RESEARCH BY: SALMAN PARTNERS AND FINANCIAL CONSULT LTD

GOVERNMENT BAIL OUT OF THE GHANAIAN BANKING SECTOR: A JUSTIFIABLE STRATEGY?

Abstract

This paper attempts to analyze the rationale behind government bailout of cash distressed financial institutions in the 2017 to 2019 financial crisis. This enquiry is important from the standpoint of the reasons that have been discovered to be the core of the national financial distress. Irresponsible corporate governance, outright fraud and excessive risk taking with moral hazards were the major culprits behind the meltdown. The research is a qualitative study which is based on secondary data gleaned from journal articles and books on the subject matter from the virtual and physical libraries. In the United State of America, United Kingdom and Austria, government bailout of the banking system seems to be justified as the crisis emanated from error in their policy thrust. The paper concludes that in view of the high degree of financial shenanigan involved in the Ghanaian's case, government intervention (bailout strategy) would not have been justified but for the consideration of the generality of small savers, depositors and the general impact on the economy. Certain regulatory policy prescriptions were proffered to avoid future occurrence.

Key Words: government bailout, distressed bank, Central Bank of Ghana, strategy, Ghana.

1.0 Introduction

The central problem in financial regulation is that governments cannot commit not to bail out banks and other financial firms. The recent financial crisis pushed some governments to the brink of insolvency in dramatic confirmation of this. As noted recently by Mervyn King, former Governor of the Bank of England (2016). When all the functions of the financial system are so closely interconnected, any problems that arise can end up playing havoc with services vital to the operation of the economy - the payments system, the role of money and the provision of working capital to industry. If such functions are materially threatened, governments will never be able to sit idly by. Institutions supplying those services are quite simply too important to fail. Everyone knows it. (King (2016). However, others believe that banks can self-adjust, finding a new equilibrium without help from the government: “Bailout is not necessary. The banking industry can handle this mess internally and does not need subsidies.” (Bert Ely, a leading expert on banking and finance in the Washington policy community, 24 September 2008)

Banks fulfill a special role in the financial system and the broader economy. They play an essential intermediation function within the economy by allocating financial resources from savings to investments and consumption, providing vehicles for wealth accumulation, performing maturity transformation functions that enable and facilitate financing for long-term projects, providing liquidity, and facilitating a payment, clearing and settlement function in the economy, including cross-border payments. To execute all these functions, banks have become more complex, interconnected and integrated into the real economy. Consequently, a failure in a single bank could cause deadlock in critical financial markets and services, which could spread to other financial systems and negatively affect the financial system as a whole. Because a bank failure, especially in the case of a systemically important bank, can propagate contagion that can rapidly spread across the whole interconnected financial system it is pivotally important that measures be put in place to prevent the financial collapse of banks and, in instances where such collapse materializes, to facilitate the orderly resolution of an insolvent bank. It is in this context that the governments and central banks have a very important role in terms whereof it can intervene to inject financial support in the form of bail out.

Bail out is not a new phenomenon in the Ghanaian banking sector. World Bank study in (1987) posited that six state owned banks were found to be financially distressed because their balance sheets were seriously impaired with high non-performing loans which rendered them financially insolvent and under which Financial Sector Adjustment Program received financial support from International Monetary Fund and World Bank bailed out of US$ 170 million or 4.4% of GDP into the six troubled state -owned banks in 1990s as a form of bailout owing to 62 billion Cedis of non-performing loans of state- owned enterprises, loans guaranteed by the Government of Ghana and the private sector (Bawumia, 2010).

According to Bawumia (2010) opine that as part of a comprehensive macroeconomic adjustment program with the support of the International Monetary Fund, World Bank and Swiss government, financial market liberalization in Ghana that began in the late 1980s, under the Financial Sector Adjustment Program (FINSAP), six distressed banks were restructured and cleaned up of non-performing loans and restored into profitability and viability. The recent banking crisis in Ghana pushed the Government and the Bank of Ghana to embark on a systematic reform of regulations and directives around the key contributors to the crisis; for instance, capital deficiency, poor corporate governance practices, connected and related party lending, poor and uneven supervision, weak enforcement and poor risk management practices.

At the time of writing of this article, Ghana did not have an explicit deposit insurance system that could mitigate the effects of bank failure-meaning that taxpayers often have to foot the bill for bank failures during a "bail-out". The Ministry of Finance and Economic Planning 2019 Mid -year Budget review, posited that the government has injected between (US$ 3billion) GHC 15.9 billion and (US$ 4 billion) GHC 21.2 billion (average of GHC 18.6 billion) in the form of bailout to prevent systemic crisis in the banking sector (MOFEP 2019). During the period 2017-2019, Bank of Ghana found out that 9 universal banks, 347 micro-finance companies, 15 savings and loans companies and 8 finance houses were financially distressed, so the Government decided to intervene in the Ghanaian banking industry meltdown through the bailout strategy. The Government injected about GHC 18.6 billion into the troubled banks and distressed specialized deposit taking institutions over the period 2017-2019 as a form of bailout mainly due to high non-performing assets, unsecured connected and related loans, capital deficiencies as well as liquidity crisis which led to tight credit in the economy.

The extraordinary amounts of public funding were made available for the Ghanaian banking sector 2017, 2018 and 2019, had dwarfed the capital budgets of the country and has impacted negatively on the country's Debt/ GDP ratio of 59.1%. The average amount of GHC 18.6 billion has so far more than the country's capital expenditure and also about 40% of the country's total revenue. The banking crisis of the past three years has seen extensive government interventions to stabilize banking system and prevent disorderly failures. According to some observers, this massive intervention was necessary to keep the banking sector from collapsing, while others posited that, it constituted an inacceptable gift to private institutions that will help to sustain unreasonable investment decisions in the future. The risk of a contagion from failing local banks created a public problem that justifies intervention, but it was difficult to know how much and what kind of emergency aid is necessary in a given situation. Designing bank rescue packages therefore resulted consultation between the government, Ministry of Finance and Economic Planning and Bank of Ghana.

During the 2007-2009 global financial crisis, various government prevented individual bank failures from turning into a general financial crisis, responded by issuing state guarantees to reassure depositors, provided liquidity support to distressed banks, recapitalized some of distressed banks while others provided mechanisms to relief banking institutions of impaired or toxic assets.

Governments of several countries – including the United States, United Kingdom, Ireland, Greece, Portugal, Japan, Nigeria and more - chose to bailout their distressed financial institutions because they feared that the failure of one bank could cause the bankruptcy of more – risk of contagion. So, bearing in mind the devastating results that a failure of just one bank could cause to the entire financial system, and thus to the economy and society, governments aided these institutions by guaranteeing their liabilities, providing impaired asset relief, restructuring aid loans and even by recapitalizing these entities, so that they could restore their viability. There have been comparable bank bail outs plans across the globe after the 2007-2009 financial crisis more importantly the United States of America and European countries. The various bail outs schemes were particularly instructive because a number of countries with comparable economies and banking sectors opted for markedly different bail-out strategies (Laeven & Valencia, 2010; Schmitz et el, 2009). Some European countries such as Ireland committed more than twice of their Gross Domestic Product (GDP) to their ailing banking sector during the 2007-2009 global financial crisis which eventually led the country into sovereign debt crisis. The total bail out costs of Ireland stood at US$ 614 billion.

Also, a similar event happened in the United States of America passed the US$ 1 (one) trillion in the summer of 2009. A whooping sum of US 1 trillion was injected into the financial sector to ease credit situation (Scott, 2009). De Caux, McGroarty and Brede (2016) posit that a bailout can offer protection against widespread contagion, such as the panic that swept through the financial markets in the wake of Lehman Brothers' insolvency. For United Kingdom the bail -out costs was US$ 718 billion or about 45% of the GDP. To avoid a collapse of the entire banking system, the government developed a comprehensive bail-out scheme by the Prime Minister, the Chancellor of Exchequer, the Treasury and industry representatives on 2 October 2008. When coordination with the EU proved unsuccessful and UK stock markets continued to plummet, Prime Minister Gordon Brown and Chancellor of the Exchequer Alistair Darling decided to announce a £500 billion bailout package on 8 October, 2008. The initial British plan had three pillars: (1) recapitalization through a Bank Recapitalization Fund, for £50 billion; (2) a Credit Guarantee Scheme, a government loan guarantee for new debt issued between British banks for up to £250 billion; (3) liquidity provision through short term loans made available through a Special Liquidity Scheme operated by the Bank of England, for £200 billion. The UK bank support plan was voluntary. Banks benefitting from the rescue package had to accept restrictions on executive pay, changes in corporate governance and dividends to existing shareholders. They furthermore committed to offer reasonable credit to homeowners and small businesses. Although banks such as HSBC Group, Standard Chartered or Barclays declared their support for the plan, they announced that they will not have recourse to the government recapitalization. Only the Royal Bank of Scotland and Lloyds TSB together with HBOS applied for government funding. Following a series of adjustments and transactions, the capital injections eventually led the British government to acquire 83% of the Royal Bank of Scotland (but only 68% of the voting rights) and 41% of Lloyds (National Audit Office 2010). Following the nationalizations of Northern Rock, Bradford and Bingley and the solicitation of the Bank Recapitalization

Plan, the government decided to establish United Kingdom Financial Investments in November 2008 as a vehicle for managing public ownership in the banking system. Between 2009 and 2010, the Central Bank of Nigeria (CBN) injected Niara (N) 620 billion (US $ 4.1 billion) into troubled banks as a form of a bail-out due to high non-performing and unsecured loans of the banks which led to tight credit in the economy (Sanusi, 2010). In Nigeria, the economy faltered and bank system experienced a crisis in 2009, supposedly triggered by the global event with down turn in oil and gas prices. The Nigerian stock market collapsed by 70% in 2008-2009 and many Nigerian banks had to rescued in order to stabilize the financial system and return confidence to the markets and investors. The Central Bank of Nigeria rescued the banking sector from illiquidity and also sacked the board leadership of 8 banks (Sanusi,2010). In 2010, Central Bank of Nigeria created the Asset Management Corporation (AMCON) to resolve the non-performing loan worth Niara (N) 4 Trillion.

In Ghana, the current banking crisis in Ghanaian industry emanated from heavy dependence on revenue from lending to energy related businesses, and the government's accumulation of arrears to contractors and other service providers which undermined the capacity of some banks to service their bank loans and created high non-performing loans across the industry (various IMF country reports 2010-2017). The bubble was absolute financial shenanigan in the Ghanaian banking industry system, most of which were routed through connected and related loans. Also, the shareholding structure of defunct banks were generally concentrated, they had greater willingness to tolerate risk and pressured board and management for increased leverage. The pressure on some of local banks made them deliver high returns to their shareholders after the introduction of universal banking concept in 2003 and deregulation of the financial sector in 2000s contributed to some of highly risky behavior that led to the insolvency of some indigenous banks and specialized deposit taking institutions over the past three years. How justifiable then should government use the tax payers money to rescue banks and non-bank financial institutions that have been wantonly destroyed by their own owners and board of directors? The purpose of this article is therefore to assess the justification or rationale for the government bailout of the Ghanaian banking industry.

2.0 The Concept of Bailout

A bailout is a rescue arrangement made by government or regulatory authority, especially a financial rescue, to safeguard an individual or group of individuals or a firm or group of firms. It is a term used to describe financial support or assistance given to a country facing serious financial difficulty or bankruptcy. In this regard, the purpose of such intervention is to bring the company back on its feet for further profitability and functionality in the economy. To Proprio (2017) bailout helps a distressed company to fail gracefully without spreading the harmful effects of its failure to the larger economy. In such circumstances, bailout is seen as a necessity in order to prevent greater socio-economic failures. There is a longstanding and ongoing debate about whether government bailout is necessary during a financial crisis and, if so, in what form it should be provided. Some believe that government bailout of banks will save banks and their projects, minimizing a domino effect in the financial system and the loss of employment while others believe that there is no need for any bail out. Bail outs are a form of state intervention into the economy with important redistributive effects, and economists have repeated warned governments against moral hazard they create and their welfare effect on the economy (Grossman & Woll, 2012). According to Levitin (2011), bail out are an inevitable feature of modern economy because of the interconnectedness of firms that have impart on entire economy which bears the risk of an individual firm's failure. There are variety of bank bail outs strategies for various governments around the globe. To avoid individual bank failures from turning into general financial crises, most governments around the world response by adopting the following options- (i) the issuing state guarantees to reassure depositors (ii) provision of emergency liquidity support backed by government treasury papers; (iii) through the injection of capital by states or governments, (iv) provide mechanisms to relief banking institutions of the impaired assets or toxic assets; (v) significant bank nationalization (vi) liquidation option through the Purchase and Assumption and (vii) failure resolution options where the Deposit Insurance Corporation or Government through the central banks provide funds for the depositors of the failed banking institutions

3.0. Literature Review

Banks are financial intermediaries whose liabilities are mainly short-term deposits and whose assets are usually short, medium and long- term loans to businesses and customers. When the value of their assets falls short of the value of their liabilities, then the banks are declared insolvent. The value of a bank's assets may decline because borrowers are unable or unwilling to service their debt. Banking crises could be damaging and contagious, prompting calls for swift policy responses. The banking crises of the past have led affected economies into deep recession and sharp decline in economic growth. Some crises have turned out to be contagious, rapidly spread to other sectors and countries with no apparent vulnerabilities. Among the many causes of banking crisis have been a combination of unsustainable macro-economic policies, high fiscal deficits, huge non-performing assets and other banks' balance sheet fragilities. Academics and economists have adopted many approaches to resolve both banking and systemic crises more efficiently. Some governments have focused on reducing the fiscal costs of banking crisis, others on limiting the economic costs in terms of lost output and accelerating, while others have focused on achieving long-term, structural reforms. Other governments may, for example through certain policies consciously incur large fiscal outlays in resolving the banking crisis with the objective of stabilizing the financial system.

Financial distress is a broad concept used to describe situations in which firms face financial difficulty. The most common terms used interchangeably for financial distress are 'failure', 'default', 'insolvency', and 'bankruptcy' (Geng, Bose, and Chen, 2015). However, bankruptcy is the extreme and irredeemable outcome of financial distress and as such many financially distressed firms escape bankruptcy due to early reconstruction of operations. There are many definitions of financial distress because different countries have different accounting procedures and rules. It is generally believed that it is a situation where operating cash flow does not exceed negative net assets (Li et al., 2014). Geng et al. (2015) state that some of the methods that have been used for financial distress prediction include discriminant analysis, logit or probity regression model, linear conditional probability models, neural network, decision trees, case -based reasoning, genetic algorithm, rough sets, support vector machine, and others. However, the assumptions underlying the majority of these methods are far from real world situation. Extant research has focused on the discovery of better models for financial distress prediction because of the limitations of statistical techniques that have been extensively used over the years. Banking literature describes bank failure as a situation when a bank is unable to meet its obligation to its depositors or other creditors because it has become insolvent or too illiquid to meet its liabilities. More specifically, a bank usually fails economically when the market value of its assets declines to a value that is less than the market value of its liabilities. The failure of a bank is generally considered to be more important than the failure of other types of business firms because of the interconnectedness and fragility of banking institutions. The term "banking crisis" refers to a situation of major disruptions in a country's banking sector which may not just be minor downturns or disturbances. Banking crisis occurs when the capital of the banking sector has been depleted due to loan losses, resulting in a negative net worth of the banking sector. A bank failed when it cannot meet its commitments as they fall due. According to Faff, Parwada and Tan (2010) posit that when the concept of the banking institution going concern is threatened, the ultimate risk faced by the bank becomes too high that the depositors' funds unsafe, then the options left for the central banks or the regulators are either a bankruptcy or bail-out. In other jurisdictions, deposit insurance schemes are used to protect depositors against losses when a bank fails to meet its debt obligations. A banking crisis occurs when many banks in a country are in serious solvency or liquidity problems at the same time –either because there are all hit by the outside shocks or because failure in one bank or a group of banks spreads to other banks in the system.

According to Dermirguc- Kunt & Detriacghe (1997) for an episode of banking distress to qualify as a fully- fledged banking crisis as established at least two of the following must apply: (i) the ratio of non-performing assets to total assets in the banking system exceeded 10% ; (ii) the cost of bail out or rescue operations was at least 2% of GDP (iii) banking sector problems resulted in a large scale nationalization (iv) or extensive bank runs occurred or emergency measures such as deposit freezes, prolonged bank holidays or generalized deposit guarantees were enacted by government in response to the crisis. Laeven and Valencia (2018) describe a systemic banking crisis in a situation where a country's financial and corporate sectors experience a large number of defaults and financial institutions including banks and corporations face great difficulties repaying their debts on time. As a result, non-performing loans increase sharply and all or most of the aggregate banking system capital is exhausted. Systemic banking crises are disruptive events not only to financial system but to the entire economy as a whole. According to Laeven and Valencia (2012) banking crisis is said to be systemic if the two of the following conditions are met : (i) significant signs of financial distress in the banking system (significant bank runs, losses in the banking system and significant bank liquidation); and (ii) significant banking policy intervention measures by the government and central banks such as provision of emergency liquidity support, or bail-outs in response to significant losses in the banking system. Laeven and Valencia (2012) further considered the policy intervention measures to systemic banking crisis at least three (3) out of the following six (6) should have used by the government or the central bank: (i) bail-out or bank restructuring costs exceed 3% of GDP, (ii) significant bank nationalization; (iii) significant assets purchase exceeding 5% of GDP; (iv) significant guarantees are put in place to help in restoring confidence in the banking system; (v) extensive use of emergency liquidity supports exceeding 5% of GDP and (vi) deposit freezes and bank holidays.

To avoid systemic failure in the banking sector, selected banks may receive capital or liquidity supports from regulatory authorities or government when in distress or crisis in the form of bail-out (Dam & Koetter, 2011). These financial safety nets for individual banks aim to reduce the social costs of bank failures due to systemic risks (Puri, Rocholl and Steffen, 2011) or prevent bank contagion (Gropp, Hakenes and Schnabel, 2011) and also promote financial stability (Dermirguc-Kunt and Detragiache, 2002). The term "banking crisis" refers to a situation of major disruptions in a country's banking sector which may not just be minor downturns or disturbances. Banking crisis occurs when the capital of the banking sector has been depleted due to loan losses, resulting in a negative net worth of the banking sector. This implies that the system is insolvent and therefore the value of its realizable assets is less than the total value of its liabilities. Dermiguc-Kunt & Detriagache (1997) define banking crisis as when non-performing asset ratio in the banking system exceeds 10%; when the cost of rescue operation or bail-out exceeds 2% of GDP and banking problems resulted in a large - scale bank nationalization. Caprio & Klingebiel (1996), Laeven & Valencia (2008a), and Reinhart & Rogoff (2009) define banking crises as situations in which “a large fraction of banking system capital has been depleted,” whereas Calomiris (2010) defines banking crises as “panics or waves of bank failures.” A broader definition of a banking crisis is a situation in which actual or potential bank runs or failures induce banks to suspend the internal convertibility of their liabilities or that compels the government to intervene by extending assistance on a large scale (IMF 1998). Laeven & Valencia

(2010) define banking crises as situations in which there are significant signs of financial distress in the banking system—as evidenced by significant bank runs, bank losses, and bank liquidations—or significant policy intervention measures directed toward banks. Banking can become systemic, if not prevented through policy, and can create panics and contagion, with negative externalities. Daumont et al (2004) cited Caprio and Klingebiel (1996) defined systemic banking crisis where non-performing assets ratios are at least between 5% and 10% of the total banking system assets and thus likely to be sufficient to wipe out most or all of the banking system's capital.

A systemic banking crisis is defined, exactly as in Laeven and Valencia (2008), as one where the country's corporate and financial sector experiences a large number of defaults and difficulties in timely repaying of contracts. Also, non-performing loans increase sharply and most of the aggregate capital in the banking system may be exhausted. Alongside depressed asset prices, sharp increases in real interest rates and slowed capital flow is often observable. Each crisis event and starting date is cross-checked with whether it coincides with deposit runs, deposit freezes, extensive liquidity support, large proportions of non-performing loans, or bank interventions.

3. i. Systemic risk

One of the most feared events in banking is the alarm of systemic risk. It can be likened to fire alarm that is triggered in a public space. But unlike fire, systemic risk is not clearly defined. Moreover, unlike the firefighters who often are able to turn off the fire, bank regulators have been accused many times of the contribution that they had in amplifying systemic risk. Systemic risk is the risk of a collapse of the entire financial system typically triggered by the default of one or more, large and interconnected financial institutions. Systemic risk can be characterized by three factors: (a) it affects a substantial portion of the financial system; (b) it involves negative externalities (c) it requires intervention of public authorities for prevention and eventually, management of the risky environment. Since the failure of US Lehmann Brothers in September 2008; systemic risk gained great attention in financial policy circles. In a 2009 report the International Monetary Fund and the Financial Stability Board believes that systemic risk is "the risk of disruption of financial services caused by major problems arising in the financial system as a whole or a part of it, a situation that has the potential to cause serious negative consequences for the real economy ", bringing serious externalities, namely economic and social costs in areas that fall outside the sphere of responsibility of shareholders, creditors and employees of financial institutions in trouble

Systemic risk is the possibility that an individual financial institution's failure will result in broad damages to the economy as a whole is the crux of financial crisis. The implies that the financial institution's failure has a cascading effect of successive failures (Dam & Koetter,2011). While systemic risk is about the individual bank's failure having broader economic and social consequences on the economy, what makes such consequences systemic or not is ultimately a valuation driven by political culture and social norms. Systemic banking crises may result from causes that may occur either separately or in combination; The banking system is inherently more vulnerable to contagion. Incomplete markets also inhibit risk of contagion, signifying the risk of spreading an individual financial institutions risk to other ones, thus potentially disrupting the whole financial system. More precisely, contagion risk comes from overlapping claims that financial institutions have on each other. Defaulting Bank A for example decreases Bank B's assets if Bank A's claims are included in these assets. Such a strong enough spill- over effect might even yield a default of Bank B leading to a default of Bank C which has Bank B's assets in its accounts and might have been already weakened by Bank A's. This causes a systemic crisis in which a higher degree of interconnectedness results in a further but less strong spread of the crisis and a shock can be absorbed better. On the other hand, if only a few but strong links exist, then crisis are more likely to spread since capital buffers are overwhelmed by the strength of the defaulting link (one of only a few but strong links). Contagion can be very expensive for a financial system which in turn would potentially have large spill -over effects to the real economy. In such a scenario, firms face low or no access to funding and consequently are forced to cut back investment and output levels.

Contagion effect can therefore be defined as the probability that the instability of the given institution (instrument, market, infrastructure, financial system sector) will spread to other parts of the financial system with negative effects, leading to a system-wide crisis. Also, contagion effects can arise in which an individual bank's shock spreads to other institutions leading to a chain of bankruptcies. Contagion effect is thus understood as the transmission of systemic risk through various channels. Domino effect, often synonymous with contagion, can be understood as an example of systemic risk materialization. Domino effect is based on the negative impact of the failure of a single financial institution (e.g. a bank) on the entire financial system, causing a chain reaction of further default. There are three systemic risk transmission mechanisms through which this happen: counterparty contagion; informational contagion and default contagion (Levitin, 2011)

3.ii. Counterparty Contagion

Counterparty contagion or the domino effect, occur when the failure of one bank leads directly to the failure of other banks that are its counter parties because the counterparties relied on payment or future business from the initialed failed bank (Humphery, 1986). Counterparty contagion is a particular concern in highly leveraged industries like banking where even small losses can leave a ban insolvent. Helwege (2009) argued that the prerequisite for a bank run is not a bank's actual inability to repay its obligations in timely fashion but only a perception that the bank might not be able to repay on time. Contagion risk refers to the process whereby a problem experienced in one sector of the world economy leads to the problems in other unrelated sectors. When Russia defaulted on its debt in 1998, there was a flight to quality and credit spreads on the bonds increased. During the global financial turmoil that commenced in 2007, there was a similar flight to quality and again credit spreads increased. The accompanying downturn led to a record number of financial institutions defaulting, for instance the collapse of Lehman Brothers in 2008 have alerted financial regulators the necessity of managing contagion risk so as to downsize the probability of defaults of other financial institution in the future. Financial contagion is considered to be one of the main parts in the study of systemic risk. Interconnections among the financial institutions that allow interbank market can trigger essential channels for contagion risk and escalation of financial shocks to the banking system. The interconnectedness of the banking system has played a major role in the world financial crisis. It has triggered the propagation of financial distress from one institution to the other parts of the system through bilateral exposures. The crisis has shown that financial contagion is highly dynamic and may assume many forms, slowly accumulating in normal market conditions, but rapidly emerging during periods of unfavorable market conditions (Georg, 2013). It is believed that the interbank market structure is regarded as an essential driver affecting the propagation of financial contagion in banking network systems.

3.iii. Informational Contagion

One major source of systemic risk is information contagion: when investors are sensitive to news about the health of the financial system, bad news about one financial institution can adversely spill over to other financial institutions. The information channel refers to massive and contagious cash withdrawals (bank runs) by depositors imperfectly informed about the type of shocks affecting banks. It also refers to ways through which bad news from one bank lead to the conclusion in the market that other banks are also in trouble, leading to adjustments of contracts with other partners.

For instance, the insolvency of one money market mutual fund with a large exposure to Lehman Brothers spurred investor fears and led to a widespread run on all money market mutual funds in September 2008. Informational contagion occurs when the failure of one bank result in market confidence eroding in similar banks which then fail when they are no longer able financing or conduct transactions on viable terms (Kuye, Ogundele & Otike-Oboro, 2013). Runs can occur in not only when their funds ebb, but also when customers pull their future business from a bank because of concerns generated due to problems with competitor (Roubini,2008). There are other transmission channels of contagion that have been proposed in the literatures such as liquidity mechanism that comes from asset fire sales or refinancing problems because of dried up interbank markets and others which occur due to information contagion or exposure to common risks (Memmel and Sachs. 2013) Previously, regulators and scholars found problems in anticipating the effect of contagion risk partly due to a lack of both visibility and relevant indicators on the structure of the banking system.

3.v. Common Shock

On September, 15th 2008, Lehman Brothers with US$639 billion in assets and US$ 619 billion in debt filed the biggest bankruptcy in US history which shocked the entire global financial system. That failure of a systemically important financial institution with some of US$ 619 billion of liabilities, as well as 25000 employees created a seismic shock to the entire global financial system. Its collapse sent shock waves through international banking markets, as many banks had significant exposures to Lehman Brothers and investors feared that other banks may have been mismanaged as well. As a result of Lehman Brother collapse, the global money market froze, and banks and insurance companies in most of the developed world could not borrow either the collapse of Lehman Brothers resulted global credit crunch. A systemic event is one in which “the release of ‘bad news’ about a Lehman Brothers, or even its bankruptcy, or the crash of a financial market leads in a sequential fashion to considerable adverse effects on one or several other financial institutions or markets, e.g. their failure or crash (De Bandt and Hartmann 2000). Central in this definition of a systemic event is the “domino effect” that is implicit in the phrasing “sequential fashion”, where a shock is “transferred” from one institution or from one market to another. Systemic can be transmitted in several distinct but often intertwined ways, all which apply to both financial and non-financial firms.

4.0 Overview of Systemic Risk in Ghanaian banking Sector

Systemic risk varies across the Ghanaian financial system, reflecting that some parts of the system are more important to market functioning and economic activity than others. Systemic risk also varies over time due to changes in risk appetite and operating environment. Within the financial space, Ghanaian banks are entities that are regarded as posing the greatest systemic risk. There are at least three reasons for this: (i) First, banks provide financial services that are critical to the functioning of the Ghanaian economy, in particular payment and settlement facilities, deposit-taking and allocating credit to productive activities. Any disruption to these types of services would be expected to impose significant costs in terms of foregone economic activity. Second, Ghanaian banks are inherently unstable because of their asset-liability structure. Diamond and Rajan (2011) focus on the role of liquidity risk and liquidity shocks. Liquidity risk has been an important element in the recent banking crisis. Ghanaian banks assume liquidity risk by engaging in maturity transformation and provide liquidity services. These inherent functions of banks mean they are exposed to liquidity shocks, such as funding market disruptions. If a bank’s creditors seek to withdraw their funds at the same time, the banks may be unable to meet its obligation to return these funds due to the difficulty of liquefying its assets. Ghanaian banks use fixed-price liabilities (including deposits) to fund most of their assets, so they are highly leveraged: that is, their capital is equivalent to only a small proportion of their assets. This gives depositors and other creditors only a small buffer against losses on a bank's assets, increasing their incentive to quickly withdraw their funds in times of financial distress or uncertainty. Third, problems in one or two banks -whether internally generated such as happened in Ghana during the period 2009-2017 or arising from external shocks- have the potential to quickly spread to others. A systemic event upon the released of bad news concerning the collapsed of Unibank Limited in 2018 led to a sequential fashion to considerable adverse or negative impact on the Ghanaian banking system.

According to Bank of Ghana's annual report (2018) the total assets of the banking sector as at the end of December, 2018 stood at GHC 107.34 billion or 90% of the total assets in the Ghana's financial sector that made the banks posed the greatest systemic risk in the entire financial system. Contagion in Ghanaian banking markets can stem from interconnections between banks through borrowing and lending activities, payment transactions as well as correlated exposures and similar funding structures. In certain circumstances, a lack of transparency and uncertainty surrounding parts of banks' balance sheets can be enough for some creditors to run on an entire banking system rather than simply one or two banks. The failure of two indigenous banks in 2017 disrupted the intermediation of funds between lenders and borrowers, had potential negative effects on the economy. Borrowers found it difficult to establish a relationship with a new bank and found that existing projects threatened if expected bank credits were not forthcoming. One major source of systemic risk was the information contagion in 2017 when UT Bank and Capital Bank were declared insolvent. Information contagion occurred where the two indigenous banks failed, the market confidence was eroded as there were no longer able to fulfil their money and interbank markets roles and commitments. The exposure channel results from real exposures in the interbank market and in payment systems. Insolvency problems of one bank can trigger a chain reaction leading to other bank failures; this channel refers to the potential for emergence of "domino effect". The collapsed of UT Bank and Capital Bank in 2017 created a “domino effect” on the interbank market and payment settlement systems.

5.0. Causes of Ghana Banking Systemic Crisis

In view of the information available from various IMF country reports and Bank of Ghana’s annual reports it is well accepted fact that the crisis in the banking sector of the Ghanaian economy was not a transmission of any global economic meltdown but all the causes responsible for the failure of the banking sector were home-grown. It was envisaged that the rapid financial assets growth over the past decade would have driven economic growth. Ghana like other developing countries in the Sub-Sahara Africa that have followed the path of financialization, the country has not benefited from real economic growth. According to various IMF reports have indicated that most of the causes responsible for the crisis in Ghanaian banking sector over the last decade could be attributed to macro-economic instability, lending to high risk borrowers , high non-performing loans, weak corporate governance practices, poor management, excessive concentration in the energy sector (oil, gas and electricity), huge exposures in the road sector and related lending or connected lending (Brownbridge, 1998; IMF, 2013;2014;2015) The problem of poor loan quality and non - performing assets in the banking sector were compounded by macro-economic instability. Ghana has faced macro-economic challenges during the 2008 to 2016 period which could be traced in part of government policies, huge public sector debt and declining commodities prices of cocoa, gold and oil. Government fiscal policies were expansionary from 2008 through 2016; inflation and interest rates and the persistent currency depreciation, the rate inflation surged above 18% in 2008 and remained high until declining to 15.7% in December 2016. Demirguc-Kunt and Detragiache (1997) argue that bank distress and crisis tend to erupt when macroeconomic environment is weak, particularly when growth is low, inflation is high and currency depreciation is persistent. This section discusses the factors responsible for the recent banking crisis, focusing on nine specific problems.

First, a major cause responsible for the banking crisis was the mismanagement of credit, this phenomenon known as high non-performing assets in the banking industry over the past decade. One of the key contributors to the collapse of seven local banks in Ghana was the high stock of non-performing loans. It is critical and very important to mention because all the collapsed banks and those that were at the verge of collapse had huge non-performing loans on their balance sheets. Non-performing affected the banks' performance through two main channels. First, high non-performing loans generated less income for the banks' profitability and impaired on the banks' capital. In most cases, these affected the solvency and viability of such banks and had severe negative implications for financial stability. Second, high non-performing assets tied up significant amounts of a bank resources in terms of human and financial. The high non-performing loans also reduced the bank capacity to lend to small and medium enterprises (SMEs). Small and medium enterprise were particularly affected by the reduction credit supply as they relied on bank lending to a much greater extent than the large corporate customers, thereby affected the economic growth and job creation. Ultimately high non-performing assets are less able to finance the real economy than sounder banks, which has a detrimental impact on economic growth and wider public interest. Historically, the occurrence of banking crises has often been associated with a massive accumulation of non-performing loans which can account for a sizable share of total assets of insolvent and non-bank financial institutions, especially during episodes of systemic crises. The recent banking crisis could be attributed to rapid accumulation of non-performing loans. Non- performing loans generally refer to loans which for relatively long period of time do not generate income: that is the principal and or interest on these loans has been left unpaid for at least 90 days (Caprio & Klingebiel, 1996). Poor asset quality has remained a key challenge and a major constraint to credit expansion in the Ghanaian banking sector over the past decade. The non- performing loans ratio has hovered between 16.2% of the total banking assets in 2009 and 22.7% in 2018, it remains high and points to the industry's exposure to high credit risk. Many banks were saddled with huge non-performing loans over the past decade meaning that they were not able to recover loans they have provided to their customers. These affected the ability of banks to generate income to operate their business. It also led to losses which eroded their capital base further. The Ghanaian banking system has recorded a non-performing assets ratio to total assets of 16.2% in 2009; 17.6% in 2010; 14.1% in 2011; 13.2% in 2012; 11.7% in 2013; 15.7% in 2014; 14.6% in 2015; 16.6% in 2016; 21.57% in 2017 and 18.7% in 2018; averaging 15.97% (IMF country assessment reports 2009-2017; BOG annual report, 2018). The banking crises stemmed from widespread losses on the asset side of banks' balance sheets that rendered some banks insolvent. Losses generally followed a protracted deterioration in asset quality and stemmed from adverse macroeconomic shocks, market failures, government refusal to pay contractors, Bulk oil distribution companies and other service providers on time, or connected and related party loans.

Government arrears continued to be a lingering risk to banks' asset quality because fiscal management never improved during the period under discussion. The provisioning approach to credit risk was less resilient and concentration risk relating to single larger borrower was relatively high in the banking industry. A comprehensive Asset Quality Review (AQR) conducted by the Bank of Ghana in 2015 and 2016 showed severe deterioration in asset quality in the banking sector.

The Bank of Ghana's Asset Quality Review in 2015 and 2016 found that some local banks including UT Bank and Capital Bank were found to be insolvent which resulted in the revocation of their banking license in 2017. The AQR results also showed substantial provisioning shortfalls in a subset of banks (with a combined capital need of around 1.6% of GDP). These toxic balance sheets of banks contributed to a decline in credit to the private sector and higher lending rates and spreads, undermining the transmission of monetary policy rate to the economy through market rates. Bad debts in the failed banks before consolidation were also attributable to poor credit strategies adopted during these periods. These strategies were characterized by related party lending, high lending rates as a result of high cost of sourcing for funds. Most of the banks relied on interbank borrowings on which the interest rates were over 20%. These banks had to recover from these high costs of funding by charging high lending rates, this made the banks suffer a shortage of borrowers because they could not pay the high lending rates and as a result of this, banks moved to serving risky borrowers who were prepared to pay the high rate of interest because they did not have enough access to any other form of credit. Another reason for failure of banks in the pre-consolidation era was undercapitalization. The minimum capital requirements of GHC 120 million in force as at the commencement of those bank were really low, owners had little of their own capital at risk when there is a case of failure, this created a large degree of asymmetry in the consequences and reward of the loans been granted. Most of the deposit to be kept as reserves were used to invest in highly risky projects knowing that if they fail, they will lose little of their own money. Banking literature showed the Ghanaian banking crisis stemmed from widespread losses on the asset side of banks' balance sheets that rendered banks' insolvent. These losses followed a protracted deterioration in asset quality that emanated from macroeconomic instability over the period 2012-2016, governance malpractices within banks which became a way of life in large parts of the domestic sector in the banking industry, connected, related and insider lending in several of the local banks and regulatory lapses.

Second, the scenario is a functional banking system affected by strong macroeconomic shocks. If banks' funding costs rise sharply starting from the fixed interest rates on loans, banks must support the emergence of losses and are forced into costly financing with short-term maturities. If this situation lasted longer banks came to be undercapitalized. The effect is similar to that obtained in the case of a severe and prolonged recession affecting the quality of the loan portfolio. Macroeconomic instability had two important consequences on the credit portfolios of banks that operated in Ghana under the period of review. As fiscal deficits widened, inflation accelerated, interest rates rose above 30%, investors became skittish and began to exit the debt markets, and the exchange rates depreciated and thereby created conditions for asset price deterioration (IMF,2011,11/131). High inflation rates over the period had two consequences on the assets quality. First, high inflation increased the volatility of business profile because of its unpredictability and because it normally entails a high degree of variability in the rates of increase of prices of the particular goods and services which make up the overall price index. The probability that firms will make losses rises, as does the probability that they will earn windfall profits (Harvey and Jerkins, 1994). This intensifies both adverse selection and adverse incentives for borrowers to take risks, and thus the probability of loan default. The second consequence of high inflation is that it makes loan appraisal more difficult for banks, because the viability of potential borrower depends upon unpredictable developments in its individual correspondent, exchange rates and interest rates. Moreover, asset prices are likely to be highly volatile under such conditions. Hence, the future real value of loan security is also very uncertain (Brownbridge, 1997).

Third, a striking feature of the banking crisis of 2017 -2019 was due to the government's dominance in economic activity, against the backdrop of weaknesses in fiscal management which further increased vulnerabilities in the banking sector. State owned enterprises (SOEs) and many small and medium enterprises relied heavily on business from the government. However, the government's accumulation of payment arrears on time to contractors and other service providers undermined their capacity to service their credit facilities and created non-performing loans across the entire financial sector. The swiftness with which the non-performing loans to the entire financial sector caused the collapsed of small and medium enterprises and banks over the past decade. The failed local banks played a key role in this bank contagion. History has shown once again the fragility of the banking sector started in 2009 (IMF, 2011/11/131). In general, the banking system was considered more vulnerable to contagion than other industries since banks are viewed as more susceptible to failures. The Ghanaian banking crisis had contagion effect on the banking industry (i) contagion spread more rapidly in the banking sector compared to other financial sectors such as asset management companies; savings and loan companies and micro-finance companies (ii) negative externalities of bank contagion have a stronger effect than other financial markets. (iii) Compared to other sectors, in the banking market a larger number of institutions and non-bank financial institutions were bankrupt as a result of contagion. (iv) Banking contagion caused both by the unfavorable development of the banking industry and of individual local banks. This was due to the fact that depositors were not sufficiently informed about the performance of the bank where they placed the resources or about the performance of the entire banking system. Another contagion was cross border contagion given the dominance of foreign banks in banking space. Of the 23 universal banks operating in Ghana, 15 are subsidiaries of foreign banks with estimated market share of 60% of bank assets, A collapse of a parent bank in Nigeria or South Africa could easily undermine confidence in the subsidiary and trigger a deposit run on banks considered to be the same asset class.

Fourth, the information channel refers to massive and contagious cash withdrawals (bank runs) by depositors imperfectly informed about the type of shocks affecting banks. It also refers to ways through which bad news from one bank lead to the conclusion in the market that other banks are also in trouble, leading to adjustments of contracts with other partners. An example of this is a perfectly insolvent micro finance company DKM in 2013 had massive contagious cash withdrawals on banks, rural and community banks and savings and loans companies in Brong Ahafo region, after the Bank of Ghana report showed the failure of DKM. Information contagion also occurred when two indigenous banks collapsed in 2017, it resulted in market confidence erosion in similar banks as they could no longer able to source interbank financing or conducted transactions on viable terms. Bank runs occurred in not only when their funds ebbed, but also customers pulled their businesses from the local banks because of concerns generated due to problems at similar local banks. For instance, a major bank failure could hurt business for other indigenous Ghanaian banks.

Fifth, contagion effect is thus understood as the transmission of systemic risk through various channels. Domino effect, often synonymous with contagion, can be understood as an example of systemic risk materialization. Domino effect is based on the negative impact of the failure of a single financial institution (e.g. a bank) on the entire financial system, causing a chain reaction of further default. For instance, in 2017 the banking sector experienced domino effect when the two indigenous banks failed there were long queues of depositors outside their doors. This was a forceful reminder that banks may also be vulnerable today. The closure of these banks created fear that other indigenous banks could close, and depositors and investors withdrew their funds for other foreign owned banks. Problem banks inflicted on other local banks partly because banks had claims on one another. Another example, in 2018 when a systemically important experienced difficulties, the contagion to other banks on the interbank market and the rest of the economy were serious that prompted the Bank of Ghana to step in to prevent systemic crises. In August 2018, following the consolidation of 5 local banks into Consolidated Bank Ghana, interbank market lending rates soared up because banks were distrusted with one another. Short-term funding and money markets dried up nationwide. The interbank market experienced payment problems. The recent banking crisis is a prime example of intensified counterparty risk placing undue stress on interbank markets, with negative ramifications for the flow of bank funds. The spill overs spread through- out the financial system. Also, contagion effect arose as the two failed domestic banks shock spread to the seven other indigenous banks that lead to a chain of bankruptcies in 2018. The Bank of Ghana created a bridge bank and also injected large quantities of liquidity into banking system to keep the wheels turning. The aim of these measures was to keep the banking system operating so that the economy was not damaged.

Sixth, on the 21/3/2018 when Bank of Ghana declared one of the systemically domestic important banks as insolvent and appointed KPMG as official administrator for the bank and it sent a massive shock waves into the entire banking system. The failure of systemically important bank with billions of Cedis liabilities as well as more 4000 employees created a massive shock in the banking space. A systemic event was the released of bad news by the Bank of Ghana on 21/03/2018 about the insolvent of this bank limited led in a sequential fashion to considerable negative effect on the Ghanaian banking system and general public. As a result of the collapse of this bank, interbank market dried up and other solvent banks could not borrow either. Interest rates charged on overnight lending increased because some of the solvent and liquid banks suspected that some insolvent banks were sitting on massive unrecognized losses and huge non-performing assets.

Seventh, the single biggest contributor to the bad loans of banking crisis was connected and related lending in the banking sector. The details of the extent of connected, related and insider loans in several of distressed banks were mind boggling. For example, in one of defunct banks out of the total loan portfolio of GHC 8.4 billion, it was noted that GHC 5.7 billion were connected or related party lending through their domestic financial conglomerate structures. The failure of related borrowers to service their loans caused the insolvency of the local bank. Domestic financial conglomerates became a major feature of Ghana's financial system but banks were not supervised on a consolidated basis and there was no mapping of shareholders and common directors made it possible for affiliated companies to exist that allowed related lending to occurred unnoticed. "Connected lending or related party lending" refers to loans extended to banks' owners or managers and to their related businesses. It is a more common practice among universal banks and development banks. The risks are primarily ones of lack of objectivity (sometimes even fraud) in credit assessment and undue concentration of credit risk. The failure of a few large related borrowers, or a collapse of a particular sector of the economy, can wipe out a bank's capital. De Juan (1996) argues that, because the bank will be unlikely to deal with connected borrowers on an arm's-length basis and because the borrower's access to liquidity will be guaranteed, information flows from the borrower to the creditor will suffer and incentives both to appoint top-quality management in such a company and to identify (and make provision for) bad loans will be low. In his view, such practices contributed to the Spanish banking crisis of the 1980s. Lindgren et al. (1996) and Sheng (1996) likewise cite connected lending as a key bank governance problem and one that has contributed to banking problems in Argentina, Bangladesh, Brazil, Chile, Indonesia, Malaysia, Spain and Thailand.

These growing inter-linkages increased the potential for risks to have a system-wide impact. Some chairpersons and chief executive officers of the failed banks created financial domestic conglomerates to lend customers' deposits to their related or connected companies or estate acquisition all over the country without proper due diligence and credit risk assessments. For instance, in one of the defunct banks used the Bank of Ghana's Emergency Liquidity Support to establish set up a new bank and established more businesses. In another bank, the board chairperson and management set up 30 companies for the purpose of diverting the customers' funds as well as perpetrating fraud (Boulders reports, 2017). Some of the banks that were licensed in the period between 2014 and 2017, a lot of capital supposedly raised was fake capital and some instance, no funds were contributed as shareholder' fund or called as fictitious capital. In at least half of the bank failures referred to above, connected or related and insider loans accounted for a substantial proportion of the bad debts. Most of the larger local banks that failed were involved extensive connected and related lending often to related businesses or domestic financial conglomerates. The threat posed by connected and related lending to the soundness of the banks was exacerbated because many of connected or related loans were invested in speculative projects such as real estate development, breached the single obligor limits and were extended to projects which could not generate short term returns (such as high offices rental properties) with the result that the maturities of the bank's assets and liabilities were imprudently mismatched (Brownbridge, 1997). The high incidence of connected and related lending among failed local banks in Ghana suggested that problems of moral hazards which were especially acute in these banks. There were two factors that contributed to this.

One factor that contributed to connected and related lending were the excessive concentrated ownership structure of the failed local banks. In many of the failed banks, the majority of shares were held by one man or one family, while directors and managers lacked sufficient independence from interference by owners in operational decisions (Brownbridge, 1997). Some of the failed Ghanaian local banks were undercapitalized, in part because the minimum capital requirements in force when they were set up were very low. Owners had little of their own funds at risk should their collapse, which created a large asymmetry in the potential risks and rewards of connected and related lending. Bank owners could invest the bank's deposits in their own high-risky projects, knowing that they would make large profits if their projects succeeded, but would lose little of their own money if they were not profitable. Of the nine (9) distressed local banks taken over by the Bank of Ghana in 2017 and 2018, all except one had paid up share capital which barely exceeded the minimum required by law of GHC 120 million for universal bank

Eighth, generally banks are the backbones of the Ghanaian economy; it is therefore of immense importance for the economy to posses a healthy and buoyant banking system with effective corporate governance practices. Poor corporate governance practices had a significant negative impact on the Ghanaian economy, it led to financial distress and bank failures while on the long run impacted on the public trust on the economy's banking system in its management of assets and liabilities. The banks' assets and liabilities involved its customers' deposits and as these funds were not efficiently managed it led to liquidity and solvency crisis. Corporate governance malpractices within some of indigenous banks became a way of life in large parts of the domestic banking sector, as a few owners and directors enriched themselves at the expense of many depositors and investors. Corporate governance in many local banks failed because boards disregarded these malpractices for reasons including misled by executive management, involving themselves in connected and related loans at the expense of depositors and also, the board of directors not having requisite expertise, skills and experience to enforce good governance on bank management. The board committees of the distressed banks were also often vain, inactive and captured. In addition, the internal audit and risk committees of some local banks appeared not to have taken cognizance of the rapid deterioration of the economy and hence of the need for aggressive provisioning against risk assets. Also, a recent Bank of Ghana report concludes that banking crisis could be to an important extent attributed to failures and weaknesses in corporate governance arrangements. This permitted the profit declaration at the expense of the health of some of the local banks. Recent experience indicated that aggressively pursuing perhaps profitable but more risky transactions in order to maximize shareholder return could not have been sustainable option as it resulted in more non-performing assets. Misclassification of non-performing loans, under-provisioning for non-performing loans and accrual of interest on non-performing loans also resulted in the overstatement of capital, profitability and liquidity in the banking sector.

Because of a variety of factors – the inherent fragility of banking institutions, the interconnections among them and the closely correlated risks that they face, and finally the political economy of financial regulation – it is unfortunately predictable that serious problems capable of generating a systemic crisis will not be detected in advance or will elicit only an inadequate response such as the experience in the financial sector in Ghanaian economy. Therefore, there should have been contingent plans to forestall its occurrence or make its impact less harmful on the taxpayer (Diamond and Dybvig,1983).

Ninth, another cause of the recent banking crisis was the abuse and misused of the Bank of Ghana's emergency liquidity assistance offered to illiquid and insolvent banks. The Bank of Ghana has legal powers to provide exceptional liquidity assistance against collateral, including government securities. Central banks have traditionally held this role because they are primarily the ones responsible for help protect people and businesses from the difficulties that can arise when banks are in trouble. ensuring that financial markets function smoothly and the financial system is stable. Central banks usually only provide emergency liquidity assistance in potentially systemic situations and only for a limited period. Liquidity support to individual institutions can buy time to assess the underlying solvency position and to assess alternative resolution strategies. To qualify for emergency liquidity assistance, banks can be illiquid but they need to be solvent. Being illiquid means that banks might struggle to repay all their depositors at the current time. Being solvent means that they are able to do so in the long term. A bank can become illiquid while remaining solvent because its funds might be tied up in longer-term loans it has given to its customers. A popular defense of central banks and fiat money claims that they are needed to protect the payments system against the peril of financial crises. A central bank can act as a "lender of last resort" to other banks, assuring depositors that they need never fear a general banking collapse; fiat money in turn guarantees that the lender of last resort itself will never go broke.' Indeed, a lender of last resort is needed only when such "contagion, spillover, or domino effects" threaten "the stability of the entire monetary system" (Humphrey and Keleher 1984). The insolvency problems of two banks (Bank A) and (Bank B) in 2017 triggered a chain reaction leading to five other local bank failures in 2018; that channel referred to the potential for emergence of "domino effect. In normal times, the interbank market ensures efficient liquidity distribution from banks with surplus liquidity to banks with a shortage of liquidity and thus serves as an absorber of idiosyncratic liquidity shocks. However, in the turbulent times of 2015-2017, interbank market became a channel for liquidity contagion due to liquidity hoarding by banks and or credit risk contagion due to credit losses on the interbank exposures. The losses occurred because the distressed banks were highly dependent on wholesale financing. Furthermore, there were no clear implementing guidelines for the Bank of Ghana in determining whether, whenever, when, to what, or what conditions it should provide support to distressed banking institutions. For the period 2015-2017, the Bank of Ghana injected in excess of GHC 5 billion as emergency liquidity support to illiquid and insolvent banks (Bank of Ghana report,2018). The Bank of Ghana under its lender of last resort function always carried out "overnight" lending to universal banks to a period not more than 14 days. These overnight lending are just for a day and in some cases the maximum number of days could be for a period of two weeks, However, a key observation of misapplication and misused of the emergency liquidity support started in August 2014 lingered on for three year period before metamorphosing into a long term loan facility from these distressed banks. For instance, one local bank (Bank A) received a total of GHC 620 million of Emergency Liquidity Support from the Bank of Ghana in three tranches (first GHC 150 million in June 2015; second GHC300 million in September, 2015 and finally GHC 170 million in November 2016) (Boulders report 2017).These emergency liquidity support was extended by Bank of Ghana to help the liquidity challenges to meet their obligations as part of the routine functions of the Central Bank as a lender of last resort. The emergency liquidity support granted to that (Bank A) attracted an average rate of interest of 25.1% over the period. According to Boulders Report on summary of utilization of Liquidity Support; (i) Total repayment made to Bank of Ghana was GHC 255 million; (ii) bought Shares in another Bank was GHC 65 million; (iii) Repayment from Asset management firm placement was GHC 65 million; (iv) Business Promotion was GHC 27.5 million; (v) The amount of GHC 207.5 million was taken over through the Purchase and Assumption transaction with GCB Bank thus making total of GHC 620 million (Boulders Report, 2016/2017). Another example, one domestic systemically important bank faced with severe insolvency and liquidity challenges over the previous two years, with persistent clearing deficits resulting in extensive reliance on the Bank of Ghana's Emergency Liquidity Assistance (ELA) instrument since 2015. As a result, Bank of Ghana was heavily exposed to that domestic systemically important bank to the tune of GH¢2.2 billion, of which GH¢1.6 billion was not collateralized with government securities in 2018 at the time when Bank of Ghana revoked the banking license of that bank. IMF country report (2011/11/131) identified weaknesses in the Bank of Ghana's role as the lender of last resort facility. They noted that Bank of Ghana provided emergency liquidity support to both insolvent banks as well as specialized deposit taking institutions (non-bank financial institutions). However, Bank of Ghana continued to provide emergency liquidity support to both illiquid and insolvent banks over the past decade. Some local distressed banks were granted Emergency Liquidity Support by Bank of Ghana without adequate government securities but these banks became insolvent during period that impacted negatively on the Bank of Ghana's balance sheet. These negative externalities made these banks special to justify for the government bail out of the banking sector.

Given the massive externalities of local bank failures in terms of lost jobs, lost incomes and lost wealth, rational policy maker would risk restructuring large banks and forcing losses on depositors and counterparties using the new tools in a risky environment, let alone in crisis environment like Ghana has experienced over the past two years. Concern about the recent banking crisis is hardly surprising. Bank failures are presumed to generate more serious negative externalities for the rest of the economy than those at either other kinds of financial firms or non-financial firms. These externalities take a variety of forms. The use of public money to bail out insolvent banks can seriously handicap efforts to control budget deficits. Even if public expenditure on rescuing banks is viewed as a (domestic) transfer rather than as a real economic cost, it can push the authorities toward less benign ways of financing the deficit (e.g. the inflation tax); moreover, the rescue itself can sap the incentives for private creditors to monitor the behavior of banks in the future.

6.0 Ghanaian Banking Systemic Crisis Situation

Asset quality had remained a key challenge and a major constraint to credit expansion in the banking sector over the past decade. The non- performing loans ratio has hovered between 16.2% of the total banking assets in 2009 and 22.7% in 2018, it remains high and points to the industry's exposure to high credit risk. After reviewing several studies on worldwide episodes of banking distress and crisis, Dermirguc-Kunt and Detragiache (1997) concluded that for an episode of banking distress to be classified as fully-fledged crisis and of a systemic nature, at least one of the following four conditions had to hold: (i) the ratio of non-performing assets to the total assets in the banking system exceed 10%; (ii) the cost of rescue operation should at least be 2% of the GDP; (iii) banking sector problems resulted in large scale nationalization of banks ; and (iv) extensive bank run took place or emergency measures such as deposit freezes, prolonged bank holidays or generalized deposit guarantees or massive bail outs were implemented by the governments in response to the banking distress and crisis. However, the Ghanaian banking system has recorded a non-performing assets ratio of 16.2% in 2009; 17.6% in 2010; 14.1% in 2011; 13.2% in 2012; 14.7% in 2013; 15.7% in 2014; 14.6% in 2015; 16,6% in 2016; 17.3% in 2017 and 22.7% in 2018; averaging 16.27% (IMF country assessment reports 2008-2017). According to Ministry of Finance 2019 Mid-year budget review the total fiscal cost of the bailout is set between US$ 3billion (GHC 15.9 billion and US$ 4 billion (GHC 21.2 billion) averaging GHC18.6 billion or 5% of GDP. The nationalization of 7 local banks into the Consolidated Bank Ghana confirms the significant nationalization. This IMF country assessment reports confirmed Dermirguc-Kunt and Detragiache (1997) that the Ghanaian banking system is in fully fledged crisis. Also, Laeven and Valencia (2012) in their recent paper on systemic banking crisis, defined banking crisis as systemic if two the following conditions are met: (i) restructuring or bail out costs exceeds 3% of GDP; (ii) significant bank nationalization (iii) extensive liquidity support that exceeds 5% of deposits and liabilities to non-residents; (iv) significant guarantees issued by governments to support banks' deposits and (v) significant assets purchase at least that exceeds 5% of the country's GDP such as Ireland National Assets Management Company; US Troubled Assets Relief Program and Nigeria Assets Management Corporation. From the above empirical literature, we can conclude that Ghana experienced an average high non-performing assets to the total banking asset ratio of 16.27% exceeding the limit of 10% in the Dermirguc-Kunt & Detriaigche (1997); also the bailout of 5% of GDP exceeded the empirical limits of 2% of GDP set by Dermirguc-Kunt and Detriaigche (1997) and Laeven & Valencia (2012) respectively and the significant nationalization which resulted in the establishment of Consolidated Bank Ghana Ltd in 2018. All above assertions confirmed that the Ghanaian banking sector is not only in crisis but systemic banking crisis. In view of the high degree of financial shenanigan involved in the Ghana's case, government intervention (bailout strategy) would not have been justified but the consideration of generality of small savers, depositors, investors and the general impact on the Ghanaian economy.

7.0 The impact of Banking Systemic Crisis on the Ghanaian economy

As alluded to earlier, a healthy banking system generally contributes to strong economic growth, while banking crisis can present a substantial drag on the real economy as it reduces the amount of financial intermediation undertaken and consequently a decline in investment and aggregate economic activity in the economy. The banking crisis effected almost all sector of the economy especially production sectors. Their effects on the other areas, for example; rising unemployment or cut down the working hours, consumer spending has fallen, reflecting heightened uncertainty, tight credit conditions and lower financial wealth. By the nature of their business, banks tend to be highly leveraged and incur a mismatch in the maturity of assets and liabilities, which make them susceptible to deposit runs. Banks' intermediation function entails that they link most sectors of the economy. Hence, on one hand, banking sector difficulties had an effect outside the banking sector, and on the other, shocks to any one sector are reflected in bank performance and was transmitted through the banking system throughout the economy. For instance, the government's accumulation of payment arrears to Bulk Oil Distribution companies, contractors and other service providers undermined their capacity to service their loans and created high non-performing loans across the banking industry.

Banking crises intensified in 2017-2018 and slowdown in economic activities, and also prevented loanable funds from being allocated to their most productive uses, reduced the availability and increased the cost of funds to small and medium-size businesses and seriously constrained the conduct of monetary policy, among others. During banking crises, banks decreased credit to firms which in turn lowered expenditure and investment. This decrease also reduced consumption, aggregate demand and employment and drove firms into illiquidity. Distressed banks and consecutive bank run and bank failures threatened the payment system's soundness, thus increasing transaction costs. These mechanisms suggest that distressed banks hinder the rest of the economy. Such lower credit supply than demand is called —credit crunch.

In developing economies, like Ghana, banks are the major participants in the financial systems. They operate the payments system, provide liquidity to fledging securities markets and are major purchasers of government securities. Given the major role of banks in these economies, it is easy to conclude that the collapse of the banking system causes serious negative externalities for the rest of the economy. Africa watch (2019) noted that over 6000 direct jobs were lost without taking into account of temporary and indirect jobs lost during the crisis period. These externalities take various forms. Bank failures are usually followed by government bailouts. Fiscal costs of banking crises included costs of restructuring the banking system, considering the payments to depositors, bank recapitalization bonds, Purchase and Assumption and bridge banking estimated cost of GHC 18.6 billion (MOFEP, 2019). The fiscal gross direct costs are measured as outlays of the government and central bank in terms of bond issuance and disbursements for liquidity support, costs of recapitalization, and recovery of non-performing loans.

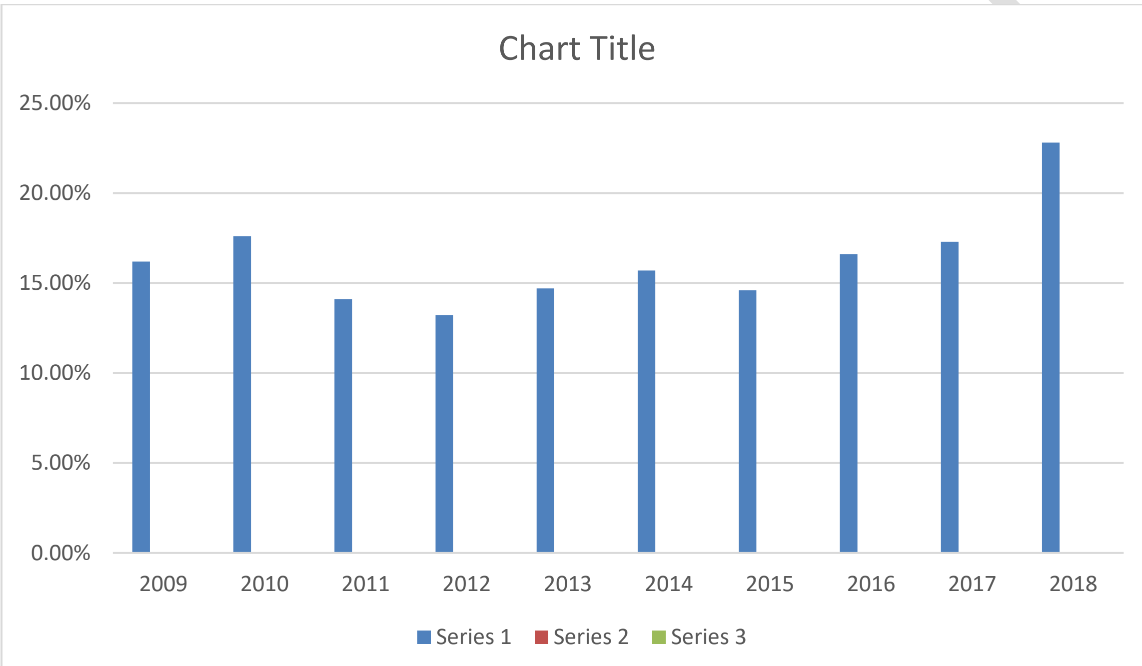
Bad loans reduced Ghanaian local banks' profitability and limited their ability to issue new credit. Large volumes of bad loans caused banks problems with their capital adequacy and, at worst, led to default. Bad loans also risk impaired long-term economic growth and led to greater uncertainty in the banking system which resulted in elevated financial stability risk. Huge nonperforming loans portfolio eroded the ability of some of the local banks to make profits. In the 2010s and beyond many indigenous Ghanaian banks became weak and highly unprofitable due to excessive nonperforming loans portfolio accumulated by bank promoters and management that led to the demise of these banks in 2017-2019. Connected or relating dealing was the major cause of large nonperforming loan portfolio in Ghana, involving over-extension of loans to promoters, directors and significant others that became bad and irrecoverable. Net costs to the public sector are estimated as the deduction from gross costs of recoveries from the sale of assets and equity stakes and repayment of debt by recapitalized entities (Hoelscher and Quintyn, IMF 2003).

The public money that is needed to recapitalize insolvent banks puts pressure on the budget deficit to increase. Because of various factors- the inherent fragility of banking institutions, the interconnections among them and the closely correlated risks that they faced and political economy of regulation – it was unfortunately predictable that small problems were allowed to cascade into systemic crisis over the past three years. The government intervention (bailout strategy) was justified because of generality of small savers, depositors, investors as well as the negative impact on the economy. Depositor panics were most damaging that resulted in contagion, with liquidity pressures spread through the banking system as failures of individual local banks created network externalities for the Ghanaian banking system as a whole. Contagion arose from direct contractual linkages between banks, such as through interbank loans, or from indirect linkages, such as through balance sheet exposures to common shocks.

8.0. Research Methodology and Methods

This study being historical and explanatory utilized secondary sources of information to describe the research phenomena. The research is a qualitative study which is based on secondary data gleaned from various IMF reports, Bank of Ghana's annual reports, and journal articles on the subject matter from the virtual libraries. Secondary data are data collected by individual other than the investigator and for purpose other than the current needs of the researcher (Harris,2001). This process is economical because it saves time and cost that would otherwise be spent collecting data (Zikmund, 2003). Furthermore, secondary data generally have a pre-established degree of validity and reliability which need not be re-examined by the researcher who is re-using such data (Bishop, 2007). Data collected from Bank of Ghana's annual reports 2009-2018; IMF country reports (2009-2018) and other sources enabled the researcher in comprehending the details of the research problem from historical perspective. The bibliographical references, Bank of Ghana and various IMF country reports and internet provide complete list of the series of sources upon which the study was based. The table below reveals the magnitude of the ratio of non-performing loans in the banking industry over the period 2009-2018. The Bank of Ghana's assets quality review and the various IMF reports on Ghana Financial System Stability revealed that high non-performing asset ratios in the banking industry**.** The Bank of Ghana's assets quality review (AQR) in 2015 and 2016 asset verification showed that the financial system which was under a considerable state of distress, with some banks that were not meeting capital adequacy requirement, banks that had suffered capital erosion with high non-performing loans which had led to a weak transmission of monetary policy to the real economy. Some of these banks were insolvent and illiquid, others were solvent but illiquid. The Assets Quality Review at the time showed that banks were at various solvency levels, with 9 banks in particular that had a clear capital shortage problem. For some of these, the shortages resulted from deterioration of their SME portfolio while for others this was due to significant exposures to state-owned enterprises (SOEs) in the energy sector as well as Bulk Oil Distribution Companies (BDCs).

NON -PERFORMING ASSET RATIOS (2009-2018).



Sources: Various IMF Country Reports & Various Bank of Ghana's Annual Reports.

9.0. Discussions on the Government bailout strategies.

As Ghanaian banks increased their profitability it also resulted increased of their leverage which created continue anxiety between Bank of Ghana and those systemically significant banking institutions over the issues of risk and leverage. Heightened systemic risk involved costs that were externalized by the bank and fell on the taxpayers. Some of the unrestrained shareholders of local banks pursuit of wealth maximization led to externalities. Some of distressed banking institutions with high non-performing assets on a thin market in order to raise capital or funds, its depressed asset values and also reduced the market value of other banking institutions. This caused bankruptcy and other failures which necessitated public bail out of the banking sector that imposed huge costs on Ghanaian tax payers.

Stern and Feldman argue in their book Too Big to Fail, the Hazards of Bank Bailouts (2004) that the main justification for governments intervening in financial system and providing help to financial institutions, is the belief that the cost of protecting institutions they deemed to be systemically important from bankruptcy is smaller than the benefit they gain from avoiding the externalities of instability in the banking system and spill-over to the rest of the economy. As noted recently by Mervyn King, former Governor of the Bank of England: When all the functions of the financial system are so closely interconnected, any problems that arise can end up playing havoc with services vital to the operation of the economy - the payments system, the role of money and the provision of working capital to industry. If such functions are materially threatened, governments will never be able to sit idly by. Institutions supplying those services are quite simply too important to fail. Everyone knows it. (King (2016). Reluctantly, UK and US governments offered many banking institutions financial assistance in the form of bailout (Rose & Wieladek, 2012; Ait-Sahalia et al, 2013) including Royal Bank of Scotland, Lloyds Bank in United Kingdom; Citibank Group and JP Morgan in USA while some governments suggesting such intervention should never be allowed to happen again (Birchler, 2014). The bank failures have a long-lasting adverse effect on economic activity partly because bank failures restrict access to the deposits in failed institutions. During this period, depositors at failed banks were precluded from accessing their funds for an extended time, and when their accounts became liquid, depositors generally faced sizable losses. The loss in depositors' liquidity resulted in reduced consumption and investment spending.

During the recent banking systemic crisis in Ghana, the government resorted extensively to public bail out to prevent bail failures from destabilizing the banking sector and the economy. This strategy fueled strong public resentment against scare fiscal resources to rescue banks especially given the fiscal consolidation efforts being followed by the government. Furthermore, the use of bail-out in the Ghanaian banking sector has reignited the well- known debate about moral hazard impact on the behavior of banking institutions. The academic literature and policy debate have long recognized that bail outs entail a policy trade off. Together with higher capital requirements, bridge banking mechanism and the enhancement resolution regimes were central elements to the Bank of Ghana's response to increase banks' resilience and financial stability. The nine underlisted reasons that justified why the government bailed out the banking sector after nearly ten years of financial distress and bank failures. The 2017 /2019 banking crisis has exposed weaknesses in the Ghanaian banking system including the threat to financial stability posed by banks that were too big, interconnected and complex to be closed or go bankrupt. The local bank failures triggered a loss of confidence in the banking system that led to the hedging in foreign currencies in their corporate vaults and fewer bank deposits that reduced the money multiplier and the money supply. Following the recent banking crisis, the Government and Bank of Ghana made coordinated efforts to increase capital requirements and liquidity supports in the banking system, reform resolution procedures for restructuring of failed banks under the Banks and

Specialized Deposit Taking Institutions Act 2016 Act 930, established Deposit Insurance Scheme under Ghana Deposit Insurance Protection Act 2016 Act 931, tightening “fitness and proper procedures for board of directors and key management positions and improve corporate governance practices in the banking sector.

First, one of the most obvious reasons why the government bailed out the Ghanaian banking sector is that banks are of systemic importance. By this meant that a failure of local Ghanaian bank- if a bank goes bankrupt, it might set off a domino effect and effectively trigger financial crisis. A financial crisis is here defined as a disturbance to financial markets, associated typically with falling asset prices and insolvency among debtors and intermediaries which spreads through out the financial system, disrupting the markets capacity to allocate capital (Eichengreen, 1989). Some local Ghanaian banks became systemically important due to their size, complexity and lack of substitute and interconnection. Any failure of any domestically important bank such as Unibank Ghana could have brought significant disruption to the essential services they provided to the banking system and overall economy. The Financial Stability Board (2009) defined systemically important financial institutions whose distress or catastrophic failure; because of their size, complexity and interconnectedness would cause significant disruption to the wider financial system and economic activity. By this is meant that a failure of Unibank Ghana and UT Bank it might have had a set of domino effect, effectively triggering a banking crisis and on the entire Ghanaian economy. The Government bailed out of the banking sector offered protection against widespread contagion, such as the panic that swept through the banking markets in the wake of Unibank Bank and UT

Bank insolvency. A banking crisis is here defined as a disturbance of banking market, associated typically with deterioration of banks' assets and insolvency among debtors and intermediaries, which spreads through the financial system, disrupting the market's capacity to allocate capital.

Second, the recent banking crisis are known to have had tremendous social costs in the form of unemployment, and the average fiscal costs of about GHC 18.6 billion have added up to the total national debt of GHC205 billion. The cost to tax payers of banking sector has been substantial since banking crisis started in 2017. For example, the magnitude of the financial resources provided the government from 2017 to 2019 is estimated to be 5% of GDP. The systemic importance of banks in Ghana is contagion, in which a small shock that initially affected sector and even affected a few banking institutions, but spread from bank to bank throughout the rest of the financial system including micro-finance companies and then affected the entire Ghanaian economy. The government had to spend a whooping of GHC 18.6 billion to bail out the banking sector, because Ghanaian banks are fundamental to the economic system in many ways. For instance, banks are financial intermediaries through maturity transformation- that is banks transform short-term deposits into long-term loans-thus making sure that credit ends up in the most productive borrowers as well as being instruments for which the Bank of Ghana's monetary policy work through (Vislie, 2014).

Third, Ghanaian banks are fundamental to the economy system in many ways. For instance, Ghanaian banks are financial intermediaries through maturity transformation -that is, they transform short term deposits into medium and long- term loans thereby making sure that credit ends up in the most productive hands.

The Ghanaian banking system is at the heart of the economy, pumping money and credit throughout the economic system just as the heart pumps blood throughout at the human bodies. So, when Ghanaian banks stop functioning, so does the Ghanaian economy. Furthermore, Ghanaian banks have contributed to the payment and settlement system and also provided liquidity and liquidity insurance to public (Vislie, 2014). The Ghanaian banks play a key role in the payment system. In one way or another, practically all payments go through banks. Individuals and firms have bank deposits that they depend on for making payments. Banks operate payment systems used by shops and other businesses. They operate interbank and international payment systems and payment systems for securities trading. If payments come to a halt, the Ghanaian economy will stop as well. For the above reasons, the government was justified in bailing out the banking sector over the past three years. King (2016) posited that banks have an important role in the economy. They provide 'money', effect payments, fund working capital, and indeed they are vehicles to take over other, weaker institutions in times of stress.

Fourth, Ghanaian banks extended credit to the economy: Short-term trade credit and operating credit; long-term loans for investing in manufacturing, real estate and construction businesses. Without these credits, businesses and investments come to a standstill. In the years 2015-2018, only few of us were unaware of the banking crisis which was rocking the country, commonly known as the credit crunch (Hunt,2009) Credit crunches are usually considered to be an extension of recessions. A credit crunch made it nearly impossible for companies and individuals to borrow because lenders were scared of bankruptcies or defaults, which results in higher rates. The consequence was a prolonged recession (or slower recovery), which occurred as a result of the shrinking credit supply. It also occurred when there was a rapid reduction in the availability of loans from banks. This was when loans went sour, forcing the banks to tighten up lending standards. Credit crunch created negative effects in the economy which affected the private sector credit. By examining these effects carefully, we can gain a greater understanding of how credit crunch works and what we can learn from them. This situation had in turn had an adverse impact on the Ghanaian economy which created a situation in which banks are afraid to grant new loans to both retail and corporate customers. In the face of consequences of credit crunch on the economy, the government decided to bail out the banking sector to support its developmental agenda.

Fifth, the Ghanaian banking sector has economy-wide externalities. The failure was due to the fact that the banks fail to internalize the social cost of bankruptcy and potential systemic risk. In fact, the problem related to systemic importance and contagion exemplifies the inherent fragility of the banking system and hence the corresponding externalities one bank can impose on banks or the system as a whole. A lesson from the recent banking crisis was that the externalities of large bank failure was massive. It is not about just the fiscal costs of bailouts. Even with the current bailout, the cost to society from the banking crisis in terms of lost jobs, lost incomes and lost wealth were staggering – many millions of Ghana Cedis and devastation for thousands of families. Failures of large banking institutions such as Unibank Ghana limited posed massively asymmetric risks to society that policy makers must consider. Ghana government had no choice in 2017, 2018 and 2019, to spend taxpayer money averaging GHC18.5 billion to stabilize the banking sector or don’t and potentially trigger many billions of additional costs to the Ghanaian society.

Sixth, if an ordinary firm takes too much risk and end up defaulting their loans and go bankrupt, the negative externalities are quite small, when Ghanaian bank such as Unibank experienced bankruptcy, the negative externalities were relatively big. First if customers and investors lose their saving depositors that group customers and investors would experience negative income shock. Also, as a local bank defaulted on their interbank market transactions during 2016-2017 it led to losses for Bank of Ghana and other banks as well. Furthermore, defaulting loans in the interbank market led to higher uncertainty and bigger margins on the overnight interest rate between banks. Some in 2017 funds dried up in the interbank market because so many players lost confidence in the market place because inability of borrowed bank to pay the lender on schedule. This again raised the interest rate on loans to corporate and retail customers, which led to less investment and a higher cost on current credit facilities. There was a declined in credit to private sector due the financial distress and bank failures. A weakened banking system led to a reduction in bank loans either because some banks fail or because banks under capital pressure are limited in their ability to extend new loans. As part of the government effort to restore confidence in the banking and specialized deposit taking institutions, Government and Bank of Ghana embarked on the clean-up exercise three years ago to address issues concerning insolvent and illiquid financial institutions whose continued existence posed risks to interest of depositors and mitigate the social costs to Ghanaians.

From the above discussions, the Government through Ministry of Finance and Bank of Ghana were justified to bail out the banking sector. As a result, some local banks have been rescued using public support, allowing for an uninterrupted provision of their services but effectively shifting most of their losses to taxpayers instead of banks' owners or investors. The government bailed out the banking sector prevented systemic crises and also limited the substantial damage that could have deepened the banking crisis and afflicted the entire Ghanaian economy. These were compelling arguments for banking sector bailouts. The government measures in 2017-2019 were targeted at viable banks and were intended to prevent the crisis from spreading. To clean up the mess in the banking sector and return the sector to the paths of sound management and profitability, the Government and Bank of Ghana had to inject about (US$3 billion (GHC 15.9 Billion)- US$ 4 billion (GHC21.2 billion, MOFEP, 2019) average cost of GHC 18.6 billion in a bailout exercise while purging the system of bad and irresponsible management teams .

10.0. Resolution options used by the Government and Bank of Ghana to Bail out of the banking sector.

The policy options available in a banking crisis are sensitive to the type and size of shock affecting the financial system, in particular, whether failures are thought systemic. If the situation is non systemic, the focus of the resolution is on the individual failed bank's balance sheet. In this case the failed bank will either be merged with a healthy bank or liquidated. In a systemic situation, however, the immediate aim of the authorities is usually to restore financial stability of the system as a whole, restore public confidence and avoid bank runs. Here guarantees are likely to be given to liability holders at the failed bank(s), and perhaps to the financial system as a whole to avoid or reduce panic. The distinction between a legal closure and economic closure of the bank is important. In a legal closure, the license of the bank and non-bank financial institution is withdrawn and the legal entity ceases to exist. In an economic closure, there is interruption or cessation of the operations of the bank which may often lead to severe disruption and possibly losses for the bank's customers. The Bank of Ghana art of resolving bank and non-bank financial problems entailed both "legal closure" and "economic closure". The Government and Bank of Ghana used four broad types of resolution options to address the systemic crisis in the banking industry: (i) Outright liquidation (deposit pay-out), (ii) Purchase and Assumption (P&A) options, (iii) Bridge banking mechanism and (iv) GAT as Special Purpose Vehicle for Recapitalization for 5 local banks

Outright Liquidation (deposit payout):

Under this option, the entire assets and liabilities of the affected bank are placed under the control of the appointed receiver by Bank of Ghana who would arrange to physically close the bank. The appointed liquidator then verifies the assets and liabilities of the bank and exercises control over all its moveable assets. Under this option the government provided funds through the Central Bank for the appointed receiver under the Banks and Specialized Deposit Taking Institutions Act 2016 Act 930 to pay off the depositors of failed 347 micro-finance companies, 15 savings and loan companies and 8 finance houses. Because consolidation was not possible, a decision is often made to liquidate the non-bank financial institutions. In liquidation, specialized deposit taking institutions were declared insolvent by Bank of Ghana the regulator, were closed down and depositors paid off. The restructuring authority KPMG then would liquidate all assets. In most cases uninsured depositors and other creditors are only covered if sufficient funds are available after liquidation. Liquidation exerts a strong financial discipline on the various stakeholders. But when liquidation occurs, it may affect other banks and other non-bank financial institutions through direct exposures or changes in financial market prices. In addition, reimbursing depositor and creditor claims, from the sale of the failed bank's assets, can be a long and disruptive process that locks up people's wealth for months or even years and has knock-on effects throughout the economy. Public funds for the resolution of weak banks and non-bank financial institutions may be considered in potentially systemic situations, including the risk of loss or disruption of credit and payment services to a large number of customers. An intervention of this nature should be preceded by a cost assessment of the alternatives, including the indirect cost to the economy. If public monies are used, shareholders of these failed institutions should be made to bear the cost of the resolution via a dilution or even elimination of their shareholding interests.

Purchase and Assumption by GCB Bank for the deposit liabilities and good assets of Capital Bank and UT Bank

A Purchase and Assumption transaction is one where a healthy institution or private investor(s) purchases some or all of the assets and assumes some or all of the liabilities of a failed bank. Purchase and Assumption transactions in most countries require withdrawal of the bank license and the commencement of resolution proceedings by the liquidator. On 17/08/2017, Bank of Ghana under the

Section 123 of Banks and Specialized Deposit Taking Institutions Act 2016 Act 930 used the Purchase and Assumption option which allowed GCB Bank to take over all deposit liabilities and selected assets of both Capital Bank and UT Bank. The basic characteristics of this option is the purchase of the whole or part (cherry-picking) of the assets of a failed bank by a healthy (assuming) bank and the assumption of the deposit liabilities of the failed bank by the same bank. The P&A option has not featured prominently in the history of bank failure resolution in Ghana. Following the collapsed of Capital Bank and UT Bank on the 17/8/2017, the defunct banks were handed over to GCB Bank by Bank of Ghana. In the process we also resolved two Banks through a Purchase and Assumption transaction allowed GCB Bank to take over all the deposits and purchased of selected assets. The rest of liabilities was settled by the appointed receiver through the realization of the assets. This was a necessary action taken to ring-fence the troubled banks, and also to prevent spillovers to the rest of the banks and the economy as a whole. GCB Bank took over all depositors' funds and continued to provide normal banking services to customers. Some loans were transferred to GCB Bank while others to the receiver. The government issued a bond of GHC 2.2 billion to cover the gap between the liabilities and good assets assumed by the GCB Bank. The Purchase and Assumption assumed by GCB Bank gave customers prompt access to depositors' funds, preserved confidence in the banking system and minimized disruptions to the two defunct banks' customers as well as preserved financial stability.

.

Bridge Banking Mechanism

A bridge bank is a resolution technique that allows a bank to continue its operations until a permanent solution can be found. The weak bank is closed by the licensing authority. and placed under liquidation. A new bank, referred to as a bridge bank, is licensed and controlled by the liquidator. The liquidator has discretion in determining which assets and liabilities are transferred to the bridge bank. Those assets and liabilities that are not transferred to the bridge bank remain with the liquidator. A bridge bank is designed to "bridge" the gap between the failure of a bank and the time when the liquidator can evaluate and market the bank in such a manner that allows for a satisfactory acquisition by a third party. It also allows potential purchasers the time necessary to assess the bank's condition in order to submit their offers while at the same time permitting uninterrupted service to bank customers. A bridge bank transaction is most commonly used when the failed institution is unusually large or complex or when the deposit insurer or the government believes there is value to be realized or costs minimized, but does not have a ready solution other than a payoff. It has the advantage of gaining time to find another bank willing to step in and prepare the terms of the operation.

On the 1/08/2018, the Government and Bank of Ghana under Section 123 of Banks and Specialized Deposit Taking Institutions Act 2016 Act 930 established the Consolidated Bank Ghana Limited to acquire the assets and liabilities of five distressed indigenous banks. This act of nationalization involves the capitalization of distressed institutions with national funds in exchange for ownership in the institutions to prevent the bank's bankruptcy, and thus limiting the negative consequences of its distress for the banking sector. This was especially common with systemically important bank such as Unibank Ghana limited. This option is referred to as bridge bank. While the government can maintain the business operation of the bank, the set time period forces the resolution authority to focus on cleaning up the bank's balance sheet in preparation for selling it. On 1/8/2018, the Bank of Ghana collapsed five local banks and created a bridge bank named as Consolidated Bank Ghana to support government's twin objective of financial stability and strengthening indigenous banks. By this, Bank of Ghana revoked the licenses of Biege bank, Sovereign bank, Construction bank, Unibank and Royal bank. The Government issued a bond of GHC 5.76 billion to cover the gap between the liabilities and good assets assumed by the Consolidated Bank Ghana. In December, 2018 Bank of Ghana revoked the licenses of Heritage Bank and Premium Bank under the Government issued another bond of GHC 1.6 billion to cover the gap between the liabilities and good assets assumed the Consolidated Bank Ghana to cost of GHC7.36 billion to the Government. In addition to the cost of GHC7.36 billion, government also issued up paid capital of GHC450 million thereby bringing the total cost of GHC 7.81 billion to the taxpayers. KPMG was appointed a receiver in respect of the bad assets of 7 defunct banks under Section 123 of the Banks and Specialized Deposit Taking Institutions Act 2016 Act 930

Formation of Ghana Amalgamated Trust guaranteed by the Ministry of Finance and Economic Planning

Also, Government facilitated the incorporation of a special purpose holding company, named Ghana Amalgamated Trust (GAT) Limited, to assist five indigenous banks to meet their capitalization requirements. Support for Solvent Indigenous Banks to meet new Minimum Capital Requirement. Government has worked with an Advisor and selected Pension Funds to structure a Special Purpose Vehicle (SPV): the Ghana Amalgamated Trust (GAT) to support solvent and well-run indigenous banks, which were otherwise having difficulties meeting the new minimum capital requirement deadline, to meet their obligations. Ghana Amalgamated Trust is said to have injected GHC 2 billion capital support to Prudential Bank, Universal Merchant Bank, OminiBisic, ADB Bank and National Investment Bank. The government guaranteed the GAT arrangement for those banks in meeting the minimum capital requirement of GHC 400 million (Addison, 2019). Government, through the Ghana Amalgamated Trust (GAT), was to raise some GH¢2billion through a bond structured for five years and given to the banks as zero-coupon bonds. This means that the banks will not pay the interest (21 percent) on the bond yearly, but will do so after end of the fifth year with the principal. The bond is also fully guaranteed by government: meaning that in the event of default by any of the banks, government will have to pay up from its revenue envelope. However, it was against such guarantee that the IMF cautioned that different strategies must be put in place to avoid GAT adding to the country's debt stock – which stood at GH¢205 billion, representing 59.1 percent of GDP

11.0. Conclusion

Following the recent banking crisis, the government and Bank of Ghana made coordinated efforts to bailed-out the distressed banking sector, by increasing minimum capital requirement and improved the write off the non-performing loans in the banking system, to reform resolution procedures for restructuring failed banks, to identify systemically important financial institutions and to think through supervision of hitherto less regulated areas of the financial sector. Regulatory efforts by Bank of Ghana to address systematic risk, especially during the current crisis, have been focused on reinforcement of financial safety net for banks by providing resolution options such as explicit deposit insurances in order to restore confidence and prevent bank failures. Bank of Ghana has also created certain regulatory policy prescriptions to prevent future occurrences. Such buffers created include the capital requirement directive, corporate governance directive and financial holding company directive that will prevent the failure of one significant bank from carrying its interconnected cohorts down with it, as these creative policy prescriptions are implemented and meticulously monitored would prevent ails in the banking system affect the entire Ghanaian economy.

The article concludes that in view of the high degree of financial shenanigan involved in the Ghana's case, government bailed out would not have been justified but for the consideration of the generality of small savers, depositors and the general impact on the economy. The goal for most central banks' policy in the world including Bank of Ghana is to make the financial system more resilient to localized economic shocks in order that a crisis at one banking institution does not generate a cascading series of failures through the interconnected banking institutions. According BIS (Core Principles for Effective Banking Supervision 2006;2012) central banks and other regulatory agencies are expected to create a buffer that prevent the failure of one significant financial institution from carrying its interconnected cohorts down with it, but ensure creative policy prescriptions are initiated, implemented and meticulously monitored so the negative externalities affect both the financial system and entire economy. Some of the Bank of Ghana's regulatory policy prescriptions were proffered to avoid future occurrence have been highlighted below.

First, the Bank of Ghana has taken some regulatory measures post crisis such as, the introduction of the GHC 400 million new minimum capital requirement for Ghanaian banks by the end of 31/12/2018. The decision of the Bank of Ghana to strategically place the nation's banking system in regional and international context and promote soundness, stability and enhanced efficiency of the system led to the proposed increase of minimum capital base of universal banks to GHS 400 million by 31st December, 2018. No doubt, the development had in turn prompted a regulation-induced restructuring in the form of consolidation through Mergers, Acquisitions Takeovers, Private Placement, Initial Public Offers and Capitalization of Income Surpluses. Consolidation of banking institutions aims, among others, at strengthening the banking sector to more meaningfully protect depositors, play developmental roles in the nation's economy, and become a competent and active player in the African regional and global financial system. It is also envisaged that the reform would overtime guarantee higher returns to the shareholders and other stakeholders of the banking industry. The new policy initiative has, no doubt, pose some challenges to both the economy as well as the banking system.

Second, Bank of Ghana has embarked on a systematic review of regulations and guidelines around the key contributors to the recent banking crisis for instance: Basel 11 & 111 Capital Requirement Directive in 2018 under the Section 92 (1) of Banks and Specialized Deposit Taking Institutions Act 2016 Act 930. The CRD consists of four major components: (i) definition of regulatory capital (ii) management and measurement of credit risks in three sectors; (iii) management and measurement of operational risks and (iv) management and measurement of market risk. Apart from the definition of regulatory capital and risk weighted capital, the capital requirement directive discusses the composition of regulatory capital, principles for capital management, principles of risk management and capital conservation buffer which were lacked previously that contributed significantly to the crisis. The regulatory measures introduced by Bank of Ghana relating to both regulatory monetary capital and capital adequacy or risk and capital charge requirements are all intended to provide not just enough buffer to absorb the risks faced by these financial institutions but also cause a paradigm shift in risk management practices at these institutions to ensure financial soundness.

Third, Bank of Ghana has embarked on a systemic review of corporate governance directives that played a major role in the banking sector crisis. Bank of Ghana issued corporate governance directive (December,2018) for banks, savings and loans companies, finance houses and financial holding companies. Corporate governance directive was issued under powers conferred by Sections 56 and 92(1) of the Banks and Specialized Deposit Taking Institutions Act 2016 Act 930.

Fourth, the Central Bank has taken regulatory step in post crisis to ensure only persons that are fit and proper are appointed to be directors, significant shareholder and key management positions in the financial organization. Bank of Ghana issued “Fit and Proper Persons” directive (2018) for banks, savings and loans companies, financial houses and financial holding companies. The objective of this directive is to set framework which can be used by regulated financial institutions as well as Bank of Ghana in determining whether a person is fit to be director, significant shareholder or to hold a key management position in financial institution. The enforcement of this directive would enhance and improve the caliber of persons appointed as directors, significant shareholders as well as persons appointed to hold key positions in the financial institutions in Ghana.

Fifth, the Government embarked on systematic review of the establishment of the Ghana Deposit Insurance Corporation under Ghana Deposit Protection Act 2016 Act 931 to protect small depositors from losses that depositors may suffer as result of the depositor's financial institution going under (i.e. in the event where the bank's or specialized deposit taking institution's license is revoked or the Central Bank appoint liquidator over the assets of the bank. Under the current dispensation the depositors with banks cannot recover more than GHC 6250 while in the case of specialized deposit taking institutions, a depositor cannot recover more than GHC1250, The Government should revise the current coverage limit to take into the depreciation of GHC over the past three years and other economic conditions. The introduction of the scheme would increase the confidence in the banking sector and provide a ready source of funding to address bank distress in order for it not to spread to other institutions. An effective deposit protection scheme would reduce the risks of financial crisis by minimizing bank runs and prevent the breakdown of payment systems.

Sixth, Bank of Ghana has embarked on systematic review on the rules and regulations governing Financial holding company directive (2018) seeks to understand the structure of financial holding company, registration requirements, ownership and control, governance including board structure, permissible and non-permissible activities, statutory regulation as well as supervision. It also seeks to facilitate effective consolidated supervision of the regulated financial institutions and further engender the safety and soundness of the banking system. The financial holding company directive will enable the Bank of Ghana to supervise on consolidated basis that will prevent connected or party lending. These will reduce the potential for risks that will impact on systemic risk.

Seventh, Bank of Ghana's other strategies for curtailing unbridled speculative behavior of the banks include setting a credit limits for financial holding companies, to a set proportion of a bank's equity capital, setting guidelines for interbank market dealings, to strengthen consolidated supervision and cross border supervision.

Lastly, another post crisis systemic rules and regulations developed by the Central Bank is about guidelines and rules on BOG's role as Lender of last resort. Bank of Ghana has legal powers to provide exceptional liquidity support to banks. The facility should be granted only to illiquid bank but solvent. The liquidity assistance must be against collateral including government securities. The facility should be overnight to a maximum two weeks. These guidelines on the Bank of Ghana's role as lender of last resort will prevent Bank of Ghana granting the facility to illiquid and insolvent banks.

12.0 Policy Recommendations

Based on the empirical findings in this study the following recommendations are made:

(i) Because banks play a crucial role in the economy, a key question is the extent to which governments should intervene to prevent and resolve banking crisis. In terms of crisis prevention, regulatory measures such as increases in capital requirements and limits on credit growth have been met with some success in limiting the build-up of excessive credit growth, whereas limits on credit concentration and on maturity and currency mismatches have frequently strengthened banks' balance sheets (Kraft & Jankov 2005). For example, Morrison & White (2005) show that capital requirements can play an important role in preventing banking crises by improving the quality of banks The government can also choose to carve out bad assets from banks' balance sheets through the setting up of a government-owned asset management company, or to set up special bank restructuring agencies to restructure distressed banks. The effectiveness of such agencies in resolving assets have been mixed, and have generally been better for assets that can easily be sold in secondary markets, such as real estate assets (Klingebiel 2000). (i) The Government and Ministry of Finance and Economic Planning through Bank of Ghana as part of the post crisis should have establish asset management company to resolve the non-performing loan problems which contributed significantly to the banking crisis over the past decade.

(ii) The goal for Bank of Ghana policy must be to make the banking system more robust and resilient to localized economic shocks in order that crisis at one banking institution does not generate a cascading series of failures by interconnected financial institutions. To create such a buffer that prevents the failure of one significant bank from carrying its interconnected cohorts down with it, creative policy prescriptions must be initiated, implemented and monitored because whatever ails the banking system ails the entire economy.

(iii) Every bank bailout by Ghanaian Government should be a product of Act of Parliament or legislation but not through "Executive Fiat" or as rule of thumb. On the contrary, in Ghana, bailouts are not predicated on legislations to give them the legal teeth needed for their effective and efficient operationalization, hence the difficulty in measuring the performance of bailout in the country.

(iv) The Bank of Ghana's goal of price stability should be supplemented by a robust macro-prudential regulatory framework which monitors and acts on signs of systemic risk through s dedicated unit as warning signs are easily missed without a dedicated unit to monitor and act upon such signs. Bank of Ghana policy prescriptions should emphasize healthy relationship between the banking sector and the real sector of the economy, namely agriculture, power and transport infrastructure. The government incentivize banks the grant credit facilities to these sectors because of its impact on macroeconomic productivity.

(v) According to International bodies such as IMF and BCBS, systemically important institutions such as GCB Bank; Ecobank and others should be supervised more closely that other smaller institutions and also be subjected to stricter capital and liquidity regulations and rules: riskier their balance sheets are perceived to be the tighter the rules and regulations. In short, the rationale goes that protecting institutions that are systemically important helps preserve macroeconomic stability. Additionally, there is the evident need for closer supervision by the Bank of Ghana, of banking operations and, lending activities by Ghanaian banks and specialized deposit taking institutions; and to ensure mitigation/ prevention of further incidence of financial shenanigans; as well as other unbridled financial malpractices by bank managements and board of directors.

(vi) To stabilize the economy and move towards recovery and growth, government should harmonize the fiscal and monetary policies in the country. This, no doubt, will bring down both interest and inlation rate, make available capital for investment, create jobs and grow the economy.

(vii) Bank of Ghana should make conscious efforts to address systemic risk and build resilience in the Ghanaian financial system through the span several policy areas, including micro-prudential supervision and regulation, macroprudential policy, liquidity provision, and management of the national balance sheet and related policy domains, such as the exchange rate regime and crisis management tools and policies.

(viii) To finalize, we are convinced that, in order to uphold the stability of the Ghanaian banking system, there is a need to apply systemic risk assessment practices. These could also be useful in the execution of bank-internal systemic stress tests of default contagion.

REFERENCES

- Ait-Sahalia Y.; Fan, J and Li, Y (2013) The leverage effect puzzle; Distangling Sources of Bias at High Frequency. Journal of Financial Economics 109 p224-249
- Allen, F and Gale D (2004), Financial Contagion in Banking Journal of Political Economy 108 (1) 1-33.
- Bank of Ghana's Annual Reports (201I-2018)
- Bawumia, M (2010) Monetary Policy and Financial Sector Reform in Africa: Ghana's Experience. Paperback IBSN 978-1-609 10-415-3
- BIS (Core Principles for Effective Banking Supervision 2006;2012)
- Brownbridge, M. (1997) Causes of Financial Distress in Local Banks in Africa and Implications for Prudential Policy. UNCTAD Discussion Papers 132 General Switzerland.
- Capiro G. & Klingebiel, D. (1996) Bank Insolvencies: Cross-Country Experience Policy Research Working Paper 1620 World Bank.
- Dam, L & Koetter M (2011) "Bank Bail outs, Intervention and Moral Hazard" Banking & Financial Studies 2 (10) 1 – 59.
- De Caux, R; Brede, M; and McGroarty, F (2016) Payment Prioritization and Liquidity Risk in Collateralization Interbank Payment System. Journal of International Financial Markets, Institutions and Money 41 (6) p135-15
- Demirguc – Kunt & Detragiache E (2002) does Deposit Insurance increase banking system Stability? An Empirical Investigation. Journal of Monetary Economics 49 pp 1373 – 1406.
- Dermirguc-Kunt, A & Detragiache, E (1997) The Determinants of Banking Crisis: Evidence from Developed and Developing Countries: IMF Staff Paper Vol 1 pp81-109.

- Diamond, D.W. & Dybrig, P.H (1983) "Banking Runs, Deposit Insurance and Liquidity" Journal of Political Economics 91 pp 401-420.
- Eichengreen, B (1989) The Political Economy of Smoot-Hawley Tarriff.s. Research in Economic History pp1-35
- Faff, R, Parwada J.T. and Tank, B (2010) "Were Bank Bailout Effective During the 2007 – 2009 Financial Crisis? Evidence from Contagion Risk in the Global Hedge Fund Industry, www.bundesbank.de. 1 – 39.
- Gropp, R; Hakeness, H and Schnabel, 1 (2011) "Competition, Risk – Shifting and Public Bailout Policies" Review of Financial Studies.
- Grossman, E and Woll, C (2012) Savings the Banks: The Political Economy of Bailout Hal. Archives – Ouvertes. https// Hal-sciencespo archives – ouvertes. /from//hal-oua 72960.
- Harvey, C.C and Jerkins J (1994) Interest Rates Policy, Taxation and Risk World. Development Studies Vol 22 pp12- 34
- Helwege, J (2009) "Financial Firm Bankruptcy and Systemic Risk" 32 REG 24.
- Humphrey, D.B (1986) Payments Finality and Risk of Settlement Failure, in Technology and the Regulation of Financial markets: Securities, Futures and Banking. Anthony Saunders and Lawrence J. White Eds.
- Humphrey, T. M & Keleher, R. E (1984) "The Lender of Last Resort: A Historical Perspective. Cato Journal 4 pp. 275-318
- Various IMF Country reports on Ghana (2010-2018)
- Kaufman G (1970) 'Bank employment. Cross Section Analysis in the largest banks. Journal of Money, Credit and Banking 2 pp 101-111.

- King. M (2016) The End of Alchemy: Money, Banking and the Future of the Global Economy, Little Brown Norton 448 pages.
- Kraft, E and Jankov. L (2005). Does Speed Kill? Lending Booms and their Consequences in Croatia. Journal of Banking & Finance 29, pp 105-121.
- Kuye, L. O; Ogundele, O J. K and Otike Obaro (2013) Government bailout of financially distressed banks in Nigeria: A Justifiable Strategy? Internal Journal of Business and Social Science 4 (8) pp 174 – 180.
- Laeven L & Valencia F (2010) "Resolution of Banking Crises: The Good, the Bad and the Ugly: IMF Working Paper.
- Laeven, L and Valencia; F (2008) Systemic Banking Crises. IMF Working Paper.
- Levitin, A. J. (2011) "In Defense of Bailout: The Georgetown Law Journal 99, pp 435 – 514.
- Levitin, A.J., (2011) "In Defence of Bailouts", The Georgetown Law Journal, 99,435-514
- Memmel C and Sachs, A (2013) Contagion in the Interbank Market and its determinants; Journal of Financial Stability 9 (1) pp 46-54.
- Puri, M; Rocholl, J & Steffen, S (2011) Global Retail Lending in the Aftermath of the US Financial Crisis: Distinguishing between Supply and Demand Effects. Journal of Financial Economics 98 pp87-98
- Proprio. M (2017) US Dollar Crash might happen in October 2017. Is Investing Crypto the Safest Way to go?
- Rose, A. K; & Wieladek, T (2011) Financial Protectionism: The First Tests: Centre For Economic Policy Research.

- Sanusi, L. S. (2010), The Nigerian Banking Industry: What Went Wrong and the Way Forward CBN Governor's Speech 1 – 23.
- Schmitz, S.W; Weber, B and Posch, M (2009) "EU Bank Packages: Objectives and Potential Conflicts of Objectives". In Financial Stability Report ed.OcNB p63-83
- Scott, K.E (2009) "The Financial Crisis: Causes and Lessons" American Economic Review Vol 109 pp 235-242
- Stern G.H. and Feldman, R. J (2004) Too Big to Fail: The Hazards of Bank Bail outs. Brookings Institution Press Washington DC 230. ISBN-08157 8152-0.
- Vives, X (2010) "Competition and Stability in Banking in Monetary Policy under Financial Turbulence", Proceedings at Annual Conference of Central Bank of Chile p 455-502
- World Bank (1987) Financial Sector Review, World Bank Washington DC.
- Zikmund, W.G. (2003) Business Research Methods. Thouson Learning