

# **The nexus between Financial Inclusion and Financial Development in Zimbabwe (2009-2015)**

A Dissertation

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by

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## **ABSTRACT**

The study aims to establish the nexus between financial inclusion and financial development in Zimbabwe covering the period from 2009 to 2015. Using descriptive statistics including correlation analysis, t-tests, and graphical analysis, the study revealed that there is a positive relationship between financial inclusion and financial development. The study however established that the relationship is relatively weak. The positive relationship is being driven by expansion of the banking sector into previously marginalised and unbanked markets, riding on the increase in financial and mobile technology based banking products. The weak relationship is explained by the current high levels of financial exclusion and the increasing levels of financial dis-intermediation occurring in Zimbabwe. This is further explained by high levels of informalisation of the economy and the deterioration in the microeconomic environment which then resulted in cash shortages and creation of quasi-currencies with the potential to further dent market confidence. People then preferred to transact outside the formal financial system.

The study further established that financial inclusion, through mobile and financial technology has great potential to support financial development in Zimbabwe. This is premised on the established high mobile penetration rate and the impact that mobile and financial technology has had on financial inclusion in the short period since 2012. It is also established that the negative governance factors, (as ranked by the World Bank World Development Indicators (WDI)), such as political stability, rule of law, regulatory quality and government effectiveness had largely a strong and significant relationship with financial inclusion and financial development. These negative governance factors need to be addressed by policy makers because they have the potential to inhibit local and international trust and market confidence in Zimbabwe's financial system. The loss of trust and market confidence impacts negatively on effective execution of both financial inclusion and financial development goals. It is imperative that interventions to leverage financial development through financial inclusion must embrace developments in the financial technology and mobile technology sectors due to the high mobile penetration rate and potential to lower transaction costs and foster financial inclusion. Policy makers must devise regulatory policies that foster infrastructure sharing, interoperability and interconnectivity of MNOs mobile and financial technology platforms to increase levels of financial inclusion and financial development. The established nexus makes it imperative that a national financial inclusion strategy must be complemented by a supportive financial development strategy for optimum results.

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## **DEDICATION**

This thesis is dedicated to my mother, mentor and my friend since childhood, Abina Mazai. You are a great mother and thank you for raising me to believe in hard work and continuous professional development. To my granddaughter Kundiso Mia Marino, I know you are too young to appreciate this dedication, but may you please use this as a starting point in your professional journey whenever it starts.

## LIST OF ACRONYMS AND ABBREVIATIONS

AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
ATMs	Automated Teller Machines
APA	American Psychological Association
CPFL	Consumer Protection and Financial Literacy
CTF	Counter Terrorism Financing
ECB	European Central Bank
G-20	Group of Twenty Major Economies
GDP	Gross Domestic Product
GFDD	Global Financial Development Database
GFDR	Global Financial Development Report
GMM	General Methods of Moments
GPFI	Global Partnership for Financial Inclusion
ICT	Information Communication Technology
IMF	International Monetary Fund
MFI	Micro-Finance Institutions
MNOs	Mobile Network Operators
MSMEs	Micro, Small and Medium Enterprises
OECD	Organization for Economic, Co-operation and Development
PMG	Pooled Mean Group
PPP	Purchasing Power Parity
RBZ	Reserve Bank of Zimbabwe
RTGS	Real Time Gross Settlement
SACCOS	Savings and Credit Cooperative Societies
SADC	Southern Africa Development Committee
SDGs	Sustainable Development Goals
SIFIs	Systemically Important Financial Institutions
USAID	United States Agency for International Development
USD	United States Dollar
VAR	Vector-Auto Regression
WEF	World Economic Forum
WDI	World Development Indicators
ZIMASSET	Zimbabwe Agenda for Sustainable Socio-Economic Transformation

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Several scholars, such as Schumpeter (1911), Patrick (1966), King and Levine (1993), Levine (1997) and De Gregorio and Guidotti (1995) have studied the association between financial development and economic growth. These past studies however, gave less focus on the importance of inclusiveness of financial systems and the link between financial inclusion and financial and economic development as suggested in studies by World Bank (2014) and Demirgüç-Kunt and Klapper (2012). Later, some studies, such as those by Chakravarty and Pal (2010), Dacanay, Nito and Buensuceso (2011), Fowler and Panetta (2011), Ardic, Heimann, and Myleko (2011), World Bank (2014) and Demirgüç-Kunt and Klapper (2012), started incorporating the concept of financial inclusion and exclusion on financial and economic development. Although financial inclusion and financial development have become increasingly crucial in development literature, most studies on these concepts concentrate on cross-country analysis with limited work being done on single country analysis.

The study is premised on the basis that Zimbabwe has adopted a financial inclusion strategy in an environment where its financial system is in a precarious situation characterised by serious liquidity challenges. Therefore, the author investigates whether financial inclusion has a relationship with financial development or vice versa and if so in which dimensions and what are the implications on economic growth, development and policy.

The Government of Zimbabwe is cognisant of the importance of an inclusive financial system and its impact on poverty alleviation, reduction of income inequalities and fostering financial, social and economic development. The Reserve Bank of Zimbabwe (RBZ) (2016) postulates that there is consensus that financial inclusion and its goal of broadening access to finance and usage of financial services by the poor amongst others can increase savings and consequently the nation's loanable funds which in turn lead to financial and economic development (p. 9). The RBZ (2016) further acknowledges that in Zimbabwe there have been several interventions in the past to broaden financial access for poor people to participate in the mainstream financial system with limited success. As of 2016, there were financial inclusion gaps in terms of access to finance and usage of financial services for poor people and some sectors of the economy, such as MSMEs (p. 9). RBZ indicated that the 2012 Finscope MSME survey report posited that

only 14% of MSMEs were financially included, whilst the 2014 Finscope Consumer Survey asserts that only 30% of the country's adult population were financially included (p. 9).

### **Zimbabwe- A Fragile State**

Zimbabwe is classified as a fragile state by the OECD (Organisation for Economic Co-operation and Development) (as cited in Sile, 2013) and fragile states are defined as “*states which are failing to provide basic services to poor people because they are unwilling or unable to do so*” (p. 95) and the USAID defines them as states which are failing, failed or recovering (Sile, 2013, p. 95). Generally, these are states which are vulnerable, in crisis and are likely to suffer low or negative economic growth. Zimbabwe's financial system has been struggling to offer affordable financial services products that are appropriate. Some of the financial institutions collapsed thus denting the trust of the public in formal financial services and then preferring to save and borrow employing informal mechanisms (Sile, 2013). Due to increased fragility, the financial system became risk averse and substituted long term credit with short term credit and relation-based lending and in the process the economy developed a huge preference for cash transactions which naturally affected financial inclusion. The largest group hit by these negative developments are the poor and the MSMEs who already battle to access finance from the formal system under normal circumstances (Sile, 2013). However, of all the fragile states in Africa, Zimbabwe has one of the highest formal bank account penetration at 55% as at 2012 (Sile, 2013, p. 97). This is in part due to high levels of poverty which then attracts sympathy from family members living abroad resulting in high remittance inflows (Sile, 2013).

Adnan (2011) opined that the higher the degree of financial development in a country the wider will be the availability of financial services meaning greater financial inclusion. Efficient allocation of credit to the private sector and potential businesses leads to an increase in industrial growth and in turn boost economic growth (Adnan, 2011).

## **1.2 Problem Statement**

Zimbabwe launched a National Financial Inclusion Strategy in 2016, at a time when Zimbabwe's financial system was facing severe challenges in terms of both local and international market confidence (RBZ, 2016d). The loss of confidence was largely due to legacies of the hyperinflation era, liquidity shortages and an underperforming economy. Zimbabwe's financial system further faced policy challenges as to how the economy could generate adequate foreign currency to meet domestic and external needs. The economy's export revenues have been consistently lower than payments for imports resulting in current account deficits which then in part gave rise to foreign exchange scarcity and the resultant cash shortages in the economy. This scenario had negative implications as it then caused the emergence of a parallel market for foreign exchange and multiple pricing in the economy which then fed into a deteriorating inflation trajectory. This situation makes it potentially difficult to implement a financial inclusion strategy.

The RBZ's Press Statement (2016a), acknowledged that Zimbabwe has a huge shortage of US dollars (USD) in the economy as evidenced by unending long queues at bank branches and automated teller machines (ATMs) and such a scenario has disenfranchised the banked population from the financial system including those segments which are targeted for financial inclusion. The factors cited by RBZ include what the bank termed a "dysfunctional multi-currency system" (p. 2), in which the USD is reported to have become the most preferred currency amongst a basket of other currencies. RBZ asserts that the USD has become a commodity and a store of value to the extent that higher denomination notes for the USD are no longer facilitating ordinary transactions. It is further reported by RBZ, that Zimbabwe has become a cash economy with a very low usage of ATMs, debit cards, credit cards and RTGS electronic platforms possibly as a legacy of hyperinflation when plastic money and ATMs could not cope with the size of the digits of the bearer cheque currency and the frequency of changes to the denominations. The RBZ posits that because of the low level of consumer and business confidence in the financial system there is high inclination by both consumers and businesses, particularly the MSMEs to hold cash outside the banking system thus affecting effective financial inclusion and financial development through financial intermediation. This practice has resulted in a sub-optimal distribution, allocation and utilisation of financial resources. The strong USD has made Zimbabwe a high cost producing country, reliant on USD cash for a significant portion of domestic transactions and a prolific target for externalisation and capital flight. The negative impact of these factors has put pressure on the country's balance of

payments position through trade deficits, which averaged US\$ 400 million during the period 2004-2006 but rose to US\$ 2.5 billion from 2011 to 2015 (RZB, 2016a, p. 3). Such huge perennial trade deficits have resulted in huge liquidity and cash drain from the economy.

The factors cited above, are pertinent for financial inclusion and financial development from two perspectives. Those financially included and those targeted for inclusion are disenfranchised and are avoiding the major part of the financial system which impacts financial inclusion. The high cost of production, hoarding of cash and the potentially rampant externalisation of foreign currency may affect financial development through reduced financial intermediation. This scenario has potential negative consequences on both individuals and businesses particularly the MSMEs in terms of access to finance. The study therefore aims to establish the nexus between financial inclusion and financial development in Zimbabwe given the fact that the above factors cited by RBZ, appear not to be conducive to financial inclusion and financial development. The scenario suggests that there could be inter-linkages, between financial inclusion and financial development and if this holds true, then adopting either financial inclusion or financial development objectives in a “silo” format might produce sub-optimal policy outcomes.

### **1.3 Purpose and Significance of the Research**

The study seeks to assess the relationship between financial inclusion and financial development in Zimbabwe. The findings of the study will assist policy makers in synchronising policy approaches to financial inclusion and financial development. The study will also help Zimbabwe in designing further policies to achieve sustainable development goals (SDGs) 2030 particularly those that deal with inequality and poverty alleviation. The Alliance for Financial Inclusion (AFI) (2016), posits that financial inclusion is a facilitator of at least eight (47%) of the seventeen 2030 Sustainable Development Goals (p. 11). It postulates that increasing financial inclusion related to individuals contributes to goals 1, 2, 3, 4 and 10 which address issues of poverty, hunger, good health and well-being, quality education and reduced inequalities respectively (p. 11). AFI further speculates that through financial inclusion, greater access to financial services for MSMEs contributes to gender equality (goal 5) and decent work and economic growth (goal 8) whilst remittances and insurance contribute to goal 10 on reduced inequalities. AFI also asserts that digital financial services through digital government payments to pensioners and suppliers contribute to good health and well-being (goal 3) (AFI,

2016, p. 11). Finally, the interlinkages between financial inclusion and the financing of environmentally sustainable growth projects will contribute to goal 13 which advocates for the stemming and mitigation of the adverse impacts of climate change (AFI, 2016, p. 11).

The above factors from a Zimbabwean and its development partners' perspective, bring to the fore the importance of financial inclusion and financial development and that buttresses the justification and importance of this study to policy makers. This study will also add to literature that will assist academia and other stakeholders in appreciating the link between financial inclusion and financial development.

#### **1.4 Research Questions and Scope**

This study seeks to answer the following question: -

**What is the nexus between Financial Inclusion and Financial Development in Zimbabwe?**

**The objective of the study is:** To establish the nexus between financial inclusion and financial development in Zimbabwe and if there is a link to ascertain the policy implications.

##### **Hypothesis**

H<sub>0</sub>: There is no relationship between financial inclusion and financial development.

H<sub>1</sub>: There is a relationship between financial inclusion and financial development.

#### **1.5 Research Assumptions**

The study assumes that Zimbabwe has an interest and would find the results and recommendations of the current study invaluable in designing policy options on financial inclusion and financial development and thus contributing to the development of Zimbabwe. It further assumes that the secondary data sources used in this study will provide sufficient data that when processed will produce reliable and valid results which provide meaning to the study and gives the users of the results of the study, confidence.

#### **1.6 Organisation of the Study**

The balance of the study comprises Chapter 2 which provides a detailed literature review of financial inclusion and financial development and the related pillars underpinning these concepts. The unfolding innovations in digital financial services and how these financial technologies are impacting on financial inclusion and financial development are discussed in context with recent literature. The links between financial inclusion and financial development are covered as well as indicators and the evolution of the two concepts. Chapter 3 outlines the

research methodology including variables description, data collection systems used and data analysis tools employed and justification thereof. Chapter 4 covers research findings, discussion and analysis of results followed by Chapter 5 which addresses research conclusions and recommendations.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

##### **Defining Financial Inclusion**

In the Global Financial Development Report 2014 financial inclusion is defined as “*the proportion of individuals and firms that use financial services. It has a multitude of dimensions, reflecting the variety of possible financial services, from payments and savings accounts to credit, insurance, pensions, and securities markets. It can be determined differently for individuals and for firms*” (World Bank, 2014b, p. 15).

The RBZ (2016d) defined financial inclusion as “*The effective use of a wide range of quality, affordable and accessible financial services, provided in a fair and transparent manner through formal/regulated entities, by all Zimbabweans*” (p. 36). RBZ (2016d) posits that the Zimbabwean definition is a result of numerous studies and the key principles underpinning the definition of financial inclusion are further explained by RBZ to achieve clarity of purpose. Effective use strives to make financial inclusion part of everyday life in Zimbabwe and usage is measured by frequency, regularity and sustainability over the long-term whilst the wide range of products and services relates to access to insurance, banking, capital markets, remittances and pension. Quality referred to in the definition relates to providing Zimbabweans with appropriate financial products suitable to their needs that positively impact their lives (p. 37). Access in this context, means providing appropriate financial service delivery channels which are accessible to everyone and that foster regular use (p. 37). Financial consumer protection and empowerment is achieved through financial literacy education to minimise potential exploitation by financial service providers. Formalisation of financial access to financial services by marginalised Zimbabweans is aimed at further minimising exploitation of the poor by informal providers of financial services. Financial inclusion also facilitates effective monitoring of attendant money-laundering risks through ensuring that financial transactions are processed through a formal financial system. Underpinning the whole definition is the issue of financial sustainability which relates to reduction of transaction costs, finding innovative ways to reach the unbanked poor Zimbabweans and offering them appropriate and better products (Reserve Bank of Zimbabwe, 2016d, p. 22).

## **Financial Inclusion- A New Global Policy Imperative**

There is growing global consensus by several governments, including Brazil, Mexico, Peru, Kenya, and Rwanda amongst others, who have committed to be catalysts in the increased access to financial services by their citizens by signing the Maya Declaration (2011) on Financial Inclusion (Alliance for Financial Inclusion, 2011). Zimbabwe joined the Alliance for Financial Inclusion in 2012 (Reserve Bank of Zimbabwe, 2016d, p.7). The G-20 leaders at their Pittsburgh Summit in 2009 committed to increasing access to financial services for those at the bottom of the pyramid. A G-20 Financial Inclusion Experts Group was launched at that Summit with a mandate to promote effective policy initiatives on financial access, financial literacy, consumer empowerment and protection (Global Partnership for Financial Inclusion, 2011).

The World Bank (2014c) asserts that the focus by the G20 group on financial inclusion adds to its nucleus goal of attaining robust, sustainable, equitable and inclusive growth. A more all-inclusive participation in the financial system decreases income inequality and spurs job creation, stimulate consumption, increase investment in education and help the low- income groups to manage risk and absorb financially related shocks. The thrust on financial inclusion spurs broader and high economic growth heightening financial intermediation and increasing efficiency of, and access to, credit services, payments, savings and micro-insurance services (p. 2).

## **Defining Financial Development**

The World Bank Global Financial Development Report (2013) defines financial development as: *'improvements in the quality of five key financial functions: (a) producing and processing information about possible investments and allocating capital based on these assessments; (b) monitoring individuals and firms and exerting corporate governance after allocating capital; (c) facilitating the trading, diversification, and management of risk; (d) mobilizing and pooling savings; and (e) easing the exchange of goods, services, and financial instruments'* (p. 18).

The World Economic Forum in its Financial Development Report (2012) defines financial development as *'the factors, policies, and institutions that lead to effective financial intermediation and markets, as well as deep and broad access to capital and financial services'* (Reuttner & Glass, 2012, p. 3).

## **Defining a Financial System**

This study finds it imperative to state the definition of a financial system for a financial system produces financial services which are then consumed by those entities, individuals and households who are financially included.

The International Monetary Fund (IMF) has aptly defined a financial system as herein quoted: ‘*A financial system consists of institutional units and markets that interact, typically in a complex manner, for the purpose of mobilizing funds for investment, and providing facilities, including payment systems, for the financing of commercial activity*’ (International Monetary Fund, 2004, p. 12). The context of the definition amplifies the functions of financial intermediaries in the financial system.

The definition of a financial system from the World Bank Global Financial Development Report 2013 reads as quoted:” *The financial system in a country is defined to include financial institutions (banks, insurance companies, and other nonbank financial institutions) and financial markets (such as those in stocks, bonds, and financial derivatives). It also includes the financial infrastructure (which includes, for example, credit information–sharing systems and payment and settlement systems)*” (World Bank, 2012b, pp. xx). Čihák, Demirgüç-Kunt, Feyen and Levine (2012) define financial development as advances in important financial system functions such as mobilising and pooling savings, processing and producing information about the viability of potential investment projects and allocation of capital to approved projects, exerting corporate control influences on both firms and individuals after allocation of capital, providing opportunities for risk diversification and finally smoothening the exchange of financial instruments , goods and services (p. 5).

### **2.1.1 Overview of Zimbabwe’s Financial Sector**

Zimbabwe’s financial sector has been plagued by serious periods of financial fragility in the last decade characterised by hyperinflation and the demise of the local currency leading to the adoption of a multi-currency system in 2009. Makina (2012) suggests that the loss of Zimbabwe dollar savings due to hyperinflation and subsequent dollarization dented public and depositor confidence in the financial sector. The rampant collapse of banks which started in 2003 continued unabated to destroy depositor confidence as the banks collapsed and depositors lost funds. Up to 2012, twenty financial institutions had collapsed reflecting poor regulatory supervision and lack of compliance with prudential regulations (p. 11). The major causes of

bank failures were cited as poor corporate governance, poor risk management, insufficient capitalisation levels, high levels of non-performing loans and severe liquidity challenges (p. vi). The absence of robust financial infrastructure characterised by lack of credit bureaux and other credit information sharing infrastructure exacerbated the levels of non-performing loans. The extended economic crisis made depositors take a short-term view, such that most deposits held by banks were of a short-term nature whilst borrowers preferred long-term positions and thus delaying liquidity transformation. The loss of confidence in the domestic banking resulted in the development of the informal financial system in which significant amounts were reported to be circulating causing a serious liquidity crunch (Makina, 2012).

The IMF (2017) contend that although dollarization removed the exchange rate risk, put inflation under control and improved the credibility of policies, the multi-currency regime was frail from the start because both the fiscal and external positions were in negative territory and the RBZ was undercapitalised hence the financial sector was weak. IMF further asserts that the RBZ lost influence on monetary policy and other subsidiary policies and could not respond to some economic shocks, resulting in expansionary policy positions including high civil service wages which then transcended to other prices and private sector wages. The IMF then posits that the US dollar (USD) strengthened against the currencies of other key trading partners of Zimbabwe from 2010 and competitiveness in foreign export markets suffered and the current account deficit remained high in sympathy with the nominal depreciation of relevant external trading currencies (p. 4). In part, due to these factors and weather-related shocks such as El-Nino which caused drought (p. 8), the multi-currency system failed to operate optimally and quasi-currency instruments were introduced and began to be dominant in the economy (p. 1). These were real-time gross settlement system (RTGS), Treasury Bills (T-Bills) and bond coins and notes (p. 4). A Deposit Protection Board was established in 2003 and later modified by the passing into law of the Deposit Protection Corporation Act (Chapter 24:29) in 2012 (Makina, 2012, p. 20). The low levels of compensation in the event of bank failures has not fostered public confidence with devastating impact on financial stability (Makina, 2012, p. 14).

The IMF (2017) asserts that the delay in fiscal adjustment, the decline of commodity export prices and limited access to foreign financing, made the RBZ to resort to financing the Government's budget deficit through an overdraft facility after the private sector (mainly through commercial banks) had reached its optimum capacity to absorb more T-Bills (p. 6). Government began crediting, through the RTGS, bank accounts of its service providers,

contractors and its employees. This scenario, increased deposits in the RTGS financial system without a corresponding increase in physical cash or funds in banks external (nostro) accounts (p. 9). The IMF further asserts that the RBZ monetary financing of the budget deficits, which was done in an environment of low external inflows, was more than its free surplus reserves and therefore resulted in creation of money and weakened banks' capacity to provide loanable funds to the private sector and that inhibited the level of financial development. The IMF goes on to postulate that the RBZ's ability to pay back its obligations to banks is interrelated to Government being able to pay back the overdraft obtained from RBZ which is only possible through fiscal surpluses and external financing (p. 16). The increased demand for cash, in view of shortages of the US dollar, resulted in cash shortages and led Government to introduce capital and current account controls in 2016 (p. 9).

The IMF (2017) contends that Zimbabwe's fiscal imbalances, have aroused financial sector vulnerability during periods of high sovereign risk and RBZ's inadequate reserves to pay back its obligations to banks. Therefore, the assets of banks in the form of RTGS electronic balances and Treasury Bills have the potential to cause solvency and liquidity risks for the financial sector. The IMF further posits that quasi-currencies, T-bills and RTGS electronic balances trade at a discount to the US Dollar and the Basel based reforms to bank regulations, requiring that valuation of assets be market price based as at the reporting date, could potentially cause depletion of bank capital and therefore recapitalisation challenges when these balances are marked-down to market (p. 15). The IMF asserts that due to ever increasing credit risk and the perceived high country risk, Zimbabwe lost 50 correspondent bank relationships since 2014 to 2016 (p. 16). Such a development results in continued decline in access to external financing especially for domestic-owned banks and therefore delays in payment of foreign obligations and the attendant increase in transaction costs and heightened cost of capital. These factors jeopardise the soundness of the financial sector (IMF, 2017, p. 16).

The IMF (2017) suggests that the obligation to finance the budget deficits lessens confidence and increases liquidity shortages which further increases financial sector vulnerability. This has therefore crowded out the private sector and raised the risks for both banks and enterprises. Whilst bank balance sheets may show sound financial indicators, these are weighed down by RTGS balances and T-Bills which are potentially to be written down as they transact at a discount to the US Dollar. Government T-Bills have lost their traditional risk-free status as they are subject to high discounts in the market sometimes as high as 45% (p. 41). The scenario,

per IMF, also highlights that mobilised funds are being utilised by Government at the expense of the economy. The growing mismatch between the RTGS and T-Bills balances and the actual foreign exchange that RBZ holds to meet them renders a huge portion of these balances illiquid and inaccessible. The private sector is reported to be facing huge challenges in paying for critical imports in part due to these foreign currency liquidity challenges and these delays affect industry's capacity to produce and export which then feedback into the liquidity crisis (p. 41). The above factors have serious implications for both financial development and financial inclusion.

### **De-Risking and Re-risking the Financial Sector**

The AFI 2016 Global Policy Forum Report refers to the process whereby international financial institutions pull out of agency and correspondent banking relationships with certain countries as happened in Zimbabwe as de-risking (AFI, 2016). De-risking is largely driven by banks curtailing correspondent banking relationships in fear of violating anti-money laundering laws (AML) and Counter-Terrorism Financing (CTF) regulation and is normally based on perceptions about political stability and other governance issues in the affected jurisdictions. AFI posits that de-risking isolates countries from international finance with serious repercussions on access to correspondent banking by local banks, money transfer operators and remittances and blocks charities from access to finance, thus seriously affecting financial inclusion and financial development. Most governments in fragile states are devising compliance policies that promote re-risking of their financial systems and programmes to stem de-risking (AFI, p. 35). In addition to Zimbabwe being de-risked through loss of 50 correspondent banking relationships (IMF, 2017, p. 16), all state-owned banks and companies were under USA economic sanctions (during the period under study) and could not fully engage in international transactions with serious consequences on financial development, export performance and financial inclusion.

### **Banking**

The financial services sector in Zimbabwe consists of the banking sector, comprising 19 banking institutions inclusive of 4 building societies, one merchant bank and one savings bank (RBZ, 2016d, p, 13-14). In addition to the banking institutions, there are 153 credit-only microfinance institutions and 2 deposit taking microfinance institutions (p. 14). The banking sector also has 2 development finance institutions (p. 14). As at September 2015 the banking sector had more than 4500 branches and access points inclusive of sub-branches, agencies and

automated teller machines (ATMs) (p. 14). The banking services are complemented by services and products of Savings and Credit Cooperative Societies (SACCOS) which are significantly visible in rural communities. These are organisations formed by people with a common interest, who save collectively and provide loans to each other (p. 16).

The IMF (2017) posits that Zimbabwe's financial sector is bank-based, with 13 of the commercial banks owning total assets equivalent to almost 50% of the Zimbabwe's GDP and 24% of total assets to GDP are held by foreign owned banks. These foreign banks have a 42% market share and one domestic bank commands more than 30% market share. To give an appreciation of the level and nature of financial intermediation, the income of banks generally comprises of 50% interest based and 40% fee and commission based income (p. 41).

### **Microfinance Institutions (MFI)**

Microfinance is key for financial inclusion and financial and economic development, however in Zimbabwe the sector faces several challenges that inhibit its development. These include information asymmetry in credit processes and resultant high default rates and high levels of non-performing loans. MFI lending tends to be skewed towards consumption rather than production and this trend is exacerbated by slow new product innovation in the sector. Inadequate skills, inadequate funding and poor management information systems are posited to be among the challenges affecting the MFI sector (RBZ, 2016d, p. 21).

### **Insurance**

The insurance sector comprised of 114 registered organisations as at September 2015, offering re-insurance, funeral, life, and non-life insurance services. Non-life services cover assets all risks, legal aid insurance, travel insurance and third-party liability cover amongst others. Life insurance comprise of annuity, term insurance, whole life insurance, endowment policies, group life and funeral assurance (RBZ, 2016d, pp. 5-6).

The Finscope Survey 2014 (as cited in RBZ, 2016d) indicates that there was an increase in usage of formal insurance rising to 26% in 2014 from 19% in 2011 (p. 27). Consequently, the survey also established that, during this period, there was a decrease in the consumption of informal insurance services such as burial societies (p. 29). Micro-insurance provides some protection to low income groups against specific risks in exchange for periodic and regular premiums proportionate to the likelihood and potential risks involved. According to the

Finscope Survey 2014, only 30% of adults had insurance cover and the main barrier was reported to be lack of knowledge about how insurance products worked and issues of unaffordability (p. 71).

### **Pensions and Provident Funds**

This sector comprised of four Pension Fund Administrators with a total of 1 174 pension and provident funds with a membership of 760 000 people as at 30 June 2015 (RZB, 2016d, p. 17). The Finscope surveys for 2011 and 2014 (as cited in RBZ, 2016d) indicated that there was a 12% increase in the number of pensioners rising from 623 000 in 2011 to 774 000 in 2014 (p. 28). Zimbabwe's pensions and insurance schemes were devastated by hyperinflation and the changeover to multi-currency regime. In July 2014, a Government Inquiry on Pensions and Insurance Conversions was launched (World Bank, 2015d, p. 3). The inquiry focussed on transition to multi-currency and its effect on policyholders and pensioners and the equity and transparency of the conversions. This was meant to restore market confidence in the sector which confidence has a bearing on financial inclusion.

### **Capital Markets**

The most notable attribute of this sector is that 99% of resident Zimbabwean adult population (18 years and above) are excluded from this market (RZB, 2016d, p. 21). The sector however comprises the Zimbabwe Stock Exchange, stockbrokers and dealers who offer broking services, transfer secretaries, custodians offering custodial services, asset managers providing investment management services, investment advisors, collective investment schemes, securities trustees offering trusteeship and listed companies whose shares are traded and at times offer shares to the public and the investing public (p. 20).

### **State of Financial Inclusion in Zimbabwe**

The RBZ (2017c) asserts that Zimbabwe's operating environment caused economic structural shifts from heavy reliance on corporates to MSMEs. The MSMEs contribute 60% to Zimbabwe's gross domestic product (GDP) and contribute significantly to creation of employment and poverty alleviation (p. 2). The Reserve Bank of Zimbabwe further asserts that according to the Finscope MSME Survey, Zimbabwe's MSMEs employed close to 5.7 million people comprising 2.8 million MSME owners and 2.9 million employees thus constituting 73% of the total workforce (p. 2). Notwithstanding that the MSME sector was identified as a key engine for employment and economic growth the level of financial inclusion in this key sector

was deemed by RBZ to be very low. The Finscope Survey also found that only 18% of MSMEs were served by formal institutions, 39% were served by informal service providers and 43 % were financially excluded (p. 3).

The Reserve Bank of Zimbabwe (2016d) asserts that the 2014 Finscope Survey approximated that 67% of Zimbabwean adult population live in rural areas and 33% live in urban areas (p. 25). The survey estimated that in 2011, 40% were formally excluded and this improved to 11% in 2014 and the number of those formally served were 38% improving to 69% in 2014 (p. 27). The number of people relying on exclusively informal financial products declined from 22% in 2011 to 7% in 2014 whilst those relying exclusively on bank financial services declined from 22% in 2011 to 7% in 2014 (p. 27). The number relying exclusively on non-bank products increased from 6% in 2011 to 22% in 2014. However, the number of banked adults increased from 1.45 million to 2.17 million. The Finscope survey (2014) estimated that 89% of Zimbabwe's urban population was financially included as opposed to 62% of the 67% that live in rural areas (RBZ, 2016d, pp. 9-10). The 2014 Finscope Survey (as cited in RBZ, 2016d) revealed that there was a significant reliance on informal savings channels by Zimbabwean adults as 23% made use of informal channels whilst only 20% used formal banking channels (p. 28). The Finscope survey indicated there was a significant reliance on informal sources of credit by 30% of Zimbabwean adults whilst those borrowing from formal channels constituted only 13% in 2014. In fact, 58% of Zimbabwe's adult population revealed that they do not borrow due to personal concerns about debt whilst 45% indicated that they had no capacity to incur debt (p. 28). Of the Zimbabwean adult population who do not save, 74% cited lack of disposable income after funding living expenses as a reason whilst 21% indicated that they had no money to save (p. 28).

RBZ (2016d) asserts that Zimbabwe's economic performance and operating environment has been declining for more than a decade which has led to informalisation of the economy. The Zimbabwean economy is now in part driven by MSMEs which have become an engine for growth through job creation which alleviates poverty. Most of the MSMEs, however, lack appropriate infrastructure and adequate funding to support the maintenance and growth of their businesses. The sector also lacks financial capacity to package business plan proposals to seek funding from microfinance and other financial institutions. The microfinance sector, is also hamstrung by challenges such as inadequate funding, high default rates, skewness of lending

towards consumption, slow product innovation and credit information asymmetries (RBZ, 2016d, p. 68).

Notwithstanding their importance to economic development as stated earlier, 45%-55% of MSMEs in Africa are financially unserved, with no banking and financing facilities with financial institutions. Due to high default risk associated with information asymmetry and lack of collateral, a significant number of MSMEs can rarely meet requirements of the financial institutions. Even when finance is offered to MSMEs it is usually very expensive and short term in nature thus denying them medium to long term finance needed for sustainable growth. This has given rise to microfinance institutions and loans associations but these are also encumbered by restrained funding and the unsustainable cost of financing. Formal banking institutions and loans associations are also unpredictable and usually have regional sectoral focus when providing finances (Stein, Bilandzic, & Hommes, 2013).

The RBZ (2017c) posits that as at 31 March 2017, the sector had USD 135.83 million extended to it and this constituted 3.78% of total banking sector loans and advances (p. 3). The RBZ asserts that significant progress has been made in strengthening the financial infrastructure through establishing credit and collateral registries. The credit registry was targeted to address informational asymmetries between lenders and borrowers. A credit guarantee scheme had also been established to facilitate partial risk transfer of risk from stakeholders such as MSMEs (p. 4). RBZ further posits that to address availability funds to the MSME sector, a USD 90 million Empowerment Revolving Fund was established in 2017 (p. 4). The fund was allocated to Women Empowerment Fund USD 15 million, Business Linkages Facility USD 10 Million, Horticulture Fund USD 10 million, Gold Support Facility USD 40 million and Cross-Border Facility USD 15 Million (p. 5). The Youth Fund was also under construction (p. 5). To ameliorate access to financial services by underserved sections of society including MSMEs, the RBZ issued Agency Banking Prudential Standards and Financial Consumer Protection Framework in 2016 and 2017 respectively (p. 5-6). A National Literacy Framework, an MSME Finance Policy and an Agricultural Finance Policy were also underway and the Insurance and Pensions Commission established the Microinsurance Framework in June 2017 (p. 5-6).

## **2.2 Theoretical Literature**

### **Financial Development and Financial Inclusion Economic Roles**

Čihák et al. (2012) posit that countries with improved and significant levels of financial development generally have achieved quicker reductions in poverty levels and improved growth rates. There are however financial market distortions that suppress the smooth flowing of a country's financial resources from savers to individuals and firms with bankable investment projects, which curtail economic development and constrain improvements in the standards of living. Financial development is meant in part, to address these imperfections. Financial development's role of allocating capital impacts on which individuals will get access to finance, which businesses shall be funded, with significant ramifications on poverty levels and income distribution (Čihák et al., 2012).

The International Monetary Fund (2004) suggests that for financial intermediaries, some risk arises from the maturity transformation role whereby they borrow short-term liabilities through accepting demand deposits from customers and investing in long-term loans/assets by granting longer maturity credit to borrowers. Financial markets and institutions supply a platform that facilitates the diversification of maturity and liquidity transformation risks and the trading of financial claims under laid down regulations. The IMF further asserts that, financial markets have a critical function in distinguishing market prices and thus facilitating price discovery. They further speculate that the financial system role of taking deposits is key as the system then provides a structure for lending these funds to borrowers thus becoming a source of liquidity to the economy. Financial institutions within a financial system also provide payments services to trade activities in an economy. Considering the above, the failure of financial institutions can have reverberant impingement on the performance of the whole financial system including non-financial entities and can destroy market confidence which is paramount for the proper functioning of financial systems.

Financial inclusion focuses on access to formal financial services primarily by poor people whilst financial development focuses on improvement of financial systems and how those systems facilitate mobilisation of savings and determines who has access to finance and hence the need to study the nexus between financial inclusion and financial development. Both financial inclusion and financial development appear to have a significant bearing on poverty alleviation and socio-economic development.

According to Čihák et al. (2012) when banking institutions assess potential borrowers and identify, select and lend to firms with the most viable projects, this is viewed as a major step towards achieving efficient allocation of resources which fosters economic development. Čihák et al. further posit that when financial institutions and financial markets target intermediate savings from households and individuals to lend to potentially viable investment proposals, financial intermediaries foster economic development. Čihák et al. assert that after lending the funds to borrowers, financial intermediaries exert corporate governance influences and oversight on the performance of the funded projects investments, which boosts the efficiency of the businesses of the borrowers. Financial markets through derivative, bond and equity markets, provide opportunities for the diversification of risk and through that process encourages investment in high risk and high return projects. Financial systems are generally expected to lower transaction costs which promotes trade and to some extent specialisation (Čihák et al, 2012).

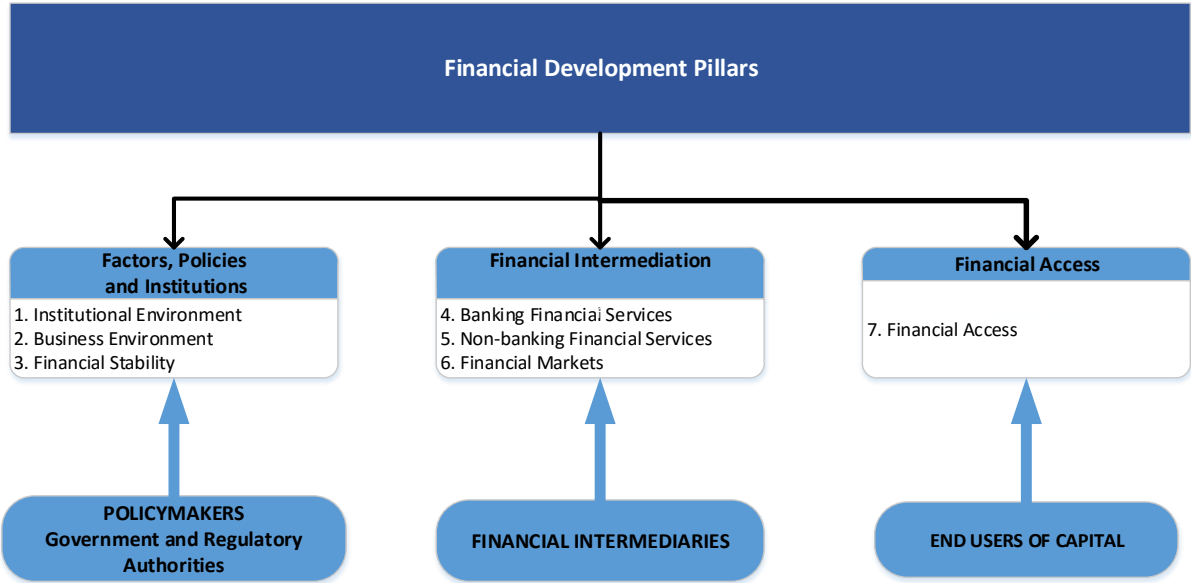
Čihák et al. (2012) postulate that researchers are generally agreed that a financial system shapes economic development through mobilising savings from those with excess funds and through intermediation on-lend these funds to most potentially viable projects in the economy. The financial system develops on a continuous basis, the quality of credit information about borrowers thus improving the efficiency of allocating resources within an economy. The financial system exerts oversight and sound corporate governance on borrowers who would have accessed the funds through the system, facilitating the pooling, managing and diversification of risk and facilitates trade through various financial services (Čihák et al, 2012). Čihák et al. (2012) believe that if a financial system underperforms in delivering the above services, then the economy is negatively affected and potentially destabilised. A poor financial system might just mobilise savings and on-lend to friends, politicians, the wealthy and well-connected irrespective of the quality of their projects and such practices destabilise a financial system because it becomes difficult to exert sound corporate governance practices on cronies. Čihák et al. postulate that such practices create market imperfections which bring about costs and uncertainties in drafting, interpreting and enforcing contracts and other transaction costs. Market imperfections affect the smooth flowing of a nation's financial resources to finance promising projects and that regresses economic growth. This study will be guided by the following theoretical framework which is an author's own invention from a hybrid of literature such as Dacanay et al. (2011), Levine (1997), Sarma (2008) and Padhi (2003).



**2.2.1 Pillars of Financial Development**

The World Bank (2012b) posits that the constituent factors of the enabling environment for financial development impact the allocation and utilisation of capital. It asserts that Governments usually intervene in financial markets by way of financial sector policies which may result in subsidies to certain industries, guarantees or funding for agriculture, housing, establishing state-owned banks and issuing government securities and liquidity provision. The World Bank contends that financial sector policies may also include micro and macro-prudential regulations and business conduct, competition policy in the financial services sector and promotion of financial infrastructure and technology. It is these government financial sector policies which create an enabling environment for financial development outcomes such as financial depth, financial access, financial efficiency and financial stability (World Bank, 2012b).

**Figure 2: Pillars of Financial Development**



**Source: Adapted From** (Reuttner & Glass, 2012, pp. 4-5)

Pursuant to the above (Reuttner & Glass, 2012) and as per the World Bank (2012a), the pillars of financial development are divided into three major groupings as depicted in figure 2. The first group comprise of factors, policies and institutions and the resultant pillars are institutional and business environment and financial stability. These three pillars are largely the domain of

government and regulatory authorities through their policy making instruments which impact financial development. The factors, policies and institutions shape the enabling environment through regulation and supervision of business conduct and competition policy. Governments devise policies which impact on financial development and these include legal regimes and macroeconomic frameworks such as dollarization policies in the case of Zimbabwe, monetary policies, exchange rate regimes and capital controls. This study therefore includes in its analysis the effects of governance factors including rule of law, regulatory quality, political stability and inflation as conditioning variables and as proxies for the institutional category. The second category comprise financial intermediation and the resultant financial development pillars are banking financial services, non-bank financial services and financial markets. Financial intermediaries perform the financial system functions and the proxies for financial development are depth, access, efficiency and financial stability. The last category is that of financial access and the access pillar is key to both financial inclusion as well as financial development (Reuttner & Glass, 2012, p. 5).

### **2.2.2 Financial Development Theories**

According to Čihák et al. (2012) the level of financial development determines the degree of innovation embedded in a financial system and it is through intermediation processes that financial systems determine who has access to finance and on what terms and the system also addresses issues of transaction costs relating to information asymmetry, enforcement of contracts and credit rationing through vetting customers and in the process minimising the levels of non-performing loans in the financial sector. Čihák et al. (2012) posit that high levels of nonperforming loans might also cause financial instability in the economy with the attendant loss of confidence in the financial sector and thus affecting financial inclusion. They further assert that an uncontrolled increase in credit through financial inclusion might adversely affect financial stability. (Cihak, Mare, & Melecky 2016) suggest that financial stability, which is an ingredient of financial development is key in promoting trust in a country's financial systems and by extension promoting the use of financial services (pp. 2-3).

#### **2.2.2.1 Schumpeterian View**

As cited in King and Levine (1993), Joseph Schumpeter (1911) posited that the functions carried out by financial intermediaries such as mobilising savings, appraising projects, monitoring company management, facilitating exchange of goods and services and managing risk are crucial for technological innovation and economic growth. King and Levine (1993)

asserted that empirical work by Goldsmith (1969) and McKinnon (1973) supported this view. King and Levine (1993) postulated that most scholars including Robinson (1952) argue that financial development merely conforms to the development of the economy hence finance was therefore not an important factor and the same view was supported by Lucas (1988) (King & Levine, 1993, p. 717).

King and Levine (1993) studied if significant levels of financial development were positively linked to economic growth using statistics from over eighty countries from 1960 to 1989 with a view to confirm the Schumpeterian view. The measures employed by King and Levine included financial depth which was the ratio of liquid liabilities to GDP but limited to deposit taking financial institutions, the ratio of financial institution domestic assets to deposit money banks domestic assets aggregated with central bank assets. Liquid liabilities were made up of currency outside the banking system plus demand deposits and interest-bearing liabilities of nonbank financial intermediaries and banks. The other measures included the ratio of credit to non-financial private sector to GDP and the ratio of claims on the nonfinancial private sector to total domestic credit. King and Levine then studied the link between these four indicators and growth indicators proxied by physical capital appreciation and other GDP related attributes which represented efficiency (pp. 720-722). They established that the level of financial development indicators was strongly and robustly linked to efficiency of capital allocation, physical capital accumulation and growth and hence proved Schumpeter's view. King and Levine posit that Schumpeter's economic postulation was that innovation substitutes outdated production systems and goods with better commodities and services and therefore in Schumpeter's view, financial intermediaries influence accumulation of capital and innovations in technology and by extension economic development (pp. 722-735).

#### **2.2.2.2 Demand-Following and Supply-Leading Hypothesis**

Sharma (2015) asserts that the supply leading hypothesis postulates that financial infrastructure drives growth and by extension financial inclusion is therefore a cause of economic growth. On the contrary, the demand following hypotheses asserts that economic growth pushes financial infrastructure and banking facilities (pp. 24-25).

Belinga, Zhou, Doumbe Doumbe, Gahe and Koffi (2016) posit that the fact that finance causes economic growth is no longer contestable, but the causality between financial development and economic growth has been a matter that scholars have been researching for a long time with

their empirical findings sometimes conflicting (p. 665). Such scholars include Patrick (1966) positing his “demand-following and supply-leading” hypothesis. Belinga et al. (2016) contend that whenever the causality flows from financial development to economic growth, it is called “supply-leading” due to the belief that actions and processes of financial institutions heightens the provision of financial services which creates economic growth. On the contrary, when the growth results in increased demand for financial services which then prompts financial development, it is named “demand-following” hypothesis (Belinga et al., 2016, pp. 665-666).

### **Demand-Following Hypothesis**

Patrick (1966) asserts that when the economy grows, it generates demand for financial services which cause a response from suppliers of financial services and this results in the growth of an economy’s financial system. Patrick posits that poor financial systems in underdeveloped countries are a result of subdued demand for financial services because the growth of a financial system is a consequence of the growth in an economy. The resultant financial system is shaped by real opportunities in the economic environment and further modified by the legal, economic and institutional framework and the subjective influence of motivations, preferences, attitudes and the tastes of a country’s citizens. Patrick submitted that the demand-following view asserts that “*where enterprise leads, finance follows*” (p. 174) implying that finance was just a permissive and a passive element in the interlinkage between finance and economic growth. However, the supply side response of financial services may not be commensurate due to market imperfections and restrictive legislation among other factors.

### **Supply-Leading Hypothesis**

Under the supply-leading hypothesis, Patrick (1966) asserts that “*the growth of financial institutions and the supply of financial services grows ahead of and leads economic growth*” (p. 177). Patrick posits that the supply-leading phenomenon is meant to transfer resources from those with surplus funds and in low growth sectors to modern sector high growth entrepreneurs. Patrick further posits that whilst supply-leading hypothesis was not necessarily a condition for sustained economic development, it provides an opportunity to stimulate economic growth through financial services.

### **2.2.2.3 Financial Systems Structure**

Levine (2002) submits that issues of the structure of a financial system is another area that scholars have debated over a long time. Levine posits that many researchers argue that bank-

based financial systems are advantageously positioned to mobilise savings, identifying and allocating these savings to investments with the highest potential and executing good and sound corporate control in poor institutional environments and during the infancy stages of economic development. Levine further posits that other researchers are of the view that market-based systems are more efficient in the allocation of capital, provision of tools to diversify and manage risks and diluting the perceived power of some banks. He asserts that previous empirical studies on the comparative advantages of the above two financial system structures have centred on the UK and the USA as market-based systems and Japan and Germany as bank-based systems. A broad cross-country study was carried out by Levine to investigate the degree to which financial system structure affects economic growth or vice-versa and provides empirical evidence on the competing theoretical views on financial system structure (pp. 405-414).

Deltuvaite and Sineviciene (2014) studied the empirical relationship between the financial system structure and economic development of selected European Union countries. Deltuvaite and Sineviciene posited that financial systems in which banks are dominant in providing intermediation services are defined as bank-based financial systems whilst systems where financial markets are dominant are termed market-based systems. They carried out a comparative analysis of scientific literature on the subject and analysed the statistical data through a hierarchical cluster analysis and a correlation analysis. They deviated from the bivariate categorisation of the financial system by Demirgüç-Kunt and Levine (1999) and classified the financial system into three broad categories: market-based, bank-based and hybrid (which is a mixture of both market-based and bank-based systems) (Deltuvaite & Sineviciene, 2014, p. 534). The following variable indicators were used by Deltuvaite and Sineviciene in their empirical research: private credit by deposit money banks and other financial institutions to GDP, stock market capitalisation to GDP, private bond capitalisation to GDP and public bond market capitulation (p. 535). They concluded that bank-based financial systems were associated with the lowest GDP per capita whilst hybrid and market-based financial systems were linked to higher development levels (p. 536).

### **Bank-based view**

According to Levine (2002) the bank-based view places emphasis on the complementary role played by banks in the acquisition of information regarding individuals, enterprises and corporate managers which improves allocation of capital and the levels of exerting corporate governance. Banks mobilise resources whilst leveraging on economies of scale and providing

oversight to liquidity risk management which enhances investment efficiency. He concluded that those who support the bank-based view posit that market-based systems are disadvantaged in that in most cases, they reveal quickly and publicly information about market participants, which discourages investors to acquire relevant information. Researchers posit that banks on the contrary do not reveal information quickly into public markets as they do have long lasting relationships with firms and individuals. Banks are also posited to be in a better position to keep surveillance on firms and minimise post-lending moral hazard. Levine (2002) asserts that those who support the bank-based view argue that in liquid markets, investors can dispose of their shares at low cost and this becomes a disincentive to monitor and exert corporate governance control on borrowers. Significantly empowered banks can and do force repayment of debts by their borrowers more effectively. The bank-based view further asserts that subject to regulations, banks can benefit from scale economies in information processing (such as credit and collateral registries) which then minimises information asymmetry through effective monitoring. The formation of long-term acquaintances with borrowers further reduces asymmetric information on borrowers (Levine, 2002, pp. 399-400)

### **Market-based view**

Levine (2002) submits that advocates of the market-based view assert that properly functioning markets are more poised to give decent returns in markets through entering transactions based on market information. According to Levine, this provides incentives to researching and gathering of the relevant information. The possibility of corporate takeovers enhances corporate governance with its spill over effects of being able to monitor executive compensation and its relation to firm performance. This view also asserts that powerful banks can hinder innovation by protecting firms with close ties to the bank from competition. Subject to the level of regulatory restrictions, powerful banks may collude with corporate managers at the expense of other creditors and in the process, compromise corporate governance standards. Overall, this view asserts that the built-in inefficiencies related to banks will be reduced by the markets resulting in enhanced economic performance (Levine, 2002, p. 400).

### **Financial services view**

Levine (2002) emphasises that financial arrangements as in markets, contracts and financial intermediaries develop to improve the situation against market imperfections. Financial intermediaries then provide financial services with financial arrangements meant to appraise investment proposals, exert corporate oversight, simplify savings mobilisation, facilitate risk

management and improve liquidity. In line with this financial services view, Levine posits that the bank-based and the market-based views are as pertinent as profiled by other researchers, but the key issue is about establishing a conducive environment for financial intermediaries and markets to provide economy supportive and comprehensive financial services (p. 400).

Levine postulates that financial services view proponents, assert that finance generally is made of a series of defined contracts whose effectiveness is enhanced by transparent investor protection rights and legal regimes of contract enforcement. Levine further posits that it is the degree of financial services quality, derived and accorded through legal regimes that enhances the allocative efficiency of financial resources and growth in the economy. Levine submits that other researchers have argued that this was a better approach to describe financial systems rather than overemphasis on the financial system being bank-based or market-based.

#### **2.2.2.4 Financial System Characteristics**

The World Bank (2012b) prepared the Global Financial Development Database (GFDD) covering financial system characteristics of 205 countries over a period of fifty years (1960-2010) and the goal of their paper was to measure these characteristics for both financial institutions and financial markets. They devised and used what they termed ‘The 4X2 Matrix of Financial System Characteristics’ to measure and benchmark financial systems around the world (p. 16). These four characteristics described below have also become the financial development indicators used.

##### **Financial Depth**

The World Bank (2012b) posits that financial depth measures the size of financial intermediaries and private sector credit to GDP is the key proxy used under this characteristic while stock market capitalisation plus outstanding domestic private debt securities were used as a proxy for financial markets. Financial depth is a proxy for the magnitude of financial services supplied by the financial system (p. 30). For financial markets the stock market capitalisation plus the outstanding domestic private debt securities to GDP is the key proxy (p. 23).

##### **Financial Access**

The World Bank (2012b) asserts that the proxy variables for financial access under financial development is accounts per 1000 adults (+15 years), bank branches per 1000 adults, account at formal financial institution, people saved at financial institutions in the past and loan at

financial institutions in the past year (p. 26). The key proxy for financial markets is percent of market capitalisation outside of top 10 largest companies (p. 23).

### **Financial Efficiency**

The financial efficiency measure for financial institutions is primarily the net interest margin and this captures the cost of intermediating credit by financial institutions. Other supplementary measures include lending deposit rate spread, non-interest income to total income and profitability ratios. For financial markets the focus is on the stock market turnover ratio, which is the total stock value traded divided by total stock market capitalisation (World Bank, 2012b, p. 23).

### **Financial Stability**

The European Central Bank (ECB) defines financial stability *as a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances. This mitigates the likelihood of disruptions in the financial intermediation process that are severe enough to significantly impair the allocation of savings to profitable investment opportunities* (European Central Bank, 2012, p. 5).

Morgan and Pontines (2014) assert that the ECB further defines three considerations related to financial stability in that the financial system must effectively and smoothly intermediate resources from those with excess funds to viable investment projects and that financial risks must be assessed and appropriately priced followed by prudent management of the risks. The last consideration is that the financial system must be able to absorb shocks and surprises from the real economy and from within the financial sector (pp. 3-4). Morgan and Pontines cite Borio (2011) as having classified financial system risks into cross-sectional and time dimensions. The first dimension focuses on procyclicality of the financial system through the macro-financial channel in which there could be feedback loops between the financial system and the economy. The evolution of these feedback loops could emerge from a situation where there is a sudden drop in real estate asset values which would have been used as collateral for bank loans resulting in banks having to put through provisions against profits for potential non-performing loans and reducing lending levels. Decreased lending levels might then trigger further falls in real estate asset prices. A decrease in bank capital through provisions might lead to further reduced lending which may reduce productivity in the economy leading to further erosion of capital.

Morgan and Pontines (2014) further posit that similar effects would also emerge from currency mismatches through the exchange rate and balance sheet interactions or through maturity mismatches causing liquidity crises and subsequent “bank runs” due to lack of confidence in the financial system. The cross-sectional dimension focuses on risk distribution within the financial system and the attendant interlinkages of risk. There could be similar financial system exposures to the same asset class such as mortgages, counterparty risks exposures and exposures to systemically important financial institutions (SIFIs) (pp. 4-5).

The World Bank (2012b) speculates that the proxy for financial institution stability is the z-score or distance to default primarily comprising of capital adequacy ratios, asset quality ratios, liquidity ratios and others such as net foreign exchange position to capital. For financial markets volatility of the stock market is used as a proxy for financial stability (p. 23).

#### **2.2.2.5 Financial Development- Overall Measurement**

As indicated earlier in the literature, the financial services view posits that being bank-based or market-based was found to be of less importance in identifying financial systems that enhance growth. Levine (2002) proceeded further to measure overall financial development using indicators of size, activity and efficiency and these indicators were believed to be proxies for the level and extent that a financial system provides financial services such as mobilising resources, assessing borrowers and exerting control and easing risk management (p. 411).

Finance-Activity comprises the total value traded ratio in the case of stock markets and private credit ratio for financial intermediaries. Private credit ratio is defined in the study by Levine (2002) as the value of a financial system’s loans and advances to the private sector as a ratio of GDP and this ratio excluded loans and advances to the public sector. It was also noted in the study, that substituting private credit ratio for bank credit ratio did not alter the results significantly. Finance-Size is measured by market capitalisation ratio for the domestic stock market and the private credit ratio for the financial intermediaries. Previous studies have indicated that stock market activity as measured by the total value traded ratio was a better forecaster of economic growth rather than simply growth in market capitalisation (Levine, 2002, pp. 410-411).

Finance-Efficiency measures the efficiency of the financial sector with total value traded ratio being incorporated to represent the stock market component whilst the banking sector overhead costs as a ratio of banking system assets was used to proxy the efficiency of the banking sector.

Finance-Aggregate was used as a composite measure of financial development indicators of activity, size and efficiency (Levine, 2002, p. 411).

### **2.2.3 Financial Inclusion Theories**

The significance of financial inclusion is widely recognised in policy circles and Sarma (2010) suggests that financial inclusion is desirable because it facilitates close to equitable and efficient allocation of productive capital and improves the availability of credit amongst the country's citizens. Sarma posits that access to economically priced financial services improves the general management of poor households' finances including savings for education, health, micro-insurance and small business start-ups. Financial inclusion helps in curbing the emergence and growth of informal sources of credit which in the main tend to be exploitative and destructive to the economy. Sarma further asserts that financial inclusion enhances welfare and standards of living of poor households by availing opportunities for safe and secure savings and the capacity of these households to absorb financial shocks (pp. 1-3).

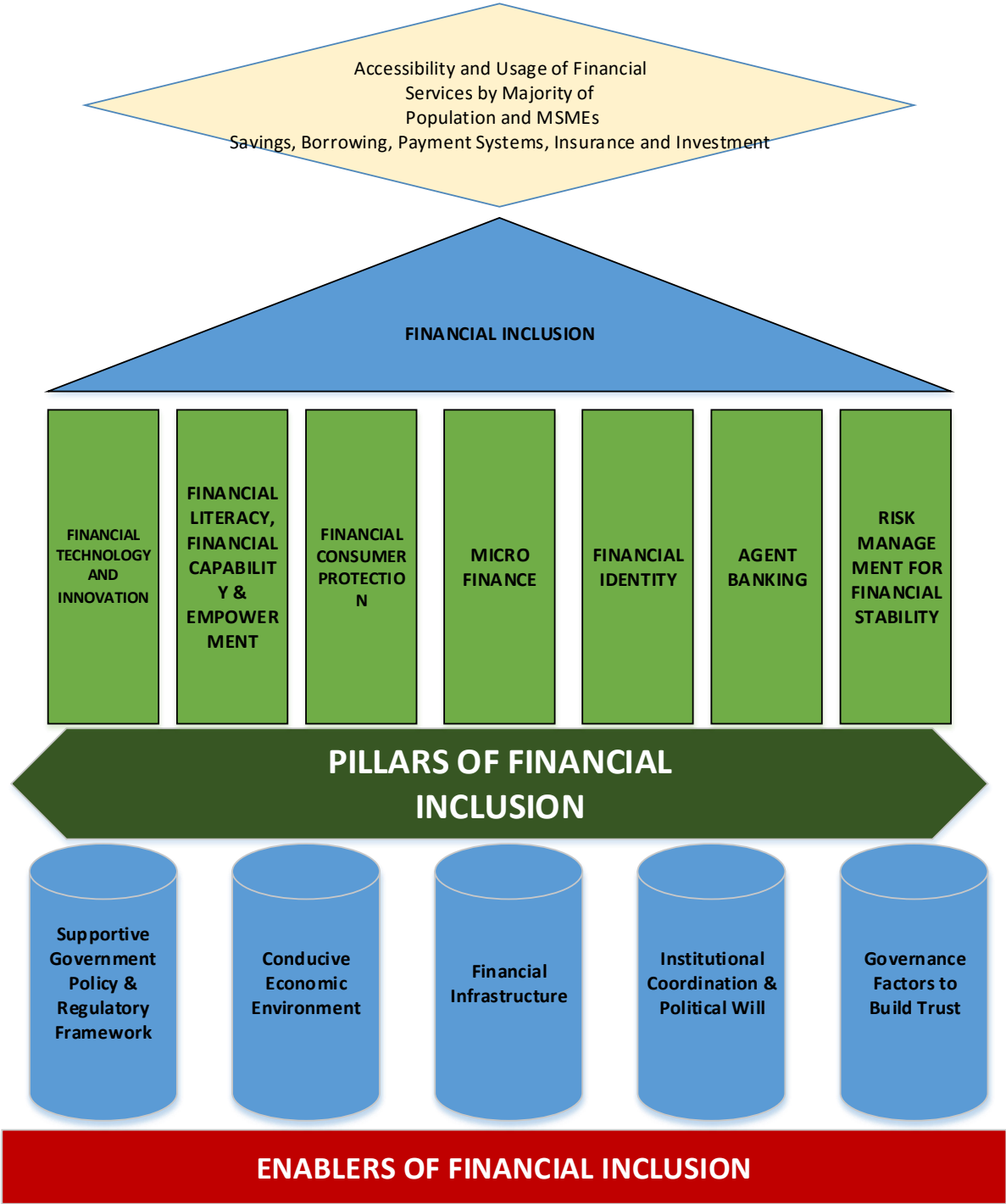
Sarma submits that on the contrary, there are also major forms of financial exclusion which to some extent, militate against financial inclusion and these include access exclusion referring to unavailability or remote availability of banking services for the poor and price exclusion due to the high and unaffordable cost of the financial services on offer. Other forms of exclusion include condition exclusion whereby the conditions attached to a financial service or product are inappropriate to attract the poor and marketing exclusion referring to situations where there is lack of outreach sales and marketing effort to the vulnerable groups of society. The last type is self-exclusion which refers to a situation where people may choose not to be financially included due to cultural, religious, psychological barriers and mistrust of the financial system amongst other reasons (Sarma, 2010, pp. 2-5). Financial exclusion, may be quite harmful as it may generate low levels of investment emanating from excluded people and small businesses failing to get formal credit and/or getting credit from the informal sector at economically suboptimal interest rates. Some economically viable projects from these poor people and the working capital requirements of their businesses may remain unfunded thus harming the economy due to lost opportunities. It is through the entry of new firms or expansion of existing ones that financial development in turn promotes economic growth. Most financial services are intermediated through banks, and hence banking inclusion can safely be assumed to be a proxy for financial inclusion (Chakravarty & Pal, 2010, pp. 1-3). However, literature on financial inclusion has limited measures which lack comprehensiveness to measure the extent of financial inclusion in an economy.

Serrao (2012) posits that the essence of financial inclusion is underpinned in the economics of development and growth. They opine that an optimally functioning financial system brings poor people to the mainstream economy and provides an opportunity for them to participate and contribute to economic development. Financial inclusion worldwide has been acknowledged as critical in reducing poverty and resulting in inclusive economic growth (pp. 1-2). When poor people are facilitated to access and participate in a nation's financial system, it empowers them to save and invest in business start-ups and to expand existing ventures. The people are also better able to manage risks and absorb financial shocks and to invest in human capital (education) and savings. Participation by poor people in a financial system alleviates income inequality whilst improving economic growth. Thus, many nations have begun to make financial inclusion a critical component of their financial sector development programmes (Demirgüç-Kunt, Klapper, Singer, & van Oudheusden, 2014, pp. 2-3).

### **2.2.3.1 Pillars of Financial Inclusion**

The RBZ (2016d) in its national financial inclusion strategy, identified financial innovation, financial literacy, financial consumer protection and microfinance as pillars of financial inclusion. These pillars are discussed below and are in this study, juxtaposed against trends and approaches per literature (p. 18). These pillars have however been adapted in line with various literature to include risk management and agent banking amongst others and are discussed below. Like the pillars of financial development, financial inclusion is also dependent on enabling conditions as shown in the figure 3 below.

**Figure 3: Pillars of Financial Inclusion**



Source: Adapted from (Reserve Bank of Zimbabwe, 2016c, p. 18)

## **Financial Technology and Innovation**

Hanning and Jansen (2010) argue that the most recent (2007-2008) financial crisis demonstrated that financial innovation can have desolating systemic risks with debilitating impact on a global scale. They argue that innovations in financial inclusion create opportunities that increase financial stability. Hanning and Jansen also posit that financial sectors have tendencies to suffer market failure since the low-income people particularly those seeking to borrow are blighted through information asymmetries and usually do not have a track record or collateral to allay the concerns of lending financial institutions. On the contrary, lenders at times do not have the expertise to exploit new business opportunities unfolding at the “bottom of the pyramid”. The small size of transactions of low-income people creates challenges to lenders as they may fail to recover fixed costs with such transactions. Financial and business model innovations are therefore critical to enable lenders to tap into vast opportunities in financial inclusion. Technological innovations have lowered transaction costs of serving the poor and unbanked market that was considered an unviable sector in the past. (Hanning & Jansen, 2010, pp. 13-14).

## **Digital Financial Services**

The Global Partnership for Financial Inclusion (GPFI) (2016) suggests that digital financial inclusion is about use of digital financial services to advance financial inclusion. It necessitates the distribution of digital means to cover the financially excluded and under-served people with a wide spectrum of formal financial services tailor-made to suit their needs. These financial services must be delivered in a responsible manner, at an affordable cost to customers and which cost is also viable and sustainable for providers (GPFI, 2016, p. 3). GPFI postulates that digitalisation of financial services achieves huge reductions of costs and enhances transparency of remittances thus improving the opportunities for fast and safe international remittances for diaspora and migrant communities. Digitising also enhances greater control over household finances and budgeting thus increasing women’s emancipation through financial inclusion (World Bank, 2014c, p. ii. In a study by the World Bank Research Group (World Bank, 2014c) they found evidence that a broader adoption of digitalisation reduces the costs and physical barriers that have plagued important financial inclusion initiatives. The World Bank asserts that digital platforms provide scope to speedily ramp up access to financial services through mobile phones, retail point of sale machines and other similar access points. It further asserts that digital payments, if adopted by governments and employers for payments of procurement, pensions and other welfare benefits enhance confidentiality, convenience and can help speedily increase

financial inclusion. Furthermore, digital payments provide an opportunity for women to open accounts in their own names thus creating an opportunity to enter the formal financial sector. Digital payments have numerous benefits for remitters, receivers and owners of digital platforms. Changing from cash to digital payments makes the process more efficient by decreasing transaction costs and enhancing the individuals' capability to manage risk, increases the confidentiality of payments (World Bank, 2014c). In Kenya and Tanzania, technological advancement through mobile banking products is posited to have reduced transaction costs of financial services thus reducing the levels of exclusion. Regulatory reforms were also made to facilitate interoperability of mobile network operators (MNOs) and this further reduced costs through increased competition and wider access of financial services (Alter & Yontcheva, 2015, pp. 12-18).

### **Agent Banking**

Hanning and Jansen (2010) posit that regulators around the world have developed frameworks which facilitate financial institutions to collaborate with non-bank retail agents as service outlets for provision of financial services. Hanning and Jansen further posit that these frameworks are optimising on existing retail substructures such as supermarkets and pharmacies which have been converted into banking agents to provide financial services. They opined that these policies have succeeded in promoting financial inclusion particularly in areas where constructing bank branches was not economically viable. This approach has delivered huge cost savings and has prompted banks to relax their bank account opening procedures (pp. 14-15).

Macmillan (2016) posits that agent banking has introduced branchless banking and has promoted traditional banks penetration using agent networks. The change over from physical cash to mobile transfers and payments have significantly increased the speed of payments and brought down the cost of receiving and sending money. Macmillan postulates that security of cash was found to be a key benefit when dealing with remittances which was previously vulnerable to theft or robberies particularly when remitting to rural areas. It also meant that customers with bank accounts can also transfer money to unbanked people directly to their mobile wallets thereby increasing financial inclusion (pp. 15-16).

## **Financial Identity**

Hanning and Jansen (2010) submit that some countries credit registries only provide credit information basing on proposed loan amounts being above a certain threshold and that approach excludes the poor customers from benefitting from a reduction in the acquisition of information that lending institutions would have achieved. They posit that in most cases, the poor and low-income groups do not have the requisite documentation to enable a bank account to be opened. It is further posited that policies are required that would reduce the information and documentation gap to enable the poor to access appropriate financial services and then create and transform their credit history into a financial asset. Their created credit history can be used to leverage access to other banking services including credit (Hanning & Jansen, 2010, pp. 19-20). Governments and regulatory bodies would have to determine the risk appetite they would be comfortable with in addressing the need to reduce documentation barriers to financial inclusion. Hanning and Jansen assert that to ameliorate identification and credit risks, Indonesia are posited to have begun to collect information on low income borrowers from the informal financial sector whilst India has relaxed know-your-customer requirements to facilitate creation of low risk and basic bank accounts for the poor. The key issues however that still require innovation are issues to do with anti-money laundering and combating the financing of terrorism (CFT) which must be reconciled with financial inclusion innovations (pp. 19-20).

## **Financial Literacy and Financial Capability**

Financial literacy has been identified as a barrier to financial inclusion as already discussed earlier in this study. Alliance for Financial Inclusion & Central Bank of Armenia (2017), developed a financial capability barometer along similar lines to that of the Organisation for Economic Co-operation and Development (OECD) and the World Bank to measure financial capability of the adult population in the respective member countries. Determining financial capability is discerned as a critical part of financial education policy making. According to AFI, the definition of a financially capable person is *“a person who has the knowledge, abilities, skills and culture, which give them the opportunity to be informed, make responsible decisions about their personal finances, and take the right actions according to the situation”* (p. 4). AFI used its financial capability barometer to measure the financial capability of the population of Armenia using a scoring matrix comprising of four components and five thematic areas and synthesised the result into a financial capability index.

The four components comprised of knowledge which they asserted to be the most important component of financial capability and is formed through information flows from relatives, friends, mass media or experience and education and training. Whatever is retained by a person adds to knowledge. Knowledge is therefore defined as the stock of information on any matter or subject that a person retains. The second component was skill which was defined as the capacity and ability to use their financial knowledge to best advantage. Attitude was also included and defined as the disposition and zeal to use financial knowledge. The last component was behaviour which was defined as the practical application of skills, knowledge and attitude to daily financial decisions (Alliance for Financial Inclusion & Central Bank of Armenia, 2017, p. 5).

### **Financial Consumer Protection and Empowerment**

The World Bank (2015c) asserts that the constituting of an effective financial consumer protection framework is critical to increasing access, usage and quality of financial services and this facilitates improved financial sector deepening. Consumer protection is asserted to be a necessary condition precedent in building public trust in the financial system and that trust spurs financial inclusion and the economy. The World Bank submits that necessity for financial consumer protection emanates out of the information asymmetry and dissymmetry of power and resources between the consumers of financial services and the providers that puts consumers at a disadvantage. Delivery of financial consumer protection is generally through financial prudential regulation, financial literacy education and market competition policies. The World Bank further posits that financial markets and government policies are required to safeguard that consumers are aware of market conditions, consumers' information search costs are subjugated, concealed costs are elucidated and that comparable information is timeously provided to consumers of financial services. Notwithstanding these policies, the key issue is on building the trust of consumers in the financial system which requires much more including other policies to prevent fraudulent and misleading marketing practices.

The World Bank (2012a) submits that, until the financial crisis of 2007-2009, the global financial services sector was increasing its consumer base by 150 million customers each year (p. 1) and this trend necessitated the strengthening of financial regulation and consumer education to empower and protect consumers. Financial consumer protection objectives are meant to give the consumers adequate information to make informed and prudent decisions, protect them from delusory and unfair practices and to ensure that they have recourse to dispute

resolution mechanisms. The World Bank further asserts that the international community has also strengthened its resolve to improve frameworks for consumer protection and in October 2011, the G20 issued its “High-Level Principles on Financial Consumer Protection” (p. 2). The World Bank also supported this international dialogue by publishing international best practice in financial consumer protection and highlights of these practices are reviewed in this study.

The World Bank (2015c) carried out a diagnostic review of consumer protection and financial literacy (CPFL) framework in Zimbabwe in July 2015. The CPFL review specifically addressed the legal and regulatory framework, institutional arrangements, business practices, transparency and disclosure, complaints handling and dispute resolution mechanisms and finally financial literacy and capability. The survey covered all components of Zimbabwe’s financial sector including banking, non-bank credit institutions, credit reporting aspects, insurance, stock market, private pensions and digital financial services (p. 1). Consumer protection was found to be of vital importance and relevance to the Zimbabwean situation given the low levels of financial inclusion and its persistent financial sector fragility. Zimbabwe was also experiencing rapid expansion in digital financial services. It was also found that these mobile financial services, whilst facilitating financial inclusion might bring complexities and risks to the payment system and could potentially destabilise the financial system. The World Bank survey covered all the good practice categories of financial consumer protection and these comprised consumer protection institutions, disclosure and sales practices, dispute resolution mechanisms, guarantee schemes and insolvency, consumer empowerment and financial literacy, competition and consumer protection, privacy and data protection and customer account handling and maintenance.

### **Micro, Small and Medium Enterprises (MSMEs) and Microfinance**

Stein, Bilandzic and Hommes (2013) posit that MSMEs are key drivers of employment around the world and contribute 66% of the jobs available in developing countries. Africa is asserted to have 50 million MSMEs and 69% of these conduct businesses in the informal sector (p. 65). These enterprises contribute 33% of Africa’s GDP and 58% to employment thus making an important socio-economic growth contribution to the continent. MSMEs are therefore critical to job and value creation and are at the pulse of African economies (p. 65). MSMEs are therefore a key pillar of financial inclusion.

## **Gender and Women Financial Inclusion**

The Global Financial Development Report (GFDR) (World Bank, 2014b) posits that women owned enterprises in developing economies, are relatively smaller than man owned firms and tend to grow at a slower rate due to issues to do with access to financial services and challenges that women face. In some countries, the GFDR asserts that regulatory mandates, laws and cultural beliefs prevent women from participating in financial arrangements and contracts. The GFDR further asserts that even if offered access to financing, some institutions require male guarantors to grant loans. Some challenges faced by women in accessing finance are determined by gender differences in such factors as business experience, income and education all of which influence the bank's willingness to lend money thus practising gender discrimination (World Bank, 2014b).

According to the 2016 AFI Global Policy Forum Report (AFI, 2016), there is a 9% gender gap in ownership of bank accounts between man and women in developing countries (p. 42) and this is attributed to challenges that women experience in accessing financial services such as lack collateral assets, lower educational status and financial literacy, work and family responsibilities and physical distances to rural area branches of financial institutions. The 2016 AFI Global Policy Forum developed the 'Denarau Action Plan on Gender and Women's Financial Inclusion' which included among others, collaborating government agencies, development partners and civil society to identify gender-specific barriers affecting financial inclusion of women and understand specific gender differences relating to product development. The plan further recommended the business case for the financial inclusion of women and creation of a supportive and enabling environment to increase women's financial inclusion (pp. 42-45).

### **2.2.3.2 Access to Financial Services**

The GFDR (World Bank, 2014b) posits that optimally operating and inclusive financial systems provide a critical service by offering payment, savings, risk management and credit services to firms and individuals that use these financial services. The report further posits that, financial exclusion leads to perpetuation of poverty. It is due to frictions in financial markets that create unconducive environments where the poor people cannot invest in their education or entrepreneurial dreams thus impacting the occupational choices of poor people to be small business operators or employees if they can find a job. Financial inclusion makes it possible for individuals to benefit from their business opportunities, save for retirement, invest in their

children's education, absorb financial shocks and micro-insure against risks. Financial services relating to access to credit may however have inherent risks in that some poor people may become over borrowed which creates a debt trap. In most economies, there are users of financial services and non-users of formal financial services and the latter group can be divided into those who voluntarily exclude themselves and others who are involuntarily excluded from the financial system. According to the GFDR, those involuntarily excluded have cited insufficient income, high risk, weak contract enforcement, discrimination, product features and price barriers caused by market imperfections as reasons for exclusion. The voluntary exclusion category cited issues such as having indirect access through a family member, having no need for financial services, cultural and religious reasons for not using the financial services (World Bank, 2014b, pp. 15-17).

### **2.2.3.3 Financial Sector Barriers to Financial Inclusion**

The RBZ (2016d) categorised the major barriers to financial inclusion for the whole financial services sector into demand-side, supply-side and regulatory barriers from Finscope Surveys 2011 and 2014 (p. 30). The demand side barriers were posited to be irregular income streams, low income levels, stringent minimum account opening requirements, financial illiteracy, lack of information on financial services and the respective appropriate products and uncompromising and rigid implementation of Anti-Money Laundering (AML) and Counter-Terrorism Financing (CTF) regulations (p. 50). RBZ postulates that the supply-side participants cited absence of strong credit information systems and poor infrastructure in rural areas as major causes why financial institutions were unwilling to set up branches. RBZ also asserts that financial institutions do not comprehend the dynamics of projects being promoted by poor people and they do not have the skills to facilitate access to financial services by the poor. The last category of barriers is regulatory in nature and these include lack of a practical and coordinated financial inclusion national policy and strategy, poor consumer protection regulatory framework and capacity and resource constraints (RBZ, 2016d).

### **Barriers of Moral Hazard and Adverse Selection in Credit Markets**

The GFDR (World Bank, 2014b) asserts that notwithstanding the above barriers to financial inclusion, it should be noted that the financial sector, particularly credit and insurance markets are fraught with information problems that could cause credit rationing and financial exclusion even if the market is in equilibrium. The GFDR argues that there are huge principal-agent problems such as moral hazard where the borrower might, after receiving a loan, use the funds

for different purposes that are not in the interests of the lenders. The report further asserts that there could also be adverse selection problems in that borrowers who are intent on not re-paying the loans are the more willing to access external financing. In considering those who are financially excluded, the World Bank asserts that a distinction needs to be made between those who face price barriers and financial exclusion emanating from high levels of idiosyncratic risk or poor project quality as well as those facing barriers related to market imperfections such as asymmetric information. Credit rationing may also arise due to high interest rates and bank charges as these alter project return profiles and thus impact on capacity to repay the loan. It is opined that higher interest rates tend to attract borrowers who are higher risk hence adverse selection and these borrowers then change the motivation for re-payment thus creating a moral hazard (World Bank, 2014b, p. 17).

### **Capital Markets Barriers**

Low confidence in the capital markets, illiquidity of the Zimbabwe stock market and an underdeveloped secondary market were cited by RBZ (2016d), as some of the barriers (p. 31). The local capital markets were found in the Finscope Surveys to be inadequately diversified to cater for the needs of those at the bottom of the pyramid given their low disposable incomes and there was general lack of awareness of financial services products in this market (p. 31). Another interesting barrier which came out of Finscope Surveys was the issue of lack of investor protection and the author believes that Zimbabwe must put policies in place that changes this reality to be positive (RBZ, 2016d, p. 31).

### **Insurance and Pension Sector Barriers**

The barriers identified for this sub-sector were the low level of confidence in providers of pension and insurance services, perceived inadequacy of the regulatory and legal framework for the sector and lack of innovation by service providers to devise pro-poor risk management products. As with all the other sub-sectors, low disposable incomes, low levels of financial literacy and lack of accessibility of products were also cited. The last barrier identified was the high costs of product and service distribution (RBZ, 2016d, p. 32).

### **MSME Sector Barriers**

The major barriers noted for this sector by RBZ (2016d), were low income levels in the MSME sector and the irregular income to support regular and consistent loan repayment terms and other financial covenants as well as lack of product and service awareness. It was also posited

that there were information asymmetries associated with funding alternatives available to the MSME sector including cooperatives. The other key deterrent was the high and non-competitive interest rates and bank charges (RBZ, 2016d, p. 32).

According to Stein, Bilandzic and Hommes (2013) access to finance is cited as a key constraint to MSMEs development in Africa and in interviews carried out with 29 leading financial institutions in 6 emerging markets around the world, MSME's poor business value propositions were reported to be the major reason for declining to grant credit (p. 68). It is further asserted that lack of credit information systems and collateral registries increase information asymmetries and poor capacity building and lack of business development activities contribute to financial exclusion of MSMEs (pp. 68-69). The GFDR (World Bank, 2014b), posits that most developing countries do not have effective insolvency regimes and frameworks that ensure certainty in credit markets and orderly resolutions of financially distressed MSMEs and recovery of debts. Subject to the above constraints there were however opportunities in the areas of leasing, guarantees and bonds, debt factoring, value chain financing and depending on size or scale attracting private equity finances, venture capitalist and angel investors (pp. 125-133).

## **2.3 Empirical Literature**

### **2.3.1 Financial System Functions**

Levine (1997) postulates that the degree of financial development is a sound forecaster of future rates of economic growth, technological change and capital accumulation. It therefore becomes imperative to establish the channels through which a financial system impacts on or is impacted by economic growth. Levine submits that theory indicates that institutions, financial markets and attendant financial instruments originate to extenuate the consequences of information costs and transaction costs (pp. 688-689). These market frictions also incorporate the costs of enforcing contracts, acquiring information and the interchange of goods and financial claims. The effectiveness of a financial system to keep down information and transaction costs determines the level of savings rates, technological innovation, investment decisions and growth rates in the long term (p. 689). Levine further postulates that the financial system functional approach also focuses on the link between economic growth and the degree of quality of the functions of a financial system. Levine asserts that financial system functions include mobilising savings, allocating capital to projects, exerting corporate control on borrowers,

facilitating the exchange of goods and products, financial contracts, and facilitating the trading of risk. The emergence of financial intermediaries and financial markets is in direct response to address challenges caused by market frictions between information and transaction costs (Levine, 1997, pp. 689-690). Adjasi and Biekpe (2006) in their study on the effects of stock markets development on economic growth in 14 countries in Africa and using a panel data modelling approach and the GMM estimation method, found compelling evidence that there was an incontrovertible relationship between economic growth and stock markets development. Adjasi and Biekpe posit that the liquidity of stock markets enables firms to source capital expeditiously thus facilitating the allocation of capital to investment projects which fosters economic growth. They further assert that, simplicity within which shares are traded on stock markets makes it easy for participants to mitigate investment risk and investors are also able to deal with idiosyncratic risk by facilitating firms to hold diversified portfolios. Adjasi and Biekpe posit that the diversification of risk enhances investment in high risk and high return projects which then influences economic growth. They assert that their findings are in sync with other scholars that stock markets determine economic growth through several channels such as acquisition of information about firms, liquidity, risk diversification, savings mobilisation and corporate governance. They found however, that the value of shares traded as a ratio of GDP and market capitalisation to GDP influenced economic growth but only for those African countries categorised as upper middle income and in reasonably capitalised stock markets (Adjasi & Biekpe, 2006, pp. 146-153).

Tennant, Kirton and Abdulkadri (2011) conducted a study and modelled the effects of each of the five financial sector functions (as posited by Levine, 1997) on economic growth using Jamaica as the unit of analysis. Using cointegration and the error correction method, they developed proxies for each of the functions of the financial system as discussed under the respective function subheadings and modelled the linkage between the functioning of the financial system and economic growth to understand the channels through which each of the functions of the financial sector impacts economic growth (p. 198). The study concluded that the two functions of mobilising resources and evaluating projects and allocating capital had the largest impact on economic growth. Risk diversification and exerting corporate control had a smaller impact. Their findings on the function of ease of trading as proxied by stock market liquidity were at variance with the predictions of Levine (1997) and with conclusions by Adjasi and Biekpe (2006). They found that increased stock market liquidity may have a small adverse impact on economic growth and its positive impact on growth is not guaranteed. The ease with

which investors can disinvest from a stock market might cause short-sightedness and dampen investor's commitment to economic performance. Instead of exerting corporate control and demanding performance stock market investors would simply disinvest (Tennant, Kirton, & Abdulkadri, 2011, pp. 198-199).

### **Acquiring Information about Possible Investments and Allocating Capital**

Levine (1997) postulates that households and other savers in an economy do not always have the time, means and capacity to acquire and process information about potential borrowers. Due to this challenge savers, would be unwilling to invest in projects in which they do not have sufficient and reliable information (p. 694). The high costs of acquiring information would avoid capital from flowing to projects with the highest returns. Levine submits that these high costs of acquiring information create an inducement for financial intermediaries. Individual investors may not afford these fixed costs and may also not have skills to evaluate the prospective projects. Financial intermediaries have the capacity to economise on the acquisition costs of information about new projects and to process and evaluate the feasibility of same. Levine further postulate that this capacity by financial intermediaries, results in the optimal allocation of resources in some cases to new technologies and quicker economic growth. Financial intermediaries' capacity to identify bankable technologies and those entrepreneurs with capacity to execute such projects boosts the rate of technological advancement (p. 695).

Levine (1997) suggests that stock markets also have the capacity to acquire and process information about listed stocks and as stock markets become bigger and more liquid, players in the market are induced to investigate and acquire information on target firms. The improved quality of information acquired optimises resource allocation with comparable significance for growth of the economy. Stock markets broadcast information on stock prices ( p. 696). Debates are still ongoing as to whether large and liquid and efficient stock markets promote the creation and dissemination of information about listed stocks which leads to long-run economic growth (pp. 694-696). Tennant, Kirton and Abdulkadri (2011) however posit that due to unavailability of data it is difficult to have a proxy for information acquisition costs which information would facilitate resource allocation/investment into the most promising projects. They suggest financial systems that just advance loans to their governments are not efficiently allocating resources to the most promising projects. Therefore, a proxy used for resource allocation was credit to private sector production/total loans (p. 188).

### **Monitoring Investments and Exerting Corporate Governance**

Financial intermediaries, financial contracts and markets also emerge to mitigate the high costs of information acquisition and contract enforcement costs of monitoring managers and exerting corporate governance controls after financing the projects (Levine, 1997, p. 696). Levine asserts that shareholders will advocate for financial systems that obligate managers of firms to operate the business in the best interests of the shareholders. He contends that lenders such as banks, bondholders and other creditors not directly involved in running the business will make financial arrangements that obligate shareholders and managers to govern the business in a manner that protects the interest of creditors. Levine posits that lack of such financial arrangements to exert corporate control will hinder the mobilisation of savings from individual savers and thus limiting funding to profitable projects. He further ventures that these frictions induce financial development. He asserts that shareholders and managers have incentives to manipulate information about the performance of the firm to outside stakeholders and it is not cost effective for outsiders to monitor in detail all projects and activities of a firm. Under the circumstances, the most optimal arrangement becomes a debt contract between the firm and outsiders (p. 696). In a situation where project returns are low and insufficient, a borrower defaults and the verification and monitoring costs are paid for by lenders and hence the need for financial and collateral contracts which lower the costs of enforcement and monitoring (pp. 696-697). Levine submits that this then reduces the hindrances to effective investment. Financial intermediaries economise on these costs as they mobilise savings from various savers and lend composite amounts to projects thus saving individual savers from these high costs. However, Levine postulates that the other concern of savers is about who monitors the financial intermediaries and whether there will be financial stability such that they can continue receiving their deposits on demand. He argues that a financial intermediary with a diversified portfolio can always meet the cash withdrawal demands of its depositors such that the depositor does not have to monitor activity. As financial intermediaries develop long term relationships with borrowers and depositors it lowers the costs of acquiring information and information asymmetries (p. 697).

Levine (1997) argues that stock markets also facilitate corporate control by publishing stock prices of listed firms and shareholders can link managerial compensation to stock price performance. He ventures that this linkage aligns the interest of shareholders and managers. Stock markets (well developed) facilitate takeovers and mergers of underperforming firms and

these provide for dismissal of underperforming managers thus exerting corporate control. Levine suggests however that there are doubts as to the importance of stock markets in exerting corporate control. Information asymmetry may compromise the stock market as a vehicle for exerting corporate control because in a take-over inside shareholders and managers have more information about the firm than outsiders and prospective new buyers of the firm (pp. 697-698). Levine argues that usually existing managers of the firm engage in strategic moves to deter the take-over exacerbating information asymmetry. In some circumstances this may lead to hostile takeovers which destroy firm value leading to inefficiency of resource allocation. If the takeover bidding firm spend huge amounts researching a target firm, other market players will free-ride on that and will obtain the information less expensively when the potential acquiring firm announces its bid price. Using the bid price as an indicator, other firms can also bid for the same target (Levine, 1997, p. 698).

### **Trading, Diversification and Management of Risk**

Tennant et al. (2011) assert that financial institutions ameliorate diversification and management of risk such as liquidity and idiosyncratic risks. They further assert that liquidity risks are addressed through offering various small denomination instruments for savings when mobilising savings. Tennant et al. argue that the savings proxy has already captured the effectiveness of financial institutions in mobilising savings, thus addressing the liquidity risk. The proxy for this function therefore focusses on idiosyncratic risk. Financial institutions minimise idiosyncratic risk by holding diversified portfolios of loans and financial investments (pp. 186-188).

### **Mobilising Savings**

Levine (1997) posits that saving mobilisation of many different savers is pricy because of the necessity to collect savings from disparate individuals and households as well as surmount information asymmetries linked to depositors to make them have confidence to release their savings and cede control to intermediaries. Mobilising savings necessitates an array of transaction costs and financial intermediaries must convince savers about the soundness of saving with them, hence intermediaries also focus on branding and their reputations so that savers gain confidence. Due to the multiplicity and magnitude of costs associated with mobilising savers these frictions induce financial arrangements to aid pooling of savings. Financial systems that are efficient in mobilising savings can positively impact financial and

economic development through capital accumulation and resource allocation thus boosting technological innovation (pp. 698-700).

### **Facilitating the Exchange of Goods, Services and Financial Instruments**

Tennant et al. (2011) suggest that another financial sector function espoused by Levine (1997) is that of facilitating exchange of goods and services also known as ease of trading. This function relates to the level of monetisation in the economy and the liquidity of the stock market. Other researchers have argued that liquid stock markets reduce the negative influence of investing in long-term projects because investors can enter and exit at short notice (Tennant, Kirton, & Abdulkadri, 2011, p. 190). The proxy used for ease of trading was therefore the value of shares traded as a percentage of GDP).

### **2.3.2 Politics of Financial Development**

In a study by Roe and Siegel (2011) compelling evidence was found that political instability hinders financial development and that its fluctuation was a determining factor in disparities in financial development across countries. Roe and Siegel assert that it is widely believed that financial development is critical to foster wealth creation and national development. They further posit that this belief has caused international development agencies to support financial markets development by strengthening a country's institutions, particularly those institutions associated with investor protection expecting that financial development will follow suit. Roe and Siegel submit that, notwithstanding efforts to support financial market development, variations in financial development across countries and causes of such variations have been linked to a country's legal system, its legacy of colonial endowments, its trade openness and its legal origin. The results of their study also indicate that circumstances that sustain economic inequality do pose an exogenous effect on political stability and by extension, the political instability retards financial development (pp. 279-280). Investor protection institutions include courts, the legislature and the regulatory structures. Roe and Siegel posit that these cannot operate well in a political environment that is not stable and it is such instability that then becomes the channel through which financial development retardation is caused. They further submit that the degree of economic inequality in frail democracies were observed as the root cause of political instability and the investor protection institutions protect those who are closely associated with the political elites. Roe and Siegel in their study found evidence that financial development retardation causality channel runs from lack of equality to political instability to weak financial systems. Considering the above findings, they posit that institutions of investor protection cannot operate optimally where economic inequality causes unstable and

undemocratic government. They further argue that political disorder strongly explains the variations in financial development across countries. Roe and Siegel assert that the political instability channel explains why some governments are not as willing to strengthen investor protection institutions and is therefore a key and first-order channel to financial development retardation. However, the political economy argument applies more to inequality induced undemocratic policies in developing and transition economies rather than to the wealthy western countries (pp. 280-283). Roe and Siegel contend that theory views common law systems as being strong in developing sound investor protection institutions with adept legal remedies whilst civil law countries, such as France, are renowned for preferring to protect incumbent interests and sabotaging new entrants to minimise competition. They also posit that under the colonial endowments view, it is argued that former colonies that developed through agriculture or extractive industries operated by an elite minority group, employing a huge number of unskilled labour generally have weak property rights. On the contrary, some scholars argue that colonies that were settled by migrants tend to have firmer property rights systems, robust educational cultures and robust economic and financial development (Roe & Siegel, 2011, pp. 282-283).

Roe and Siegel (2011) concluded that political instability explains variations in financial development across countries and that political instability inhibits financial development independently of other explanations for variations in financial development. Financial backwardness was found to be firmly anchored in deep political instability (p. 307). The study further asserts that conditions that perpetuate inequality which then cause political instability and weak democratic polity are impediments to initiatives by development agencies that aim to support countries to promote financial development such as the World Bank (p. 279). The study therefore argues that political instability must be added to conditioning variables that affect financial development and financial inclusion.

### **2.3.3 Nexus between Financial Inclusion and Financial Development**

Adnan (2011) posits that more financial development in a country results in broad availability of financial services and if a financial system provides increased accessibility to financial services it is an important step towards financial development and to some extent this may link with financial inclusion.

Allen et al. (2014) researched on key issues affecting African financial development and financial inclusion and sought to evaluate whether there were gaps between the two and to

distinguish factors that have a significant impact on financial development and financial inclusion in Africa more than in developing countries. They further reviewed innovations and financial services that could mitigate infrastructural challenges to enhance financial access. Allen et al. also focussed on mobile banking and electronic payment as areas where Africa had made significant progress in achieving some of the financial development and financial inclusion product innovations. They posited that mobile banking facilitates financial transactions through receiving money and storing value and making transfer payments to other users. This aspect partially meets the functions of financial intermediaries of facilitating exchange of goods and services. Kenya was cited as an example where its M-Pesa mobile product had reduced transaction costs in payment transfers resulting in significant increased volumes and decreased the use of informal savings products and enhancing the chances of being formally banked (Allen, et al., 2014, pp. 3-4). Allen et al. (2014) used regression analysis to evaluate the degree and variation of financial inclusion and financial development across countries employing some of the variables that have been used to measure financial development by other scholars. Macroeconomic variables such as GDP per capita and growth and institutional development measures were also included in their models. Financial development variables included were the ratio of banking system liquid liabilities to GDP and the ratio of credit to private sector to GDP. Allen et al. justified that the banking system holds most financial sector assets and hence their analysis was rooted in banking indicators. The financial inclusion indicators were the percentage of adults that had an account at a formal financial institution and the percentage of adults who had obtained a loan from a financial institution in the prior year to the survey. The other three indicator variables used by Allen et al. were related to mobile phone transactions spanning from the percentage of adults who use mobile phones to receive money, to send money and settle bills (pp. 5-7).

The results of the Allen et al. (2014) study found convincing evidence that levels of financial development and financial inclusion remain low in Africa compared to other developing nations and after benchmarking the correlates of financial inclusion and financial development the results revealed huge gaps between predicted levels and actual levels of African financial development and financial inclusion. Population density was found to be important in Africa because it affected physical bank branch penetration ratio as banks found it difficult to achieve viable scales in serving sparsely populated low-income areas. However, technological innovation such as mobile banking has provided a solution whereby those living far away from their bankers can still access financial services (Allen, et al., 2014, pp. 14-16).

Rasheed, Law, Chin & Habibullah (2016) studied whether financial inclusion could foster financial development and analysed the determining factors of financial development employing the generalised methods of moment system (GMM) for the period 2004-2012. Specifically, they tested the hypotheses whether financial inclusion had an impact on financial development analysing a panel of 97 countries including Zimbabwe. In their model, they included real GDP as the control variable for financial development as they claimed that literature was abound proving that real GDP per capita fosters financial development (p. 332). The Rasheed et al. (2016) study also used domestic credit to private sector as a bank-based indicator of financial development and the stock traded indicator as a market based indicator of same and both indicators were expressed as a percentage of GDP. For financial inclusion, the study used the number of commercial bank branches per 100 000 adults and the number of ATMs per 100 000 adults. Public debt as a percentage of GDP was incorporated into the model as well as trade openness indicators as represented by the sum of exports and imports together with measures of financial openness. Finally, the study included institutional conditioning variables comprising control of corruption, political stability, government effectiveness, regulatory quality, rule of law and voice and accountability. The data for the institutional variables was sourced from World Development Indicators database (p. 355). As for the empirical strategy and model, Rasheed et al. posit that they made maximum of use of both the time series and cross-country regressions of the available data. The methodology then used a Dynamic Panel GMM estimation inclusive of other supplementary procedures such as the Sargan test to know the over identification restriction (OIR) and treat it accordingly. The empirical results of their study concluded that financial inclusion was a significant determinant of financial development and that the impact of financial inclusion on financial development was positive and significant. The GDP per capita was found to have a positive and significant relationship with financial development and thus promoting financial inclusion, financial development and economic development. The results also suggested that an increase in the number of bank branches and ATMs significantly improve financial institution development and on the contrary, financial inclusion was found to be insignificantly related to stock market development (pp. 330, 344-345).

Čihák et al. (2016) posit that financial stability as a key element of financial development and financial inclusion are topical issues on policy makers' schedules of matters to be attended to. The G-20 has facilitated the Maya Declaration and the GPMI to focus on advancing financial

inclusion and lobbied for commitments to advance financial stability through structures such as the Financial Stability Board and Basel III implementation (Čihák et al., 2012, p. 2). Čihák et al. (2016) posit that greater levels of financial inclusion through rapid credit growth for the poor and MSMEs may cause financial instability because not every individual or MSME is creditworthy or has the capacity to handle credit. This was aptly demonstrated by the sub-prime mortgage challenges in the United States and the Andhra Pradesh crises of microfinance institutions in India (p. 2). Čihák et al. (2016) conducted a study on the link between financial inclusion and financial stability as well as establishing the associated trade-offs and synergies. In summary, their key question was whether financial inclusion threatens financial stability. They selected indicators to measure the two constructs and used correlations and other non-parametric tools to measure the dependence of financial inclusion and financial stability. Financial stability variables broadly defined include resilience of the financial system, volatility and the low probability of events that could cause a financial crisis. Financial inclusion variables included the use of financial services (account ownership, payments credit and insurance) for both individuals and firms. To measure financial resilience, they used proxies for financial solvency such as capital ratios, the Z score and the financial institutions liquidity positions and exposure to credit. To factor in liquidity risk, they considered liquidity risk exposure and ration of credit provisioning to bank deposits amongst other variables (Čihák et al., 2016, pp. 5-7).

Čihák et al. (2016) found evidence that increased financial inclusion, if biased more towards excessive borrowing by individuals could cause the risk of a financial crises or unexpected losses. However, promoting financial inclusion in deposits, insurance and electronic payments only, may not have a negative impact on financial stability. Previous studies have shown that the financial development and financial inclusion nexus is largely influenced by fiscal freedom, education, depth of credit information systems and financial openness (pp. 2-4). Čihák et al. submit that other researchers have argued lending funds to MSMEs lowers the levels of non-performing loans and the possibility of defaulting by credit institutions as diversified loans to MSMEs presents less systemic risk than concentrated large size loans to large corporates. Increased inclusion in savings creates an opportunity for the financing of domestic projects and investments and thus decreasing dependency on foreign financing and in the process leading to financial development and financial stability. Improving financial development through financial stability can build trust in the financial system and thus promoting financial inclusion (Cihak et al., , 2016, pp. 3-4).

Morgan and Pontines (2014) investigated the effects of measures of financial inclusion on measures of financial stability particularly bank non-performing loans and bank z-score using a General Methods of Moments (GMM) dynamic panel estimator of Blundell and Bond (as cited in Morgan and Pontines, 2014). Included in this model were descriptive statistics and correlation analysis of the variables and the correlates were further subjected to significant testing as a measure of robustness. Morgan and Pontines found that an increased proportion of lending to MSMEs fostered financial stability though decreases in non-performing loans and a reduced loan default probability. They also found evidence that higher GDP per capita tended to increase financial stability while a higher private credit to GDP decreased financial stability (pp. 13-14).

Alter and Yontcheva (2015) posit that the level of financial inclusion in the Central African Economic and Monetary Community (CEMAC) was examined using a benchmarking exercise. A measure of financial development gap was constructed. The study used panel data regressions and inflation, income and natural resources were found to significantly explain most of the financial development level. It was found that good financial and economic sector governance is positively correlated to financial sector development (pp. 2-4). Onaolapo (2015) examined the effects of financial inclusion on the economic development of Nigeria. Ordinary least squares (OLS) was used to relate data spanning from a 30-year period. The results from the analysis showed that inclusive bank financial services significantly influence poverty reduction, but marginally influenced national economic growth and financial intermediation (pp. 1-4).

The World Bank (2012b) posits that access to credit markets when financial shocks deplete family earnings, may influence positively parental funding of children's education and reduces the incidence of school children dropping out of school to join labour markets (p. 19). Efficient financial systems induce formation of new companies and facilitate MSMEs to expand their businesses. The World Bank argues that in some cases, small but promising ventures and projects are funded without emphasis on collateral or incumbency relationships. This enhances the entrants of new firms into the market and forces out old and inefficient firms. Due to the direct benefits of access to financial services, financial development promotes economic growth, heightens competition and stimulates demand for labour and thus benefitting those at the lower end of the income spectrum (pp. 19-20).

Beck, Demirgüç-Kunt and Levine (2004), studied finance, inequality and poverty with a view to establishing whether financial development disproportionately increases the incomes of the poor through income distribution and therefore reducing poverty. To address changes in income levels they used growth rates of the Gini coefficient, the standard deviation of income distribution and the income of the poorest quintile. To examine whether financial development disproportionately increases income for the poor more than average, they studied the relationship between finance and growth in income for the poor while controlling average income growth. In addition, they also investigated the so called “Kuznerts hypothesis”, of Greenwood and Jovanovic (as cited in Beck et al., 2004, p. 9), which argue that financial development and economic development through their interaction give rise to a U-shaped curve of income inequality and financial intermediary development. Beck et al. (2004), submit that the hypothesis posits that at the early stage of development, its largely the rich and connected who have access to finance to invest in high risk, high return projects and as financial development progresses, access becomes positive for the poor.

Private credit to GDP was taken by Beck et al. (2004) as an indicator of financial development as it is viewed to demonstrate the financial intermediaries’ capacity to gather information and identify profitable projects, monitoring and exerting corporate control, easing risk management and facilitating resource mobilisation. To measure income distribution and poverty alleviation, they used the Gini coefficient and the standard deviation of income shares as indicators of income distribution (pp. 10-11). They further investigated, purely as a robustness test, if financial development has a direct impact on social aspects of society and used infant mortality rates to proxy for improvements in social services whilst primary school net enrolment was used as a proxy for human capital accumulation. The main econometric models used were the Ordinary Least Square (OLS) and Instrument Variables supplemented by the Hansen test of the over identifying restrictions (OIR) to assess validity of the instrument variables in the model (Beck et al., 2004, p. 16). They controlled for average years of schooling as a proxy for human capital stock in the economy and for inflation and the ratio of government expenditure to GDP as indicators of microeconomic stableness. To measure the degree of trade openness of the economy, the sum of exports and imports as a percentage of GDP was captured. The empirical results were that private credit has a positive effect on the income of the poor and that income of the poorest quintile grew faster than average GDP per capita in countries with more developed financial markets. Income inequality which was measured by the Gini coefficient and the standard deviation as earlier stated, fell quickly in countries with better levels of

financial development (Beck et al., 2004, p. 4). The study could not find evidence to support the “Kuznets” hypothesis.

Batuo, Guidi and Mlambo (2013) studied the relationship between financial development and income inequality for a panel of 22 countries from Africa covering the period 1980-2004 following on previous studies by other researchers who found that financial development has a substantial effect in reducing the income-inequality gap between the rich and the poor. Their other motive was to empirically study this matter from an African perspective as Africa had been implementing economic reforms and yet income inequality did not appear to reduce. They were also interested in establishing whether there was a Kuznets hypothesis U-shaped curve relationship between financial development and inequality. They posit that one school of thought asserts that financial market development does have a positive impact on income inequality since developed and more liberal markets are expected to widen and increase availability of credit and thus facilitating the poor to invest in human and physical capital accumulation. They further submit that other researchers argue that, notwithstanding increased financial development, the poor will not have increased credit due to lack of credit history, collateral and are not networked with the elite who allocate funds to projects and thus financial market imperfections of information asymmetry, contract enforcements and transaction costs remain binding on the poor. Batuo et al. argue that Africa’s financial systems are shallow as measured by the relationship between poverty levels and access to financial services. This measure was proxied by the number of deposit accounts per 1 000 adults and the number of loan accounts per 100 000 adults (p. 9). Employing the General Method of Moments (GMM), they investigated the relationship between financial sector development and the distribution of income in African countries and found that financial development is key in reducing income inequality in Africa as demonstrated by the relationship between the composite aggregate financial development index and the Gini coefficients which were used as a proxy for inequality for each country. The financial development index was derived using principal component analysis from the traditional financial development indicators such as liquid liabilities as a percentage of GDP, M2 as a ratio of GDP and domestic credit to the private sector by the banking sector as a percentage of GDP. Batuo et al. argue that broadening access to financial services targeting those at the bottom of the pyramid including rural population would help reduce the income-inequality gap that exists in Africa (p. 17).

### **Impact of Remittances on Financial Development and Financial Inclusion**

Fromentin (2017) cites World Bank estimates and posits that remittances have become the second most dominant source of external funding for developing countries after foreign direct investment (FDI) and asserts that remittances to developing countries amounted to between \$430 billion and \$431.6 billion in 2014 and 2015 respectively (p. 192). In some recipient developing countries, remittances exceed both FDI and portfolio flows even when official development assistance is included. These amounts might be understated given the tendency of migrants of sending money through informal channels as opposed to remitting through banking channels, in part due to low financial sector development in receiving countries and low transaction costs. Fromentin posits that various authors have found evidence that remittances foster financial development by raising total deposits if remitted through formal banking channels. Remittances help recipients to absorb financial shocks and provide opportunities for some of them to have access to formal financial services such as savings accounts from deferred consumption of remittances thus promoting financial inclusion. Using a Pooled Mean Group (PMG) approach, Fromentin studied the dynamic effects of migrant remittances on financial development and the results showed that there was a positive long-run relationship between remittances and financial development for low income and middle-income countries. It was also found that increased remittances and economic development as proxied by GDP, foster financial development. It was further found that financial development is positively related to trade openness and the level of economic development, but was negatively correlated to inflation (p. 197). It is further argued that remittances create demand for financial services since banks for example can sell savings products to the unbanked households receiving such remittances (Fromentin, 2017, p. 198).

In Zimbabwe, remittances from the diaspora constituted 30% of total external inflows thus becoming the second largest generator of national liquidity. Remittances grew from \$300 million in 2009 rising to a peak of \$935 million in 2015 and declining to \$780 million in 2016 (RBZ, 2017b, p. 16). The decline in remittances was attributed to the strengthening of the US dollar against other currencies including the South African rand.

Makina (2012) posits that some economies have widened domestic bank assets in home countries of migrant workers through securitisation of future receipts of remittances to secure cheaper and longer-term debt capital from international financial markets. In 2011, Zimbabwe

successfully issued a Diaspora Bond structured by CBZ Bank and Afreximbank for USD50 million which accessed the Zimbabwean Diaspora wealth (pp. 30-32).

De Gregorio and Guidotti (1995) found that financial development leads to increased economic growth. If financial inclusion is related to financial development, it could also be by extension an impetus to both financial development and economic growth. The main route of influence from financial development to economic development is through effective allocation of capital to investment projects (p. 445).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the empirical strategy employed in examining the core hypothesis of the dissertation. It covers the research approach and strategy, data sources and frequency, sampling and data analysis framework as well as the limitations.

#### **3.2 Research Approach and Strategy**

The research adopted a descriptive and empirical case study approach using secondary data. Zainal (2007) defines a case study as a method which closely analyses data within a specific context. Mostly case studies investigate present-day phenomenon through a detailed and thorough contextual analysis of events and their relationships (Zainal, 2007, p. 2). A detailed but similar definition of a case study was also given by Yin (2009) which is also supported by Zainal (2007). The case study approach was found relevant to the study given the peculiarities of the Zimbabwean economy characterised by declining economic performance over the years, hyperinflation and chronic liquidity challenges. A case study offers a systematic way of observing events, collecting and analysing data as well as reporting the results over a long period (Zainal, 2007, p. 2). The strength of secondary data analysis as a strategy is in its economic benefits channelled through savings in time and costs (Mouton, 2001, pp. 164-165). Boslaugh (2007) posits that secondary data is often data collected and processed by expertise and professionalism and this therefore increases the quality and breadth of data available (pp. 3-5).

#### **3.3 Data Collection, Frequency and Choice of Data**

The study used multiple secondary data on financial development and financial inclusion. The indicators measuring financial development were domestic credit by financial institutions to the private sector as a percentage of GDP which measures the financial depth of financial institutions, stock market total traded value as a percentage of GDP representing a measure for financial depth of financial markets and the bank z-score which measures stability of financial institutions. Financial inclusion variables used comprised of ATMs per 100 000 adults, bank accounts per 1000 adults, borrowers at commercial banks per 1000 adults, bank branches per 1000 adults and mobile transactions value as a percentage of GDP which measures innovations

in financial technology. The study incorporated other conditional variables that could impact the economy, thus potentially affecting both financial development and financial inclusion. Macroeconomic conditioning variables included annual GDP growth rate and annual inflation rates and institutional and governance indicators were political stability, rule of law, regulatory quality and government effectiveness.

The data for financial inclusion is however limited. The relevant indicators and the attendant variables, definitions are included in Appendix 1. Rule of law and political stability indices if sound, are generally expected to be positively associated with increased domestic credit to the private sector as a percentage of GDP. Inflation volatility is viewed as a measure of the level of uncertainty about the future obtaining in an economy and this might impact on savings and investment decisions by market participants and the expected sign for inflation is negative (Caporale, Rault, Sova, & Sova, 2009, pp. 11-13).

The statistical data was obtained from Global Findex, World Bank World Development Indicators (WDI), Global Financial Development Database (GFDD), and IMF Financial Access Survey.

### **3.4 Sampling**

The study employed convenience sampling, which is a non-probability sampling technique, for collection of data. There is no need for probability sampling since data was secondary and was conveniently available.

### **3.5 Data Analysis Methods**

Financial inclusion as a concept is new in Zimbabwe and does not have significant historical time series data that would have made it possible to employ modern data analysis models used by previous researchers as already explained in Chapter 2. Morgan and Pontines (2014) while studying the nexus between financial stability and financial inclusion also encountered this data limitation and assert that this was a problem faced by many researchers on financial inclusion. (pp. 6-7).

Considering the data limitations and the hyperinflation history, the study employed descriptive statistics, correlation analysis, t-tests and graphs to investigate the relationship between financial inclusion and financial development as was employed in part, by Morgan and Pontines

(2014) and Čihák et al. (2016). The tools used in this study are therefore robust enough to achieve the objectives of the study. Čihák et al. (2016) in their study on the nexus of financial inclusion and financial stability focussed on the covariance term of the concepts and firstly computed the Spearman's rank correlation between individual variables of financial inclusion and financial stability. Then they used the results to investigate the pairwise correlation coefficients of financial inclusion and financial stability variables to ascertain the configuration of their association. They also examined the modes, dispersion and measures of central tendency through descriptive statistics (Čihák et al., 2016, pp. 8-10).

The description of variables and proxies used in the study were as described above and have been defined in Appendix 1, including the data sources.

### **3.6 Research Reliability and Validity**

The research is using data from reliable and accredited sources which largely conform to international best practice in terms of reporting, making the data very reliable and valid. As already stated in 3.4 above, the data was sourced from the World Bank related databases and is therefore reliable and verifiable with ease.

### **3.7 Limitations**

The main limitation of the study was the absence of sufficient time series observations to perform more robust econometric models. Financial inclusion is a recent concept and there are no data sources going back many years. Due to data limitations, the study was not able to capture and process all the candidate variables for financial development and financial inclusion as recommended in the literature. To the best knowledge of the author, there has never been a study on the nexus between financial inclusion and financial development in Zimbabwe and this study constitutes a starting point for reference by future researchers notwithstanding the above limitations.

## CHAPTER FOUR

### REASEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

In this chapter, results are presented, interpreted and analysed. The first section in this chapter provides descriptive statistics, correlation analysis and t-tests on financial inclusion and financial development. A summary of descriptive statistics which include measures of central tendency and dispersion and matrices showing correlations and t- tests results are provided in the succeeding section 4.2.

#### 4.2 Descriptive Statistics

##### 4.2.1 Financial inclusion variables

The average number of people with bank accounts per 1000 adults was 92 and this number reached a maximum of 152 with a minimum of 75. The annual variation of the number of bank accounts held by adults over the study period shows a standard deviation of 27. The number of bank branches per 100 000 adults has remained very small with an average of 9 branches and a standard deviation of 4 branches. The mobile money transaction value as a percentage of GDP averaged 11 had maximum value of 33 and a minimum of zero. The average number of borrowers per 1000 adults is 30 and this has reached a maximum of 52, with a minimum of 7. These statistics suggest a very low level of financial inclusion in Zimbabwe. The small average number of 5 ATMs per 100 000 adults and the small number of adults with loan accounts further support that financial inclusion is still very low in the country. Table 4.1 presents a summary of the financial inclusion variables.

**Table 4.1: Descriptive Statistics of Financial Inclusion Variables**

	Bank accounts per 1000 Adults	Bank branches per 100 000 Adults	Mobile money transactions Value (% of GDP)	Borrowers at Commercial Banks/1000 adults	ATMS/100,000 adults
Mean	91.68	9.31	11.10	29.85	5.19
Median	81.01	11.59	3.08	34.76	4.90
Maximum	151.92	14.38	33.44	52.27	7.26
Minimum	75.45	4.15	0.01	6.74	3.97
Std. Dev.	26.89	4.42	13.91	18.92	1.18
Skewness	1.94	-0.20	0.65	-0.01	0.75
Kurtosis	4.94	1.24	1.78	1.39	2.26
Jarque-Bera	5.48	0.95	0.92	0.75	0.81
JB Probability	0.06	0.62	0.63	0.69	0.67
Observations	7	7	7	7	7

Source: Author's estimates from Research data

The distributions of all the financial inclusion variables are positively skewed except for bank branches per 100 000 adults and borrowers at commercial banks per 1000 adults whose skewness coefficient is negative. The Jarque-Bera statistic and its probability indicate that all the variables have distributions closer to normal. In all cases the hypothesis of normality cannot be rejected. These similar characteristics of the variables' distributions indicate some form of association among these variables. Any of these variables can therefore be used as a proxy for financial inclusion.

**Table 4.2: Correlations of Financial Inclusion Variables**

Correlation	Automated Teller Machines (ATMs) per 100,000 adults	Bank Accounts per 1000 adults	Borrowers at Commercial Banks per 1000 Adults	Bank Branches per 100, 000 Adults	Mobile money transactions: value (% of GDP)
ATMs	1.000				
Bank Accounts	-0.005	1.000			
Borrowers	-0.411	-0.441	1.000		
Bank Branches	-0.107	-0.473	0.862**	1.000	
Mobile transactions	-0.214	-0.304	0.494	0.850**	1.000
Government Effectiveness	-0.151	-0.513	0.699*	0.935***	0.900***
Inflation	-0.952***	0.205	0.378	0.112	-0.199
GDP Growth	-0.467	-0.374	-0.422	-0.730*	-0.901***
Political Stability	-0.207	-0.516	0.826**	0.977***	0.857**
Regulatory Quality	-0.140	-0.483	0.650*	0.863**	0.804**
Rule of Law	0.058	-0.376	0.655*	0.945***	0.963***

*Notes: Financial inclusion is measured by ATMs per 100 000 adults, bank accounts per 1000 adults, borrowers at commercial banks per 1000 adults, bank branches per 1000 adults, and mobile transactions value as a percentage of GDP. \*\*\*, \*\*, and \* means the Pearson correlation coefficient is statistically significant at 1%, 5% and 10%, respectively. Source: Author's estimates from Research data*

ATMs were found to be strongly and negatively correlated to inflation, and the relationship is statistically significant at 1%. This result is plausible given that rapid inflation in Zimbabwe resulted in ATMs being sterilised and failing to dispense huge denomination Zimbabwe dollar trillions and quintillions during the hyperinflationary era hence the negative legacy relationship. The cash shortages that have beset the nation have almost made the ATMs redundant as they often have no cash stock to dispense. Bank accounts are not significantly correlated to any of the other financial inclusion variables and are also not related to any institutional conditioning variables. This result is surprising but could be a consequence of the informalisation of the economy through legacy experiences with inflation and loss of value. Borrowers at

Commercial Banks per 1000 adults are positively correlated with commercial bank branches per 100 000 adults and political stability at 5% significant level. Borrowers at Commercial Banks per 1000 adults had a weak positive relationship with government effectiveness, rule of law and regulatory quality and the relationship was statistically significant at 10%. Borrowers in most cases negotiate loan agreements through bank branches hence the significant relationship. The number of commercial bank branches per 100 000 adults is positively related to mobile transactions and regulatory quality at 5% significance level and have a strong and positive correlation to government effectiveness, political stability and rule of law at 1% significance level whilst it is negatively correlated to GDP growth at 10% significance level. Mobile transactions value as a percentage of GDP have strong positive correlation with government effectiveness, and rule of law and a strong negative correlation with GDP and the relationship is statically significant in both directions at 1% significance levels. Mobile transactions value as a percentage of GDP had however a weak correlation with political stability and regulatory quality at 10% significance level. Government effectiveness show a high and statistically significant association with financial inclusion. The correlation coefficients between financial inclusion variables and governance indicators exceed 50% and are statistically significant at 1% and 5% levels, suggesting the importance of governance factors in promoting financial inclusion. Inflation discourages financial inclusion as indicated by a negative correlation coefficient.

Despite failing to provide the impact of one variable on the other, correlations and t-tests are useful statistics in providing the nature of relationships existing amongst variables. The findings provided in Table 4.2 show that governance indicators have a strong association with financial inclusion, particularly with the number of commercial bank branches per 100 000 adults, borrowers at commercial banks per 1000 adults and mobile transactions value as a percentage of GDP. This finding supports the literature review on pillars of financial inclusion in which the governance factors are included as part of the enabling environment on which the pillars use as their base as described under 2.2.3.1.

#### **4.2.2 Financial development variables**

The descriptive statistics in Table 4.3 show that the financial market in Zimbabwe is still under-developed. Domestic credit to private sector as a percentage of GDP averaged 19.6% with a standard deviation of 8.2%. The stock market value traded as a percentage of GDP averaged 3% with a maximum of 4.7%, a minimum of 2.1% and a standard deviation of 0.84%.

**Table 4.3: Descriptive Statistics of Financial Development Variables**

	Domestic credit to private sector (% GDP)	Stock market value traded (% GDP)	Financial Stability measured by Z-Score
Mean	19.57143	3.031429	3.291999
Median	23.71000	2.970000	3.289720
Maximum	25.32000	4.690000	3.499700
Minimum	4.200000	2.130000	2.953460
Std. Dev.	8.216811	0.836190	0.187066
Skewness	-1.151052	1.090741	-0.677123
Kurtosis	2.645109	3.340923	2.536963
Jarque-Bera	1.582476	1.421902	0.597446
Probability	0.453283	0.491177	0.741765
Observations	7	7	7

Source: Author's estimates from Research data

The statistics in Table 4.3 demonstrate that indicators of financial development are normally distributed as indicated by the probability values of the Jarque-Bera statistics. The average bank z-score over the study period was 3.3 with a standard deviation of 0.18. Table 4.4 provides the correlation coefficients of the variables measuring financial development.

**Table 4.4: Correlations among Financial Development Variables**

Correlation	Domestic Credit to Private Sector (% of GDP)	Financial Stability-Bank Z-score	Stock Market Value Traded (% of GDP)
Domestic Credit	1.000		
Bank z-Score	0.639	1.000	
Stock Market Value Traded	0.606	0.553	1.000
Government Effectiveness	0.847**	0.700*	0.823**
Inflation	0.595	-0.008	0.017
Political Stability	0.860**	0.777**	0.760
Regulatory Quality	0.770**	0.741*	0.900***
Rule of Law	0.703*	0.644	0.841**
GDP Growth	-0.271	-0.492	-0.523

Notes: Financial development is measured with Domestic credit to private sector, Bank Z-Score and Stock market value traded as a percentage of GDP. \*\*\*, \*\*, and \* means the Pearson correlation coefficient is statistically significant at 1%, 5% and 10%, respectively. Source: Author's estimates from Research data

Domestic credit to private sector has a weak positive correlation to rule of law at 10% significance level and a positive correlation to government effectiveness, political stability and regulatory quality at 5% significance levels. This reflects that governance factors are key for financial development and policy makers need to be alive to this key association.

Bank Z score has a weak positive correlation to government effectiveness and regulatory quality at 10% significance levels whilst it is positively correlated to political stability at 5%. This indicates that political stability is important in fostering financial stability and therefore is another key imperative for policy makers in Zimbabwe. Stock market value traded (% of GDP) is positively correlated to government and rule of law at 5% significance levels whilst it has a high positive correlation to regulatory quality at 1% significance level. This result is as expected because the governance factors are key in boosting investor confidence to trade on the stock market.

The findings in Table 4.4 indicate a high association between financial development and governance factors (political stability, regulatory quality, rule of law and government effectiveness). All financial development indicators (domestic credit to private sector, financial stability z-score and stock market value traded as a percentage of GDP) are strongly associated with governance indicators. In terms of correlates of stock market value traded as a percentage of GDP, regulatory quality emerged the strongest correlate and was statistically significant at 1% significance level. The other governance variables (government effectiveness and regulatory quality) were statistically significant at 5% level in the stock market value traded as a percentage of GDP category.

#### **4.2.3 Financial Inclusion and Financial Development**

This part of the study presents the correlations of financial development indicators and financial inclusion indicators. The table 4.5 below summarises the results to answer the research question of whether there is a relationship between financial inclusion and financial development. This section is therefore the core of the study as it juxtaposes the correlates of financial inclusion and financial development.

Table 4. 5 below shows that ATMs were found to have a negative correlation with domestic credit to the private sector and financial stability but a positive correlation with stock market value traded. The correlates were however not significant indicating ATMs in Zimbabwe have little influence on financial development.

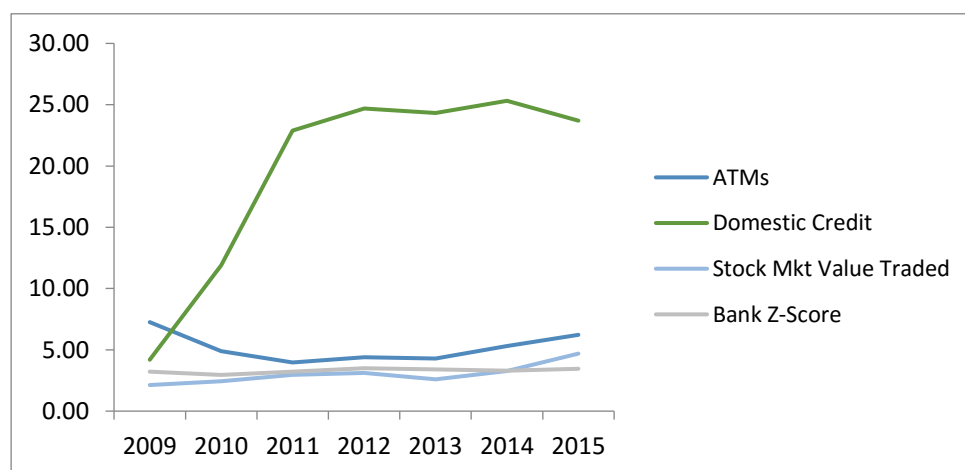
**Table 4.5: Correlations of Financial Inclusion and Financial Development**

Correlation	Automated - Teller Machines (ATMs) per 100,000 adults	Bank accounts per 1,000 adults	Bank branches per 100,000 adults	Borrowers at commercial banks per 1,000 adults	Mobile money transactions: value (% of GDP)
Domestic credit to private sector (% of GDP)	-0.634	-0.460	0.790**	0.782**	0.547
Financial Stability-Bank Z Score	-0.063	-0.807**	0.802**	0.803**	0.505
Stock market total value traded to GDP (%)	0.078	-0.328	0.729*	0.372	0.793**

\*\*\*, \*\*, and \* means the Pearson correlation coefficient is statistically significant at 1%, 5% and 10%, respectively. Financial development is measured by bank deposits, domestic credit to private sector and stock market value traded. Source: Author's estimates from Research data

The explanation of this result is that ATMs were sterilised and made redundant by hyperinflation due to the high number of zeroes of the Zimbabwe dollar currency then and the frequent revaluation of the zeroes and subsequent increase in same. This legacy problem continued when Zimbabwe dollarised because the economy was caught up in cash shortages with little or no cash to dispense. Most banks were also not replacing or increasing the stock of ATMs for the same reasons given in this discussion. As Zimbabwe moved into the dollarised and multi-currency regime there were banks whose capital bases were significantly depleted by hyperinflation and these banks could not recapitalise to meet the US Dollar minimum capital adequacy requirements as prescribed by the regulator, RBZ. These struggling banks could not effectively compete resulting in their closure during the period under study.

**Figure 4: ATMs and Financial Variables**

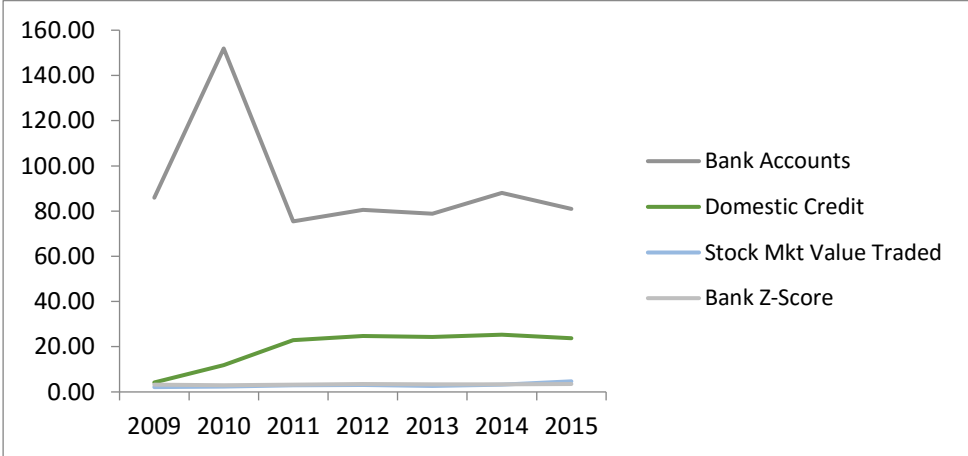


Source: Author's estimates from Research data

The self-explanatory graph in figure 4 above indicates that ATMs declined since 2009 due to closure of banks but domestic credit was increasing indicating the absence of a significant relationship.

The analysis in Table 4.5 shows that bank accounts are negatively correlated to domestic credit to the private sector and stock market value traded as a percentage of GDP but the relationship is not significant. The relationship is however negative and significant when the same variable is compared to financial stability. This result is also a legacy issue as most Zimbabweans had multiple bank accounts to take advantage of cash withdrawal limits and to quickly take money out of the system to preserve value during the hyper inflationary period. When Zimbabwe dollarised, depositors found it difficult to maintain the same number of accounts due to US dollar based account maintenance charges. The situation was exacerbated by the closure of undercapitalised banks which closed during the period under study due to capitalisation issues and could therefore not effectively compete in the multicurrency regime although the economy was progressively stabilising. The graph in figure 5 demonstrates the trend in bank accounts when there was a sharp decline from 2010.

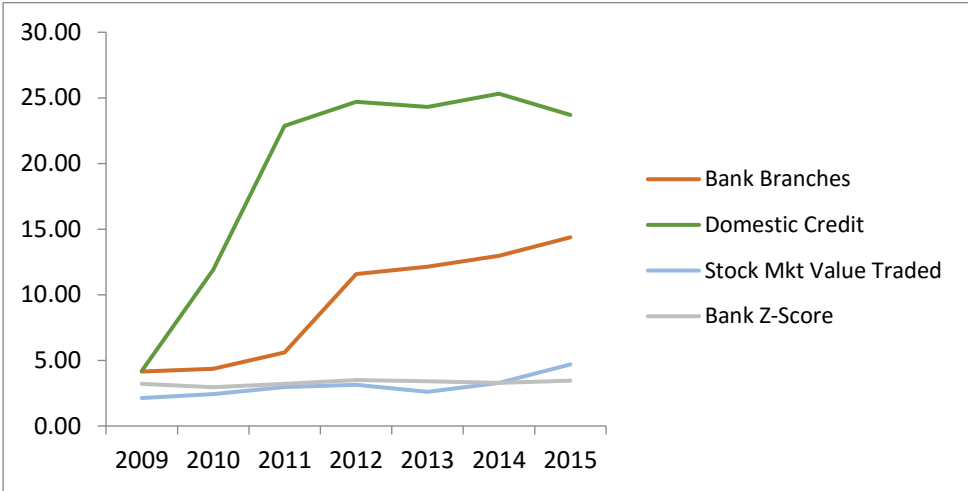
**Figure 5: Bank Branches and Financial Development Variables**



*Source: Author’s estimates from Research data*

The graph in figure 6 below shows both bank branches and domestic credit to the private sector increasing and seem to be moving together. Bank branches had a positive and statistically significant correlation with domestic credit to the private sector and financial stability at 5% significance level. Bank branches are weakly correlated to stock market total value traded as a percentage of GDP at 10% significance level.

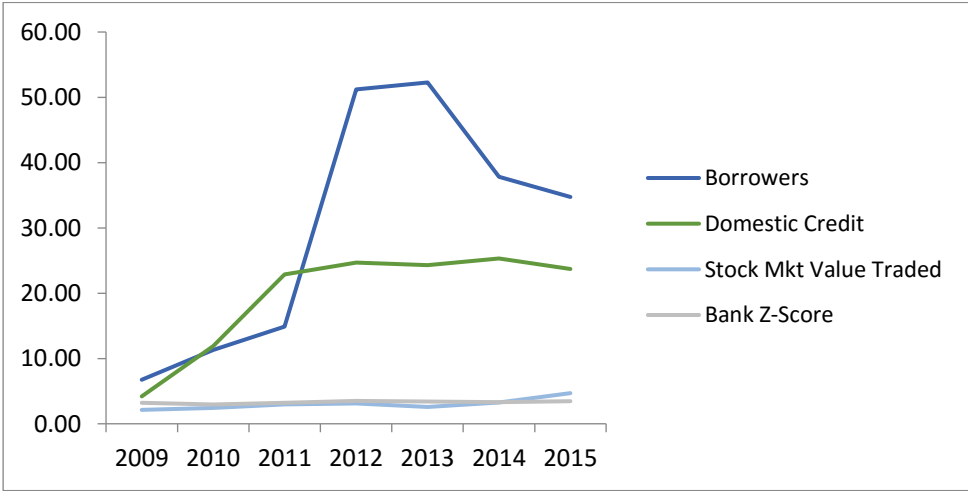
**Figure 6: Bank Branches and Financial Development Variables**



Source: Author’s estimates from Research data

The result is explained by the fact that following the introduction of the multicurrency system and the stabilisation of the financial sector, financial institutions expanded branch networks as depicted above. The net increase in branch network resulted in increased mobilisation of savings and increased access to credit by the private sector. The positive but weak relationship with the stock market is explained by the fact that increased branches mean increased funds mobilisation and increased liquidity some of which is channelled to the stock market. The graph in figure 6 shows trends which support the explanation of the coefficients.

**Figure 7: Borrowers and Financial Development Variables**



Source: Author’s estimates from Research data

The graph in figure 7 above demonstrates that borrowers increased substantially between 2011 and 2013. Borrowers were found to have a positive and significant correlation with domestic credit to the private sector and financial stability at 5% significance level and had a positive but non-significant relationship with stock market value traded as a percentage of GDP. Emanating from increased branch networks, most people approach branches for credit hence the positive relationship.

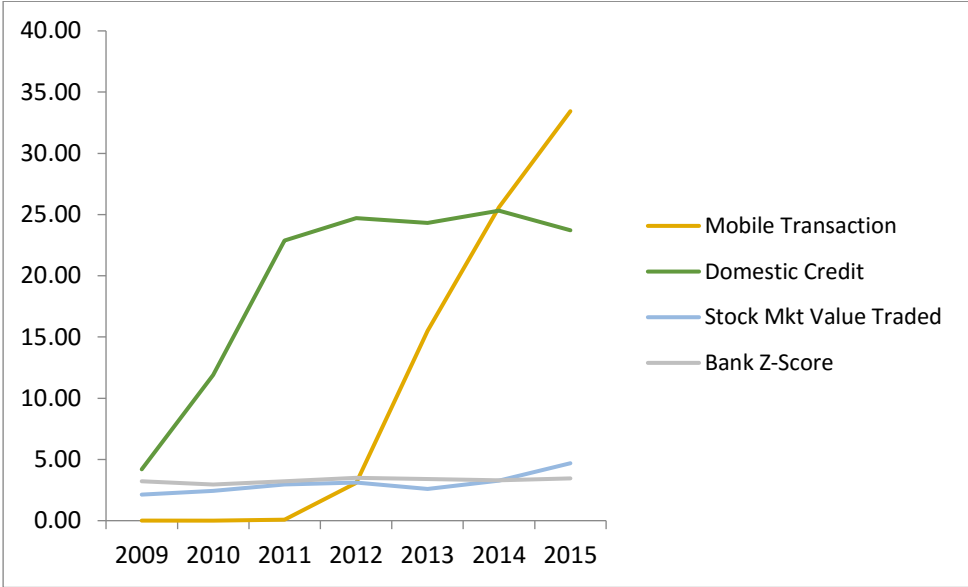
Notwithstanding the dollarisation, capacity utilisation by industry did not improve due to lack of foreign lines of credit to recapitalise and retool resulting in closure of most businesses and informalisation of the economy. Financial institutions could no longer rely largely on corporates as the lack of re-capitalisation had increased their operational and going concern risk profiles.

This to some extent worked in favour of financial inclusion as banks now began lending to individuals to spread risk. RBZ (2009) and RBZ (2015) monetary policy statements posit that lending to individuals grew from 1% share of total bank loans to the private sector in December 2009 to 18% in December 2015. Following informalisation of the economy, banks have found the household sector profitable and less risky as small size loans are made available to many people which reduces default risk unlike large corporates. The reduced risk profile of individuals buttressed financial stability. The findings are further supported by literature. Morgan and Pontines (2014) found that an increased share of lending to MSMEs fostered financial stability through a reduced loan default probability as default risk is spread over many borrowers rather than just a few corporates.

Mobile transactions in Zimbabwe were found not significant to domestic credit to the private sector and financial stability although they had positive correlations. They however had a positive and statistically significant relationship to stock market total value traded at 5% significance level. The reason for the insignificant relationship is that mobile money platforms in Zimbabwe are used primarily for convenience transactional purposes such as sending and receiving money. Mobile money platform users do not demand significant credit through that channel save for airtime credit hence the lack of relationship with financial development. Zimbabwe does not yet have innovative bank credit products based on financial technology that could be distributed through mobile money platforms. Zimbabwe was rather late to introduce mobile money technology and as can be seen from the graph in figure 8, mobile money

technology only became substantial around 2012. The excess liquidity on mobile platforms finds its way to formal banking institutions hence the significant impact on stock market value traded.

**Figure 8: Mobile Transactions and Financial Development Variables**



*Source: Author's estimates from Research data*

The graph in figure 8 shows that mobile transactions have a very high and exponential penetration rate reflecting a huge potential for financial development through this channel. Financial technology is a key driver of financial inclusion and has a positive impact on the lives of the poor because it reduces transaction costs and provides access to finance to the unbanked and the under-served as already demonstrated in the literature review section.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter concludes the study on the relationship between financial inclusion and financial development in Zimbabwe between 2009 and 2015. It covers the summary of the study and conclusions thereof; the policy recommendations and future research avenues.

#### 5.2 Summary and Conclusion of the study

The study used secondary data and applied descriptive statistics, correlation analysis and t-tests to investigate the nexus between financial inclusion and financial development in Zimbabwe. Overall, the study establishes that financial inclusion supports and is related to financial development. The correlation matrix for financial inclusion and financial development variables in Table 4.5 shows that out of the 15 possible outcomes, 7 or 47% are significant and thus demonstrate financial inclusion in Zimbabwe weakly impacts on financial development. However, the weak impact is positive considering that out of the 7 significant outcomes, 6 are positively correlated.

The positive relationship is being driven by expansion of the banking sector into previously marginalised and unbanked markets, riding on increase in mobile money and other financial technology based banking products. The current high levels of financial exclusion and the increasing levels of financial dis-intermediation occurring in Zimbabwe partially due to the informalisation of the economy and the deterioration in the microeconomic environment explain the established weakness in the relationship. The high level of financial exclusion in Zimbabwe is in part due to legacies of the hyperinflation era when depositors literally lost their savings as well as confidence in the market and due to barriers to financial inclusion discussed in Section 2.2.3.3. The high levels of disintermediation that occurred in Zimbabwe were due to lack of confidence and trust in the financial system. The informalisation of the economy and the weaknesses in the microeconomic environment resulted in cash shortages and creation of quasi-currencies with the potential to further dent market confidence and hence people prefer to transact outside the formal financial system.

The study further established that financial inclusion through financial and mobile technology platforms has great potential to foster financial development in Zimbabwe, given the high mobile penetration rate and the positive impact mobile money has had on financial development in the short period since inception in 2012. The coefficients of mobile money to financial development variables were insignificant but all positive. It can be concluded therefore that financial technology products, such as mobile money, are critical conduits through which financial inclusion could support financial development in Zimbabwe. The results highlighted the importance of financial inclusion on financial development through access to finance by many borrowers and its relationship with domestic credit to the private sector and financial stability which was found to be statistically significant. The financial sector including microfinance institutions need to enhance access to credit by the poor by developing banking products that are affordable and cater for the needs of the unbanked and under-served.

The other key finding is that, considering the separate matrices of financial inclusion and financial development, Table 4.2 and Table 4.4 respectively, governance variables comprising of government effectiveness, political stability, rule of law and regulatory quality indicated a strong and largely positive correlation with both financial inclusion and financial development indicator variables. These governance variables, namely, political stability, regulatory quality and rule of law form a critical part of the conducive enabling environment platform on which financial inclusion and financial development pillars must stand for positive outcomes as already discussed under item 2.2.1 and 2.2.3.1 respectively. Financial inclusion and financial development were therefore found to be related in that they share the same conducive enabling environmental platform. Indicatively, these negatively ranked Zimbabwe governance factors such as political stability, regulatory quality and rule of law (as measured by WDI) weaken the relationship between financial inclusion and financial development. These results were consistent with the assertion in the literature that a solid institutional environment reduces transaction and information costs and promotes financial inclusion and financial development.

It is therefore concluded and clear that financial inclusion in Zimbabwe is being launched on a weak conducive environmental platform, given that the governance indicator rankings by WDI were and remain negative, which negatively impacts local and international trust and market confidence in the financial system. This situation negatively impacts capacity to mobilise local and international finance required to boost financial inclusion and financial development. A weak economy with negative governance factor rankings, cannot generate or mobilise adequate

financial resources for effective financial inclusion and financial development. These results show a relationship between financial inclusion and financial development and therefore the null hypothesis is rejected and the study accepts the alternative hypothesis that financial inclusion has a positive relationship with financial development in Zimbabwe.

### **5.3 Recommendations**

Considering the research findings and conclusions above, the study came up with some policy recommendations for adoption. It is imperative that interventions to leverage financial development through financial inclusion must embrace developments in the financial technology and mobile technology sectors due to the high mobile technology penetration rate and its potential to lower transaction costs. It is therefore recommended and prudent for Government, to implement policies that embrace the growth and competition within the financial technology sector including mobile network operators to attract the unbanked to access financial services through the technology channel. The regulators need to continuously adapt consumer protection and empowerment regulations at the same pace as developments in the financial technology landscape to foster trust and cultivate and preserve consumer market confidence. Policies on advancement of financial technologies such as digital financial services and mobile banking interoperability and interconnectivity of MNOs including infrastructure sharing mechanisms by MNOs are desirable to improve financial development and financial inclusion and ought to be adopted from a policy perspective.

The financial sector also needs to introduce innovative and competitively priced financial services, such as financial technology based credit products suitable to a wider cross-section of Zimbabweans including the poor. These services can be accessed through convenient channels that leverage on banking agencies, mobile money, internet and other financial technology platforms. For financial inclusion to be effective in driving financial development, the financial sector must develop financial technology based bank credit products accessed through financial technology and mobile technology based platforms. Policy makers must devise regulatory policies that foster interoperability and interconnectivity of MNOs mobile and financial technology platforms to increase financial inclusion and improve national payment systems. There are opportunities to develop financial technology credit markets in Zimbabwe that may include but not limited to mobile insurance, mobile credit and mobile savings for effective financial inclusion and financial development. Such financial technology based credit markets, leveraged by electronic platforms, may include products such as “peer to peer” lending and

loan based “crowd-funding “amongst others. Financial technology when embraced may positively influence financial stability in the financial system.

Policy makers in Zimbabwe must strive to improve on the current negative World Bank (WDI) rankings on governance issues such as but not limited to rule of law, political stability, regulatory quality and government effectiveness. These governance issues form the conducive environmental platform desirable for the optimal execution of both financial inclusion and financial development objectives. Positive rankings on governance matters would restore the much needed local and international individual and corporate trust in the financial system and the re-risking of the financial sector by international correspondent banks. Policies to improve WDI rankings on governance factors such as political stability, regulatory quality and rule of law, would help Zimbabwe to be re-risked (regain correspondent banking relationships) with significant benefits in accessing international capital markets, exports receipt performance, remittances and on financial inclusion and financial development.

The Government of Zimbabwe must address some of the root causes of financial instability and liquidity shortages by addressing the perennial and ballooning fiscal deficits which are financed by overdraft facilities with RBZ and treasury bills. The current financing mechanism of fiscal deficits “crowds out” the private sector with negative consequences on financial development and financial inclusion. Improved financial system liquidity need to be, in part, addressed through increased exports which will convert the perennial current account deficits into current account surpluses with positive implications for financial development and spill over effects to financial inclusion. A conducive enabling environment for business is therefore critical and the Government of Zimbabwe needs to embrace and develop such policies.

The Government of Zimbabwe further needs to accelerate the implementation of movable collateral and credit information sharing infrastructure (credit and collateral registries) to ensure that loanable funds in the economy are advanced to borrowers with a financial identity as in servicing loans satisfactorily and that would also minimise moral hazard and adverse selection in the Zimbabwean credit market. This will decrease information asymmetry between borrowers and lenders, thus fostering financial development and financial inclusion. The nexus between financial inclusion and financial development in this study, makes it imperative that a national financial inclusion strategy must be complemented by a supportive financial

development strategy for optimum results. Implementing a national financial inclusion strategy in a “silo” format would potentially produce sub-optimal results.

Adoption and implementation of these recommendations would contribute to Zimbabwe’s efforts in meeting its sustainable development goals by 2030.

Future studies should investigate the channels if any, through which financial inclusion and financial development impact economic growth in Zimbabwe. There is need to investigate how financial inclusion impacts macroeconomic policies such as monetary policy.

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## APPENDICES

### Appendix 1: Financial Inclusion and Financial Development Variables

VARIABLE	DEFINITION	SOURCE
Automated teller machines (ATMs) (per 100,000 adults)	Automated teller machines are computerised telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place.	World Development Indicators
Account at a financial institution	Denotes the percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution (see year-specific definitions for details) (% age 15+). [test: data are available for multiple waves].	World Development Indicators
Bank accounts per 1,000 adults	Number of depositors with commercial banks per 1,000 adults.	Financial Access Survey (FAS), International Monetary Fund (IMF)
Bank branches per 100,000 adults	Number of commercial bank branches per 100,000 adults.	Financial Access Survey (FAS), International Monetary Fund (IMF)
Bank Z-Score	It captures the probability of default of a country's commercial banking system. Z-score compares the buffer of a country's commercial banking system (capitalisation and returns) with the volatility of those returns.	Bankscope and Orbis Bank Focus, Bureau van Dijk (BvD)
Borrowers at Commercial Banks per 1000 Adults	Borrowers from commercial banks are the reported number of resident customers that are nonfinancial corporations (public and private) and households who obtained loans from commercial banks and other banks functioning as commercial banks. For many countries data cover the total number of loan accounts due to lack of information on loan account holders.	World Development Indicators
Domestic credit to private sector (% of GDP)	Total assets held by deposit money banks as a share of sum of deposit money bank and Central Bank claims on domestic nonfinancial real sector. Assets include claims on domestic real nonfinancial sector which includes central, state and local governments, nonfinancial public enterprises and private sector. Deposit money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.	International Financial Statistics (IFS), International Monetary Fund (IMF)
GDP growth (annual %)	GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of	World Development Indicators

	primary income (compensation of employees and property income) from abroad.	
Government Effectiveness: Estimate	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Development Indicators
Inflation, consumer prices (annual %)	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	World Development Indicators
Mobile money transactions: value (% of GDP)	The total mobile money transactions value as a percentage of GDP. (Author's own assumption.)	International Monetary Fund (IMF)
Stocks traded, total value (% of GDP)	The value of shares traded is the total number of shares traded, both domestic and foreign, multiplied by their respective matching prices. Figures are single counted (only one side of the transaction is considered). Companies admitted to listing and admitted to trading are included in the data. Data are end of year values.	World Development Indicators/ Zimbabwe Stock Exchange (ZSE)
Political Stability and Absence of Violence/Terrorism: Estimate	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank (2016), World Development Indicators
Regulatory Quality: Estimate	Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank (2016), World Development Indicators

Rule of Law: Estimate	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	World Bank (2016), World Development Indicators
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Source: Global Financial Development Database. (GFDD, 2017)  
<http://www.worldbank.org/en/publication/gfdr/data/global-financial-development-database>)

World Bank (2016), World Development Indicators  
<http://data.worldbank.org/data-catalog/world-development-indicators>

## Appendix 2: Covariance Analysis.

### Financial Inclusion Covariance Analysis

Covariance Analysis: Ordinary

Date: 08/07/17 Time: 16:13

Sample: 2009 2015

Included observations: 7

Correlation t-Statistic Probability	ANNUAL G...	AUTOMATE...	BANK ACC...	BORROWE...	BRANCHES...	GOVERNM...	INFLATION ...	POLITICAL ...	MOBILE M...	REGULATO...	RULE OF ...
ANNUAL_GDP_G...	1.000000 ----- -----										
AUTOMATED_TEL...	-0.466910 -1.180636 0.2908	1.000000 ----- -----									
BANK_ACCOUNT...	0.374256 0.902448 0.4082	-0.005392 -0.012057 0.9908	1.000000 ----- -----								
BORROWERS_AT...	-0.422311 -1.041772 0.3452	-0.411221 -1.008757 0.3594	-0.440523 -1.097243 0.3225	1.000000 ----- -----							
BRANCHES_BRA...	-0.729288 -2.383396 0.0629	-0.107329 -0.241389 0.8188	-0.472772 -1.199691 0.2840	0.862403 3.809385 0.0125	1.000000 ----- -----						
GOVERNMENT_E...	-0.710234 -2.255980 0.0737	-0.150819 -0.341145 0.7469	-0.512761 -1.335499 0.2393	0.699261 2.187255 0.0804	0.935414 5.916051 0.0020	1.000000 ----- -----					
INFLATION__CPI...	0.513348 1.337574 0.2386	-0.952101 -6.962293 0.0009	0.205171 0.468747 0.6590	0.377774 0.912333 0.4034	0.112199 0.252479 0.8107	0.126249 0.284579 0.7874	1.000000 ----- -----				
POLITICAL_STABIL...	-0.695443 -2.164064 0.0828	-0.206609 -0.472179 0.6567	-0.515776 -1.346187 0.2361	0.826304 3.280520 0.0219	0.977206 10.29280 0.0001	0.975833 9.985548 0.0002	0.179165 0.407213 0.7007	1.000000 ----- -----			
MOBILE_MONEY_...	-0.900787 -4.638267 0.0056	0.213946 0.489738 0.6450	-0.304549 -0.714955 0.5066	0.493805 1.269796 0.2600	0.850180 3.610804 0.0154	0.898800 4.584789 0.0059	-0.198856 -0.453718 0.6690	0.856687 3.713601 0.0138	1.000000 ----- -----		
REGULATORY_Q...	-0.580162 -1.592731 0.1721	-0.139840 -0.315794 0.7649	-0.482952 -1.233276 0.2723	0.650264 1.913939 0.1138	0.862512 3.811262 0.0125	0.906780 4.809310 0.0048	0.146615 0.331423 0.7538	0.916382 5.118815 0.0037	0.803906 3.022392 0.0293	1.000000 ----- -----	
RULE_OF_LAW_...	-0.813603 -3.129007 0.0260	0.057979 0.129864 0.9017	-0.375585 -0.906178 0.4064	0.655069 1.938642 0.1103	0.945051 6.463893 0.0013	0.959378 7.603830 0.0006	-0.025656 -0.057387 0.9565	0.938531 6.079507 0.0017	0.963306 8.025269 0.0005	0.865784 3.868676 0.0118	1.000000 ----- -----

## Financial Development Covariance Analysis

Covariance Analysis: Ordinary

Date: 08/07/17 Time: 16:11

Sample: 2009 2015

Included observations: 7

Correlation t-Statistic Probability	FINANCIAL...	ANNUAL G...	DOMESTIC...	GOVERNMENT...	INFLATION ...	POLITICAL ...	REGULATO...	RULE OF ...	STOCK MA...
FINANCIAL_STABI...	1.000000 ----- -----								
ANNUAL_GDP_G...	-0.490158 -1.257438 0.2641	1.000000 ----- -----							
DOMESTIC_CRED...	0.638908 1.857107 0.1224	-0.270704 -0.628789 0.5571	1.000000 ----- -----						
GOVERNMENT_E...	0.695776 2.166074 0.0826	-0.710234 -2.255980 0.0737	0.846689 3.558152 0.0162	1.000000 ----- -----					
INFLATION__CPI...	-0.008405 -0.018794 0.9857	0.513348 1.337574 0.2386	0.594776 1.654402 0.1590	0.126249 0.284579 0.7874	1.000000 ----- -----				
POLITICAL_STABIL...	0.777115 2.761036 0.0398	-0.695443 -2.164064 0.0828	0.860136 3.770740 0.0130	0.975833 9.985548 0.0002	0.179165 0.407213 0.7007	1.000000 ----- -----			
REGULATORY_Q...	0.740292 2.462264 0.0571	-0.580162 -1.592731 0.1721	0.769375 2.693143 0.0431	0.906780 4.809310 0.0048	0.146615 0.331423 0.7538	0.916382 5.118815 0.0037	1.000000 ----- -----		
RULE_OF_LAW_...	0.643817 1.881412 0.1187	-0.813603 -3.129007 0.0260	0.703173 2.211392 0.0780	0.959378 7.603830 0.0006	-0.025656 -0.057387 0.9565	0.938531 6.079507 0.0017	0.865784 3.868676 0.0118	1.000000 ----- -----	
STOCK_MARKET_...	0.553250 1.485091 0.1977	-0.523243 -1.372952 0.2281	0.606329 1.704943 0.1489	0.822857 3.237960 0.0230	0.016747 0.037454 0.9716	0.760413 2.618153 0.0472	0.895757 4.505682 0.0064	0.841021 3.476107 0.0177	1.000000 ----- -----

## Financial Inclusion and Financial Development Covariance Analysis

Covariance Analysis: Ordinary

Date: 08/07/17 Time: 16:09

Sample: 2009 2015

Included observations: 7

Correlation								
t-Statistic								
Probability	AUTOMATE...	BANK ACC...	BRANCHES...	BORROWE...	DOMESTIC...	FINANCIAL...	MOBILE M...	STOCK MA...
AUTOMATED_TEL...	1.000000							
	----							
	----							
BANK_ACCOUNT...	-0.005392	1.000000						
	-0.012057	----						
	0.9908	----						
BRANCHES_BRA...	-0.107329	-0.472772	1.000000					
	-0.241389	-1.199691	----					
	0.8188	0.2840	----					
BORROWERS_AT...	-0.411221	-0.440523	0.862403	1.000000				
	-1.008757	-1.097243	3.809385	----				
	0.3594	0.3225	0.0125	----				
DOMESTIC_CRED...	-0.634049	-0.460169	0.790386	0.782340	1.000000			
	-1.833427	-1.158968	2.884965	2.808642	----			
	0.1262	0.2988	0.0344	0.0376	----			
FINANCIAL_STABI...	-0.062931	-0.807227	0.801972	0.803295	0.638908	1.000000		
	-0.140996	-3.058097	3.001977	3.015919	1.857107	----		
	0.8934	0.0282	0.0300	0.0296	0.1224	----		
MOBILE_MONEY_...	0.213946	-0.304549	0.850180	0.493805	0.546550	0.505240	1.000000	
	0.489738	-0.714955	3.610804	1.269796	1.459378	1.309128	----	
	0.6450	0.5066	0.0154	0.2600	0.2043	0.2474	----	
STOCK_MARKET_...	0.077939	-0.328166	0.729328	0.371766	0.606329	0.553250	0.793353	1.000000
	0.174810	-0.776822	2.383676	0.895477	1.704943	1.485091	2.914094	----
	0.8681	0.4724	0.0629	0.4116	0.1489	0.1977	0.0332	----