participant will have to deal with which exacerbates the risk taking behavior among the banking industry players (Vives, 2006, Honohan and Beck, 2007 and Beck et al., 2011). In contrast with the advanced economies, there are structural weaknesses of the financial environment, low quality of accountancy data, inadequate of auditing agencies, hitches in accounting and auditing procedures and difficulty in the implementation of sophisticated techniques in addressing the structural challenges. Moreover most of the countries within which these banks operate are in their early stages of financial development, weak legal and regulatory environment. In spite of the enumerated structural defect, the stability of the banking sector is the heartbeat and defines the development of the economies of Sub-Saharan Africa countries. In view of this, the question is asked, what can been done to safeguard the financial market especially the banking sector which appears to be dominant in driving economic activities? The contribution of the study is to empirically examine how the issue of information disclosure, governance relate to bank stability

Financial liberalization has been adopted by most economies including developing economies in Africa as mean to accelerate development and economic growth. This inadvertently opens the financial market to the global financial services. Now banks are operating the universal banking system model which allows the banks to offer wide range of financial services (e.g. commercial banking, investment banking and insurance

services). This model expose the banks to a number of risks as operators engages in numerous services their sophisticated customers are demanding. Again, the aftermath of the financial crises demonstrated that no economy is immune to the turmoil of instability. In the midst of the increased financial market complexity and the growth as a result of globalization, market discipline has emerge necessary tool to complement official supervision. Thus, financial regulators having recognized the potency of this tool have integrated in the prudential frameworks. Information disclosure is one the key aspects of financial sector regulation as supported by the Pillar 3, Basel II (Basel Committee on Banking Supervision, 2006). As admitted by Stephanou (2010), the concept of market discipline is intuitive and can function under several financial system structure and institutional context, there is a need to promote further research as the concept remain unclear. Whiles empirics remains inconclusive on the effect of information disclosure on bank stability, this study aims to contribution the knowledge gap.

Several existing body of research concedes to the low level of information disclosure in Africa, specifically the Sub – Saharan Africa market. The effect of this accession leads to the continent classified dark leading less foreign investment, high cost of capital, illiquidity of the financial market and impede financial market growth. The paper by Bopkin (2013) on corporate disclosure on the Ghana Stock Exchange concluded that the level of corporate disclosure and transparency is low and encourage the adoption of the International Financial Reporting Standard (IFRS) in order to increase the level of information disclosure. Information disclosure considered key to the development of the financial market in Africa as the continent is appears dark in the eyes of international investors.

The peculiar nature of the financial sector has made it such that most papers on corporate governance have excluded financial firms from the data. The few existing literature though establish a relation between governance and bank risk taking behaviour none to the best of our knowledge establishes the influence of certain governance characteristics and banks risk taking. The most common governance proxies explore are managerial shareholdings (e.g., Anderson and Fraser, 2000), bank insider shareholdings (Gorton and Rosen, 1995), the ownership percentage of the single largest shareholder (Beltratti and Stulz, 2012), or the shareholder friendliness of the board (as developed by Aggarwal, Erel, Stulz, and Williamson, 2009, and Beltratti and Stulz, 2012). Although, Adams and Mehran (2012), admit the existing body of research of governance and financial institutions, the research are dispersed as some have been published in very diverse journals and cross-references are often not found. The relevance of this study is that, we offer clarity and knowledge on how information disclosure together with governance relates bank stability in the Sub-Saharan Africa market. Also, we argue corporate governance from the stakeholder perspective in contrast with most governance papers of the non-financial firms' emphasis the shareholder value creation only. This narrow the applicability of the findings of such papers on corporate governance of banks

(Laeven, 2012), since the success and failure of banks transcend the shareholders. This paper makes the following literature contributions; bank corporate governance, information disclosure and financial stability

2. Banking in Africa

The positive association of the development of the banking system and economic development has been clearly established (Levine 2004). In as much as the causality has not been concluded (Demetriades and Hussein 1996), the consensus is that well-functioning banking systems promote economic growth (Demetriades and Andrianova 2005). In view of this, economies are seeking the development of the financial sector to promote their economic growth and the Sub-Saharan Africa market is not excluded. Financial systems across Africa have seen a deepening and broadening over the past years, partly benefiting from the Great Moderation and global liquidity glut, but also from improvements in macroeconomic policies and progress in institutional reforms (Beck, Fuchs and Uy, 2009). The banking sector and other financial intermediaries play a vital role in advancing economic development in Africa as alternative sources of finance appears limited and in certain areas nonexistent.

The financial market has been classified as unique as compared to other markets yet it role to economic development is profound. The development of the Africa market is low compared to other markets in the developing world. The market is consider shallow but stable hence the global financial crisis could not destabilize the financial market though had some limited impact as Africa forms part of the global market but not deeply integrated. As expound by Kasakende et al. (2012), the reforms introduced by the Basel III will not be sufficient in the African context, and as demand additional regulatory tools which comprise possibility to impose restrictions on banks' asset exposures and regulations on loan concentration and foreign exchange exposure. A cross –country study to benchmark African financial development against its developing counterparts show a significant gap between predicted and actual level of African financial development, thus the financial market is hard to predict (Allen et al. 2012b) study. The study conducted both country-level and firm level tests and found that the determinants of banking development in Africa differ from the other financial markets in the world. It was found that inflation and the current account balance as a proxy for quality macroeconomic management measures were had not bearing on African financial development as the case was different for other developing countries. Whereas rule of law as institutional development measure had positive association to African financial development yet was substantially less strong than the other developing markets.

As argue by Beck and Cull (2013), the Africa banking systems is centered largely on the short-end of the yield curve, as shown by the maturity structure of both asset and liability sides of banks' balance sheets (Beck et al., 2011). More than 80 percent of deposits are sight deposits or 10 deposits with a maturity of less than one year and less than two

percent of deposits have a maturity of more than 10 years. Also, it was found that almost 60 percent of loans are for less than one year, and less than 2 percent of loans are for more than 10 years. This maturity distribution explains the scarcity of non-bank long-term financial instruments, including the limited development of contractual savings institutions, such as insurance companies, pension funds, and mutual funds. Fewer than half of the countries in the region have stock exchanges and few of them are liquid. Another indication for the short-term nature of African banking is the dearth of mortgage finance. The study by Badev et al., (2013) reveal that mortgage depth to GDP in the median African country was below one percent, it was above two percent outside Africa.

Although, the African financial market comprise different region hence there exist regional variations in term of size, growth and development. However, four (4) specific attributes have been used to define the banking sector in most African economies if not all (Honohan and Beck, 2007 and Beck et al., 2011). The first attribute has to do with the small size of the economies impairs performance of financial services providers. This issue is that large parts of the population are not commercially viable. The population is disperse hence providing financial service outside urban centers is expensive and also there is limited demand for savings, insurance, credit and payment transactions. Secondly, the informal sector of most of the African economies appears larger than the formal sector meaning necessary formal documentation required (e.g. formal address, properties documents, enterprise registration, proper book keeping) to facilitate financial transactions is no difficult to assess. Hence increasing the cost and risks for financial institutions resulting in financial exclusion of the larger population. Thirdly, the high volatility of income at all levels (government, business and households) increases costs and undermines risk management measures. At the household level, volatility is linked to informality and leading to the fluctuations in the income streams of many microenterprises. These eventually makes one less attractive to the financial service providers. Also, the aggregate level, the overdependence on commodity export which is highly volatile leaves most of the economies vulnerable as well as political and social unrest. Finally, the issue of governance continues to subject many private as well as government institution throughout the continent undermining market-based provisions of financial services, reforms and interventions aimed at fixing market failures

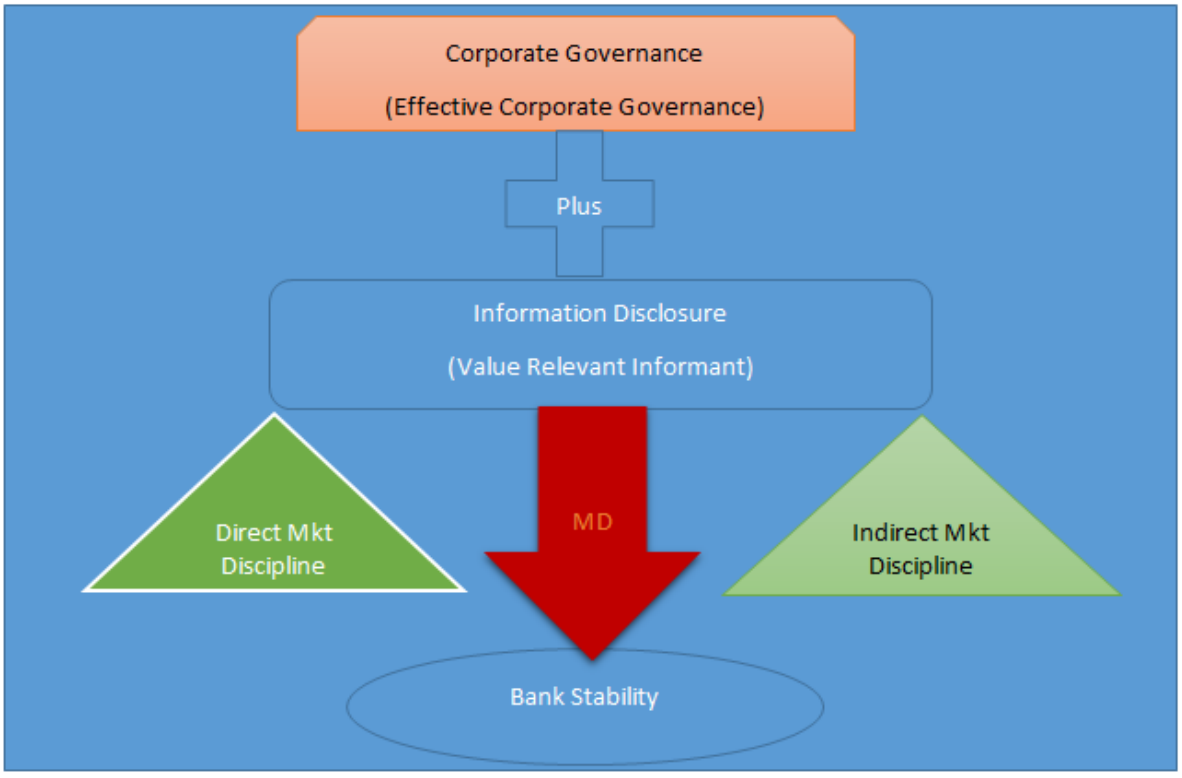
3. Conceptual Framework and Related literature

Existing banking literature proposed that information play is fundamental to promoting market discipline as it serves as a control measure for prudential banking regulation. As clearly defined in the pillar 3 of the Basel II framework, market discipline is conceptualized as a means of involving market participants in monitoring and disciplining bank managers for excessive risk-taking (Basel Committee on Banking Supervision, 2006). The study by Stephanou (2010) found that in promoting market discipline among the public, the most important building block is provide timely, consistent and reliable

information on banks' financial performance and risk exposures. As such information emanate primarily from Financial accounting disclosures. Thus, the financial accounting information plays a key role in providing prudential oversight of banks which falls in line with the Basel II Capital Accord. This accord postulates the key role accounting information plays in facilitating market discipline. Firm –specific information stemming from the financial accounting systems which is offered to the various stakeholders outside the firm and serve as the starting point of querying the key information for addressing moral hazard problems of the firm. Moreover, the quality of the financial system is as important as the quality of the disclosure stakeholders will be serve hence the need to improve the financial accounting system.

Market discipline from the banking literature (Stephanou, 2010) is classified into two; namely direct and indirect. Where direct market discipline pertains to the influence market participants exert on banks risk taking behavour. For instance information disclosure is expected to enhance ex-ante discipline since managers know that informed investors will be able to see through their high risk taking behaviours and sanction them with high cost on investments (Cordella and Yayati ;2003, Allen and Carletti;2008). On the other hand, indirect market discipline is more with market signal such as securities price changes which is normally triggered by regulatory interventions (see. Rochet, 2005; Hovakimian and Kane, 2000; Kane, 2004; Flannery andThakor, 2006).

The Research Framework



(Source: Designed by Authors, 2016)

4. Objective

The study examines the linkage between information disclosure and bank stability, by focusing on the Sub-Saharan Africa market. Specifically, the study seeks to;

- Empirically examine the relationship between information disclosure and bank stability.4

Hypothesis:

Information disclosure has a positive association with bank stability

5. DATA AND SAMPLE SELECTION

We use annual Bank-level accounting information for 159 banks from 15 Sub-Saharan Africa countries obtained from the Bank- Scope database. The Bank-Scope database has comprehensive coverage in most countries, accounting for over 90% of all banking assets in each country. The bank report contains a detailed balance sheet and income statement totaling up to 200 data items and 36 pre-calculated financial ratios. In this study, we mainly use the reported period 2006–2013. Our sample contains observations from the year 2007 to 2012, for data reasons. This study focused on 159 banks (both listed and non-listed) from 15 countries in the Sub- Saharan African market, namely; 18 banks, Ghana, 2 banks, Benin, 4 banks, Rwanda, 27 banks Kenya, 9 banks Senegal, 2 banks, Nigeria, 13 banks, Uganda, 4 banks, Burkina Faso, 6 banks Cameroun, 7 banks, Namibia 14 from Zambia, 10 banks Mozambique, 24 banks Egypt, 8 banks Morocco and 11 banks Tunisia. The criteria for the selection of these banks was such that, one should have data point 5 years minimum and 6 year maximum. In terms of region division, the data had 5 West Africa countries (Ghana, Benin, Senegal, Nigeria and Burkina Faso), 4 Southern Africa countries (Rwanda, Namibia, Zambia and Mozambique), the country South Africa was not consider as a means to reduce outliers in the data. 2 Eastern Africa countries (Kenya and Uganda) and 4 Northern Africa countries (Cameroun, Egypt, Morocco and Tunisia). The table 1 below illustrate the sample countries;

Number	Countries	No. of Banks	Reg. Div	Reg. Code
1	Benin	2	West Africa	1
2	Burkina Faso	4	West Africa	1
3	Ghana	18	West Africa	1
4	Nigeria	2	West Africa	1
5	Senegal	9	West Africa	1
6	Mozambique	10	Southern Africa	2
7	Namibia	7	Southern Africa	2
8	Rwanda	4	Southern Africa	2
9	Zambia	14	Southern Africa	2
10	Kenya	27	East Africa	3
11	Uganda	13	East Africa	3
12	Cameroun	6	North Africa	4
13	Egypt	24	North Africa	4
14	Morocco	8	North Africa	4
15	Tunisia	11	North Africa	4

6. Empirical Model

The study aims to empirically test the relationship between information disclosures on bank stability. Using a panel data of cross-sectional banks over the period of 2007 to 2012. The unbalanced panel is based on annual time series data. We estimate a random – effect generalized least square (GLS) regression model to examine the relationship between bank stability and information disclosure. The following specific model were formulated:

The general panel model

$$Y_{it} = \alpha + \lambda Disindex_{it} + \chi Firmlevel_{it} + \delta GOV_{it} + \pi Country_{it} + \varepsilon_{it} \quad \text{Eqn.}$$

$$lnz_{it} = \alpha + \lambda disindex_{it} + \chi\,(logassetsz_{it} + Loanrat_{it} + NiM_{it} + audit_{it}) + \delta(nonexec + auditind) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{---------- eqn . (1)}$$

$$lnz_{it} = \alpha + \lambda IFRS_{it} + \chi\,(logassetsz_{it} + Loanrat_{it} + NiM_{it} + audit_{it}) + \delta(nonexec + auditind) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{----------}$$
eqn. (2)

$$levratio_{it} = \alpha + \lambda disindex_{it} + \chi\,(logassetsz_{it} + NiM_{it} + audit_{it}) + \delta(nonexec + auditind + bodgen) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{----------}$$
eqn . (3)

$$levratio_{it} = \alpha + \lambda IFRS_{it} + \chi (logassetsz_{it} + NiM_{it} + audit_{it}) + \delta(nonexec + auditind + bodgen) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{---------- eqn . (4)}$$

$$Liq\_M_{it} = \alpha + \lambda disindex_{it} + \chi (logassetsz_{it} + NiM_{it} + audit_{it}) + \delta(nonexec + auditind + bodgen) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{----------}$$

eqn . (5)

$$Liq\_M_{it} = \alpha + \lambda IFRS_{it} + \chi (logassetsz_{it} + NiM_{it} + audit_{it}) + \delta(nonexec_{it} + auditind_{it} + bodgen_{it}) + \pi(Gdpg_{it} + exrate1_{it} + rulelaw_{it} + regdiv_{it}) + \varepsilon_{it} \quad \text{---------- eqn . (6)}$$

Where the dependent variable Y_{it} is represented by $Z\text{-score}_{it}$, $Leverage_{it}$ and $Liquidity_{it}$ as bank stability proxies for bank i in year t. The dependent variables were regressed on the independent variables mainly the disclosure variables in the form of $index_{it}$ and $IFRS_{it}$. Together with the disclosure variables are other firm specific variables which are firm size (log of total asset), Operation size (net loans to total asset), profitability (Net interest margin) and quality of firm auditors. Then bank corporate governance variables used are effective board (non-executive board members), effective audit committee (auditor independence) and female influence on the board activities (board gender). Also country variables considered are economic size (GDP growth), currency volatility (exchange rate) and Kaufman institutional quality (rule of law).

Table 2: Variable definition and data source

Variables	Operational Definition	Source
Dependent (Bank Stability)		
Z-score (lnz)	z-score = ROA + E/A / SDROA -measures the distance to default - bank safety"	Bank scope
Leverage Ratio (Levratio)	Total liabilities to Total assets	Bank scope
Liquidity Ratio (Liq_m1)	Liquid Assets to Cust & ST Funding /100	Bank scope
Independent		
Disclosure Variable		
Disclosure index (Disindex)	Disclosure index as define by Nier and Baumann (2006)	Bank scope
AS1 (IFRS)	Dichotomous :1 if bank uses IFRS otherwise 0	Bank scope
Firm level		
Firm size (Logassetsz)	Log of Total asset	Bank scope
Operation size (Loan ratio)	Net loan to Total asset	Bank scope
Profitability (NIM)	Net interest margin	Bank scope

Auditor quality (audit)	Dichotomous :1 if bank is audited by the top 4 accounting firms otherwise 0	Bank scope
Corporate Governance		
Auditor Independence(auditind)	Dichotomous : 1 if head of audit commit is a non-exec director, otherwise 0"	Bank scope
Non-Executive board member(s) (nonexec)	ratio of non-executive members to total board members	Bank scope
Female Board member(s) (bodgen)	ratio of female members of the board of directors	Bank scope
Country Level		
Country Economic Growth	GDP per Growth	World Development Indicators
Currency Volatility	Exchange rate	World Development Indicators
Kaufmann Institutional quality	Rule of law	World Development Indicators
Cross Country Data (Regdiv)	Region Division	Computed from data

Table 3: Descriptive Statistics

Variables	Obs.	Mean	Std. Dev	Min.	Max
lnz	902	3.8209	1.1289	-1.756	6.2797
levratio	916	8.5356	7.3850	-96.3333	93
Liq_M	905	38.0326	36.5338	0.59	789.28
disindex	918	12.9989	2.2749	3	17
as1	918	0.4847	0.5000	0	1
logassetsz	918	2.774	0.7046	1	4.7257
loanrat	916	49.4344	16.9135	0.19	98.31
NIM	909	6.6956	4.6941	-5.84	49.94
audit	918	0.6243	0.4689	0	1
nonexec	703	0.1138	0.2148	0	0.8571
auditind	703	1.2481	8.7015	0	76.2614
bodgen	703	0.1209	0.1747	0	1
gdpg	918	0.0543	0.0267	-0.0146	0.1501
exrate1	839	5.0504	12.8767	0.0094	51.4725
rule of law	778	-0.4162	0.3945	-1.2480	0.3632
regdiv	918	2.6612	1.1342	1	4

From Table 3, the descriptive summary statistics is report all variables consider in the regression. The sample consist of 918 banks (both listed and non-listed) from 15 Sub-Saharan Africa Countries. This statistics based on annual data from 2007 – 2012. The table shows the average z-score across all banks to be 3.8209 with a standard deviation of 1.1289. This means that on the average banks are maintain their earnings and capitalization at 3.8209 to avoid insolvency whereas the fairly high standard deviation explaining the market dynamics represent the cross-sectional difference in bank risk. Our statistics is quite similar compared with others studies like Laeven and Levine (2009) and Houston et al,(2009) who find mean of 2.85, 3.24 and standard deviation of 0.9, 1.086 respectively. In addition to the dependent variables (z-score), leverage and liquidity were used as a form of robustness check, following the work by Bourgain et al, (2012). Also disclosure index reports a mean of 12.9989 with a deviation of 2.2749 and a maximum of 17. This statistics indicate considerable high level of disclosure among banks given the index. IFRS as an alternate disclosure proxy was included.

Correlation Matrix Result

Correlation matrix help to avoid biased estimators in econometric modeling, it is necessary to ensure the absence of multicollinearity problems. This problem occurs when some explanatory variables are correlated, causing instability of the estimated coefficients and resulting to high standard deviations. The rational of the correlation matrix is to allow analysis of connections between variables. Positive coefficients (negative) indicate a positive relationship (negative) between them. Obtaining correlation coefficients greater than 0.5 can give an indication of a multicollinearity problem between the independent variables included in the model. From the results below, there is no coefficient > than 0.5 hence the model is free form multicollinearity problem.

Table 4: Correlation statistics

	lnz	disindex	t~pratio	loanrat	logass~z	NIM	audit	auditind	nonexec	gdpg	exrate1	rulelaw
lnz	1.0000											
disindex	0.1236	1.0000										
totalcapra~o	0.0057	-0.1854	1.0000									
loanrat	0.3413	0.0199	-0.1768	1.0000								
logassetsz	0.2947	0.3085	-0.4493	0.0122	1.0000							
NIM	-0.2195	-0.0868	0.1952	0.0344	-0.3844	1.0000						
audit	-0.0197	0.0066	0.1823	0.1518	0.0009	0.1335	1.0000					
auditind	-0.0132	-0.0714	0.0511	-0.2016	-0.0758	-0.1239	-0.1726	1.0000				
nonexec	-0.1553	0.0663	0.0345	-0.1911	-0.0655	0.1890	0.0567	-0.0241	1.0000			
gdpg	-0.3163	-0.0142	-0.0050	-0.2071	-0.1923	0.2029	-0.0569	0.1812	0.2519	1.0000		
exrate1	-0.3168	-0.0088	-0.0876	-0.0781	-0.1084	0.1945	0.1544	-0.0260	0.2611	0.1297	1.0000	
rulelaw	0.0683	0.1834	-0.2304	-0.0089	0.2902	-0.1594	-0.1045	0.0893	0.1136	0.2603	-0.0103	1.0000
regdiv	0.2550	-0.1085	-0.0416	0.1079	0.3013	-0.4277	-0.0238	0.1296	-0.4410	-0.4749	-0.1396	-0.2036

	regdiv
regdiv	1.0000

Table 5: Random-Effect GLS Regression Results

Variables	1 Lnz	2 lnz	3 levratio	4 levratio	5 Liq_M	6 Liq_M
Disindex	-0.2335** (0.0113)		0.2208 (0.1513)		-6.3751*** (1.1780)	
As1		-0.2982** (0.1371)		1.6699* (1.0199)	5.1377	(9.4745)
Logassetsz	0.1627** (0.0805)	0.1119 (0.0780)	1.9440*** (0.7444)	2.1926*** (0.7040)	2.3724 (6.4896)	-8.1678 (6.3786)
Loanrat	0.0004 (0.0017)	0.0006 (0.970)				
NIM	0.0155** (0.0076)	0.0154** (0.0076)	-0.1577** (0.0804)	-0.1647** (0.0806)	-3.0928*** (0.6882)	-3.4535*** (0.7056)
Audit	0.1419 (0.1216)	0.0683 (0.1230)	-2.1877** (0.9477)	-2.3942** (0.9669)	5.4719 (8.6036)	0.6527 (8.8431)
Nonexec	0.5968*** (0.2255)	0.7456*** (0.2345)	-4.8531** (1.9878)	-5.6794*** (2.0520)	7.9022 (18.0614)	3.2000 (19.0001)
Auditind	0.0061 (0.0079)	0.0007 (0.0079)	-0.0649 (0.0526)	-0.0713 (0.0529)	0.7726 (0.4970)	0.5775 (0.5106)
Bodgen			2.2993 (2.5832)	1.7944 (2.5780)	-39.9225* (24.8171)	-32.8612 (25.3783)
Gdpg	-0.5113	-0.5050	12.0010	11.3195	-65.7238	-34.9647

	(0.6269)	(0.6264)	(9.9869)	(9.9856)	(68.1162)	(69.861)
Exrate1	-0.0132**	-0.0148***	0.1067***	0.1221***	0.8327**	0.9173**
	(0.0055)	(0.0055)	(0.0381)	(0.0395)	(0.3610)	(0.3813)
Rulelaw	0.3850***	0.4326***	-1.1427	-1.3279	4.8018	0.4688
	(0.1471)	(0.1488)	(1.3330)	(1.3396)	(11.7806)	(12.1524)
Regdiv						
2	0.2085	0.2873	-1.0817	-1.9511	17.1948	12.0821
	(0.2487)	(0.2514)	(1.3492)	(1.3541)	(13.3475)	(13.7619)
3	0.8750***	0.9752***	-3.8394**	-4.1020**	-4.9384	-11.1541
	(0.2733)	(0.2770)	(1.6368)	(1.6497)	(15.5439)	(16.0755)
4	0.7266***	0.6763***	-1.2420	-0.9383	-9.4191	3.1532
	(0.2519)	(0.2541)	(1.4427)	(1.4785)	(13.8422)	(14.5138)
Cons	3.2323***	3.2704***	3.3192	4.8631**	139.5362***	83.4071***
	(0.2952)	(0.2991)	(2.5578)	(2.2312)	(22.0843)	(20.3422)
Wald Chi2 (13)	57.78	58.31	66.05	66.73	74.39	43.07
Prob> Chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
No. of Obs	525	525	532	532	522	522
No. of Group	109	109	109	109	108	108
R-square	0.083	0.076	0.031	0.033	0.118	0.062

Notes: All regressions include coefficient. Standard errors are in parentheses. ***,**, *means significant at 1, 5 and 10% level of significance.

Discussion of Results

From table 5 reports the six models. Model 1 and 2 shows a negative significant relationship between z-score and disclosure variables (disclosure index and IFRS). Thus, that stability of the banks has an inverse relationship. This result deviate from most literature (Bourgain et al; 2012, Nier and Baumann; 2006 and Boot and Schmeits; 2000) but may agree with Barth and Landsman (2010) who propose that the necessary requirement for bank stability may transcend or not be the same as requirement for quality accounting standard. Also the level of the financial market efficiency in Africa may have led to the result.

Bank size was significant and positive in the model 1 but was not significant in model 2. Thus, the larger the bank size promote stability. Intuitively banks with large asset sizes can attract higher skilled management, exude confidence which can attract the depositors as well as investor trust to do more business that can enhance earning power and performance. Profitability for both model 1 and 2 were significant and positive associated with bank stability.

At governance level, non-executive board membership had as significantly positive relation with the bank stability. This can be explicated using the evidence from Adams and Mehran (2012) who argued that outsiders may be more effective monitors of

management because they are, in theory, less obliged to management and may also bring on board different perspective to bear on problems the management faces, which can be useful to a complex sector such as banking. Furthermore, at country level we have both models (1 and 2) showing a negative significant relationship between exchange rate with bank stability.

As expected, a depreciated currency has a lot to do with macroeconomic instability which incidentally impact the financial sector adversely. Also Kaufman quality institution which was proxy as rule of law as expected had a positive and significant relationship with bank stability.

As a cross sectional data, we controlled for the regions included to aid policy direction. From both models, there is a positive significant relationship between bank stability and region 3 and 4 representing Eastern and Northern Africa countries respectively. This explains that banks operating in the eastern and northern regional divide of the Sub-Saharan Africa are stable and thus far from insolvency.

Now shifting on to the 3 and 4 models, we report a positive relationship between disclosure and bank stability by only significant be stability and IFRS. Meaning more disclosure leads to high leverage (bank instability), which is contrary to expectation and literature (Bourgain et al; 2012). Bank size was significant and positive with bank stability. As explained earlier the larger the bank can associated with quality management and enhance performance which can promote stability. Surprisingly there is a negative significant relation between profitability and stability for both models. This could mean that high leverage claiming higher interest rate settlement which may lead to financial distress and poor profitability performance.

Another firm level variable, auditor quality had a negative significant relationship with leverage ratio. Thus quality auditors promote bank stability. This probably suggest that quality auditors can expose management activities to the governing board such that there is a limit as to how much banks can borrow. At the governance level, non-executives had a negative significant relationship with leverage ratio as expected. Meaning non-executive board members, operating as effective board promote bank stability.

From the country level, exchange rate had a significant positive association with leverage ratio as expected. This means high exchange rate (currency depreciation) encourages high borrowing which could lead to bank instability. From the two models (3 and 4), it was regional divide 3 (Eastern Africa Countries) that had a negative and significant relationship with leverage ratio. This means that banks operating in the eastern regional divide of the Sub-Saharan Africa are stable and thus far from insolvency.

And now form model 5 and 6, we show a mixed result between bank stability and disclosure. Contrary to expectation, model 5 reports a negative significant relationship between disclosure index and liquidity. Which explains that high disclosure result in less

liquidity. Although existing literature affirms that relation with suggestion that higher disclosure enhances firm credibility and reduce firm level of cash holding (Bopkin, 2013). Whereas model 6 was positive relation but not significant. Again there was a negative significant association between firm profitability and liquidity. This can possibly be explain as banks with high profitability can be deem to reliable to pay off immediate debt and with assumption will reduce the amount of liquid asset their statement. On the other hand, high performance firms invest more in fixed asset and not liquid asset hence the result.

Summary and Conclusion

The banking literature advances that informational disclosure of bank is critical in promoting market discipline and augment prudential bank regulation. The financial markets over the years have grown rapidly in structure and complexity which requires augmented monitoring and control via market discipline to ensure reliability, stability and global development. Indeed, the operations of the bank is to assume risk in making profit but without control unnecessary risks leads to insolvency which had greater externality cost. As clearly defined in the pillar 3 of the Basel II framework, market discipline is conceptualized as a means of involving market participants in monitoring and disciplining bank managers for excessive risk-taking (Basel Committee on Banking Supervision, 2006). The information emanate primarily from Financial accounting disclosures. The level of information disclosure in Sub-Saharan Africa market estimated detrimental by most scholars (Bopkin; 2013, Yartey and Adjasi; 2007) hence the continent classified dark. This study examine empirically the hypothesis that information disclosure has positive association with bank stability. Inverse, information disclosure can reduce excessive bank risk-taking behavior.

From the preliminary results, findings are mixed and so we cannot conclude.

Appendices

THE DISCLOSURE INDEX VARIABLES

$DISC = 1/17 \sum Si$

ASSETS	CATEGORY	Captured
LOANS S1	Loans by maturity Sub 3 months, 3–6 months, 6 months–1 year, 1–5 years, 5 years +	Inferred from S2
S2	Loans by type a Loans to Municipalities/Government, Mortgages, HP/Lease, Other Loans	Corporate & Commercial Loans
S3	Loans by counterparty Loans to Group Companies, Loans to other Corporate, Loans to Banks	Loans and Advances to Banks
S4	Problem loans Total Problem loans	Impaired Loans
S5		Not Captured
Other Earning		

Assets		
S6	Securities by type (detailed breakdown) Treasury Bills, Other Bills, Bonds, CDs, Equity Investments	Total Securities
S7	Securities by type (coarse breakdown) Government Securities, Other Listed Securities, Non-listed Securities	Government Securities
S8	Securities by holding purpose Investment Securities, Trading Securities	Available for Sale Securities
Liabilities		
Deposit S9	Deposits by maturity Demand, Savings, Sub 3 months, 3–6 months, 6 months–1year, 1-5years, 5 years +	Customer Deposits - Term
S10	Deposit by type of customer Banks Deposits, Municipal/Government	Deposits from Banks
Other Funding		
S11	Money market funding Total Money Market Funding	Total Deposits, Money Market and Short-Term Funding
S12	Long-term funding Convertible Bonds, Mortgage Bonds, Other Bonds, Subordinated Debt, Hybrid Capital	Total Long Term Funding
Memo Lines		
S13	Reserves Loan Loss Reserves (Memo)	Loan Loss Reserve / Gross Loans
S14	Capital Total Capital Ratio, Tier 1 Ratio, Total Capital, Tier 1 Capital	Total Capital Ratio
S15	Contingent Liabilities Total Contingent Liabilities	Trading Liabilities
S16	Off-Balance Sheet Items Off-Balance Sheet Items	Net Gains (Losses) on Trading and Derivatives
Income Statement		
S17	Non-interest Income Net Commission Income, Net Fee Income, Net Trading Income	Total Non-Interest Operating Income
S18	Loan Loss Provisions Loan Loss Provisions	Reserves for Impaired Loans/NPLs

Assets

Loans S1:	Loans by maturity Sub 3 months, 3–6 months, 6 months–1 year, 1–5 years,	5 years +
S2:	Loans by typea Loans to Municipalities/Government, Mortgages, HP/Lease,	Other Loans
S3:	Loans by counterparty Loans to Group Companies, Loans to other Corporate, Loans to Banks	
S4:	Problem loans Total Problem loans	

S5:	Problem loans by type Overdue/Restructured/Other non-performing
Other Earning Assets	
S6:	Securities by type (detailed breakdown) Treasury Bills, Other Bills, Bonds, CDs, Equity Investments, other Investment
S7:	Securities by type (coarse breakdown) Government Securities, Other Listed Securities, Non-listed Securities
S8:	Securities by holding purpose Investment Securities, Trading Securities
Liabilities	
Deposits S9:	Deposits by maturity Demand, Savings, Sub 3 months, 3–6 months, 6 months– 1year, 1-5years, 5years+
S10:	Deposit by type of customer Banks Deposits, Municipal/Government
Other Funding	
S11:	Money market funding Total Money Market Funding
S12:	Long-term funding Convertible Bonds, Mortgage Bonds, Other Bonds, Subordinated Debt, Hybrid Capital
Memo lines	
S13:	Reserves Loan Loss Reserves (Memo)
S14:	Capital Total Capital Ratio, Tier 1 Ratio, Total Capital, Tier 1 Capital
S15:	Contingent Liabilities Total Contingent Liabilities
S16:	Off-Balance Sheet Items Off-Balance Sheet Items
Income statement	
S17:	Non-interest Income Net Commission Income, Net Fee Income, Net Trading Income
S18:	Loan Loss Provisions Loan Loss Provisions

References

Allen, Franklin, Elena Carletti, Robert Cull, Jun Qian, Lemma Senbet, and Patricio Valenzuela. April 2012b. “Resolving the African Financial Development Gap: Cross-country Comparisons and a Within-country Study of Kenya,” National Bureau of Economic Research Working Paper 18013, Cambridge, MA. http://www.nber.org/papers/w18013.

Akerlof, G., 1970. The market for ‘lemons’: quality uncertainty and the market mechanism. Quarterly Journal of Economics 90, 629–650.

Badev, Anton, Thorsten Beck, Ligia Vado and Simon Walley, 2013, “Housing Finance across Countries: New Data and Analysis.” World Bank mimeo.

Beck, Thorsten, Samuel Munzele Maimbo, Issa Faye, and Thouraya Triki, 2011. *Financing Africa: Through the Crisis and Beyond*. Washington, DC: The World Bank.

Berle, A. A. & Means, G. C. 1932. *The Modern Corporation and private property*. New York: Harcourt, Brace & World.

Bens, D., and S. Monahan. 2004. Disclosure quality and the excess value of diversification. Journal of Accounting Research 42 (4): 691–730.

Black, B. S. 2001. The legal and institutional preconditions for strong securities markets. UCLA Law

Review 48 (April): 781–856.

Boot, A.W., Schmeits, A., 2000. Marked discipline and incentive problems in conglomerate firms with applications to banking. J. Finan. Intermediation 9, 240–273.

Bushee, B. 2004. Discussion of disclosure practices of foreign companies interacting with U.S. markets. Journal of Accounting Research 42 (2): 207–252.

Bushee, B., and C. Leuz. 2005. Economic consequences of SEC disclosure regulation: Evidence from the OTC bulletin board. Journal of Accounting and Economics 39 (2): 233–264.

Bushman, R., and A. Smith. 2001. Financial accounting information and corporate governance. Journal of Accounting and Economics 32 (1-3): 237–333.

Cordella, T., Yeyati, E.L., 1998. Public disclosure and bank failures. Discussion paper No. 1886. CEPR.

Coyle, B. (2007), Corporate Governance, 5th ed., Institute of Chartered Secretaries and Administrators, London.

Dahya, J., McConnell, J.J. and Travlos, N.G. (2002), “The Cadbury Committee, corporate performance, and top management turnover”, Journal of Finance, Vol. 57 No. 1, pp. 461-83.

Daily, C.M., Johnson, J.L., Ellstrand, A.E. and Dalton, D.R. (1998), “Compensation committee composition as a determinant of CEO compensation”, Academy of Management Journal, Vol. 41, pp. 209-20.

Denis, D., and V. Sibilkov. 2010. Financial constraints, investment, and the value of cash holdings. Review of Financial Studies 23 (1): 247–269.

Dewing, I.P. and Russell, P.O. (2008), “The individualization of corporate governance: the approved persons’ regime for UK financial services firms”, Accounting, Auditing, Accountability Journal, Vol. 21 No. 7, pp. 978-1000.

Diamond, D., and R. Verrecchia. 1991. Disclosure, liquidity, and the cost of capital. Journal of Finance 46 (4): 1325–1359.

Dittmar, A., and J. Mahrt-Smith. 2007. Corporate governance and the value of cash holdings. Journal of Financial Economics 83 (3): 599–634.

Doidge, C., A. Karolyi, and R. Stulz. 2007. Why do countries matter so much for corporate governance? Journal of Financial Economics 86 (1): 1–39.

Eisenhardt, K. (1989), “Agency theory: an assessment and review”, Academy of Management Review, Vol. 14, pp. 57-74.

Easterly, W., Levine, R., 1997. Africa’s growth tragedy: policies and ethnic divisions. Quarterly Journal of Economics 112, 1203–1250.

Ezeoha, A.E. (2007), “Structural effects of banking industry consolidation in Nigeria”, Journal of

Banking Regulation, Vol. 8 No. 2, pp. 159-76.

Freshfields Bruckhaus Deringer (2005), “A legal framework for the integration of environmental, social and governance issues into institutional investment”, UNEP Finance Initiative, produced for the Asset Management Working Group of the UNEP Finance Initiative, October.

Friedman, A.L. and Miles, S. (2001), “Socially responsible investment and corporate social and environmental reporting in the UK: an exploratory study”, British Accounting Review, Vol. 33, pp. 523-48.

Frost, C.A., Gordon, and Hayed, A.F. (2006), ‘Stock Exchange Disclosure and Market Liquidity: An Analysis of 50 International Exchanges’, *Journal of Accounting Research,* 44 (3) June: 437–83

Gao, P. (2010), ‘Disclosure Quality, Cost of Capital and Investors’ Welfare’, *Accounting Review*, 85 (1): 1–29

Goyal, V., and C. Park. 2002. Board leadership structure and CEO turnover. Journal of Corporate Finance 8 (1): 49–66.

Greene, W. 2003. Econometric Analysis. Fifth edition. Upper Saddle River, NJ: Pearson Education, Inc.

Gupta, N. and Yuan, K. (2009), ‘On the Growth Effect of Stock Market Liberalisations’, *Review of Financial Studies,* 22 (11): 4715–52

Haddad, A.E., Al Shattarat W.K. and Nobanee, H. (2009), ‘Voluntary Disclosure and Stock Market Liquidity: Evidence from Jordanian Capital Market’, *International Journal of Accounting, Auditing and Performance Evaluation,* 5 (3): 285–309

Healy, P., and K. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting and Economics 31 (1-3): 405–440.

Honohan, P., and T. Beck. Making Finance Work for Africa, Washington, DC: The World Bank, 2007.

Jensen, M., Meckling, W., (1976), ‘Theory of the firm: managerial behavior, agency costs and ownership structure’, Journal of Financial Economics 3, 305–360.

Jolibert, A., & Jourdan, P. (2006). *Marketing Research, méthodes de recherche et d'études en marketing*. Paris, Dunod.

Kasakende, Louis, Justine Bagyenda and Martin Brownbridge, 2012, "Basel III and the global reform of financial regulation: how should Africa respond? a bank regulator's perspective," Bank of Uganda mimeo.

Lambert, R., Leuz, C. and Verrechia, R.E. (2007), 'Accounting Information, Disclosure, and the Cost of Capital', *Journal of Accounting Research,* 45 (2): 385–420

Laeven, L., Levine, R., 2009. Bank governance, regulation and risk taking. Journal of Financial Economics 93, 259–275.

Rajan, R., Zingales, L., 1998. Financial dependence and growth. American Economic Review 88, 559–586.

Roy, A.D., 1952. Safety first and the holding of assets. Econometrica 20, 431–449.

Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", Journal of Finance, Vol. 52 No. 2, pp. 737-83.

Sikka, P. (2008), "Corporate governance: what about the workers?", Accounting, Auditing, Accountability Journal, Vol. 21 No. 7.

Solomon, J.F. (2007), Corporate Governance and Accountability, 2nd ed., Wiley, New York, NY.

Solomon, J.F. and Solomon, A. (2006), "Private social, ethical and environmental disclosure", Accounting, Auditing & Accountability Journal, Vol. 19 No. 4, pp. 564-91.