FINANCIAL SECTOR REFORMS AND BANKING STABILITY IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC)

By

Ayavuya Ndubela (201812143)

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CO-SUPERVISOR: Dr N LAWANA

Abstract

The banking sector plays a very critical role to the development of a country. However, in the Southern African Development Community region, in some member countries the banking sector is not well developed. The region continues to encounter major obstacles in the growth of its banking sector, which impedes the rate of economic development, even after implementing several measures to strengthen the banking industry, non-banking sector, and financial markets. Reducing government involvement, opening financial markets, and fortifying financial institutions are all part of the financial sector reforms that has been a key element of developing countries' structural adjustment plans. Despite these reforms, the majority of Southern African countries still have relatively weak financial systems. The literature on financial sector development does also highlight that the reforms which maybe implemented in the sector may also influence the stability of the financial system which may create instability and thwart any growth prospects. The aim of any economy whether developed or developing is to achieve stability, reduce unemployment and sustain economic development through macroeconomic policy which these SADC countries aim to achieve. Given this background, the study examined the effect of financial sector reforms on banking stability in the SADC region for the period from 2013 to 2023 employing the Generalized Method of Moments. The study was underpinned by the financial liberalization theory of McKinnon and Shaw (1973) which shows how financial reforms can result in the development of the banking sector. The findings reveal that proper implementation of financial sector reforms (any changes in banking regulation) results in banking stability. This provides valuable insights for policymakers to design effective strategies for promoting financial sector reforms and banking stability in the SADC region.

Keywords: Southern African Development Community; Financial sector reforms; Banking stability; Generalized Methods of Moments.

Declarations

On originality of work

I, Ayavuya Ndubela hereby declare that this dissertation is of my own original work and every resource that was used was acknowledged using complete referencing of sources in reference list. This dissertation has not been submitted before to any university or academic institution for an award or degree purposes.

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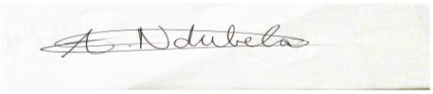

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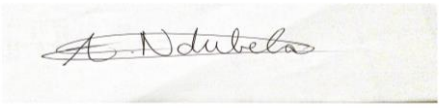

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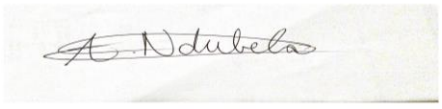

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To my chosen family, my friends, Hlonela Ntoni, Sinesihle Notshinga, Asemahle Simanga and Masithandaze Magadla and others whom I have not mentioned but hold dear to my heart- you have held me in many ways that you will not understand, thank you for checking up on me, allowing me to bounce ideas for this project and thank you for the warmth. I would not have gotten through this without you.

Dedication

This dissertation is dedicated to the most precious people in my life, my mother, Nosipho Gloria Ndubela, and my grandfather Wiseman Ndubela. Knowing that my grandfather has played a huge role in raising me and assisting me with wise words in times of need. With also keeping in mind that my mother's unchanging love, support and guidance helps me to get through toughest times. Because of my grandfather, raising a strong beautiful woman, my mother then was able to raise one just like her. Both have shaped me to be the woman that I am today.

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List of Acronyms

ASGISA	The South African Government Accelerated and Shared Growth
GMM	Generalized Method of Moments
MLE	Maximum Likelihood Estimation
OLS	Ordinary Least Squares
IMF	International Monetary Fund
SADCC	Southern African Development Coordination Conference
SADC	Southern African Development Community
ECM	Error Correction Model
GDP	Gross Domestic Product
SARB	South African Reserve Bank
JB	Jarque-Bera
DF	Dickey Fuller
GMM	Generalised Method of Moments
SGMM	System Generalised Method of Moments
DGMM	Differenced Generalised Method of Moments

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CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

The impact of financial sector reforms on banking stability cannot be understated (Abderzag & Hasnaoui, 2015; Ollo, 2018; Arifin, Ramly, Hashim, Aziz & Kamaralzaman, 2020; Jungo, Madaleno & Botelho, 2022; Koudalo & Toure, 2023). However, conclusions emanating from these studies have been varied. Aluko & Ajayi (2018) opine that the banking industry is an important sector in many nations, hence it requires continual adoption of appropriate policy measures and financial reforms to make sure it fulfils its purpose effectively.

According to Kaur (2017), financial sector reforms encompass policies aimed at improving the soundness and efficiency of the banking sector in order to boost resource allocation efficiency, foster financial stability, and preserve public trust in the financial system. The author also highlights that financial sector reforms involve reducing external constraints on the banking sector's operations and allowing competition through new banks entering the market (Kaur, 2017). The second objective is to boost market forces' influence and banking system transparency by introducing prudential requirements and deregulating interest rates. Thirdly, to free institutions from financial restraint and give them functional and operational independence. Lastly, to encourage the preservation of financial stability despite internal and external shocks. Johnson (2022) argues that banking sector stability is the industry's capacity to resist shocks, proceed on without interruption, and boost public trust. As a result, the banking industry acts as a buffer against both internal and external risks.

There are different views on the role which is played by financial sector reforms on banking sector development. Ekong & Udonwa (2015) stated that commercial banks' profitability improves because of financial sector reforms. Concurrently, Arifin, Arifin, Ramly & Hashim (2019) claims that financial reforms have produced a more stable financial environment that allows financial firms such as banks to provide better, more affordable goods and services. Banks increase the market share as a result of this. Thus, financial sector reforms produce a financial system that is more accessible and adaptable.

On the other hand, Cantah, Darfor, Nunoo, Afful Jr & Wiafe (2023) asserts that financial sector reforms have a potential to increase competition between banks as it allows more participants

to get into the market which may have an effect on profitability of banks. Asset quality and efficiency are threatened when banks take on greater risk. Instability in the banking industry might potentially be a result of these high-risk firms. Consequently, in this regard, bank competition increases the likelihood of instability in the banking sector.

In the same vein, Moyo & Le Roux (2020) argue that banking sector development brought on by financial sector reforms may boost competitiveness, which in turn lowers profits and encourages risk-taking. Also, in a nation with an underdeveloped banking sector, capital inflows may cause a sharp rise in bank lending, which, if extended to borrowers who are not deserving, might trigger banking instability as was witnessed during the Global Financial crisis.

When it comes to performance and stability of banks in the Southern African Development Community (SADC), Nyamazunzu (2019) argues that the banking systems of Swaziland, Zambia and Zimbabwe have the shortest distance to distress, which implies that these three countries face high risk to their banking stability. Of late, Seychelles, Mauritius, Malawi, and Madagascar have had the most stable banking systems. However, a comparative study by Jungo, Madaleno & Botelho (2022) between SADC countries and South Asian countries indicate that the stability score in the region of 9.38% is lower than 15.07 as measured by the z-score. It was also found that banks in the region have an average non-performing loan rate of 6.48%, while SAARC countries have a rate of 7.70%.

It should be noted that in the late 1980s and early 1990s, most of the SADC nations implemented financial sector reforms. Prior to the changes, real interest rates were negative, most of these nations' financial systems were primarily under the authority of their national governments, and there was little competition, particularly in the banking industry (Moyo & Le Roux, 2020). In another study, Jungo et al., (2022) documents that financial institutions in the SADC region are exposed to credit risk, which leads to banking instability, as a result of banks' lending to the population where the majority of people do not have collateral but as part of the financial inclusion initiatives.

To promote reforms in member countries, the Southern African Development Community (SADC) also implemented the protocol on finance and investment which stipulates the policies geared towards financial sector development in the region. The reforms included polices focusing on promoting financial sector liberalisation. According to the SADC website (2025), the initiatives under this included:

i. "Allowing interest rates to fluctuate based on the market value

ii. Reducing directed and subsidised credit
iii. Redrafting financial and bank statutes
iv. Adopting indirect instruments of monetary policy
v. Privatising banking systems
vi. Easing conditions for participating in stock markets"

In the early 1990, the countries that implemented these financial liberalisation policies witnessed significant changes in their financial systems. At the time, it is argued that with the liberalisation of interest rates, the rise in interest rates encouraged savings to rise. For countries such as Mauritius, Seychelles and South Africa, they witnessed a significant growth of the financial sector which translated to high growth rates in some of the member states. Despite these changes which were implemented, the majority of the countries in the region have not fared well. In this regard, the study focuses on examining whether reforms in the financial sector do influence banking sector stability in the member countries.

1.2 PROBLEM STATEMENT

The majority of countries in the SADC through financial liberation initiatives have permitted floating interest rates, promoted foreign exchange, and implemented indirect monetary policy mechanisms (SADC 2022). All of these reforms have eased previous restrictions on new entrants into the financial system and the formal economy. Following the deregulation which was implemented in the 1980s in many of the member countries, interest rates have risen, which was expected to raise domestic savings which are still very low in almost all countries in the region. The SADC (2022) report further indicate that countries such as South Africa and Mauritius have experienced massive developments in their financial systems to the extent that they compare favourably to those of other developed countries (SADC, 2022). Other countries in the region such as Tanzania have also witnessed developments in their banking sector after financial reforms. Prior to reforms, there were few foreign banks in Tanzania. However, after financial sector reforms there was a huge influx of foreign banks. In addition, in recent years, Angola, Madagascar, and Malawi have improved their credit frameworks, which has seen the banking sector developing and expanding its ability to mobilise and allocate capital (SADC, 2022). Kapingura, Mkosana & Kusairi (2022) also indicate that financial sector reforms in SADC have led to improvements in some of member nations' banking industries with some, such as South Africa, having systems which compares to those of advanced nations, even though still some lag behind.

As much as there has been developments in many of the member states banking sectors, Sanderson, Le Roux & Mutandwa (2018) documented that Zimbabwe's banking sector witnessed banking failures between 2009 and 2017. More than nine banks closed during the period. Blache (2022) indicated that the banking industry in the DRC contributes relatively little financial support to the economy. The DRC has one of the ten lowest credit-to-GDP ratios in the world as of the end of 2020; it was 7.5%, in comparison to the 147.6% global average. Additionally, a comparison with some of the DRC's regional peers shows that the country's banking sector is among the least profitable and most unstable in the world. Moyo & Le Roux (2020) pointed out that financial reforms had a detrimental impact on Lesotho, which was experiencing financial sector challenges. A number of banks in Lesotho collapsed after financial reforms which was partly blamed on poor regulation of the banking sector.

Makalima (2022) also indicate that in the SADC region the banking sector is at various stages of development as good as the countries themselves. South Africa leads with a banking sector which contributes greatly to the economy where domestic credit to the private sector as a percentage of GDP stands at 147%. This is followed by Mauritius (91.5%) and Namibia (48.5%). The other member countries lack a vibrant banking sector. Monteiro (2015) also highlighted that most SADC nations have lowest levels of financial depth and least effective financial institutions. All this has implications for the development of a country as the banking sector plays a very important role through raising savings and allocating them to productive sectors of the economy. Given that there are different arguments as well as experiences on the role which financial reforms have played on the development of the banking sector, the study seeks to examine the effect of financial sector reforms on banking stability in the SADC region.

1.3 RESEARCH OBJECTIVES

The main focus of the study is to investigate the effect of financial reforms on banking stability in the SADC region. Specific objectives are:

a) To provide an overview of financial reforms, banking stability and other related variables in the SADC region.

b) Testing empirically, the effect of the different measures of financial reforms on banking stability in the Southern African Development Community region.

c) Based on the empirical results, to suggest relevant policies for the development of the banking sector in the SADC region.

1.4 HYPHOTHESIS

H0: Financial reforms do not have a significant effect on banking stability in the South African Development Community region.

H1: Financial reforms do have a significant effect on banking stability in the South African Development Community region.

1.5 JUSTIFICATION OF THE STUDY

The majority of SADC countries have liberalised their financial systems over the past three decades, restructuring most of their state-owned commercial banks in the process. This has made it easier for foreign banks to enter the region and allowed domestic financial institutions to buy foreign assets. Research shows that, in comparison to countries with less transparent financial sector policies, competition in the banking sector has generally improved in developing countries with transparent financial sector regimes where financial sector reforms have been implemented (Le Roux et al., 2019). However, it is important to note that the role which the banking sector is playing in the development process is still limited.

The majority of studies on finance in the SADC region have largely been on financial sector development and volatility (Kapingura et al. 2022), finance and economic growth (Popov, 2018), whether financial liberalisation, financial sector development and financial crises (Moyo & Le Roux, 2020; Cele & Kapingura 2018). The study differs in that in examines the role of financial reforms on promoting banking sector development in the SADC region.

As much as literature has ensured that the economies of Southern Africa have implemented financial reforms such as lowered trade barriers, allowed floating interest rates, eased foreign exchange, and implemented indirect monetary policy tools (Bowles & White, 2019). The aforementioned limitations on new players entering the banking system and the formal economy have all been relaxed due to these changes. Nonetheless, with economies being liberalized the financial sector is still underdeveloped. This research will focus to examine the effect of banking sector development reforms on banking stability in the SADC region. It will further provide policy recommendations that will help the government to develop strategic policies that will not only propel stability in financial institutions and cultivate economic growth in SADC countries.

1.6 LAY OUT OF THE DISSERTATION

The study is composed of 6 Chapters. Following the introduction Chapter, the second chapter focuses on providing an overview of the different reforms of financial reforms which have been

carried out by the countries in the region as well as the state of the banking sector development. The third chapter presents a review of literature focusing on the theories which underpins the study as well as the available studies on the subject. The 4th chapter discusses the research methodology used to analyse the link between the variables. Chapter 5 presents the findings from the study. Lastly, chapter 6 provides a summary and conclusion to the study.

CHAPTER 2

OVERVIEW OF FINANCIAL SECTOR REFORMS ON BANKING STABILITY IN THE SADC REGION

2.1 INTRODUCTION

This chapter provides an overview of financial sector reforms and banking stability in the SADC region. Following the introduction, the second section provides an overview of financial sector development in SADC. The third section indicates an overview of financial sector reforms in the SADC region. This is followed by banking stability in the SADC region in the fourth section and the conclusion follows in the fifth section.

2.2. OVERVIEW OF FINANCIAL SECTOR DEVELOPMENT IN THE SADC REGION

The Southern African Development Community originated from the Southern African Development Coordination Conference (SADCC), which was created in 1980. The SADC declaration and treaty, which replaced the SADCC, were signed in 1992. The SADC envisions a regional community where the inhabitants of Southern Africa can achieve economic prosperity, enhanced living conditions and quality of life, freedom, social justice, as well as peace and security. The mission of SADC is to promote sustainable and equitable economic development through efficient productive systems to ensure that the region becomes competitive (Le Roux, Mutonhori, Nyamutowa & Abel, 2019).

According to SARB (2014), financial sector development is defined as the process of strengthening and diversifying the provision of financial services to meet the requirements of economic agents in an effective and efficient manner and thereby support, as well as stimulate, economic growth. Mahawiya (2015) argued that the financial sector of SADC countries is made up of different financial intermediaries which include central banks, commercial banks, investment banks, pension funds, insurance companies, microfinance institutions as well as bond and stock markets. The level of activity and development of these varies from one country to another. However, across the region, the insurance sector has the greatest opportunity for growth as 94.5% of the population in the region is not formally insured. In the region, South Africa has the best developed markets which include highly sophisticated stock exchange and a significantly bonds market. As a result, in some instances South Africa`s financial sector dominates the region more than that of other regional countries (Mahawiya, 2015)

The banking sector in the SADC region has experienced significant growth in the past years (KPMG, 2014). Initiatives to enhance financial development in SADC - mainly anchored in reforms introduced in the 1980s and 1990s (Kasekende, 2010), innovation and institutional development - managed to gradually increase depth, coverage of and access to financial systems over the past decades. The banking sector has been driving economic development for most of Southern Africa countries, providing capital and credit to both the private and the public sector (Allen, Otchere & Senbet, 2011).

Stylised facts on SADC indicate that the level of financial development is diverse across countries, with South Africa being the more financially advanced country (Table 2.1). Bara, Mugano and Roux (2016) argued that financial systems of most SADC countries are largely dominated by banks, with a few countries such as South Africa and Mauritius having relatively developed non-bank financial sectors.

Table 2.1: Banking sector development indicators in SADC for the period 2013 to 2021

	Average domestic credit to private sector percent of GDP (2013-2021)	**Average broad money percent of GDP (2013-2021)**	**Average interest rate spread (2013-2021)**
Angola	16,82	34,62	12,36
Botswana	34,82	45,56	5,27
Comoros	15,24	27,77	8,19
Dem. Rep. Congo	6,23	12,45	17,29
Eswatini	20,96	28,22	6,50
Lesotho	20,37	36,63	8,56
Madagascar	13,43	24,50	42,09
Malawi	7,87	17,06	N/A
Mauritius	91,75	118,07	4,02
Mozambique	26,06	49,36	9,00
Namibia	68,21	60,70	4,20
Seychelles	24,28	80,64	8,60
South Africa	119,13	67,46	3,18
Tanzania	13,18	21,25	7,68
Zambia	15,57	23,54	3,12

Zimbabwe	12,63	21,12	13,17

Source: Author's compilation using data from Global Financial Development indicators (2024)

Table 2.1 shows the banking sector indicators for the years 2013 to 2021. As expected, South Africa has the highest average domestic credit to private sector percentage of GDP which is 119.13%. Mauritius, Namibia also have high average domestic credit to private sector percentages of GDP of 91.75% and 68.21% respectively. The higher private sector credit figures in these countries are indicative of the high efficiency of financial intermediaries in these countries in allocating credit to the private sector. It is also indicative of the investment opportunities available in the countries which are perceived to be more attractive than those of other regional countries. The rest of the remaining 13 countries have lower private sector credit percentages with all of them failing to reach the 50% mark. This might be reflective of the efficiency of the financial sector in these countries with less of the credit allocation going to private enterprise in contrast with South Africa, Mauritius and Namibia. This might imply that the public sector dominates in terms of credit allocation; therefore, most of the financial intermediation in these countries might not be for productive purposes (Tembo, 2018).

In terms of liquidity of the sector measured by broad money, Mauritius has the highest average broad money to GDP, followed by Seychelles, South Africa and Namibia respectively. These nations have shown that they have the most liquid banking sectors as they have the highest broad money percentages. This again confirms the size and depth of the banking sectors in these countries when compared to other regional countries. The remaining 12 countries have lower broad money to GDP percentages below 50%, implying lower levels of monetization (Tembo, 2018). Furthermore, Zambia, South Africa, Mauritius and Namibia have low interest rate spread, this entails that these nations have relative competitive environment in the banking system. However, countries such as Madagascar, Democratic Republic of Congo, Zimbabwe and Angola have high interest rate spread which might mean that the banking sector in those countries face financial risks and instabilities.

Table 2.2: SADC financial markets development indicators in SADC for the period 2013 to 2021

	Average stock market capitalization (2013-2021)	**Average stock market return (%, year-on-year)**	**Average stocks traded, turnover ratio of domestic**	**Average stocks traded, total value (% of GDP) (2013-2021)**

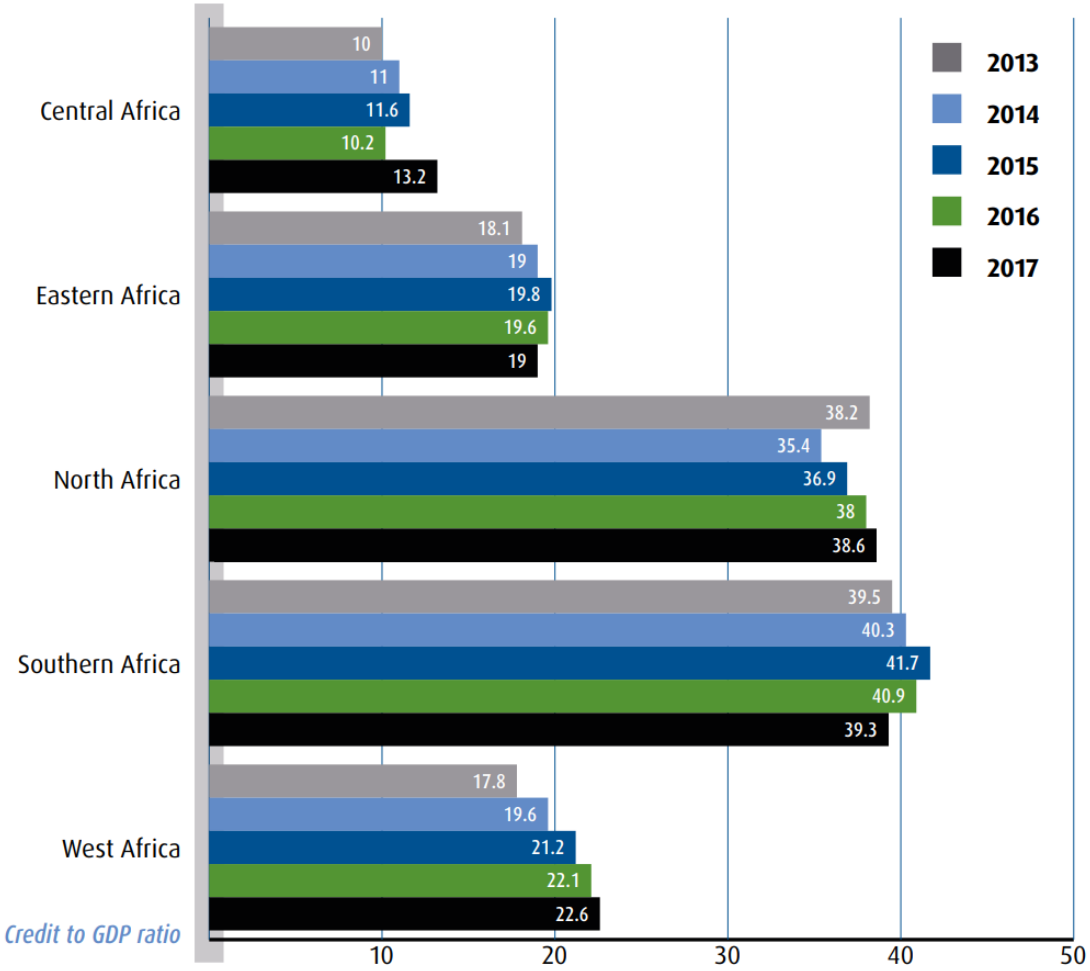
			shares (%) (2013-2021)	
Angola	N/A	N/A	N/A	N/A
Botswana	N/A	-0,34	N/A	N/A
Comoros	N/A	N/A	N/A	N/A
Dem. Rep. Congo	N/A	N/A	N/A	N/A
Eswatini	N/A	N/A	N/A	N/A
Lesotho	N/A	N/A	N/A	N/A
Madagascar	N/A	N/A	N/A	N/A
Malawi	N/A	N/A	N/A	N/A
Mauritius	65,81	1,14	4,76	3,12
Mozambique	N/A	N/A	N/A	N/A
Namibia	20,17	5,91	2,86	0,49
Seychelles	N/A	N/A	N/A	N/A
South Africa	263,58	7,86	30,92	81,94
Tanzania	10,39	4,65	0,29	0,03
Zambia	N/A	N/A	N/A	N/A
Zimbabwe	N/A	N/A	N/A	N/A

Source: Author's compilation using data from Global Financial Development indicators (2024)

Financial markets in the SADC region are not that well developed. When financial markets are not that well developed, institutions like stock exchanges and capital markets will also be limited. This may also be true of the SADC region as indicated by Table 2.2 above, South Africa has a well-developed stock market followed by Mauritius, Namibia and Tanzania respectively.

Figure 2.1 indicates that the SADC region high credit to GDP as compared to other African regions. The region compares favourably to North Africa. On the other hand, Central Africa is at the bottom. The high level of credit to GDP in Southern Africa where the majority of SADC countries are could be attributed to the developments of the financial sector in South Africa.

Figure 2.1: Credit to GDP by African Region



Source: United Nations Economic Commission for Africa (2020)

Table 2.3 presents a comparative analysis of the SADC countries levels of financial sector development against other African countries.

Table 2.3 Comparative analysis of financial inclusion in the SADC vs other African regions

Region	Account ownership	Bank accounts per 1000 adults	Bank branches per 100 000 adults	5-bank asset concentration
Africa	41.36	476.00	8.75	80.49
North Africa	35.89	517.68	10.36	79.11
West Africa	35.29	402.14	6.81	79.99
Central Africa	32.95	230.53	6.89	84.26
East Africa	55.01	754.30	13.06	73.80
Southern Africa	52.87	-	6.62	87.31
Southern Africa excluding South Africa	53.87	475.33	5.98	85.72

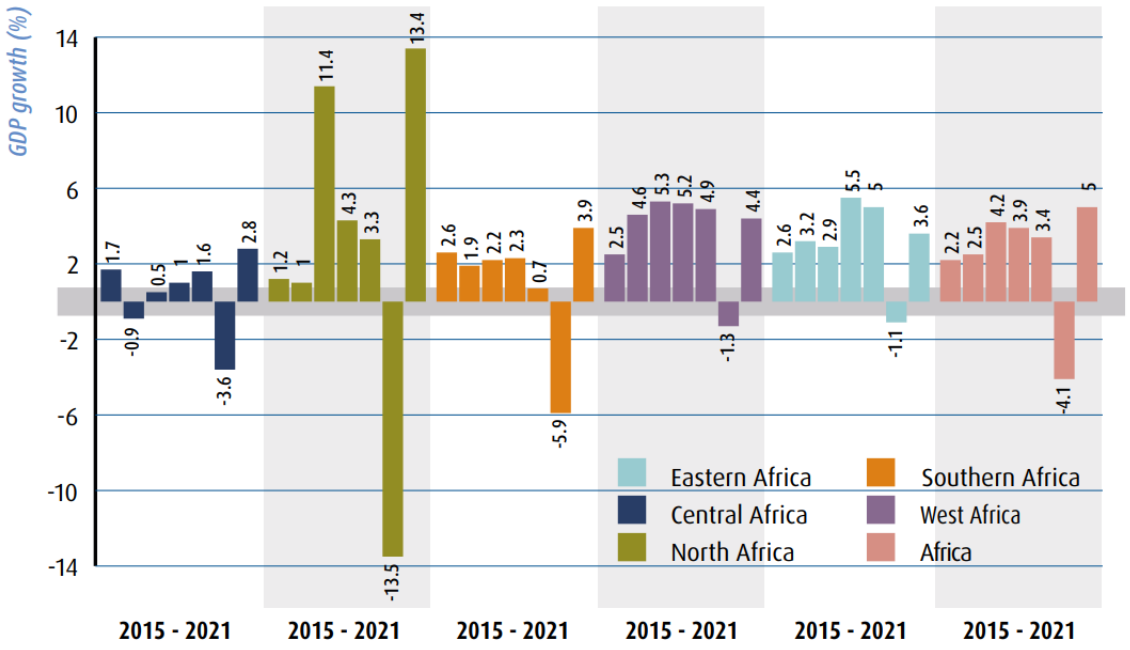
Source: World bank development Indicators (2022)

Table 2.3 shows that the SADC region has also made strides in terms of financial inclusion. In a way, the developments in overall financial development have mirrored the developments in the area of financial inclusion. In all the measures of financial inclusion, the region is performing very well.

2.3 Comparison of Growth patterns in the SADC region vs other African regions

The development in the financial sector mirrors the developments in the growth of the SADC countries as indicated on Figure 2.2. Figure 2.2 shows that the region has experienced positive growth rates with the exception of 2020 which could be attributed to the Covid 19 pandemic.

Figure 2.2: Comparison of Growth patterns in the SADC region vs other African regions



Source: United Nations Economic Commission for Africa (2020)

2.3 OVERVIEW OF FINANCIAL SECTOR REFORMS IN THE SADC REGION

The late 1980s witnessed several countries in SADC moving towards economic and financial sector reforms following the adoption of the Structural Adjustment Programmes and Economic Recovery Programme which were supported by the International Monetary Fund (IMF) and the World Bank. Poor economic performance of SADC was blamed on the regression post-independent economic and financial system (Allen et al., 2011). Second cause was the nature of treaty since SADCC up to 1992 was a conference, and hence no actual binding economic treaty was signed and implemented. One of the core focus of reforms was the financial system developments which further economic growth. Inadequate financial sector development was argued to be among other central reasons answerable for the slow growth process in the region. This is because a well-developed and efficient financial system results in mobilising and channelling resources not only to productive areas but also to areas that are more risky but promising, and these processes could include economic growth (Allen et al., 2011)

In line with a global trend in the 1990s, many countries in Southern Africa explored liberalised financial systems. Since this time, Southern African economies have reduced trade tariffs, allowed floating interest rates, facilitated foreign exchange, and adopted indirect instruments of monetary policy. All of these changes have relaxed prior conditions that prevented new entries into the Banking system and the formal economy. Recent reports indicate that these

liberalised policies have generated a positive effect on economic growth in the SADC region. Interest rates have risen following liberalisation, which has encouraged saving (SADC, 2022).

The financial sectors of Mauritius, Seychelles and South Africa developed significantly by 2004, with 50 % of their Gross Domestic Product (GDP) invested in highly accessible, short-term deposits and securities – a standard indicator of a country's financial health. Tanzania has also fared well. Prior to liberalisation, no foreign banks operated in the country; five such institutions were operating by 1998. Most recently, Angola, Madagascar, and Malawi have all made improvements to their credit systems, which should improve access to credit for local investors in the future (SADC, 2022).

Financial reforms boosted financial development in most SADC countries as indicated by the increase in the number of new banks entering the markets including foreign-owned institutions. South African banks in particular have benefited from the liberalisation of the financial sectors in SADC as can be seen from the number of new branches established by these banks across the region. Competition in the banking sector as well as credit availability have improved thus benefiting small business and households. Credit to the private sector and broad money increased in most SADC countries following the financial reforms (Moyo & Le Roux, 2021).

SADC has improved access to financial services for most residents of the region through strategies aimed at improving livelihoods and broad participation in economic development. SADC Heads of State and Government approved the SADC Strategy on Financial Inclusion and SME's access to finance (2016-2021) in 2018, aimed at improving access, uptake and utilisation of financial services and products by consumers and small businesses (Mambo, 2023). SADC has since established various platforms, programmes and bodies which allow stakeholders to meet to discuss and share experiences on the promotion of financial inclusion and integration across member states such as the Annual Regional Financial Inclusion Forum, the Support to Improving the Investment and Business Environment Programme, and the Committee of Central Bank Governors, as well as the Peer Review Panel of SADC Ministers of Finance and Investment (Mambo, 2023). Moreover, regarding restrictions on current and capital account transactions, most SADC economies have liberalised these transactions, with some countries having done so earlier and others doing so recently. This is indicated by table 2.3 below.

Table 2.3: Restrictions on current and capital account transactions in the SADC region

Country	Exchange control on current account (CA) transactions	Restrictions on capital account Transactions
Angola	Almost all CA transactions have been liberalized	Restrictions on investment in sectors such as defence and security
Botswana	Exchange controls abolished in February 1999. Guidelines for monitoring and controlling foreign exchange exposure limits for commercial banks.	Full capital account convertibility
DRC	No restrictions on current account transactions. Forms are required only for record purposes.	No restrictions on capital account transactions, but reasons must be provided for transactions more than US$ 10 million.
Lesotho	No controls on current account transactions	Limited reforms on capital account transactions from June 2003
Malawi	No exchange control on the current account	Both inward and outward direct and portfolio investments require prior approval.
Mauritius	Current account is fully convertible	No restrictions on capital account transactions
Mozambique	No restrictions on exports of goods. Registration required with Customs	Capital transactions are subject to approval of the central bank
Namibia	No restrictions on the current account	No restriction on capital from non-residents for investments: corporate entities are allowed to invest offshore

Seychelles	All restrictions on current account transactions were removed	There are no restrictions on capital account transactions
South Africa	No restrictions on current account transactions	There are no restrictions on inward investment and dis-investment by non- residents
Tanzania	No restrictions	Limited movement to and from the country
Zambia	Liberalised since 1992	Repeal of the Exchange Control Act in 1994
Zimbabwe	Fully liberalized	Partially liberalized

Source: Chiwira, Bakwena, Mupimpila & Tlhalefang (2016); SADC (2022); European Investment bank (2023)

Table 2.4 presents the banking sector indicators in the Sub-Saharan Africa. The Southern African Development Community has the second highest number of banks in the continent. The region has the highest credit to the private sector as well as the annual credit growth. It is also important to note that non-performing loans are lower in the region as compared to other regions.

Table 2.4: Key banking Indicators in Africa at sub-regional level

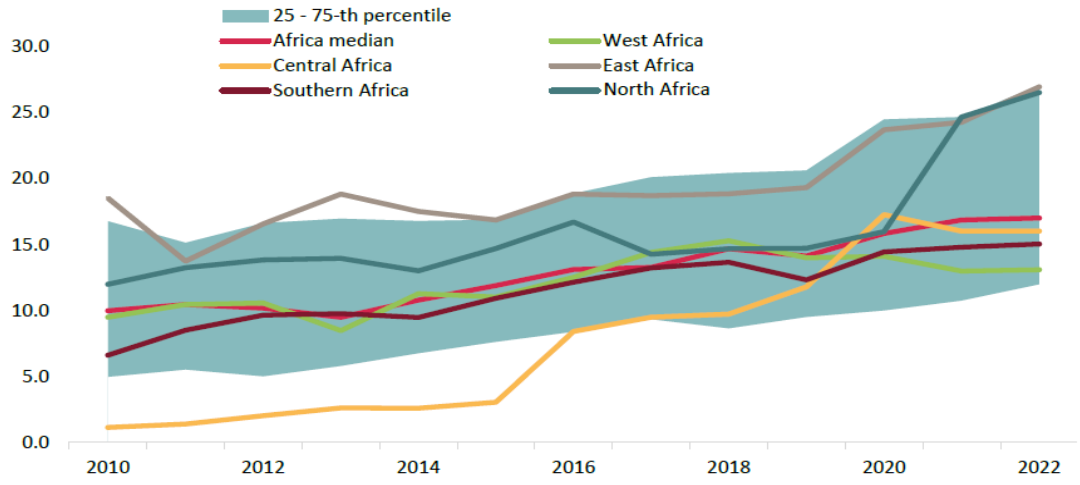
Region	Number of banks	Banking concentration	Credit to the private sector	Annual credit growth (%)	Loans to deposits	Non-performing loans (% of total loans)	Capital to risk-weighted assets (%)	Return on equity (%)
Southern Africa	208	59.84	62.51	24.98	80.33	5.88	22.10	18.70
West Africa	212	48.25	14.24	17.68	63.87	10.12	14.21	16.80
East Africa	142	46.05	18.48	9.96	82.38	9.56	18.91	23.80
Central Africa	48	69.15	10.84	14.20	71.44	18.22	13.46	18.18

Sub-Saharan Africa	**610**	**55.82**	**37.60**	**16.71**	**74.51**	**10.19**	**17.17**	**19.37**

Source: European Investment bank (2023)

Figure 2.3 presents trends of African bank's exposure to the public sector. The trend shows that for all African regions, there has been a general increase in the exposure from 2010, with a notable increase in 2020/2021 which could be attributed to the Covid 19 pandemic.

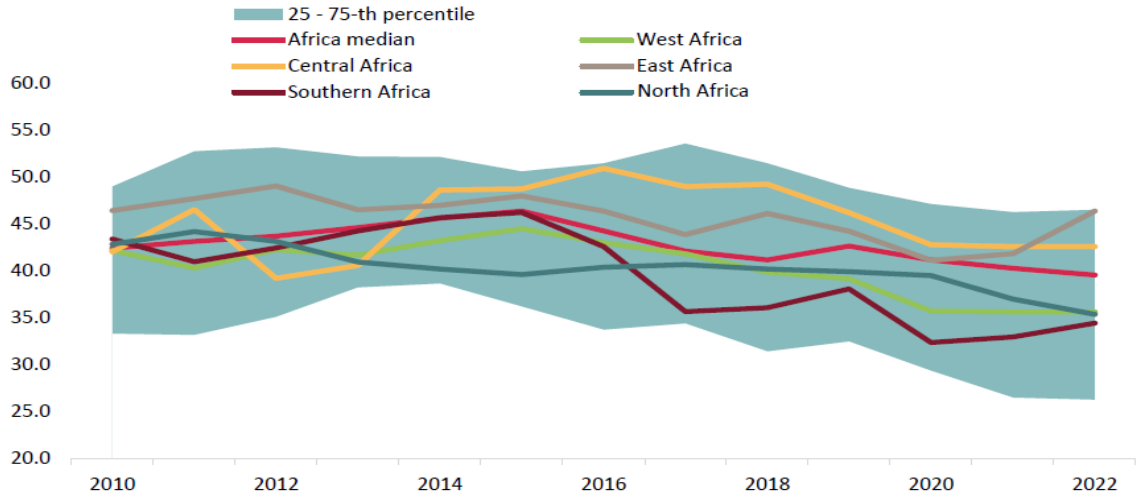
Figure 2.3 African banks exposure to the public sector (% of assets)



Source: European Investment bank (2023)

It is also interesting to note that the increase in public sector lending has been accompanied with a decline in private sector lending as presented in Figure 2.4.

Figure 2.4 African bank's private sector lending (% of assets)



Source: European Investment bank (2023)

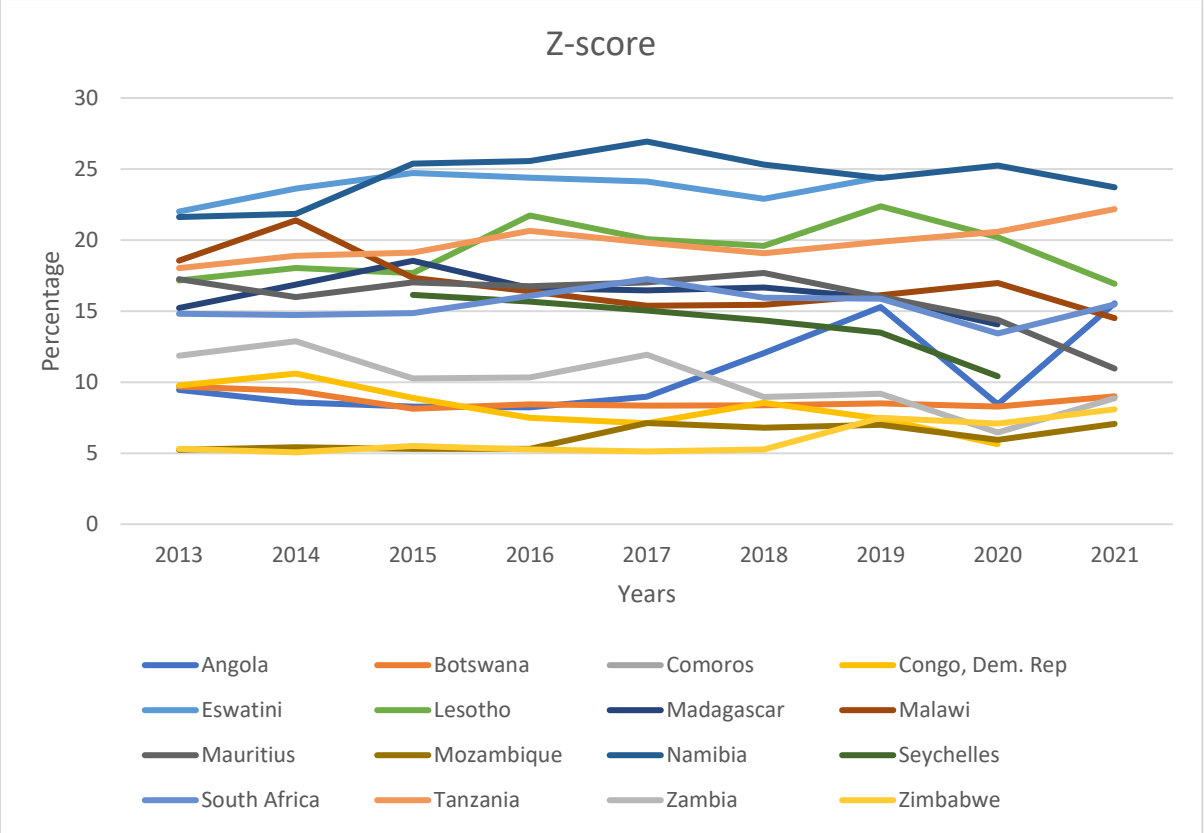
2.4 BANKING STABILITY IN THE SADC REGION

A strong and stable banking system is the backbone of an effective economy. Bank loans and investments divert funds into productive uses, creating businesses, jobs, and a higher standard of living. As the SADC endeavours to liberalise the economies of the region in pursuit of improved livelihoods for the people of Southern Africa, it strives to build an integrated banking system that will better facilitate trade among member states and with the world at large (SADC, 2022).

2.4.1 Z-score in SADC

Vilakazi (2021) argued that banking stability is not straightforward to measure; however, literature mainly proposes Z-score as one of the alternatives that could be used to measure banking stability. Cihak and Hesse (2010) viewed Z-score to be amongst the most efficient statistical tools used to measure a bank's soundness and stability.

Figure 2.5: Z-score in SADC for the period 2013 to 2021



Source: Author's compilation using data from Global Financial Development indicators (2024)

Figure 2.5 presents the Z-scores over time for each SADC country. The statistics show that the banking systems of Congo Democratic Republic, Mozambique, Zambia and Zimbabwe have the shortest distance to distress, which implies that these three countries face high risk to their banking stability. Namibia, Eswatini, Seychelles, Mauritius, South Africa and Madagascar have the most stable banking systems. It is argued that a stable financial system is capable of efficiently allocating resources, assessing and managing financial risks, maintaining employment levels close to the economy's natural rate, and eliminating relative price movements of real or financial assets that will affect monetary stability or employment levels (Nyamazunzu, 2019).

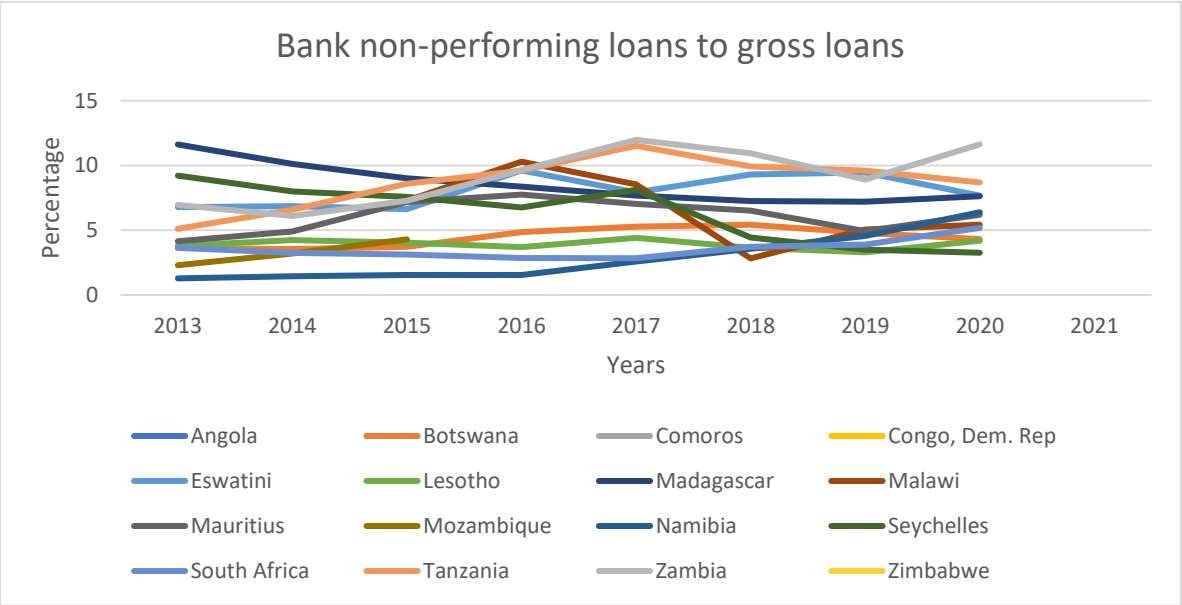
It is also interesting to note that the banks in the region are relatively stable even though of all the regions, the region comes after Central African region which is at the bottom. This also highlights that there could be more which needs to ensure that the banks are more stable.

2.4.2 Bank non-performing loans to gross loans in SADC

Bank nonperforming loans (NPLs) to total gross loans are the value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the

deduction of specific loan-loss provisions). The loan amount recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the amount that is overdue (Global economy, 2024).

Figure 2.6: Bank non-performing loans to gross loans in SADC for the period 2013 to 2021



Source: Author's compilation using data from Global Financial Development indicators (2024)

Figure 2.6 shows that Zambia, Tanzania and Eswatini have been recording high levels of NPLs to gross loans. Even though Madagascar recorded the highest level of NPLs at the start of the period under review (2013), the trend for Madagascar has been declining. On the other hand, from 2013 to 2017, Namibia had the lowest number of NPLs, but the trend has been increasing hence at the end of the period under review, it is the 5th country with high levels of NPLs in SADC. South Africa also has been recording low levels of NPLs, nevertheless, since 2017 till the end, the trend is increasing. Seychelles was the 2nd highest during the start of the period but at the end of the period, it has the lowest value compared to other nations. Countries such as Botswana and Lesotho also had low NPLs in the period under review. Low levels of NPLs reveal better stability in the banking sector.

According to IMF (2021), high and rising NPL ratios can severely limit the ability of the banking sector to provide new credit and support the economy. Compared to other regions, SADC has historically recorded high levels of nonperforming loans in the banking sector. They have been particularly elevated in commodity producers and fragile states. The structurally

high level of NPLs in SADC can be explained by a range of factors, including government arrears creating debt repayment difficulties for domestic suppliers, macroeconomic volatility, poor credit risk management practices, and a legacy of problem loans that remain unresolved or are not written off partly because of weak legal systems (IMF, 2021).

Table 2.5: A Comparative analysis of Bank Regulatory capital and Non-Performing Loans of selected SADC countries and other African countries

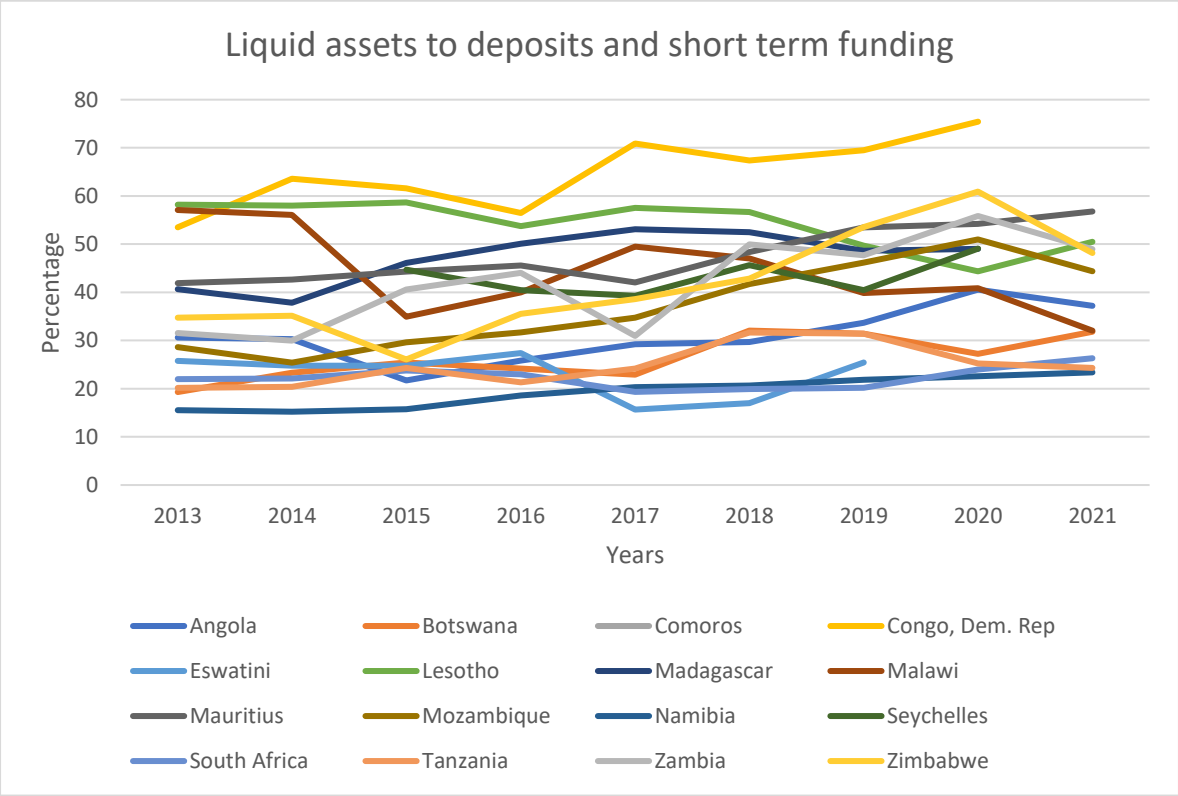
Country	Regulatory Capital	Non-performing Loans	Year
Botswana	19.25	4.85	2016
Congo	19.09	4.85	2016
Eswatini	22.21	9.62	2016
Lesotho	18.05	3.59	2016
Madagascar	13.67	8.36	2016
Mauritius	18.24	7.76	2016
Mozambique	17.10	4.30	2015
Namibia	15.15	1.54	2016
South Africa	15.93	2.86	2016
Tanzania	19.15	9.61	2016
Zambia	26.16	9.66	2016
Nigeria	14.78	12.82	2016
Rwanda	23.05	7.08	2016
Kenya	18.87	11.66	2016
Ghana	17.75	17.29	2016
Egypt	13.20	7.20	2015

Table 2.5 shows that there is a link between regulatory capital and non-performing loans. Generally, for the SADC countries, regulatory capital is high with low levels of non-performing loans.

2.4.3 Liquid assets to deposits and short-term funding in SADC

Liquid assets to deposits and short-term funding are the ratio of the value of liquid assets (easily converted to cash) to short-term funding plus total deposits. Liquid assets include cash and due from banks, trading securities and at fair value through income, loans and advances to banks, reverse repos and cash collaterals. Deposits and short-term funding include total customer deposits (current, savings and term) and short-term borrowing (money market instruments, CDs and other deposits) (World Bank, 2024).

Figure 2.7: Liquid assets to deposits and short-term funding in SADC for the period 2013 to 2021



Source: Author's compilation using data from Global Financial Development indicators (2024)

As shown by figure 2.7, nations such as South Africa, Tanzania, Botswana, Namibia have low liquid assets to deposits and short-term funding hence this might mean that these nations are finding it hard to manage short term financial obligations which might impact banking stability. On the other hand, nations such as Mauritius, Zimbabwe, Lesotho, Congo have high liquid assets to deposits and short-term funding, meaning that these nations are able to meet short term financial demands.

2.5 CONCLUSION

This chapter presented an overview of financial sector reforms and banking stability in the SADC region. Many countries in Southern Africa explored liberalised financial systems. On that note, Southern African economies have allowed floating interest rates, facilitated foreign exchange, and adopted indirect instruments of monetary policy amongst other measures. All of these changes have relaxed prior conditions that prevented new entries into the banking system and the formal economy. On the other hand, in terms of financial development in the SADC region, the nations are at various stages. South Africa has the most developed banking sector and a well-functioning financial market followed by Mauritius and Namibia. Other nations such as Democratic Republic of Congo and Angola amongst others have least developed financial sectors. Also, Namibia, Eswatini, Seychelles, Mauritius, South Africa and Madagascar have the most stable banking systems in the region. That being said, one might wonder if financial sector reforms are the best way to induce banking stability in all member states. Therefore, the next chapter will assess theories as well as empirical studies that also focused on financial sector reforms and banking stability worldwide.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

The chapter presents a review of both the theoretical and empirical literature which has examined the impact of financial sector reforms and banking stability. Despite the paucity of research on the topic, it is important to acknowledge that banks are crucial to the success of financial inclusion initiatives and the fight against poverty and increase economic growth (Ouechtati 2020; Sikarwar et al. 2020). However, in order for banks to carry out their conventional role of financial intermediation, they must be financially stable. The chapter is composed of five sections. The first section is the introduction, followed by the conceptual framework which is the second section. The third section focuses on the theoretical literature which focuses on the theories that better explain financial sector reforms and banking stability, the fourth section reviews the available empirical literature, and the last section is the assessment of the literature and conclusion.

3.2 CONCEPTUAL LITERATURE

3.2.1 Defining financial sector reforms.

Policy initiatives aimed at deregulating the financial system and changing its structure in order to achieve a liberalized, market-oriented system within a suitable regulatory framework are known as financial sector reforms (Moyo & Le Roux ,2019). In many industrialized nations, financial sector innovation and reform took increased speed in the late 1970s; in other developing nations, this acceleration occurred in the early 1980s.The implementation of financial sector reform within the financial sector has led to more flexibility in interest rates, a stronger role for market forces in loan distribution, a progressive expansion of the money and securities markets, and more autonomy for commercial banks (Okonkwo et al., 2018). Alongside these establishments, the monetary policy framework is also undergoing major modifications. In order to implement monetary policy, market-based tools are replacing bank-specific credit ceilings and selective credit allocations, and prudential supervisory systems are being implemented to promote wise lending decisions.

These changes have meant raising real interest rates to positive levels, allocating credit based on commercial criteria, tightening prudential regulation and supervision, and reorganizing state-owned banks (Moyo & Le Roux ,2018). Due to higher interest rates, the financial sector

changes will encourage more household savings into bank accounts, increasing the amount of loanable money. Faster economic growth and increased investment would follow this.

It is essential to consider the financial reforms in order. Indeed, most researchers agree that successful financial liberalization requires macroeconomic stability. In a case of high inflation, it may be a challenge to achieve positive real interest rates through liberalizing. Furthermore, high amounts of public debt may also make it more difficult for the private sector to obtain credit, which would inhibit investment (Goetz, 2018). Liberalization should not precede the strengthening of the financial system's institutional structure since this could lead to destabilization. In comparison to environments with strong state control, liberalized financial regimes require more effective regulation and oversight (Ozili ,2018).

Aghion, Howitt and Levine (2018) assert that financial development stimulates innovation and increased output of products and services, which in turn drives economic expansion. Thus, following the recommendations of McKinnon (1973) and Shaw (1973), the majority of developing nations began financial reforms in the mid to late 1990s in an effort to increase financial development and growth levels. As evidenced by the rise in the number of new banks entering the market, including foreign-owned establishments, financial reforms helped to advance financial growth in many SADC nations (Aghion et al.,2018). The number of new branches opened by South African banks around the region indicates that these banks, in particular, have profited from the liberalization of the financial sectors in SADC (Aghion et al.,2018). The availability of credit and the level of competition in the banking industry have improved, helping consumers and small businesses.

3.2.2 Defining banking stability.

A financial system's ability to absorb shocks and the unwinding of financial imbalances is known as financial stability. This system is made up of markets, financial intermediaries, and market infrastructures. Hyperinflation, or a stock market meltdown can result from significant instability. It has the potential to seriously erode trust in the financial and economic system. The z-score is a widely used indicator of stability at the institutional level (Ahmed & Mallick ,2019).

According to Moyo and Le Roux (2021), sustainable and well-balanced economic growth is greatly aided by a sound and stable financial system. Systemic events are less likely to happen when the risks and vulnerabilities influencing the financial system are reduced. Systemic crises

have the potential to diminish public trust and confidence in the financial system, as well as have a negative impact on "real" economic factors like unemployment and the growth of the GDP (Menyari,2019).

A financial system that is considered financially stable is one that effectively manages money, is resilient to systemic threats, and exudes trust. When banks, other lenders, and financial markets can give individuals, communities, and companies the funding they require to make investments, expand, and take part in a healthy economy—and can do so without making the system more susceptible to severe downturns—that financial system is deemed stable (Jayakumar et al.,2018). On the other hand, an economic shock is likely to have considerably more significant impacts in an unstable system, interrupting the credit flow and resulting in larger-than-expected decreases in economic activity and employment (Goetz, 2018).

The financial system offers the following resources and services: cheques and savings accounts, retirement accounts, and other savings products; cash management, brokerage services, securities underwriting, and other essential services of an advanced financial system; loans and lines of credit to individuals and businesses, such as mortgages and credit cards (Goetz, 2018).

3.3 THEORECTICAL REVIEW

This section discusses the most relevant theories concerning financial sector reforms and banking stability.

3.3.1 The Financial liberalisation theory

The study is underpinned by the financial liberalisation of McKinnon and Shaw (1973) which shows how financial reforms can result in the development of the banking sector. Financial liberalisation involves leaving the market to determine the interest rate which is assumed to result in more savings being deposited into the banks which will be channelled to entrepreneurs resulting in the growth of the economy (Cele ,2018). According to Ofolabi & Ehinomen (2014) in 1973 Edward Shaw and Ronald McKinnon popularized the idea of financial liberalization. In their individual works, they contended that pursuing policies of controlling interest rates, allowing selective credit management and anything related to that is part of financial repression which can negatively affect the development of the banking sector (Olawumi et al.,2017).

Olawumi et al., (2017) further indicate that when the financial system is repressed, it discourages savings and delays the effective distribution of resources, and increases market segmentation (Moyo & Tursoy,2020). The central idea of the McKinnon-Shaw theory is that when real interest rates are low or negative, it discourages savings, resulting in a decrease in the funds available for lending. This will result in a banking sector which is unstable and will not play its role properly in the economy resulting in low investment and growth (Khan and Hassan, 1998; Odhiambo, 2004).

Moyo & Le Roux (2020) indicate that the process of financial liberation involves the following steps: credit controls should be removed; interest rates should be deregulated; foreign banks should be allowed to freely enter the banking sector; banks should be autonomous; banks should be privately owned; there should not be barriers to foreign capital inflows into the domestic financial system; exchange controls should be removed; and any obstacles to the entry of foreign banks should be removed.

According to the theory, when interest rates increase, it encourages savers to set aside more money, which would free up more capital for investment. The primary goal of financial liberalization is to create a deeper, more reliable, and more efficient financial system that can sustain the expansion of the private sector (Cantah et al.,2023). In general, it is anticipated that financial liberalization will promote long-term growth and development. Developing nations can lessen their undue reliance on foreign capital flows and promote domestic savings and growth by implementing financial liberalization (Anthony et al., 2015).

Financial liberalization as a significant tool of economic growth in both developed and developed countries. Akpan (2004) in order to figure out the effects of financial liberalization, investigated Nigeria experience and concluded through the results of the study that financial liberalization cannot be the cause of the macroeconomic instability because the volatility that is associated with it does not negatively impact the economy's overall growth. Even while financial development is important for economic expansion, financial liberalization has not significantly deepened the financial system, which would have a positive impact on the economy (Akpan, 2004; Sulaiman et al., (2012).

Banks in Central and Eastern European (CEE) countries that have greater liberalization, and openness can improve cost efficiency and ultimately provide more affordable services to customers. Additionally, larger banks are considerably more cost-efficient than medium and small banks, while smaller banks exhibit the highest productivity growth (Andries & Capraru

2013). The objective of both the financial sector's internal structural changes and its external openness is the development of a financially efficient and competitive system, which will support both financial system stability and economic growth. Benefits of financial liberalization are currently under debate, especially considering recent volatility on the financial markets. In addition, others who believe that the recent financial crisis was exacerbated primarily by financial deregulation and the acceleration of globalization.

Moreover, by diversifying and expanding the financial sector, it will contribute to changing the nation's market structure and better sustaining economic growth while satisfying the demands of the populace that uses the financial system infrequently. The amount of financial intermediation is expected to rise with higher real interest rates, and the rate of economic growth in developing nations is accelerated by greater financial intermediation. At Macroeconomic level, there is mounting evidence that nations with more liberalized financial systems have seen higher rates of economic development, better and more efficient investment performance, and higher savings. Higher trade openness promotes banks' development by increasing the volume and decreasing the cost and risk of bank credit (Ashraf, 2018).

3.3.2 Critics of Financial Liberalisation Theory

Despite the theory receiving wide attention, it has been criticised on a number of fronts. Arestis and Demetriades (2015) argue that liberalising the financial sector has contributed to banking crises by creating moral hazard problems and inflows of capital. Suhaibu et al. (2022) also indicate that a liberalized interest rate environment encourages an expansionary approach in lending activities with higher interest rates. This policy, however, may result in financial instability as borrowers with high credit risks are willing to borrow more than those with lower credit risks (Mishkin, 1997).

Financial liberalization theorists argue that savings might not react to rising interest rates and that interest rate reforms' increase in borrowing costs hurts investments (Warman & Thirwall 1994, De Melo & Tybout 1986). Moreover, according to Cele (2018), financial changes raise the possibility of financial disastrous events.

Basu (2002) argues that the McKinnon and Shaw model is based on the assumption of a perfect competition that is unrealistic, notably unpredictable when it comes to less developed nations. Since it is conceivable to argue that ideal competition is perpetually impracticable and unachievable in all markets and nations, particularly in credit markets, Basu (2002) categorized this premise as unrealistic. Due to the oligopolistic nature of the banking industry, financial

liberalization may well produce a monopoly in which real interest rates rise and loan volume declines on a larger scale than in an imperfectly competitive market.

Taylor's (1983) and Van Wijnbergen's (1983) theories provide another critique which posits that the increased interest rates resulting from financial deregulation may either stay the same or reduce the overall amount of money in circulation. This can be attributed to hedging effects, which may not be apparent in situations where the overall money supply remains unaffected, or to limit effects, which might diminish it. The substitution of hedge assets is what triggers hedge effects.

Mezui et al. (2012) also argue that the fundamental causes of banking problems are macroeconomic instability which may also arise through liberalisation and structural weaknesses in the economy. Macroeconomic instability manifests itself in fiscal and current account deficits, high inflation, high interest rates, and currency devaluations. Structural weaknesses, on the other hand, arise from weak regulatory and supervisory frameworks, a substantial proportion of state-owned banks, heightened competition in the banking sector that reduces franchise values, and non-performing loans.

3.3.3 The supply-leading hypothesis

The theory can be traced from Schumpeter (1911) and is based on the proposal that it is the supply of capital that drives economic growth. The theory proposes therefore that developments of the banking sector which can come through financial reforms will enhance financial intermediation resulting in more capital being generated by the banking sector and being allocated to the economy in which the end result will be the growth of the economy (Adeyeye et al. 2015).

The theory argues that sound financial practices and capital are necessary for sustained economic growth. According to Schumpeter (1911), innovations can be new approaches to product manufacturing, new technology for manufacturing, the development of new markets, or new breakthroughs in raw materials and sectoral restructuring. The intermediary between capital owners and innovators is provided by banks and other financial organizations. According to Schumpeter (1911), having access to financial products boosts wellbeing, lowers poverty, and promotes productivity. Many people who work in the financial industry gain financial power and can actively participate in profitable endeavours that support the expansion of the economy. By providing loan grants to support the launch of innovative ideas, the bank

promotes economic growth. This school of thinking suggests that finance encourages economic growth in its early phases.

According to Magaji, Darma & Ingwe (2021), the main argument in support of the supply-leading theory is that financial deepening is the primary driver of economic expansion. It suggests that the growth of the financial sector leads to the best possible distribution of resources. The development of the financial sector is a prerequisite for economic expansion. According to McKinnon (1973) and Shaw (1973), a well-developed financial sector improves financial intermediation by reducing transaction, monitoring, and asymmetric information costs. The presence of a robust financial sector facilitates the development of financial services and their availability ahead of demand from the economy's real sector players (Schumpeter & Swedberg,2021).

Robinson (1952) introduced a counterargument to the supply-leading concept, arguing that economic expansion is a prerequisite for financial deepening. This position is ingrained in the growth-led or demand-following finance theory. It implies that financial development follows economic growth in a causal manner. Stated by Becker (2017), as the economy grows, there is a greater need for financial services, which expands the financial sector. The supply-leading and demand-following hypotheses are combined in what is known as the "stage of development" hypothesis. It suggests that as the economy grows, there will be alternating causal links between financial development and economic growth. According to Becker (2017) The supply-leading concept is valid in an economy that is still developing and fades as the economy expands.

The theory is also closely in line with what has been discussed before which assert that an effective banking sector can reduce transaction and monitoring expenses if there is no repression. It is also argued that addressing the information asymmetry can enhance financial intermediation. The real sector, which is greatly influenced by the level of financial development, is essentially the centre of the supply-leading hypothesis. Therefore, the deepening of financial services is projected to create a conducive environment for rapid and enduring economic advancement.

3.4 Empirical Literature

This section presents the available studies which have been carried out on the link between bank stability and financial reforms. Given that the majority of the studies on financial reforms

is centred on financial liberalisation, the review will look at studies which have been carried out focusing on financial liberalisation as well. The review will be carried out focusing on studies which argue that reforms which include financial liberalisation does enhance the development of the banking sector. The studies in this regard include**:** Cele (2018); Khan (2022); Ijaz et al., (2020); Jungo et al., (2022) and Dutta & Saha (2021).

The other available studies in this regard include studies which argue that financial reforms do promote financial instability. The studies in this regard include (Kim et al.,2020; Batuo et al.,2018; Moyo & Le Roux (2019); and Chinoda & Kapingura (2023)).

3.4.1 Positive effects of financial reforms on banking stability

Cele (2018), examined the effect of financial liberalization on financial instability in the selected SADC member countries namely: South Africa, Tanzania, Madagascar and Botswana. The author employed the panel technique to establish the relationship between the two variables. Impaired loans represented financial instability. Findings revealed that there is a positive correlation between financial liberalization and financial instability. Financial reforms and the impaired loans ratio were discovered to be positively related, with credit to private sector, government expenditure, GDP and inflation used as control variables in this case. It was also discovered that taking into account the global financial crisis it contributed to worsening financial instability. This implies that another cause of financial instability in the SADC countries may be the financial liberalization process. The results also illustrate when the dependent variable is lagged, all the results of the relationship between impaired loans and control variables suggest that financial liberalization leads to financial stability (Cele ,2018).

There are also studies which have found that financial reforms do contribute to banking sector stability. A study conducted by Khan (2022), to test whether financial development, bank competition has any potential contribution to macroeconomic stability. Macroecomic stability in this case has been classified as both economic and financial stability. Aggregate z-score was utilized as a variable to assess financial stability. In this analysis, the author employed a two-step dynamic panel system (GMM), with a data set of 48 developing nations from 1998 to 2018. Findings reveal financial development intensifies bank competition's positive impact on financial stability. Furthermore, the results demonstrate that stronger bank competition encourages macroeconomic stability by lessening the probability of bank failure, fluctuations in private credit, and the volatility of production growth. A moderate degree of bank

diversification causes a rise in banking stability (positively), but immoderate diversification has a harmful effect (Kim et al.,2020).

Asanović (2018) in another study focusing on European countries shows that financial reforms have contributed significantly to banking sector stability. The author shows that reforms reduce restrictions which inhibit the development of the banking sector which result in banks engaging in activities which enhance the sector. In another study Li (2019), examined the impact of banking sector reforms and competition on banking stability by using unbalanced data from 22 transition countries for the period of 1998 to 2016. It was found that there was a positive correlation between bank reforms and stability. It was also established that there is a positive correlation between market power and bank fragility. In this regard, banks with higher market power may be weaken by this positive effect.

Ijaz et al. (2020), investigated the link between bank competition, financial sector reforms and economic growth. This research was based on dataset of a sample of 38 European countries over 2001 to 2017, and it employed the Fixed-effect estimator as well as the GMM techniques. Findings indicate that economic growths decline during the periods of both global financial crisis and the local banking crisis. Therefore, financial reforms, banking stability and real GDP are positively correlated. Real GDP growth is a substantial factor in both the overall sample and the post-reform sample periods. An increase in real GDP growth serves as an encouraging indication of banking stability. A flourishing economy stimulates lending and profitability, which in turn results in the establishment of more banks (Allen et al., 2018).

The availability of research studies conducted to examine the link between financial sector development and economic growth propose that a well-developed financial system enhances GDP through mobilising and allocating capital to productive sectors of the economy (Akinlo and Egbetunde (2010), Balago (2014), and Le et al. (2021). Also highlighted on the research is that an advanced financial sector can decrease risk and encourage investment through reduction of transaction costs.

A study conducted to examine the effect of financial regulation on competitiveness and financial inclusion in 15 countries in SADC region and 8 countries in the SAARC over the period 2005-2018 (Jungo, Madaleno and Botelho,2022). The findings of Feasible Generalized Least Squares (FGLS) estimation indicated that financial regulation decreases competitiveness and hampers financial inclusion in the financial sector in the two regions (Botelho et al., 2022). Moreover, the results confirms that financial stability lessen the negative effect of financial

regulation on competitiveness and financial inclusion. Meaning that financial stable banks remain competitive and normally offer financial products and services even through the implementation of strong capital adequacy requirements (Jungo, Madaleno and Botelho,2022).

Bangladesh being one of the countries that are experiencing an intense competition as it is composed of a huge number of banks, Dutta and Saha (2021) explored the impact of competition and efficiency on financial stability of Bangladeshi banks over 2009-2017. In examining the impact amongst the variables by using bank-level data to evaluate competition, stability, and efficiency, respectively, a two-step system GMM as an estimation technique and other robustness checks were used to address the estimations of endogeneity. The study results point to a nonlinear link between competition and stability, with efficiency having a moderating effect when competition is present.

The authors estimated a model analysing the causal effect of competition on financial stability using only the Boone indicator in conjunction with other control variables (deposit, loan market and efficiency index). Results show the level of the lag term is positively significant at 1 percent, and the squared lag terms of competition are negatively significant at 1 percent. This finding indicates that competition and stability have a nonlinear, bell-shaped connection, with competition initially promoting stability, meaning that competition only helps stability at a lower level. As competition gets more intense, though, its positive effects tend to wane and eventually turn negative (Dutta and Saha 2021).

Moyo, Clement, Le Roux & Pierre (2018), examined the impact of interest rate reforms on economic growth through savings and investments in SADC countries for the period 1990 to 2015.The study technique which was employed for this examination was the Pooled Mean Groug method. Furthermore, for the analysis there were three specifications followed; the first one determines the influence of interest rate reforms on savings, the second one analyses the effect of savings on investments while the third one examines whether investments have a positive impact on economic growth. The results show that cointegration is detected in most countries for each one of the three specifications. Inflation, government expenditure and trade openness have a negative effect on economic growth but contrary, interest rate reforms have a positive impact on economic growth through savings and investments (Moyo et al.,2018). Implying the financial sector is stable, and that high interest rates are used to boost economic growth resulting to a rise in savings and investments, which are main determinants of long-term growth.

Goetz (2016) also indicate that banking sector deregulation which reduces barriers to entry into urban banking markets results in greater competition causing a significant rise in banking stability. Moreover, findings revealed that competition increases stability as it improves bank profitability and asset quality. The findings also suggested that financial sector reforms, such as improved supervision and stronger capital requirements, had a significant positive effect on banking stability.

In another study, Li (2019) examined the impact of banking sector reforms and competition on banking stability by using unbalanced data from 22 transition countries for the period of 1998 to 2016. It was found that there was a positive correlation between bank reforms and stability. It was also established that there is a positive correlation between market power and bank fragility. In this regard, banks with higher market power may weaken by this positive effect.

The review has established that studies which have found that financial reforms contribute to financial stability generally highlight that reforms remove impediments to growth of the financial sector, mostly the banking sector which promotes competition resulting in an environment which generally promotes stability. The review has also pointed out that the financial liberalisation has played a very important role in terms of deregulating the interest rates and promoting savings. This has resulted in higher levels of economic growth as well as the stability of the financial sector.

3.4.2 Negative effects of financial reforms on banking stability

Of the available studies, Kim, Batten & Ryu (2020) indicate that prior to the global financial crisis, banks actively pursued a lot of risk activities due to the opening of the financial sector (Roy & Kemme, 2020). This was demonstrated through research by Kim et al (2020) to examine the relationship amongst bank diversification and financial stability. By employing the unbalanced panel data technique for the period 2002 to 2012 focusing on 34 Organisation for Economic Co-operation and Development (OECD) countries. The sample size caters for the ten-year period which incorporates pre-financial crisis, financial crisis and post-financial crisis. Based on the analysis, risk activities were partly to blame for the crisis. The study by Kim et al (2020) indicate that banks tend to be more stable when they achieve a moderate level of diversification.

However, excessive diversification has a negative impact on the banking sector stability. The findings indicate that although regulators around the world encourage bank diversification as a means to reduce risk, it can actually contribute to increased financial instability within banks

or even increase the likelihood of a financial market collapse during unforeseen events like financial crises (Kim et al,2020).

Similarly, Batuo, Mlambo, and Asongu (2018), in a study focused on 41 African countries between 1985 and 2010, employed the panel data technique—specifically the Generalized Method of Moments (GMM) approach—to examine the effect of financial instability on economic growth, financial development, and financial liberalization as well as vise-versa. The results demonstrated that financial instability has a positive impact on financial liberalization, implying that the liberalization process tends to increase financial instability. The results from the study imply that as much as financial liberalisation may contribute to financial instability, financial instability may also have an influence on the extent to which a country may implement reforms successfully.

In the same vein, Moyo and Le Roux (2019) conducted a study investigating whether financial liberalisation (reforms) and financial development increase the likelihood of financial crises in SADC region. The period between 1990 to 2015 was analysed using the pooled mean group estimator technique. The findings illustrated that indeed amongst the variables there is a negative link in the long run. Agreeing with Barrell (2016) that indeed high levels of credit to the private sector were partly to blame for the global financial crises that occurred in 2008/2009. This has awakened the debate on whether the growth-enhancing effects of financial development outweigh the retarding effects associated with financial crises.

Chinoda & Kapingura (2023) also conducted a study in Sub-Saharan Africa on the extent to which developments in the financial sector such as digital financial inclusion and bank competition can influence bank stability. The period between 2014 and 2022 was analysed using the two-step System Generalized Method of Moments technique. To measure stability, z-score, and non-performing loans were utilised. The findings demonstrated a positive correlation between digital inclusion and banking stability, as evidenced by the z-score. Also, a negative association between digital inclusion and non-performing loans was observed. The study further identified a negative impact of bank competition on banking stability. This negative relationship could be attributed to bank competition eroding the pricing power of banks, leading to an increase in risk-taking behaviour, ultimately posing a threat to banking stability.

The review of the studies which established that financial sector reforms have a negative effect on financial stability highlight that several countries which implemented financial reforms in

the form of financial liberalisation have experienced financial instability. One of the critical issues which has been raised to be the major contributing factor is the sequencing of the reforms. It is highlighted that for the majority of African countries the reforms did not contribute to the stability of the financial sector as interest rates were deregulated when the fundamentals were not in place. It is also argued that the reforms have exposed developing countries to contagion given the exposure of the countries to the international world.

3.5 Assessment of literature

The review of literature has indicated that at theoretical level the Financial Liberalisation theory argues for the implementation of financial reforms if a country is to achieve high levels of banking sector development. However, the theory has also been criticised in that liberalisation is argued to also be contributing to instability of the financial system. At empirical level, the available studies were grouped in terms of those which indicate that reforms have a negative effect and those which say reforms contribute to the stability of the banking sector. For the studies which found a negative effect, it is argued that reforms are the major source of financial crises and hence instability. On the other hand, from the studies which argue of a positive effect, it is argued that reforms encourage foreign participation as well as opening up the market to many participants which enhances stability. In the case of the SADC region, studies which are related to this include Chinoda and Kapingura (2023) at Sub-Saharan level as well as Cele and Kapingura (2018) which focused on financial liberalisation and financial instability in the face of a crisis. The study differs in that it looks at financial reforms and banking sector development on the SADC region.

CHAPTER FOUR

RESEARCH METHODOLOGY

4. INTRODUCTION

The research methodology explains how the study was conducted, including the research design, research techniques, and data collection. This section gives an overview of the approach that was utilized to conduct research and determine the effect of financial sector reforms and banking stability in the Southern African Development Community (SADC). The models and econometric methods that were used in the study are discussed in this section.

4.1 RESEARCH APPROACH

There are three approaches that are used when conducting empirical research and these are qualitative, quantitative, and mixed. According to Bhandari (2020), quantitative research approach involves the collection and analysis of numerical data, enabling the identification of patterns, calculation of averages, prediction-making, testing of causal relationships, and generalisation of findings to broader populations. Bhandari (2020) further indicate that qualitative research on the other hand entails the collection and analysis of non-numerical data (Bhandari, 2020). Conversely, the mixed approach in research refers to the practice of gathering and analysing both quantitative and qualitative data in a single study (Shorten & Smith, 2017). This study will use a quantitative research approach because the variables of interest can be quantified. Also, it is possible to obtain data from large samples that can be processed (Bhandari, 2020).

4.2 MODEL SPECIFICATION

This study is underpinned by MacKinnon and Shaw Model (1973) of financial liberalisation. According to the theory, in a developing country, the liberalization of interest rates is expected to result in an increase in the real interest rate. This, in turn, is believed to stimulate higher levels of savings, encourage investments, and ultimately lead to a boost in economic activity. The increase in savings will make more loanable funds available to the banking sector. Based on McKinnon and Shaw model as well as the studies of Ollo (2018), the following model will be specified which links banking stability and financial sector reforms.

The model will be estimated as follows:

$$BST_{it} = \beta_0 + \beta 1FSR_{it} + \beta 2PCBit + \beta 3INTDit + \beta 4t\ GDPit + \beta 5INFit + \varepsilon it \quad \ldots\ldots (3.1)$$

Where: BST is banking stability, FSR is financial sector reforms, PC is domestic credit provide by banks to private sector, INTD is interest rate deregulation, GDP is gross domestic product growth rate, INF is inflation rate. β_0 is the constant and β_1 to β_4 represents the coefficients of independent variables. ε is the error term.

Definition of variables and prior expectations

Banking stability (BST): A stable banking system is characterized by its ability to consistently provide essential services to households and businesses, regardless of economic conditions. In this study, the Z-score, which is expressed in the form of standard deviations, will be employed as a widely used measure of banking stability. The Z-score can be utilized to evaluate individual institutions or aggregated to assess the overall stability of the banking system. It gauges a bank's distance to default by comparing its capitalization and return to the volatility of returns. The higher the Z-score, the more stable the banking sector. The World Bank employs the Z-score as a tool to monitor the stability of the banking sector across different countries (Tarkocin & Donduran, 2023). This will be used as the dependent variable in this study.

Financial sector reforms (FSR): Financial sector reforms, on the other hand, encompass a wide range of policy measures aimed at improving the performance and stability of the financial system. These reforms can include changes in banking regulations, supervision, capital requirements, corporate governance, and the legal and institutional framework. The financial sector reforms play a vital role in promoting the banking stability in any economy. A positive correlation is expected between financial sector reforms and banking stability. Due to competition (diversification) enhancing functionality within the financial institution, banks which are non-performing will be replaced by performing ones (Okonkwo et al., 2018). The index proposed by Abiad, et al. (2010) of reforms ranging between 0 and 21 was employed in the study. "A country with a fully liberalized financial system has an index value of 21. The initial six-dimension rations financial liberalization, while the seventh element captures the strength of bank capital regulation and supervision. The first six dimensions of liberalization covers elements such as privatization; entry barriers; high reserve and credit allocation requirements; Interest Rate Liberalization; Capital Accounts Liberalization and security market policies" Abiad, Detragiache and Tressel (2010, pg 2).

Domestic credit to private sector by banks (PC): Domestic credit to the private sector pertains to the financial resources, including loans, nonequity securities, and other accounts receivables, extended to the private sector by banks (World Bank, 2023). It is commonly utilized as a substitute for financial sector development. A direct correlation is generally anticipated between the availability of domestic credit from banks and the stability of the banking sector. The variable was normalised against GDP.

Interest rate deregulation (INTD): Interest rate deregulation represented with the maximum lending rate of the banks. Lending rates are the interest rates paid by borrowers (Reserve Bank of Australia, 2023). This is another proxy for financial sector reforms. A positive relationship is expected between interest rate deregulation and banking stability.

Gross domestic product (GDP): The monetary value of the finished goods and services produced inside a nation's borders over given time period—typically a quarter or annually—is quantified by the Gross Domestic Product (GDP). It encompasses both marketable products and services, as well as non-market activities, such as defence or educational services provided by the government (Callen, 2023). It is generally expected that there exists a positive correlation between GDP and the stability of the banking sector. Growth rates of GDP were utilised in this case.

Inflation (INF): A broad increase in the cost of goods and services across the economy is known as inflation, and it results in a reduction in the purchasing power of money for both consumers and companies (McKinsey, 2022). It is anticipated that there exists an inverse correlation between inflation and the stability of the banking sector.

4.3 DATA SOURCES

The nature of this study is quantitative, and empirical analysis was conducted using secondary data. There are two methods used for extracting data for all the variables: time series cross-sectional. Panel data analysis refers to the combination of these two methods. The study used annual panel data from 2013 to 2023. This time period covers the period in which most SADC nations had implemented financial reforms as well as other measures related to banking stability. The data was taken from World Bank Development Indicators.

4.4 ESTIMATION TECHNIQUE

4.4.1 Panel Unit root test

Given that there is a time component to the panel, panel unit root tests were therefore conducted. The study employed two panel data models, the Im, Pesaran and Shin (IPS) test as well as the Fisher ADF and Fisher PP tests. These are discussed in this section.

4.4.1.1 The Im, Pesaran and Shin (IPS) test

Im, Pesaran and Shin (1997) extended the LL test to allow for heterogeneity on the lagged value of the dependent variable $Y_{i,t-1}$. They also proposed a procedure to check for stationarity based on the individual unit-root test statistics. Under the IPS test, each cross section is estimated separately. The model is presented as follows:

$$\Delta Y_{i,t} = a_i + \rho Y_{i,t-1} + \sum_{k=1}^{n} \phi_{ik} Y_{i,t-k} + \delta_i\, t + \theta_t + u_{it}$$

Under this model, the null and alternative hypotheses are stated as follows:

$$H_0: \rho_i = 0 \; for \; all \; cross - sections$$

$$H_a: \rho < 0 \; for \; at \; least \; one \; i$$

The null hypothesis in this test is that all series are non-stationary, against the alternative that a fraction in the test are stationary.

The limitation of the IPS test is that it is formulated under the restrictive assumption that T is the same across all the cross-sectional units. In this regard, the computation requires a balanced panel. The test statistic is of the following form:

$$\bar{t} = \frac{1}{N} \sum_{i=1}^{N} t_{\rho i}$$

The Im et al (1997) shows that $t_{\rho i}$converges to a statistic denoted as t_{iT} which is assumed to be normally distributed. Given that the panel utilised is unbalanced, the Fisher ADF and Fisher PP were also estimated.

4.4.1.2 Fisher ADF and Fisher PP tests

The Fisher ADF and Fisher PP tests were proposed by Maddala and Wu (1999). The tests that combine the p-values from individual Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests, respectively, to determine if a panel of time series data contains a unit root, indicating

non-stationarity. The null hypothesis for these tests is that all series in the panel contain a unit root, while the alternative hypothesis is that at least one series is stationary. Fisher tests can be more robust than tests that assume a common unit root process across all series, allowing for heterogeneity in the unit root process. In this case the Fisher based tests are used as robust tests.

4.4.2 Generalised Method of Moments

The research study employed panel data for 16 SADC countries and used the Generalized Method of Moments (GMM), developed by Arellano and Bond (1991) and Blundell and Bond (1998), for dynamic panel data analysis. The GMM model is effective for analysing panel data because it can provide consistent results even in the presence of sources of endogeneity such as unobserved heterogeneity, simultaneity, and dynamic endogeneity. The GMM model works by externally transforming the data through a statistical process called variable transformation, whereby a variable's present value is subtracted from its past value, reducing the number of observations and improving the GMM model's efficiency (Roodman, 2009).

Given the study's time period (2013-2023) and the number of observations (N = 16 SADC countries), GMM is the most appropriate model as it is more effective when N > T, according to Roodman (2009). The study will also ensure the validity of the GMM analysis by performing the Sargan test of overidentifying restrictions and the Arellano-Bond test for second-order autocorrelation.

4.5 THE GENERALIZED METHODS OF MOMENT (GMM)

The GMM is an econometric method for data analysis that produces unknown complex model parameters by examining economic and population data (Blundell & Bond, 1998). Throughout the late 1970s and early 1980s, it was developed and made popular. The large sample properties of the Generalized Method of Moments Estimators, a major paper by Lars Peter Hansen published in 1982, established the theoretical foundation for the estimator and the foundation for the GMM frameworks. Hansen's contribution to this estimator was substantial. Currently, most literature uses this technique. Johnston and Dinardo (1997) suggest that the encouragement of utilizing the GMM was mainly drive by two major reasons:

1. “GMM nests many common estimators and provides a useful framework for their comparison and evaluation.
2. GMM provides a ‘simple’ alternative to other estimators, especially when it is difficult to write down the maximum likelihood estimator.”

As stated by Roodman (2009), the GMM estimator is quite good at capturing the challenges associated with dynamic panel models. The model is widely recognized for its flexibility,

robustness, and consistency when compared to other estimation methods like Maximum Likelihood Estimation (MLE), particularly when conventional pooled or fixed effects estimations—also known as within group (WG) and ordinary least squares (OLS) estimations—are present (Nickell, 1981; Blundell, Bond & Windmeijer, 2001; Roodman, 2009). The estimator also plays a crucial role in handling endogeneity, which refers to situations in which the regressors are correlated with the error term, autocorrelation within the panels, heteroscedasticity, and missing variable problems. It also resolves bias issues and improves coefficient precision. The GMM technique can either follow a system GMM estimator or a different GMM.

4.5.1 THE SYSTEM ESTIMATOR

According to Arellano and Bover (1995) & Blundell and Bond (1998) created the system GMM estimator to tackle the endogeneity issue. It can also be referred to as the Blundell-Bond it uses extra moment criteria, such the orthogonality restrictions in level equations, in addition to those already present in first-differenced equations, so addressing some of the shortcomings of the difference GMM estimators. Within the system GMM, a system of equations is created by integrating the original model in levels and the first-differenced model. The lagged levels and the lagged initial differences of the dependent variable serve as the instruments for the endogenous variables in the system GMM.

The system GMM estimator performs more efficiently than the difference GMM estimator when the dependent variable is exceedingly persistent because it can provide more relevant and valid instruments (Blundell & Bond, 1998). These instruments are no longer associated (exogenous) with fixed effects due to their modification. In contrast to the difference GMM, it subtracts the average of all future accessible observations of a variable rather than removing the contemporaneous observations from the prior ones. It minimizes data loss because it can be computed for all observations, apart from the last, for each individual, regardless of the number of gaps (Arellano & Bover, 1995; Blundell & Bond, 1998).

4.5.2 THE DIFFERENCE GMM ESTIMATOR

The difference GMM estimator originated from Holtz-Eakin, Newey, and Rosen (1988) and Arellano and Bond (1991). This type of estimator, also called the Arellano-Bond estimator, was created with dynamic panel data models in mind, where the explained variable is a function of its own lagged values. The difference GMM estimator mainly used first differenced to

remove the unobserved individual-specific effects, which usually correlate with the lagged dependent variable (Arellano & Bover, 1995). Also, the lagged terms of the dependent variable may be used as instruments for the first differenced lagged dependent variables, given that they are correlated with the latter but not with the first differenced error term.

Additionally, the model uses differencing to alter all regressors in order to cope with endogeneity. Arellano and Bond (1991) additionally show that the instruments for the first difference equations employed by the estimator were lag terms of specified variables chosen earlier in the current period. It is claimed that this estimate is consistent, particularly under the assumptions of valid instruments and when there is no autocorrelation in the error term beyond the first order. Blundell and Bond (2023) further point out that by permitting the endogeneity of the explanatory factors, including the lagged dependent variable, this estimator does away with the requirement for extra instruments. Nevertheless, because the first difference transformation deducts the prior observations from the present observation, it has the disadvantage of creating gaps in an uneven panel.

4.6 THE SUITABLE GMM ESTIMATOR UTILIZED IN THE STUDY

This study will use the system GMM approach. As it is the most appropriate technique for this study, more especially when the dependent variable is highly persistent over time. It is known for its efficiency as it uses both lagged levels and lagged first difference of the dependent variables as instruments, unlike the difference GMM, which uses lagged levels of the dependent variable as instruments. According to Blundell & Bond,1998) the system GMM also deals well with the challenge of endogeneity, where the independent variables are correlated with the error term. It also produces more precise parameter estimates, addresses the issue of unobserved heterogeneity, and is highly effective, especially when dealing with unbalanced data.

The set of moment conditions according under system GMM according to Nurnaddia and Nurhazia (2016) can be stated as follows:

$$E\left[(EBST_{i,t-s} - EBST_{i,t-s-1})(\mu_i - \varepsilon_{i,t)}\right] = 0 \; for \; s = 1 \ldots\ldots 3.2$$

$$\left[(EFSR_{i,t-s} - EFSR_{i,t-s-1})(\mu_i - \varepsilon_{i,t)}\right] = 0 \; for \; s = 1 \ldots\ldots 3.3$$

$$\left[(EPCB_{i,t-s} - EPCB_{i,t-s-1})(\mu_i - \varepsilon_{i,t)}\right] = 0 \; for \; s = 1 \ldots\ldots 3.4$$

$$\left[(EINTD_{i,t-s} - EINTD_{i,t-s-1})(\mu_i - \varepsilon_{i,t)}\right] = 0 \; for \; s = 1 \ldots\ldots 3.5$$

$$\left[(EGDP_{i,t-s} - EGDP_{i,t-s-1})(\mu_i - \varepsilon_{i,t})\right] = 0 \; for \; s = 1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.6$$

$$\left[(EINF_{i,t-s} - EINF_{i,t-s-1})(\mu_i - \varepsilon_{i,t})\right] = 0 \; for \; s = 1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.7$$

4.7 THE CHOICE OF WEIGHTING MATRIX

The GMM objective function's moment conditions are weighted by the utilization of the weighting matrix, denoted by the letter W. The GMM estimator's efficiency can be strongly impacted by the choice of weighting matrix. Consequently, selecting the weighting matrix is crucial for constructing the GMM model; it makes logical to allocate less weight to moment circumstances with more precise measurements (EViews, 2015). The uniqueness and validity of the parametric estimates was successfully determined by the GMM if the weighting matrix is created correctly (Hansen, 1982; Zivot & Wang, 2006).

4.8 THE SELECTION OF INSTRUMENTS

The choice of instruments is crucial in a GMM model since it determines the validity and applicability of the moment conditions used for estimates. Although using numerous instruments can result in high asymptotic efficiency, limited sample sizes may also lead in high bias and variation. Therefore, selecting the appropriate instrument variables when evaluating conditional moment restriction models is important. Instrumentation boosts asymptotic efficiency and increases volatility and/or slight sample bias (Donald & Newey, 2001). Concerns about overfitting and poor finite-sample features of the GMM estimator might also arise from the number of instruments utilized. To clearly define the GMM model, restrictions must be identified, meaning that a minimum number of instruments selected must be the number of parameters in the model (EViews, 2015).

According to Wooldridge (2001) and Baum, Schaffer, and Stillman (2003), reliability requires that valid instruments be uncorrelated with the error term (exogeneity) and correlated with the endogenous variables (relevance). It is crucial to consider aspects such as the number of endogenous variables, the accessibility of suitable instruments, and the identification assumptions. The model's over-identifying requirements indicate that, for the GMM to identify correct coefficient estimates, "the number of instrumental variables (K) modeled must be greater than or equal to the number of explanatory variables (L)." If K = L, the model is considered just identified; if K > L, it is considered over-identified; for any value of K < L, the model is considered unidentified (Baum et al., 2003).

This study's endogeneity issue may stem from time-series variation in the data, which permits the use of lagged dependent variables as regressors and accounts for unobserved individual specific effects, as well as another research by Varnamkhasti and Mehregan (2014) and Bowe and Kolokolova (2019). When endogeneity is present, instrumental variables must be utilized to account for it. Lagged values of dependent endogenous variables will be used as instrumental variables in this investigation.

4.9 GMM DIAGNOSTICS

4.9.1 TWO TESTS FOR INSTRUMENT VALIDITY

One of the essential presumptions in maintaining the validity of a GMM model is that the instruments are exogenous (Roodman,2009). This study indicates that when a dynamic panel-data instrumental variable approaches model is over-identified, the static test for the joint validity of the moment conditions can only be utilized to verify that the omitted instruments are, in fact, correctly independent of the residual process. This uses the Sargan/Hansen test for over-identifying limitations and is the appropriate test to ascertain the joint validity of the instruments included in the system-GMM estimation model, according to Arellano and Bond (1991) and Rodman (2009). Assuming conditional homoskedasticity, Sagan's statistic is a particular case of Hansen's *J*. The two tests for instrument validation include the *J* test proposed by Hansen (1982) and Sargan (1958), which is a test for over-identifying restrictions. These are employed to verify the null hypothesis regarding the general validity of the utilized instrument. The selection of instruments is supported if this null hypothesis is not rejected.

Roodman (2009) states that to confirm autocorrelation in the idiosyncratic disturbance term—a feature that would render some lags useless as instruments—it is also crucial to conduct an additional test. This test is conducted to precisely identify the second-order serial correlation (AR (2)) in the idiosyncratic disturbance term inside a GMM framework, in addition to the Sargan statistics of Arellano and Bond.

4.9.2 TEST FOR AUTOCORRELATION OF THE ERROR TERM

Roodman (2009) states that to confirm autocorrelation in the idiosyncratic disturbance term—a feature that would render some lags useless as instruments—it is also crucial to conduct an additional test. According to Adenitis (2014), this test is conducted to precisely identify the second-order serial correlation (AR (2)) in the idiosyncratic disturbance term inside a GMM framework. The Arellano-Bond test can be used to test for correlation, even on other models,

such as OLS and 2SLS, if no regressor is "post-determined" and relies on upcoming disturbances. This tests the null hypothesis that the differenced error term is first and second-order serial correlated. Failure to reject the null hypothesis of no second-order cereal correlation implies that the original error term is serially uncorrelated, and the moment conditions are correctly specified, that is, the value of AR (2)>0.05). Moreover, Roodman (2009) also indicates that Arellano and Bond found that their test was more effective than the Sargan and Hansen test at detecting the autocorrelation that renders lag-time instruments invalid. However, the test does not function well as the correlation approaches 0.2, at which point it only rejects the null hypothesis of no serial correlation 50% of the time.

4.10 ETHICAL CONSIDERATION

According to Oliver (2010), ethical consideration entails fundamental precepts and regulations that direct and regulate the researcher's behavior from the beginning to the end of the study. All ethical guidelines will be followed in this study, and to achieve the goal of the investigation, pertinent ethical concerns will be carefully taken into account. The data obtained will not be changed, and the study will abide by ethical guidelines against plagiarism. The study will adhere to the guidelines provided by the data producer and reference the information and data gathered from various sources using APA style. Prior to data collection and analysis, an application for ethics approval was submitted to IFREC.

4.11 CONCLUSION

The focus of this chapter was to discuss the suitable methodology followed in the study to examine the effect of financial sector reforms on banking stability in the SADC region. This chapter discussed the research design, model specification, definition, and prior expectations of variables. It also further elaborated the data sources and the relevant estimation technique, which is GMM. The other aspects discussed in the study is the diagnostic test to verify the validity and reliability of the model. Moreover, ethical considerations were also explained in the study. The next chapter will provide empirical results and an analysis.

CHAPTER FIVE

PRESENTATION OF EMPIRICAL RESULTS

5. INTRODUCTION

In this study, this chapter focuses on the empirical results of the chapter where diagrams have been forecasted by the author to prove the effect of financial sector reforms and banking stability in the SADC region, the data will assist in concluding whether the effect is negative, positive or does not exist at all.

The few advantages of using this estimation technique: Panel data analysis has gained popularity among social scientists because it enables the inclusion of data for N cross-sections (e.g., countries, households, firms, individuals, etc.) and T time periods (e.g., years, quarters, months, etc.). Panel data estimation is frequently regarded as an effective analytical method in handling econometric data (Borrego and Arellano,1999). Secondly, the integrated panel data matrix set provides a range of estimation techniques and comprises a time series for every cross-sectional member in the data set. Thirdly, in this instance, adding developments over time increases the total number of observations that are available (Syofya, 2022).

The basic idea behind panel data analysis comes from the notion that the individual relationships will all have the same parameters. This is sometimes known as the pooling assumption as we are in effect pooling all the individual together into one dataset and imposing a common set of parameters across them. However, the disadvantage of panel estimation is that if the pooling assumption is not correct then we may have issues. Even though in this circumstance, which is referred to as a heterogeneous panel (due to the parameters are different across the individuals) we would normally expect the panel data estimator to give some representative average estimate of the individual parameters (Banto and Monsia ,2021).

5.1 PRESENTATION OF EMPIRICAL RESULTS

Table: 5.1 Descriptive Statistic

	BST	FSR	INTD	PC	INF	GDP
Mean	15.0510	18.5819	10.1742	32.3932	7.24531	2.3781
Median	15.4728	18.1952	6.6804	20.8218	5.1856	2.7460
Maximum	26.9353	26.9725	49.0458	129.17	30.6944	12.1175

Minimum	5.2333	12.4215	0.7632	5.2465	-1.0154	-11.7398
Std. Dev.	5.9915	3.5534	10.9502	31.9765	6.5183	4.3168
Skewness	0.1147	0.6218	2.5051	2.0758	2.0092	-0.7878
Kurtosis	1.9472	2.8267	8.3356	6.2020	6.4440	4.1236
Jarque-Bera	4.3539	5.7815	200.8987	103.0894	105.0357	14.0450
Probability	0.1133	0.0555	0.0000	0.0000	0.0000	0.0008
Sum	1354.5917	1635.2153	915.6793	2915.3953	652.0786	214.0326
Sum Sq. Dev.	3195.0342	1098.5366	10671.8792	91002.4214	3781.4870	1658.5166
Observations	129	88	112	120	140	160

Author's computation using E-views Econometric Software

Table 5.1 presents the descriptive statistics. As indicated, the mean value of PC is 32.39 % and the standard deviation of 31.9765. The PC has the highest mean value compared to other variables, and all other variables are positive. The PC with the highest mean value has a maximum value of 129.17 and the minimum value of 5.25% compared to other variables. The Jarque Bera of 103.0894 is there to check normality distribution of the data and probability to determine the significance of the data. It would also appear that all the variables are not normally distributed in the model at 10% level of significance.

The mean value of FSR is 18.60% and the standard deviation of 3.5534. The FSR has the second highest mean value compared to other variables, and all other variables are positive. The BST has a maximum value of 26.97% and the minimum value of 12.42% compared to other variables. The Jarque Bera of 5.7815 is there to check normality distribution of the data and probability to determine the significance of the data. It would also appear that all the variables are not normally distributed in the model at 10% level of significance.

GDP has a mean value which is 2.38%, and the standard deviation of 4.3168. This variable has the lowest minimum value which is also negative -11.74%, compared to all the other variables and has a maximum value of 12.12%. The Jarque Bera of 14.0450 is there to check normality distribution of the data and probability to determine the significance of the data. It would also appear that all the variables are normally distributed in the model at 10% level of significance.

The mean value of BST is 15.10% and the standard deviation of 5.9915. The BST has the third highest mean value compared to other variables, and all other variables are positive. The BST has a maximum value of 26.94% and the minimum value of 5.23% compared to other variables.

The Jarque Bera of 4.3539 is there to check normality distribution of the data and probability to determine the significance of the data. It would also appear that all the variables are not normally distributed in the model at 10% level of significance.

On the other hand, INF has a mean value which is 7.25%, and the standard deviation of 6.5183. Like GDP, INF has the lowest minimum value which is also negative -1.02%, compared to all the other variables and has a maximum value of 30.69%. The Jarque Bera of 103.0894 which is there to check normality distribution of the data and probability to determine the significance of the data. All the variables are normally distributed in the model at 10% level of significance. Lastly, the mean value of INT is 10.17% and the standard deviation of 10. 9502.The INT has a maximum value of 49.05 % and the minimum value of 0.76% compared to other variables. The Jarque Bera of 200.8987 which is high and there is no normal distribution in this variable. Jarque Bera is there to check normality distribution of the data and probability to determine the significance of the data. It would also appear that all the variables are not normally distributed in the model at 10% level of significance.

5.2 CORRELATION MATRIX

According to Tang and Chua (2012), the correlation coefficient is a statistical measure of the strength of the relationship between two variables. A correlation coefficient of -1.0 shows a perfect negative correlation, while a correlation coefficient of 1.0 shows a perfect positive correlation Bayar (2014). A correlation of 0.0 shows no linear relationship between the movements of the two variables. The correlation values from the study are presented in table 5.2 below.

Table 5. 2 Correlation matrix Relationship between financial sector reforms and the variables used in the study

Probability	**BST**	**FSR**	**INTD**	**PC**	**INF**	**GDP**
BST	1.0000					
FSR	(0.1856)	1.0000				
	[0.0113]					
INTD	(0.0533)	(-0.3570)	1.0000			
	[0.0651]	[0.0017]	-----			
PC	(0.0796)	(-0.3215)	(-0.3705)	1.0000		
	[0.5000]	[0.0052]	[0.0011]	-----		
INF	(-0.0725)	(0.0227)	(0.0119)	(-0.3525)	1.0000	

	[0.5392]	[0.84733]	[0.9198]	[0.0020]	----	
GDP	(-0.1238)	(0.1310)	(0.0970)	(-0.3091)	(-0.0664)	1.0000
	[0.2929]	[0.2657]	[0.4109]	[0.0073]	[0.5738]	----

Author's computation using E-views Econometric Software

Notes: *** Correlation is significant at the 0.01 level of significance, ** Correlation is significant at the 0.05 level of significance, * Correlation is significant at the 0.1 level of significance. [] p-values

From table 5.2 above the results illustrate that there is a negative correlation between banking stability and interest rate deregulation. Also, inflation and GDP are significantly negative to banking stability. It is also interesting to note that only domestic credit to the private sector has a positive correlation of 50 %. All other correlations are below 50% which represents weak correlations between variables. The research is more concerned about the relationship between financial sector reforms and explanatory variables such as banking stability, gross domestic product, inflation, domestic credit to the private sector. However, amongst these variables and their relationship with financial sector reforms, inflation and GDP have a significant negative relationship. No significant relationship has been established with the other variables. To come out with reliable results, further tests will be considered.

5.3 UNIT ROOT TEST

Within the panel unit root-testing framework, there are two generations of tests. The first generation of tests assumes that cross-section units are cross-sectional independent; whereas the second generation of panel unit root tests relaxes this assumption and allows for cross-sectional dependence. For robust results, a test for cross-sectional dependency was performed and the results are presented in table 5.3.

Table 5.3 Cross-Sectional Dependency Test

Residual Cross-Section Dependence Test			
Null hypothesis: No cross-section dependence (correlation) in			
Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	-1.261077	10	0.2744
Pesaran scaled LM	1.091954		0.2862
Pesaran CD	-0.776044		0.4377

Levels of significance: ***(1%); **(5%); *(10%).

The results in Table 5.3 shows that there is no cross-sectional dependency given that all the three tests, Breusch-Pagan LM, Pesaran scaled LM and Pesaran CD. Given that there is no cross-sectional dependency, the study shall adopt the Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square and the PP - Fisher Chi-square to check for unit root test. Table 5.4 and table 5.5 show the unit root test of the variable under study at level series and 1st difference respectively.

5.3.1 UNIT ROOT TEST: LEVEL SERIES

Table 5.3: interprets the unit root test results at level series

Variable	IM Pesaran and Shin		Fisher ADF		Fisher PP	
	Intercept	Intercept and trend	Intercept	Intercept and trend	Intercept	Intercept and trend
BST	-0.1149	0.3451	-41.95*	-33.49**	-48.99*	-64.97*
FSR	-0.1062	-0.3522	-23.24**	-28.05**	-34.83**	-54.65***
PC	1.9603	0.5528	-26.37**	-28.36*	-29.53*	-45.03*
INTD	1.7073	0.7861	-11.53**	-14.13*	-13.24*	-20.64*
GDP	-3.2048***	-0.1749	-64.47***	-35.74*	-81.00***	-55.35***
INF	-0.0599	1.2367	-27.73**	-13.43*	-30.03*	-13.00*

Levels of significance: ***(1%); **(5%); *(10%).

Author's computation using E-views Econometric Software

Based on the results presented on Table 5.3, the Im, Pesaran and Shin t6est indicates that GDP is only stationary under intercept. On the other hand, under Fisher ADF and PP all variables are found to be stationary under intercept as well as trend and intercept. The variables were also checked for stationarity under 1st difference and the results are reported in 5.4.

5.3.2 UNIT ROOT TEST: 1ST DIFFERENCED

Table 5.4: unit root table results at 1st difference

Variable	IM Pesaran and Shin		Fisher ADF		Fisher PP	
	Intercept	Intercept and trend	Intercept	Intercept and trend	Intercept	Intercept and trend

BST	-2.5187	-0.0885*	-62.4051**	-36.0761*	-83.6632**	-71.3887**
FSR	-4.2242***	-1.0115*	-61.6831***	-38.3718**	-83.0880***	-72.8559***
PC	-2.1612**	-1.1363	-55.4972***	-49.9495**	-65.5578*	-89.2319**
INTD	-0.5155	0.3397	-29.2621*	-22.1463*	-27.2515*	-41.0266**
GDP	-5.4262***	-1.5250*	-95.9862***	-64.9746***	-124.7296***	-120.8037***
INF	-2.0306**	-0.4658	-46.4947**	-33.4136*	-49.8935***	-46.5862**

Levels of significance: ***(1%); **(5%); *(10%).

Source: Author's computation using E-views Econometric Software.

At first difference all the variables become stationary. However, given that the Fisher ADF and Fisher PP is a more robust test as compared to the Im, Pesarn and Shin as it requires a balanced panel, the result of the Fisher ADF and Fisher PP takes precedence. This regard, the variables are stationary at first difference.

Table 5.5 Steps to determine whether SGMM or DGMM is correct for the regression

4 steps involved in checking if it is SGMM/DGMM

1. Determine the pooled OLS
2. Determine the fixed effect
3. Determine the 1st difference GMM
4. Decide based on the coefficient of the lagged variable

Pooled OLS, Fixed effects and First Difference GMM

Variable	Pooled OLS	Fixed Effect	1st Difference GMM
BST (-1)	1.0141 (0.0000)	0.2563 (0.0494)	0.0422 (0.0882)
FSR	0.0143 (0.0908)	0.3230*** (0.1006)	0.7081 (0.5582)
PC	0.0060 (0.3901)	-0.0342 (0.5077)	-0.1225 (0.0315)

INTD	0.0054 (0.7790)	0.1545 (0.0964)	-0.1225 (0.4432)
GDP	0.1262 (0.0113)	0.1317 (0.0060)	0.1194 (0.1031)
INF	0.0125 (0.6978)	-0.0289 (0.5589)	0.0003 (0.9976)
Adjusted R-Squared	0.923768	0.951853	0.873950
J-statistic			8.958141
Prob(J-statistic)			0.345839
Arellano-Bond test for AR (1)			0.5372
Arellano-Bond test for AR (2)			0.6453
Observations			780
Countries	16	16	16

Source: Author's computation using *Eviews 14* Econometric Software.

table 5.5 illustrates how the decision was made into whether the regression should be conducted using the Differenced Generalised Method of Moments or the System Generalised Method of Moments. If the 1st difference is greater than or equal to the fixed effect, then the best option is the DGMM then when the 1st difference is less than the fixed effect, then the System Generalised Method of Moments is correct option. Therefore, the results in Table 5.5 indicate that 0.0422 is less than the effect, which is 0.2563, in all System Generalised method of moments is the most appropriate one proven economically.

5.4 THE GENERALISED METHOD OF MOMENTS EMPIRICAL RESULTS

Table 5.6 below: The GMM estimation results on the impact of financial sector reforms on banking stability.

Model 1 is the base model with all the variables employed in the study. The second model measures the direct impact of financial sector reforms on banking stability only.

Dependent variable: Banking stability (Z-score)

Variable	Model 1	Model 2
FSR	0.0360**	0.0312**

	(0.0420)	(0.0302)
PC	-0.0985*** (0.0323)	-0.2144*** (0.0106)
INTD	0.0296** (0.1315)	0.1186 (0.0505)
GDP	0.97108*** (0.0060)	
INF	-0.0641* (0.1470)	
J-statistic	10.2899	11.4149
Prob(J-statistic)	0.3275	0.4091
Arellano-Bond test for AR (1)	0.3157	0.0978
Arellano-Bond test for AR (2)	0.4393	0.3749
Observations	780	780
Countries	16	16

Levels of significance: ***(1%); **(5%); *(10%).

Source: Author's computation using *Eviews 14* Econometric Software.

The empirical results presented in Table 5.5 show that INTD which represents interest rate has a positive effect on banking stability. In other words, an increase in interest rates has a positive effect on banking stability in the SADC region. The variable was found to be significant at the 5 % level of significance. This implies that a 1% level increase interest rate deregulation will result to an 2.96 % increase in banking stability, ceteris paribus, highlighting the crucial role played by financial sector reforms in promoting banking stability in the economy. Prior expectations are that a positive correlation is expected between financial sector reforms and banking stability. Interest rate deregulation, which is one of the measures of financial sector reforms, in both model 1 and 2 shows that it has a positive effect on banking stability. These results to a greater extent, are also in line with the views of Goetz (2016) who showed that an increase in interest rates can result in a higher spread between the interest the bank charges

customers and what in earns on its investment. This will therefore result in higher profits and a stable banking sector.

The empirical results also shows that financial sector reforms have a positive effect on banking stability. Financial sector reforms as indicated in the previous chapter encompass a wide range of policy measures aimed at improving the performance and stability of the financial system. Okonkwo et al., (2018) indicates that these reforms encompass changes in banking regulations, supervision, capital requirements, corporate governance, and the legal and institutional framework. The financial sector reforms play a vital role in promoting the banking stability in any economy. In line with the apriori expectations, a positive effect was expected between financial sector reforms and banking stability. The variable is found to be significant at 5% level of significance. This suggests that 1% increase in financial sector reforms will lead to a rise of 3.6% in banking stability. Therefore, proper implementations of financial sector reforms are positively correlated with banking stability. Any changes made within the banking regulation positively impacts banking stability.

Contrary, Domestic credit to private sector which is another proxy of financial sector reforms was anticipated to have a positive effect on banking stability. Findings show that there is a negative relationship between the two variables. A 1% rise in domestic credit to the private sector led to a 9.85% and 21.44% decrease in banking stability which are illustrated in model 1 and 2. This result is not in line with the apriori expectations. However, a study conducted by Moyo & Le Roux (2019) revealed for some countries which implemented financial sector liberalisation, that had a negative effect on the stability of the financial sector. This also agrees with Barrell (2017) who highlight that high levels of credit to the private sector were partly to blame for the global financial crises that occurred in 2008/2009.

Consistent with the apriori expectation, it was anticipated that there exists an inverse correlation between inflation and banking stability. Therefore, a 1% rise in financial sector reforms results in a 6.41% decrease in inflation. Low and stable inflation leads to a stable banking sector, whilst rising inflation results in banking sector losses, prompting financial institutions to reduce lending (Adrian & Liang ,2018). According to Ahmed & Mallick (2019) a stock market meltdown or hyperinflation may be the outcome of severe instability. It might significantly damage public confidence in the banking and economic system. Currency devaluations, high inflation, high interest rates, and fiscal and current account deficits are all signs of macroeconomic instability (McKinsey,2022).

The results reveal that the impact of GDP on financial sector reforms and stability is positive and statistically significant. The results suggest that a 1% increase in GDP will increase banking stability in the SADC by 10.87 %. The findings agree with the results of Ijaz et al., (2020) who investigated the relationship between financial reforms, banking stability and real GDP which concluded that they are positively correlated. The author further emphasized that real GDP is a substantial factor in both the overall sample and the post-reform sample periods. An increase in real GDP growth serves as an encouraging indication of banking stability. Allen et al., (2018) elaborates that a flourishing economy stimulates lending and profitability, which in turn results in the establishment of more banks.

5.5 DIAGNOSTIC TEST RESULTS

The diagnostic tests are presented on table 5.6 at the bottom. In order to test for the validity of the models, the Hansen J-test is used. It tests the null hypothesis that the instruments are valid when the probabilities of the Hansen J-statistic are above 10%, it's an indication that the instruments are valid. The J-probabilities for models 1 and 2 are 0.3275 and 0.4091 respectively, indicating that for both models they are above 10% level of significance. The results of the Arellano-Bond test for second-order serial correlation reveal that there the models don't suffer from auto correlation since the coefficients of the models are all negative. This suggest that the models estimated passed all diagnostics.

5.6 Conclusion

This chapter concentrated on interpreting the outcomes or results of the models estimated in Chapter 4. Unit root test at level series there were a mix of results but first differencing all tests under IM Pesaran and Shin, Fisher ADF and Fisher PP are stationary except for Banking stability (BST) and Interest deregulation (INT). Based on Fisher test, all variables are considered integrated of order (0). Furthermore, steps to determine whether system generalised method of moments (SGMM) or differenced generalised method of moments is suitable and correct for the regression were outlined. Table 5.5 which illustrates model 1 and 2 results in terms of how that the effect of the broad financial sector reforms variable as measured by interest rate deregulation is positive. In other words, there is a positive effect from financial sector reforms on banking stability in the SADC region. The variable was found to be significant at the 5 % level of significance. This implies that a 1% level increase interest rate deregulation will result to an 8.57% increase in banking stability, ceteris paribus.

Highlighting the significant role played by financial sector reforms in promoting banking stability in any economy. Prior expectations are that a positive correlation is expected between financial sector reforms and banking stability. Interest rate deregulation, commonly used to substitute financial sector reforms, in both model 1 and 2 the results are positive. Meaning, there is a positive relationship between financial sector reforms and banking stability.

Lastly, for diagnostic test results the Hansen J-test is utilized in order to test for the validity of the models. It tests the null hypothesis that the instruments are valid when the probabilities of the Hansen J-statistic are above 10%, it's an indication that the instruments are valid.

CHAPTER SIX

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

6. INTRODUCTION

This chapter provides a conclusion to the study. The chapter is divided into 3 components. The first and second sections will provide a summary and conclusion to the study. This is followed up with policy implications of the study based on the results obtained.

6.1 SUMMARY AND CONCLUSION

This study is divided into 5 chapters, these chapters served the purpose of investigating the effect of financial sector reforms on banking stability in the SADC region. Chapter 1 of this research introduces the topic and its background, it further specifies the hypothesis of this study, its research objectives and the significance of the study. It further highlights that financial sector reforms in SADC have led to improvements in some of member nations' banking industries with some, such as South Africa, having systems which compares to those of advanced nations, even though still some lag (Kapingura, Mkosana & Kusairi (2022). Stated by Makalima (2022) also indicate that in the SADC region the banking sector is at various stages of development as good as the countries themselves. South Africa leads with a banking sector which contributes greatly to the economy where domestic credit to the private sector as a percentage of GDP stands at 147%. This is followed by Mauritius (91.5%) and Namibia (48.5%). The other member countries lack a vibrant banking sector. Monteiro (2015) also highlighted that most SADC nations have lowest levels of financial depth and least effective financial institutions.

Chapter 2 presented an overview of financial sector reforms and banking stability in the SADC region. Many countries in Southern Africa explored liberalised financial systems. On that note, Southern African economies have allowed floating interest rates, facilitated foreign exchange, and adopted indirect instruments of monetary policy amongst other measures. All of these changes have relaxed prior conditions that prevented new entries into the banking system and the formal economy. On the other hand, in terms of financial development in the SADC region, the nations are at various stages. South Africa has the most developed banking sector and a well-functioning financial market followed by Mauritius and Namibia. Other nations such as Democratic Republic of Congo and Angola amongst others have least developed financial sectors. Also, Namibia, Eswatini, Seychelles, Mauritius, South Africa and Madagascar have

the most stable banking systems in the region. One might wonder if financial sector reforms are the best way to induce banking stability in all member states.

Chapter 3 studies theoretical framework and empirical review of different studies. The review of literature has indicated that at theoretical level the Financial Liberalisation theory argues for the implementation of financial reforms if a country is to achieve high levels of banking sector development. However, the theory has also been criticised in that liberalisation is argued to also be contributing to instability of the financial system. At empirical level, the available studies were grouped in terms of those which indicate that reforms have a negative effect and those which say reforms contribute to the stability of the banking sector. For the studies which found a negative effect, it is argued that reforms are the major source of financial crises and hence instability. On the other hand, from the studies which argue of a positive effect, it is argued that reforms encourage foreign participation as well as opening up the market to many participants which enhances stability.

Furthermore, chapter 4 entails how the study has been conducted, the research design, techniques and how data was collected. It gives an overview of the approach chosen to conduct the research and determined the effect of financial sector reforms and banking stability in the SADC region. This research is quantitative in nature, and it is underpinned by the Mac Kinnon and Shaw model of financial liberalisation. Based on theory, in a developing country, the liberalization of interest rates is expected to result in an increase in the real interest rate. This, in turn, is believed to stimulate higher levels of savings, encourage investments, and ultimately lead to a boost in economic activity. The increase in savings will make more loanable funds available to the banking sector

The other aspect discussed in the study is the diagnostic test to verify the validity and reliability of the model. Moreover, ethical considerations were also explained in the study. The next chapter will provide empirical results and an analysis. Moreover, the last chapter which is chapter 5 provides the empirical findings and analysis which conclude that the effect of financial sector reforms on banking stability is positive, this agrees with prior expectations that there is positive correlation between financial sector reforms and banking stability. Emphasizing on the significant role played by financial sector reforms in promoting banking stability in an economy. With highlighting the significant role played by financial sector reforms in promoting banking stability in any economy. Prior expectations are that a positive correlation is expected between financial sector reforms and banking stability. Interest rate

deregulation, commonly used to substitute financial sector reforms, in both model 1 and 2 the results are positive. Meaning, there is a positive relationship between financial sector reforms and banking stability. A 1% rise in interest rate deregulation leads to 8.57% and 20.19% rise in banking stability. This agrees with the direct correlation that was anticipated between interest rate deregulation and the stability of the banking sector.

One policy implication of the analysis is that positive growth effects of financial liberalization can be obtained simultaneously with a decrease in the likelihood of banking crises. The positive growth effects are fairly well established in the literature. Empirical evidence suggests that financial liberalization is crucial for financial development and thereafter for economic growth in a market economy.

6.2 RECOMMENDATIONS

Government should continue with financial liberalization, but proper supervision will need to be enforced. To reduce the likelihood of banking sector fragility. Furthermore, based on the findings from this research, it should thus be noted that policies to foster financial deepening in SADC region should be accompanied by financial inclusion. However, both policies should therefore be separated. Financial inclusion policies should focus on the quality and suitability of financial products and services to ensure proper usage.

Policies aimed at promoting growth should also be pursued given that high levels of growth do result in stable banking sector. The same also applies to maintaining lower inflation rates.

6.3 LIMITATIONS

The study was forecasted using quantitative data to examine the relationship between different measures of financial reforms and banking stability in 16 SADC countries for the period 2013 to 2023. The only major challenge that affected this study was the lack of literature, which made it a quite difficult to fill in the missing gaps from post -reform and before it was implemented. However, there are no sufficient observations for the index given that it is a few years after it was computed. Despite that, the results emanating from the study are in-line with other available studies which support the approach followed in the study.

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