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IMPACT OF CAPITAL MARKETS IN THE ECONOMIC GROWTH OF ZIMBABWE (1990-2022)

BY

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APPROVAL FORM

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I, GABRIEL TOGAREPI declare that, this dissertation is entirely my own work and has not been copied or lifted from any other source without attribution.

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DEDICATIONS

With much gratitude, privilege and pleasure, I dedicate this dissertation to myself and my family for their support during my studies.

Abstract

Gross Domestic Product (GDP), highlighting the complexities and interdependencies between financial systems and economic growth. A declining capital market often signals investor uncertainty, reduced capital allocation, and diminished economic activity, which can exacerbate stagnation in GDP growth. The analysis identifies key factors contributing to this adverse relationship, including regulatory inefficiencies, market volatility, and investor confidence.

We discuss various policy responses aimed at mitigating these negative effects, such as enhancing regulatory frameworks, implementing monetary policy adjustments, and fostering fiscal stimulus. Additionally, the paper emphasizes the importance of structural reforms to promote innovation and entrepreneurship, which can rejuvenate both capital markets and economic performance. Ultimately, understanding the dynamics of this relationship is crucial for policymakers to formulate effective strategies that align capital market health with sustainable economic growth.

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CHAPTER I

1.0 Introduction

The chapter comprises of a detailed examination of capital market trends from a micro perspective, with an emphasis on the impact of capital markets on economic growth in Zimbabwe. It also includes other factors that affect economic growth in Zimbabwe. Thus, it contains the background of the study, the statement of the problem, the objectives of the study, the research questions, the assumptions of the study, the limitations and delimitations of the study, the definition of the study, and the conclusion.

1.1 Background of the Study

Capital markets are viewed as the major sources of financial growth and development around the globe (Kock, 2020). These markets caters for various stakeholders, which includes corporates, local and international financial investors, the government among others. The primary focus for this market is to raise capital through selling of bonds, treasury bills, and shares. Capital formation is when the investment funds are aggregated out of the incomes of one or more companies. (Beck et al. 2019). It is investment in fixed resources, which to a limited extent is supported with the capital raised through the capital market. The capital market has been one of the significant means through which foreign capital is injected in different economies and the inclination towards a worldwide economy is more noticeable there than elsewhere (Hassan, 2019).

In this regard, it is critical to mention that the growth of the capital market has become a critical component in defining a country's financial development (Kolapo, 2020). According to Kock (2020), the expansion of the capital market has resulted in two main arrangements of financial benefits, that is, it has worked on capital assignment. Because the costs of corporate commitment and value respond quickly to adjustments in demand and supply, changes in an industry's perspective are instantly illustrated in current resource costs. A change in the cost of a security either supports financial backers because of higher costs or beats them down because of lower costs; this is because financial backers frequently used the costs of protections to forecast the market's logical pattern as either bullish or negative (Hassan, 2019).

Organizations with high returns attract additional money quickly and easily. When popularity falls, expenses fall, and this signal causes financial supporters to cut the advancement of money to the firm, resulting in a decrease in monetary development (Liu et al., 2021). The ability of

organizations in their early stages of development to raise cash in the capital business sectors is also significant since it allows these companies to grow quickly. As a result of this development, the economy as a whole grows (Omrani et al., 2021).

According to Liu et al. (2021), while recognizing a traditional link between monetary framework and financial growth is critical, the underlying impulse behind this connection is reasonably easy to acquire. This is due to the fact that the primary goal of the capital market is to redirect assets from the surplus area unit of the economy to the deficient area unit. According to Hassan (2019), capital business sectors have an important part in human resource speculations, which are critical components of monetary development and improvement. Omrani et al. (2021) noted that, one should anticipate that when the capital market forms and expands, expert identification of monetary assets for speculation is utilized, and so, the extremities of creation chances are enlarged (Adam et al., 2021).

Enisani (2020) observed that monetary development in a modern economy is dependent on an efficient monetary area that pools domestic reserves and prepares foreign capital for productive projects. Monetary business sectors play an important role in the activation of monetary assets for long-term projects via financial intermediation. The monetary market, which includes the capital and currency markets as well as other submarkets, is critical to the operation of any advanced economy (Omrani et al., 2021). Regardless, with the final objective of this research activity, the emphasis will be on the capital market. The capital market is recognized as an important part of every economy, whether it is formed or not (Hassan, 2019). This is due to the fact that the capital market plays a critical role in the development of the economy by providing a pathway for unfamiliar financial backers to express interest in the country, which may aid in the development of the economy in terms of unfamiliar direct ventures (Sterken et al. 2020).

According to Enisan (2010), capital business sectors accumulate long-term commitments and value financing for long-term resource interests. Capital business sectors also contribute to a country's financial growth by supporting the monetary system. According to Adam et al. (2021), the capital market supports traditional lending operations of financial entities, for example, banks, by providing gamble capital (value) and credit capital (obligation) (Sterken et al. 2020). The market can use these instruments to activate long-term reserve funds and send money to financial supporters to fund long-term enterprises, hence increasing resource responsibility (Kock, 2020). Vendors in the capital market's safeguards segment include financial foundations, stockbrokers, speculators, dealer brokers, and adventure industrialists

who act as intermediaries between the market and the general public. Well-functioning financial business sectors are critical for the expansion of the global monetary mix (Hassan, 2019). A well-functioning domestic financial market may more easily determine a country's seriousness in seeking international funding (Beck et al. 2019).

According to Senbet (2016), reaching out to global business sectors for financing through a well-functioning monetary system will reduce the country's reliance on unknown guidance and other sorts of foreign acquisition. Adam et al. (2021) stated that, according to different monetary researchers, monetary globalization takes into account the sharing of local security risks. Given the benefits of having well-functioning monetary frameworks, numerous African countries have attempted to implement various initiatives targeted at stimulating the monetary area (Kock, 2020). Monetary area alterations have thus been widely used as strategy approaches to enable the advancement of indigenous monetary frameworks as well as the removal of impediments to global capital flows. African monetary business sectors have gradually synchronized with the rest of the world's capital business sectors (Liu et al., 2021). The encouraging effort to globalize capital flows in Africa has resulted in the growth of the relevance of emerging capital business sectors on the continent (Sterken et al. 2020).

The impact of capital is not entirely determined by various components that include how monetary resources are evaluated, such as the size of the financial exchange, market capitalization, number of recorded values, and exchanges in trading of protections (liquidity), which in this situation refers to the volume of exchanges and new issues of protections (ZSE, 2020). Thus, this focuses on the impact of capital market implementation on Zimbabwe's financial development.

1.2 Statement of the Problem

Zimbabwe's capital market has undergone a series of adjustments, all with the goal of achieving steady financial development and improvement. The most recent adjustment was made to allow for more conspicuous asset preparation and to further enhance expertise in asset allocation and the organization of relevant data for evaluation. Because of the shift, the market may supply a variety of financial instruments designed to enable financial professionals to pool, price, and exchange risk. Regardless of the critical roles that the change is supposed to play, there is still considerable concern about the presentation of the Zimbabwe monetary market comparable to financial development and improvement, which appeared shallow when viewed from the perspective of market activities. This is most likely due to the lack of enabling mechanisms

that promote clarity and financial supporters' assurance, as well as rigorous examination of aspects that are important in determining capital market execution. Despite the fact that there is a distinction between financial development and advancement from a monetary standpoint, the majority of the studies conducted in the area under study fail to consider the distinction and, moreover, the interrelationship between the two factors. This prompts the necessity to investigate what is going on, keeping in mind the distinction and appropriateness of the approach under consideration. Concentrations on leadership in the space allegedly offer mixed contradictory effects, which might most likely be attributed to an inability to accept a proper system. Another source of concern is that the great majority of exams that measure capital market execution focus on either essential or auxiliary market information and are employed to construct general capital market execution, rather than the combination of the two company sectors' information in whole. This highlights the need of evaluating the market on a whole information basis in order to decide how appealing it is for Zimbabwe's monetary growth.

1.3 Research Questions

To analyse the impact of capital markets on economic growth in Zimbabwe, the study draws the following questions:

i. What is the effect of capital market on economic growth in Zimbabwe?
ii. Is there a long run relationship between capital markets and economic growth?
iii. What is the causal relationship between capital markets and economic growth in Zimbabwe?

1.4 Objectives of the study

i. To identify the impact of capital market on economic growth in Zimbabwe.
ii. To identify whether there a long run relationship between capital markets and economic growth.
iii. To identify the causal relationship between capital markets and economic growth in Zimbabwe.

1.5 Scope of the Study

The Zimbabwean economy is enormous, with a great deal of different and, in some cases, complex parts. In such a manner, the review checks out a specific piece of the economy by zeroing in, especially on the monetary area. That being said, the review doesn't cover every

one of the pieces of the monetary area; it centres just around the capital market and its exercises, as well as its effect on Zimbabwean financial development. This is educated by the significance of the capital market to the financial improvement of the country since it gives long-haul reserves expected to speculation for the development of the economy. The decision of the time of study, 1990–2022, is anticipated on the basis that the market has encountered amazing formative changes as well as progress in the strategy structure of the market. This is with regards to its functional exercises, expansion in the quantity of cited organizations and protections, as well as market capitalization. Albeit, new issues and volume of exchanges have all recorded huge increments during the time of concentration, there have been records of slumps in certain years because of the worldwide monetary emergency.

1.6 **Assumptions**:

i. The information gathered from the Zimbabwe Stock Exchange (ZSE), RBZ, World Bank indicators and Global Financial Asset Distributions will be exact and pertinent, and in this manner, it can be relied on.
ii. The proposals to be produced using this examination will assist the country in working on the presentation of the monetary business sectors in Zimbabwe.

1.7. Limitations

There were negligible restrictions in this review. The specialist embraced optional information, which frequently acts like a constraint because of issues of time and pertinence. Also, there was restricted writing around this theme, explicitly for Zimbabwe.

1.7 Delimitations

The analyst conquered these impediments by help of comparable examinations directed in the remainder of the world as well as embracing the accessible information up to the year 2022. Moreover, all else was open.

1.8 The structure of the dissertation

This study is divided into five sections, which are as follows:

Chapter one of the study is the introduction and background of the topic. It gives an overview of the foundations of capital markets and economic growth in Zimbabwe. It gives information on where the studies began and the current state of the research. Following the introduction and background are the research aims and objectives, its hypothesis, research questions, the

methodology of the study, its significance, short definitions, and finally the limitations of the study.

Chapter two is the literature review. In this chapter, empirical and theoretical aspects of research are put together through various literatures around the topic. The chapter also outlines the definitions of the two major variables and provides information that is relevant to the study. The methodology governs this part of the chapter, given that the variables at hand determine the literature needed for the study to be well-suited.

Chapter three of the study has three components or parts, which are as follows: research design, data collection and analysis, and lastly, the instruments or tools used for the tests. To be able to test for causality, the study adopts the Engle Granger causality test, whereas to test for stationary trends, the study adopts the Augmented Dickey Fuller (ADF), Phillips Perron unit root test (PP), Kwiatkwowski, Phillips, Schmidt, and Shin unit root test (KPSS), Johansen co-integration test, Vector Error Correction Mechanism, and the General Impulse Response Function (GIRF).

Chapter four is the analysis of data, the interpretation of information, and the concluding chapter. Chapter five contains the research findings, and recommendations are suggested with regards to the outcome of the study.

1.9 Summary

This chapter presented the introduction and the background of the study. It also highlighted issues and variables that makes up the functional capital market. It therefore, discusses the problem statement, the research questions, objectives, hypothesis, and the scope of the study, the limitations, the delimitations and the structure of the research project. The next chapter will focus on the literature review.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This section contains a literature review on the impact of capital markets on the economic growth of Zimbabwe. The chapter is separated into two sections, namely, theoretical and empirical literature reviews. Initially, the chapter explores theoretically the concept of capital markets and economic growth. It further highlighted explicitly the factors that affect capital markets and economic growth, as well as the theories that underpin the detailed examination of these two variables. The chapter also acknowledges the contributions made by other researchers on capital markets and economic growth, their relationships, the variables included, and their causal effects. Lastly, the chapter exposes the gaps that need to be covered, which therefore entices this study to be contacted.

2.1 Concepts of Capital Markets

Weng et al. (2020) defined the capital market as an area where both long- and short-term capital are exchanged. Dahn (2021) suggests that the capital market is an exchange platform for resources like stocks, securities, and foreign money markets. Nonetheless, the capital market is where monetary establishments gather information on buying or selling resources like securities, stocks, protections, and numerous others. According to Fofack et al. (2019), noted that capital market is categorized into two sections: the essential market, where new stock or securities are given to financial backers through endorsement, and the optional market, where financial backers exchange with each other.

2.1 Theoretical Review

2.1.1 Theories of Capital Markets

Upgrading financial development is a significant need for every government in the world. It essentially contains expanded useful limits in all areas, worked on personal satisfaction, a lift in gross domestic product per capita, and other things (UN, 2021). Wald (2019) highlighted the significance of monetary organizations in supporting financial development. Monetary organizations trade resources like securities, protections, and stocks in capital business sectors; subsequently, it has been demonstrated that a well-oversaw capital market is essential for financial advancement. Speculations like Harrod-Domar, the Neoclassical Development Hypothesis, and the Endogenous Development Model have reinforced the writing on the connection between financial development and capital business sectors, as expressed underneath:

2.1.2 Harrod-Domar growth model

Harod-Domar model argued that the major variables that determines economic growth are savings and investment. Therefore, the state of every country's growth will depend on the way in which savings and productivity of capital investment and this is can be termed capital ratio output. Khan et al (2019) noted that if there is low capital output it therefore, mean that the level of output will be high with just low capital input. However, high capital ratio could literally produce low output with just high capital ratio. The concept behind is that when high capital ratio is injected it therefore, causes low output from that production, whilst if low capital output ratio is injected in to the production process, high out will just be produced from that little capital. The equation is shown below:

Economic growth (GDP) = savings divided by capital output ratio.

The above equation shows that economic growth can be achieved in two ways, one of it is by raising savings ratio or reducing the capital output ratio. However, this model is too thin in terms of its coverage, as it only focusing on savings and capital output ratio. There are various ways in which the country can realise growth, some of them include, and increase demand, tax reduction etc.

2.1.3 The Solow Growth Model.

This theory was proposed by Solow in 1956, with the intention to provide how economic growth can be attained in any sector. Apart from savings and capital investment, Solow suggested that it is labour and capital that determines the level of economic growth. Solow added innovations and technology as another important variables that aids to economic growth. Thus according to Solow:
Economic growth = f (labour, capital, technology, innovations)

The Solow model agreed with the assumption that capital investment leads to economic growth, but the effect is just in the short run. This is because the level of capital and that of labour increases proportionally. Therefore, after they reach the optimal level, the marginal productivity start to decline.

In addition, innovation is a continuous learning process where new ideas and methods are discovered and put them into the production line, thus increasing economic growth. Technology is a variable factor which adjust to suit the prevailing situation that arises in the production process. Thus, being able to increase productivity. This study used this model to examine how economic growth can be determined, hence, capital investment is one of the important variable which explains the capital market.

2.1.4 Endogenous Growth Theory

The endogenous growth theory embraced the component of labour productivity as the major factor that determines endogenous economic growth.

$$Y=f(L, K, T) \quad \text{2.1}$$

Where Y is endogenous economic growth, L is labour and it is measured as the total number of people employed within a country. K is capital and T is land.

An increase in labour force should be supported for it to oblige population growth, which recommends that population growth is endogenous as it relies upon the labour force. In an advanced economies or market, the pace of reserve funds is somewhat extremely high, which would open doors for venture through these monetary establishments and eventually twist out into development.

Nonetheless, a nation can save from what it procures; thus, their pay dissemination is a hindering element. In the endogenous development hypothesis, improvement underway creates

a business opportunity for the contest as the market extends, which drives the economy to request an expanded workforce, and in this way, a requirement for capital speculation (be it in human or monetary terms) is likewise conceived. Moreover, a huge supporter of the great places for investment funds is the securities exchange (Romer, 1990). Given his view on factors that contribute to development, Adam Smith is by all accounts mindful of the way that as the capital supply of a nation expands, the benefit declines. This is because an expansion in the stock will increase competition in the capital exchanging industry. An ascent in exchange contests will push the interest for higher wages, which will decrease benefits as the extent of sharing increases.

There are critical variables that illuminate the endogenous hypothesis; for example, competition in the market is fundamental for development in the economy, which is a methodology that no one but the government can execute through strategies, and another boost that empowers advancement is sponsorships. One more key consideration would be speculation about abilities or human resources. A prepared workforce can create yields that are palatable and of good quality. Preparing can likewise be a business, which opens entryways for work, capital, and land, which are additional factors that endogenous financial analysts consider crucial for development to occur in any country. Thus, arrangements set up by the public authority will guarantee that advancement happens and new boondocks will be achieved by creating organizations.

2.1.6 Hypotheses Overseeing Capital Business Sectors

The primary job of capital business sectors is to guarantee the productive dissemination of the country's capital stock. In its most straightforward term, an ideal market is one where the movement in the economy is clear enough for all partners to have the option to settle on informed choices. These educated choices would be for the situation where makers can choose when and the amount to contribute, considering that the market around then creates adequate data that would recommend that these makers are pursuing an educated choice around then; it is essentially a productive market. There is nonetheless an extensive variety of hypotheses that comprise the capital business sector. This study will talk about one capital market hypothesis.

2.1.7 Capital market hypothesis

World Bank (2014), noted that capital market hypothesis is a conventional term for the investigation of protections. Capital business sectors are basically used to cost resources, which are viewed as offers. The Markowitz portfolio model develops the capital business sector

hypothesis. The capital market hypothesis chiefly specifies that financial backers are productive. They loan cash at a gamble-free rate; the time period or extent of all financial backers is something similar; resources are especially detachable; there are no expenses or exchange costs; and the normal result for the financial backers is something similar.

2.1.8 Determinants of capital streams

For any country to have the option to foster an even strategy, it is necessary to research factors that impact capital streams or markets. Fernandez-Arias and Montiel (l 996) were quick to gather a rundown of justifications for why huge progressions of capital in non-industrial nations cause greater damage, that is, until appropriate strategies are set up to attempt to control the developing concern. As per the World Bank (1997), homegrown variables are one of the vital elements that impact capital streams in any country. In a perception made by the bank, it was found that a large number of the effects on the capital streams were not just outer variables. From a general viewpoint, there are some basics that affect the pace of return to the financial backer. Basics could be made to have a high venture-to-GDP proportion, low expansion, and low genuine swapping scale fluctuation. Given the previously mentioned, the accompanying can be accepted:

- The World Bank (1997) shed light on improvements and the condition of a country. They expressed that created nations or nations with high basics have the capability of drawing in enormous progressions of gross domestic product, while non-industrial nations or those with low essentials get a somewhat low progression of gross domestic product and furthermore neglect to draw in a steady progression of private venture.
- In developing business sectors, there are likewise different parts that structure part of the capital streams, of which unfamiliar direct venture (FOi) is the biggest. In any case, FOi isn't made sense of by worldwide loan fees in spite of the fact that it is delicate to the macroeconomic basics when contrasted with portfolio streams that are touchy to financing costs. In undeniable reality, analysts are persuaded that financing costs are the key job players in the present status of capital streams (Calvo, Leiderman, and Reinhart, 1996).

- Home-grown open doors and hazards are reflected by country-explicit elements. A high genuine monetary development rate might be seen as an indication of a positive home-grown climate, which consequently diminishes capital surges. With the re-foundation of emerging nations' financial soundness, capital streams (which are framed by bonds and value) are probably going to be a significant wellspring of outside finance. For instance, FOL and portfolio speculation are exceptionally huge capital streams and are value-related (Goldstein et al., 1991).

Throughout the long term, emerging nations have been getting portfolio value streams. In time, a change is supposed to occur because of nations' exchange receptiveness, with the primary spotlight being on the home-grown state that oversees capital and pay (Williamson, 1993). Considering Goldstein et al. (1991), suitable profits and capital might be the most pivotal figure empowering huge, unfamiliar value streams. As per traditional writing in financial matters, the high-gamble resources are estimated so that they yield a better yield.

Besides, as the global monetary framework takes on a different nature, as far as combinations and portfolios are concerned, resource costs are inclined to change to re-establish disequilibrium (Taylor and Sarno, 1997). This makes sense of the swapping scale equality condition. Bekaert (1995) states that major modern and emerging nations show an enormous and high expansion in the loan fee differentials, which recommends that there is likewise an expansion in the capital portability in proposals from non-industrial nations. Paces of return are much of the time viewed as higher in emerging nations and nations that have a powerless monetary framework when contrasted with numerous different business sectors in different nations that have an industrialized economy. The pace of return, for the most part, has a gamble of unpredictability related to it. In a small economy, the result is expected to be higher with restricted capital stock, considering that there are unavoidable losses on capital.

One more part of importance in the capital streams, as investigated by Bekaert (1995), is the pace of credit conceded to nations and the optional market costs of sovereign obligations, which frequently impact the financial backer's trust in that specific country. The value of the conversion standard is likewise a contributing component to capital flight. The more exaggerated a conversion standard is, the more likely it is for the cash to deteriorate in the future. The instability of the conversion standard then, at that point, drives inhabitants to house their resources abroad to keep away from any capital misfortunes that could happen because of the unpredictability of the cash.

With regards to the connection between government shortfalls and capital surges, Hermes and Lensik (1992) and Ajayi and Khan (2000) recommend that the general population expect higher future assessments depending on the prerequisite that administration deficiencies are additionally on the rise, which likewise energizes capital outpourings. Notwithstanding, the higher the obligation rate, the more complicated the future commitments become, which are the underlying drivers of numerous authentic obligations. In the event that interest on credit from other far-off nations doesn't do the trick, then, at that point, the populace expects that the most effective way for the government to calm the obligation would be through expansion.

The gathering of obligations by the public authority is then a legitimate clarification with regard to why capital flight is energized by capital streams. The ascent in public authority obligations further pushes occupants to keep their resources secure abroad with the apprehension of a drive that may be taken up by the public authority. In the situation where the public authority chooses to degrade the conversion scale, fully intent on remedying home-grown obligations, the venture made by these occupants will be considered a misfortune. Thinking about this, the capital business sectors abroad could be doing far better than the home-grown capital business sectors given the vulnerability of the economy (Sear, 1991).

2.2 The stock market's development

2.2.1 Bonds

Bonds are generally given with a fixed development period, while numerous others are given with a development time of ten to twenty years (Howells and Bain, 2007). There are bonds that are given by the public area that are hopeless, which is why a development period separates security. Thusly, bonds with a long-term range are classed as "momentary bonds", bonds from a time of five to fifteen years are classed as "medium-term," and from fifteen onwards are classed as "long-haul" bonds.

2.2.3 Values

Values that are otherwise called organization shares are, in established truth, expected to be alluded to as conventional offers. Common offers empower their carriers to get future returns from the speculation made, which is classified as organizational benefit or profit. By right, investors are the proprietors of the firm they have shares in. Customary investors take a more

serious gamble when contrasted with bondholders and inclination investors, but the advantage of standard offers offsets the cap of bonds and inclination shares (Howells and Bain, 2007).

2.2.4 The exchanging of bonds and values

In capital business sectors, there are bonds and values, and there are ways in which these products are exchanged. The two principal classes are the essential market, where offers or securities are sold interestingly, and the subsequent classification, when securities and values are sold second-hand. Costs on the stock are set given the condition of the market and the sorts of offers or securities that are special (Howells and Bain, 2007).

2.2.5 Capital Market and Monetary Development

The idea that monetary improvement upgrades financial development was first spread by Schumpter in 1911 (Schumpter, 1912). The need was likewise stressed by creators like Goldsmith (1969), Mckinnon (1973), and Shaw (1973), among others. There are theories that charge a connection between the monetary turn of events and financial development. The request following contention is of the view that monetary improvement is seen as an energizer for financial improvement, which doesn't think about the interest of monetary administrations in a developing economy. The advancement in the genuine area of the economy assists with smoothing the development in the monetary area. In contrast, the input speculation recommends that a bidirectional connection between the monetary turn of events and financial development depends to a great extent on the different phases of the monetary turn of events.

An advanced and powerful monetary area develops homegrown investment funds and prepares capital for useful undertakings that energize financial development. In situations where there are failures in the monetary area, useful activities are frequently unexploited for formative purposes. Capital business sectors go about as a connection among financial and genuine areas and consequently smooth the course of development in the genuine area and the monetary turn of events. Albeit stock could influence development in a positive way, there are still factors that are key job players, like the size, liquidity, and proficiency of the market, as well as the nature of the climate. The nature of the climate is viewed as reflecting the social and financial states of the nations in question. In nations where there is high political flimsiness and saw chances, securities exchanges would be compelled (Agbetsiafa, D.K., 2003).

Al-Faki (2006) characterizes capital business sectors as "an organization of specific monetary foundations, series of components, cycles, and frameworks that, in different ways, work with

the uniting of providers and clients of medium- to long-haul capital for interest in financial improvement projects". A capital market is separated into segments, which are the essential and optional markets. In the essential market, valuable open doors are made by the government, which is expected to raise new subsidies through the protection of protections that are purchased by the overall population or a specific gathering of financial backers. The auxiliary market provides a road to the buying and selling of existing protections.

2.3 Why capital business sectors and monetary area improvement are significant

Capital business sectors and monetary area improvement are significant for three key reasons: they empower financial development, they support a country's essential advantages, and they supplement and reinforce existing respective and multilateral advancement drives.

Capital business sectors are significant in light of the fact that they give value to capital foundation advancements that have strong economic benefits and work on fundamental ways of life by creating streets, water and sewer frameworks, lodging, energy, broadcast communications, public vehicles, and so forth. The financing of these activities is obtained from long-dated bonds and resource-upheld protections. Long-haul, supportable development and improvement must be accomplished on the off chance that there are areas of strength for a turn of events. It builds the proficiency of the dissemination of capital by guaranteeing that the main drives that can possibly produce benefit are the ones that draw in reserves. The seriousness of homegrown enterprises is upgraded, and it opens doors for these organizations to contend all around the world. When homegrown business sectors increment creation, the creation twists out into trades, and the worldwide business sectors are acquainted, conceiving an offspring with development and advancement in the country.

Al-Awad and Nasri Harb (2005) likewise divided the view that capital business sectors make connections among the private and public areas as useful speculations. The obligation to move financial advancement from the public area to the confidential area is undeniable, as assets are becoming more restricted every day. Since the public authority isn't independent, assets that they can't provide food for are met by the confidential area. Nasri (2021) further expresses that capital business sectors likewise draw in unfamiliar portfolio financial backers who are fundamental to enhancing the homegrown reserve fund levels. It works with inflows of unfamiliar monetary assets into the homegrown economy.

2.4 Late experimental exploration

Connecting capital market improvement and financial development proposes that the capital market upgrade monetary development and advancement. Nations with advanced capital business sectors experience higher monetary development than nations without (Lui et al., 2019). That's what the proof shows: while most capital business sectors in African nations are somewhat immature, those nations that have presented changes that are equipped towards the advancement of capital business sectors have had the option to develop at moderately higher and reasonable rates (Nasri et al., 2021). Capital business sectors increment the drawn-out reserve funds (benefits, burial service covers, and so on) that are directed to long-haul ventures. The business sectors go about as middlemen between miniature saving people or families and large-scale loaning people, for example, organizations or clinical guide plans, and the customary capability of an extent of the money-related stream as an insurance agency, aggregate venture plans, and so on. It fundamentally controls the capability of buying power in money-related terms and empowers a stream from surplus areas to deficiency areas with the goal of acquiring revenue on returns (Beck et al., 2016).

Capital business sectors additionally urge firms to raise capital or assets to fund their interest in genuine resources. An expansion in resources advances development as interest for work, interest for labor, and interest for products increase, and it further increments development underway, which twists out to development in the economy and improvement. The presence of capital-intensive business sectors serves as a guide to the financial framework by connecting long-haul speculations with long-haul capital. It advances development and abundance circulation and opens doors to speculation that supports a culture of homegrown reserve funds and venture proportions that are significant for quick industrialization (Spiegel, 2000).

2.5 Elements that impact capital business sectors

2.5.1 Pay

Levels In a developing economy, interest-driven speculation expresses that as pay levels increase, the requirement for new monetary administrations increases too. Garcia and Liu (2019) found that in an example of Latin American and Asian nations, pay levels emphatically affect financial exchange improvement. The altered Calderon-Rossel model utilized by Yartey (2016) with board information from creating markets for the period 1990–2014 found that pay levels contribute to financial exchange improvement in creating markets.

Running against the norm, different specialists have alternate discernments. Porta et al. (1996) have concluded that the impact of pay levels isn't immediate but instead that a higher volume of intercession through securities exchanges advances genuine pay development. The advancement of the financial exchange and its cost file is driven by big-time salary development. Advanced property privileges, legitimate abilities through training, and the foundation of a compelling business climate are factors that emphatically affect financial exchanges. Different analysts, be that as it may, for example, Nacuer et al. (2007), figured out that big league salaries don't really advance financial exchange improvement after checking out the information from the Middle East and North Africa.

2.5.2 Macroeconomic soundness

Throughout the long term, in view of different perceptions and studies, expansion has been a device used to attempt to keep up with macroeconomic strength (Nacuer et al., 2018). Financial exchange advancement has additionally shown hints of impacts added to by macroeconomic soundness, despite the fact that there is no hint of the type of impacts. Take, for instance, a study by Nacuer et al. (2018), who figured out that macroeconomic security has a significant, but regrettable, relationship with the stock market's turn of events. Apparently, there is no relationship between the securities exchange and expansion, as when expansion rises, the minor effect on the financial exchange's improvement lessens at a speedy and diminishing rate.

2.6 Summary

This chapter focused on the literature review, that is, theoretical review, in which theories that underpins the study was discussed. Furthermore, the chapter took a holistic analysis of the previous studies to examine what other scholars reiterates about the impact of capital markets on economic growth. The study further come up with the areas that have left out by other researchers, thus, the research gap.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, the research methodology will be discussed with the aim of further explaining the findings of the literature in an empirical manner. The chapter is divided into sections. In the first section, the paper outlines the introduction to the chapter. This is followed by models that are used to perform the test. The third section of the chapter outlines the type of data used and where it is derived. The fourth section explains the model used; it gives full details on the model and any other information that makes the tests possible with regard to the model used, which is expressed in the form of a model specification. Lastly, in the fifth section, there is a conclusion to the chapter.

The review targets delivering exact proof in light of the effect and meaning of capital business sectors on monetary development in Zimbabwe. The expectation is that capital-intensive business sectors will affect monetary development in Zimbabwe. The details of the model utilized in this study were taken from a model created by Khetsi (2014). The review explored the effect of the South African capital market on monetary development (1990–2014). Their model proposes that positive movement in the securities exchange is an improvement for development in South Africa. Monetary development is proxied by GDP (gross domestic product), while the capital market takes care of the worth of exchanges and market capitalization.

3.1 Starter Examination

The main role of this study is to investigate the effect and meaning of capital business sectors on financial development. The main period of the system is the information depiction, which makes sense of the information and the factors embraced in the review, as well as how and where the information was gathered with the end goal of unwavering quality. The primary

motivation behind leading a primer investigation is to guarantee that the factual tests give critical outcomes.

3.2 Information Depiction

The review utilized yearly time series information from 2000 to 2022. The information was gathered in the following ways: Market capitalization (MC) and worth of exchanges (VT), stock turnover (ST), and stock indices (SI) were gotten from the Zimbabwe Stock Trade; swapping scale (trauma centre) and GDP (gross domestic product) were gathered from the Hold Bank of Zimbabwe (RBZ). MC, VT, and gross domestic product are gathered in millions, while the emergency room is in rates. A definitive objective of this study is to prescribe a method for working on the normal way of life for Zimbabwean residents through their pay. The chosen factors are first connected to the chosen subject, as there are different parts that structure capital business sectors, for instance, that are important for the model. As expressed above, the model was taken from Khetsi (2014), which incorporated the accompanying factors: market capitalization (MC), completely new issues (TNI), the stock exchanged, all outworth of exchanges (VT), absolute recorded values, government stock, and financial development (gross domestic product). This study chose just four of the separate factors and incorporated an extra factor, the swapping scale, considering that the pace of trade affects the stock exchange in any country. Concerning the other two factors (TNI and LEGS) that were utilized, the scientist decided to reject them as the information was difficult to get to.

3.3 Explanation of Variables

Market capitalization (MC) is the assessment of the worth of a business that is obtained by duplicating the quantity of extraordinary offers by the ongoing cost of an offer. During the years 1990–2000, there was rapid development concerning market capitalization in creating market nations. In 1995, the development was at about $2 trillion and immediately developed to $ trillion every 2000. This broad development was likewise shared by Patrick (1966), who detailed that creating markets involved 12% of the world's market capitalization and was gradually developing. At last, the worth of exchanges supplements the market capitalization proportion by showing whether market size is matched by exchanges.

Gross domestic product is characterized as the all-out market value of labour and products delivered by laborers and capital inside a country's borders during a given period (typically a

year). Considering this specific variable, creators like Levine and Zervos (1998) have shown that securities exchange improvement emphatically affects monetary development, which is genuinely financial development. Levine and Zervos likewise noted that these open doors for development are not an exemption for agricultural nations.

The worth of exchanges supplements the market capitalization proportion by showing whether market size is matched by exchanges. In contrast to developed nations, where advanced monetary frameworks exist and are vital, reports show that there is a negative commitment made by capital business sectors towards development in non-industrial nations (Nuhiu and Hoti, 2011; Osinubi, 2001). The discoveries show that as advancement happens, the adverse consequences increase simultaneously. Non-industrial nations are said to have high rates of unpredictability in the costs of protections, unstable macroeconomic conditions, less coordinated markets, and low market liquidity.

The "conversion standard (EXCHR) alludes to the charge for trading the money of one country for the cash of another. It shows the sum or worth of the nearby cash expected to get the unit of the unfamiliar money. Firms gain openness to global rivalry through trade rates, which are driven by their essential information and result costs. Joseph (2002) put it as such: The instability of the conversion scale impacts the worth of a firm, considering that the income is still up in the air by the changes thereof. He further expressed that as enthusiasm for the money happens, exporters lose their hole in the worldwide market as a result of rivalry, and the stock costs will diminish as well as the deals and benefits of the exporters. His view decisively proposed that swapping scale unpredictability affects something beyond development in a nation; merchants and exporters are likewise impacted in an unexpected way.

3.4 Econometric Model

The tests that were utilized were as per the following: expanded Dickey-Fuller unit root test (ADF), ARDL bound testing, and pairwise Granger causality.

In financial matters, the hypothesis proposes that there is either a causal or cointegration connection between factors. The information utilized in a model raises hypotheses (Asteriou and Lobby, 2011). Different creators have a perspective on the observational results of capital business sectors and development. Considering the causality between monetary development and monetary business sectors, Garretsen (2004) found that an improvement in financial development determines an ascent in the market capitalization/gross domestic product proportion. The connection between capital market improvement and monetary development

shows a positive outcome, as indicated by Beck et al. (2006). Models give a fair reason to support the case that hypotheses arise out of studies since hypotheses are established on explored suppositions (Engle and Granger, 1978). A model guides the association of thoughts regarding the current subject, separating data to accumulate the bearing of relations in either a causal or strong way. The econometric model utilized in this study is as per the following:

$$GDP = MC^{\beta 1}.VT^{\beta 2}.SI^{\beta 3}.TR^{\beta 4}.ER^{\beta 5} \quad (3.1)$$

Where Y (economic growth) which is dependent, while) are independent variables that impacts the dependent variables (economic growth), and *f* represents the functional notation. Given the standard equation, it can be expressed as:

$$GDP_t = \beta_0 + \beta_1 MC_t + \beta_2 VT_t + \beta_3 SI_t + \beta_4 TR_t + \beta_5 ER_t + \mu_t \quad (3.2)$$

Where; GDP= Gross Domestic Product (proxy for economic growth) MC=Market Capitalization, VT =Total value for Transactions, TR = Turnover ratio, SI = stock indices and ER= Exchange rate. $\beta_0, \beta_1, \beta_2, \beta_3, +\beta_4 \; and \; \beta_5$ are coefficients and μ_t is error term.

Leah et al. (2019) argued that variables should be logged in order to have them in the same measurement unit and to verify that the measures are also Best Linear and Unbiased–BLUE. Furthermore, aside from integrating them to the same base (unit of measurement), another major rationale for logging the variables is to ensure the best outcome and reduce the incidence of heteroscedasticity (ensuring that the classical assumption of the OLS is not violated) in the model.

$$\begin{aligned}\Delta GDP_t = \alpha_0 + \sum_{i-1}^{n} \alpha_1 \, GDP_{t-1} + \sum_{i-0}^{n} \alpha_2 \, MC_{t-1} + \sum_{i-0}^{n} \alpha_3 \, VT_{t-1} + \sum_{i-0}^{n} \alpha_4 \, SI_{t-1} \\ + \sum_{i-0}^{n} \alpha_5 \, TR_{t-1} + \sum_{i-0}^{n} \alpha_6 \, ER_{t-1} + \beta_1 \, GDP_{t-1} + \beta_2 MC_{t-1} + \beta_3 VT_{t-1} \\ + \beta_4 SI_t + \beta_5 SI_{t-1} + \beta_6 \, ER_{t-1} + \mu_t\end{aligned} \quad (3.3)$$

To check for the presence of long-run relationship between corruption, public health expenditure and infant mortality rate, the study employed the conditional ARDL model as specified below:

$$GDP = \alpha_0 + \beta_1 MC_{t-1} + \beta_2 VT_{t-1} + \beta_3 SI_{t-1} + \beta_4 TR_{t-1} + \beta_5 \, ER_{t-1} + \mu_t \quad (3.4)$$

The short-run dynamic relationship is measured employing the ECM stated as follow:

$$\Delta GDP_t = \alpha_0 + \sum_{i-1}^{n} \alpha_1 \, GDP_{t-1} + \sum_{i-0}^{n} \alpha_2 \, \Delta MC_{t-1} + \sum_{i-0}^{n} \alpha_3 \, \Delta VT_{t-1} + \sum_{i-0}^{n} \alpha_4 \, \Delta SI_{t-1} + \sum_{i-0}^{n} \alpha_5 \, \Delta TR_{t-1} + \sum_{i-0}^{n} \alpha_6 \, \Delta ER_{t-1} + \delta ECM_{t-1} + \mu_t$$

Blunder Rectification term (t-1) means the factors were slacked by one period, background noise. Condition (1) will be assessed through standard least squares (OLS) utilizing yearly information from the Save Bank of Zimbabwe and the Zimbabwe Stock Trade for periods somewhere in the range of 1980 and 2022.

3.5 Estimation Procedure

The error correction (ECM) created by Engle and Granger is a method for accommodating the short-run conduct of a financial variable with its long-run conduct, as indicated by Gujarati (2004). In the event that a bunch of factors are all I(1), between them there might be at least one harmony connection, which is confirmed by utilizing the Johansen-Juselius cointegration method. In the event that a bunch of factors are found to have at least one cointegrating vector, then a reasonable assessment method is a VECM, which changes with both short-run changes in factors and deviations from balance. In any case, in the event that the factors coordinate in various orders, the fitting model is the ARDL bound test.

3.6 Diagnostic Tests

To be liberated from misleading and problematic outcomes that come from utilizing time series information, various tests should be completed. This review will play out the traditional direct relapse analytic tests, which incorporate heteroskedasticity tests, autocorrelation tests, ordinariness tests, multicollinearity tests, and model importance tests.

3.7 Unit root test

The review utilized the Increased Dickey-Fuller (ADF) test to determine the presence of a unit root, that is to say, to learn assuming the factors are fixed. ADF was liked to test for unit root since it is the most straightforward methodology in testing for unit root and it is entirely reasonable while managing an enormous and complex arrangement of time series information with obscure requests.

3.8 Granger Causality

H0: general wellbeing use doesn't cause the baby death rate.

H1: The newborn child death rate doesn't cause general wellbeing consumption.

Assuming the principal speculation is dismissed, it implies that general well-being use of Granger causes a higher baby death rate. Dismissal of the subsequent speculation would show that the causality runs from baby mortality to general wellbeing consumption. Assuming none of the speculation is dismissed, it would imply that general wellbeing use doesn't cause the newborn child death rate, and the baby death rate likewise doesn't cause general wellbeing use, subsequently demonstrating that the two factors are autonomous of each other.

3.9 Homoskedasticity

Among the OLS suppositions, the main analytic test directed in this review is the homoskedasticity suspicion. This suspicion expresses that there is consistent blunder change. It is hypothetically communicated as The Breusch-Agnostic Godfrey heteroskedasticity test will be conducted under the invalid speculation that there will be homoscedasticity.

3.10 Autocorrelation

The second significant symptomatic test that was performed in this examination is the autocorrelation test. This presumption expresses that there is no relationship between the blunder terms to such an extent that the covariance between the mistake terms after some time ought to be zero. It has been expressed assuming blunders are somehow related to each other, it would be implied that they are sequentially related. The most widely recognized tests of this supposition that will be utilized in this review are the Durbin-Watson test and the Breusch-Godfrey test to identify the issue of autocorrelation.

3.11 Multicollinearity Test

One more test that was discussed in this review is the multicollinearity test. This assists with recognizing the connection between informative factors and keeping away from the twofold

impact of free factors in the model. We can test multicollinearity by utilizing the relationship framework. Streams (2008) showed that, assuming the factors are profoundly correlated, the arrangement is overlooking. Staying away from one variable that has multicollinearity and changing that variable to 0.8 or above between two logical factors will flag a sequential relationship.

3.12 Ordinariness Test

Ordinariness is one more supposition that will be tried in this review. This suspicion expresses that the blunder term is regularly circulated, that is, it is expected to lead to a single or joint speculation test about the model boundaries. One of the most commonly applied tests for ordinariness, which was utilized for this exploration, is the Jacque-Bera (JB) test. The JB utilizes the property of ordinarily conveyed irregular variables such that the whole dissemination is described by the initial two minutes, which are mean and difference.

3.13 Model Particular Tests

The coefficient of assurance (R-squared) test will be utilized in this model to gauge its decency of fit. A rundown measure tells how well the example relapse line fits the information. The R-squared is a nonnegative amount whose cutoff points are A R2 of 1 method is an ideal fit, or at least for each. Then again, a R2 of zero actually implies that there is no connection between the regress and the regressor.

3.6 Chapter Summary

This part gave an unmistakable layout of the examination technique and exploration plan to be utilized. The specialist legitimized the experimental model and regressors which will be viewed as in this concentrate too their normal signs in the ARDL. The systems to be attempted to address the examination questions were likewise point by point which incorporate lingering diagnostics, ideal slack length determination utilizing AIC, Bound test and ARDL particular and assessment. Ultimately, the scientist portrayed the information to be utilized for this review, featuring the information source and information issues. In the following section, information will be introduced, examined and deciphered.

CHAPTER IV

DATA PRESENTATION AND INTEPRETATION

4.0 Introduction

The previous section gave the systemic structure that this study followed to meet its targets and make better specialty proposals. In accordance with this, this chapter centred on the information shown and the understanding of the results. Prior to introducing ARDL econometric results as determined in this analysis, the chapter initially gives the summary statistics, the ADF unit root test, and other econometric tests to distinguish the way in which the variables relate with each other. The chapter further presents the ARDL bound test to explore the short- and long-run relationship between capital markets and economic growth. In addition, the chapter presents the pairwise Granger causality to identify the causal relationship between the variables in question. Finally, the chapter gives the conclusion.

4.1 Summary statistics

This study performed the summary statistics for the variables in question before conducting further data analysis. The table 4.1 below indicates the summary statistics for the variables in question.

Table 4.1 Summary Statistics

Variables	GDP	ER	MC	SI	TR	VT

Mean	22.95134	110.7216	26.38509	7.964843	15.69240	26.84230
Median	22.77603	104.5443	26.24627	8.772156	10.16190	13.28920
Maximum	24.25421	181.5140	27.83883	34.11065	41.98000	77.37721
Minimum	22.20843	70.67384	24.70086	-38.48526	3.331916	1.805618
Std. Dev.	0.526937	29.45001	0.964602	17.21229	12.29654	25.60309
Skewness	0.915888	0.702133	-0.053519	-0.681216	0.435704	0.579457
Kurtosis	2.596976	2.754750	1.748431	3.090057	1.712911	1.782482
Jarque-Bera	6.156208	3.556191	2.761295	3.262579	4.227914	4.944504
Prob*	0.046046	0.168960	0.251416	0.195677	0.120759	0.084395
Obs	42	42	42	42	42	42

Source: Own estimation using Eviews 12

The results show that, in terms of deviation from the mean, exchange rate (ER) and stock value traded had the maximum deviation from the mean, while stock indices (SI) and turnover ratio (TR) had the minimal deviation from the mean with values of 8% and 16%, respectively. Subsequently, skewness measures symmetry, and thus, GDP, exchange rate (ER), value traded (VT), and turnover ratio (TR) are positively skewed, while market capitalization (MC) and stock indices (SI) are negatively skewed. The highly skewed variables are GDP and ER. It could be attributed to higher incremental values. By the same token, Kurtosis measures tailed variables, where the high Kurtosis are SI, ER, and GDP. This shows the presence of outlines and the steepness. Furthermore, the asymptotic tendency of the variables can be seen through probability. The J-B statistics for the series suggest that the series GDP and VT have a probability value of less than 5%, and the rest are normally distributed.

4.2 Classical diagnostic tests

Osborne (2017) highlighted that regression diagnostic tests are viewed as a critical step in the econometric modelling process. Diagnostic tests are used to evaluate the model's compliance with its assumptions and to determine if there are observations that are not well presented by the model. Table 4.2 juxtaposes the results for heteroskedasticity, autocorrelation, and normality tests. The results show that the probability values for all the tests are greater than

5%; therefore, this study concludes that the variables are free from heteroskedasticity, autocorrelation, and multicollinearity, as well as being normally distributed.

Table 4.2 Classical diagnostic tests

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.241512	Prob. F(24,13)	0.3504
Observation R-squared	26.45694	Prob. Chi-Square(24)	0.3304
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.253233	Prob. F(2,34)	0.2984
Observation R-squared	2.883641	Prob. Chi-Square(2)	0.2365
Normality test			
Jacque-bera statistic	0.736737	Prob*	0.6918

Source: Own estimation using Eviews version 12.

4.3 ADF Unit root test

The null hypothesis for the test in the ADF unit root test depicts that the data series under consideration has a unit root, while the alternative hypothesis claims that the series is stationary. This test is essential to be performed before undergoing various time series estimations, as this will help to identify the structure of the data and avoid spurious regression. The results of the test are presented in Table 4.3. The table indicates that lnGDP, lnER, lnMC, lnTR, and lnVT were integrated of order one 1(1), that is, they became stationary at the first difference, while lnSI was integrated of order zero 1(0), stationary at level. With this mixed order of integration, the autoregressive distributed lag model becomes the preferred approach for further analysis. The ARDL model was introduced in this study in order to incorporate I (0) and I (1) variables in the same estimation. A key assumption in the ARDL/bounds testing methodology is that the errors of the equation chosen with the proper lag length must be serially independent.

Table 4.3 ADF unit root test

Variable	ADF test	Test Critical Value	Prob*	Order

		1% level	5% level	10% level		
lnGDP	-7.0150	-3.6056	-2.9369	-2.6069	0.000***	I(1)
lnER	-5.5334	-3.6056	-2.9369	-2.6069	0.000***	I(1)
lnMC	-4.2097	-3.6056	2.9369	-2.6069	0.002***	I(1)
lnSI	-6.5029	-3.6010	-2.9350	2.6058	0.000***	I(0)
lnTR	-7.0739	-3.6056	-2.9369	-2.6069	0.000***	I(1)
lnVT	-6.1876	-3.6056	-2.9369	-2.6069	0.000***	I(1)

Source: Own estimation using Eviews version 12. *, **, and * shows 10%, 5% and 1% level of significance respectively; the null hypothesis is that there is a unit root**

4.4 The Bound Test

Following the results from the unit root test, this study confirmed that the ARDL bound test is the most appropriate to examine the existence of long-run relationships between the proxies of capital markets and economic growth in Zimbabwe. The test is interpreted based on the decision rule, which says that if the computed F-statistic falls below the lower bound, we would conclude that the variables are I (0), so no cointegration is possible by definition. If the F-statistic exceeds the upper bound, we conclude that we have cointegration. Finally, if the F-statistic falls between the bounds, the test is inclusive. Table 4.4 below shows that the calculated F statistic (11.82) is greater than the upper bound (3.79) at the 5% level of significance; therefore, we reject the null hypothesis and conclude that there is a long-run relationship among the variables tested.

Table: 4.4 ARDL Bound test

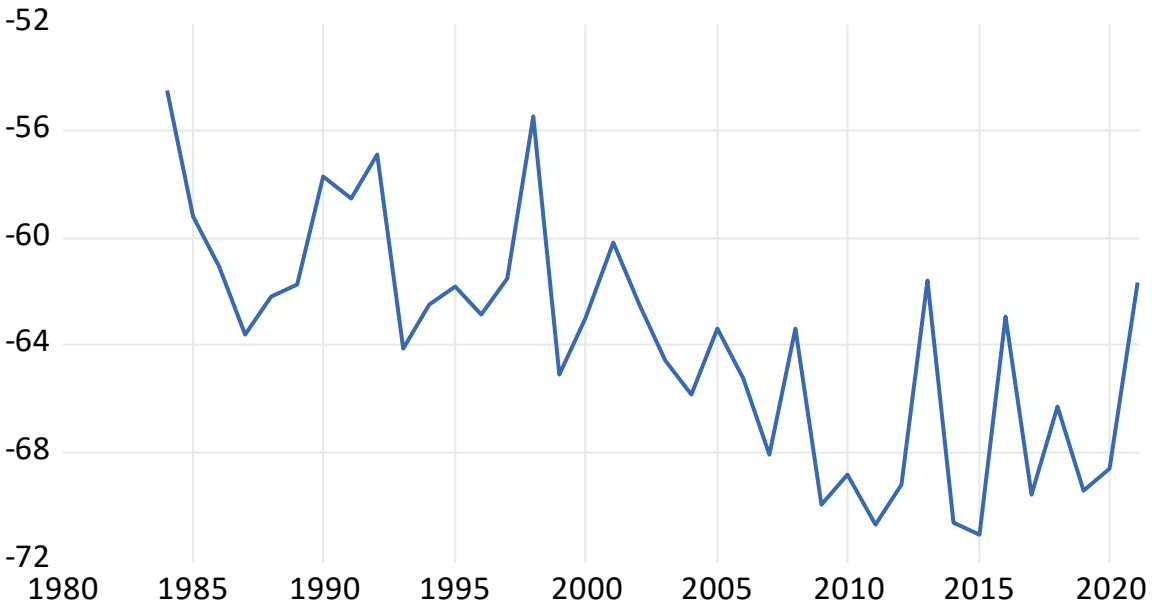
F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Significance	I(0)	I(1)
F-statistic	11.82216	10%	2.75	3.79
k	5	5%	3.12	4.25
		2.5%	3.49	4.67
		1%	3.93	5.23

Source: Own estimation using Eviews version 12. *, **, and * shows 10%, 5% and 1% level of significance respectively; the null hypothesis is that there is a unit root**

4.5 Cointegration graph

In addition, the co-integration graph shown in Fig 1 depicts the long run movement between the dependent variable and the regressors, showing inconsistent up and down trend

Fig 1



4.6 Selection Lag Length Criterion

The ADF unit root test reported that the variables in question are integrated of different orders, that is, I(0) and I(1). This suggests a random walk trend. The Fig 2 below shows the strength of the selected model criteria in which, it reports that the strength of Akaike information criteria over other criterion is based on the following fact, 20 different ARDL models are performed. The lower value of AIC will be selected, that is (4, 3, 4, 3, 1, and 3), gives the lowest values of AIC.

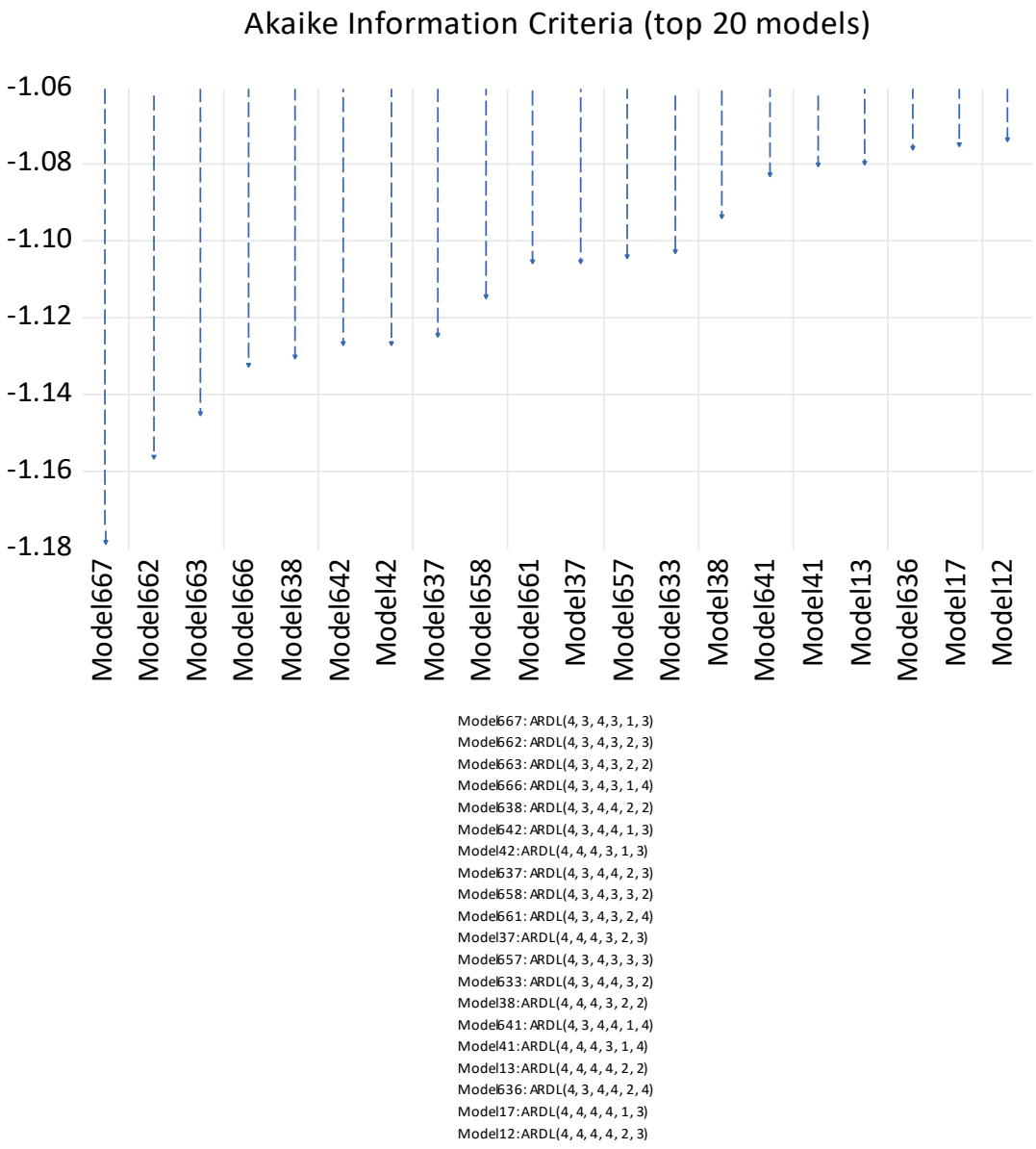


Fig 2.

4.7 ARDL regression model

The ARDL bound test brings about Table 4.4, which neglected to dismiss the invalid speculation of no cointegration; thus, this segment presents and deciphers the short-run dynamic demonstration of the ARDL model. To begin with the model detail, the short-run dynamic monetary development model revealed that around 0.896482 (90%) of the all-out variety in financial development is made sense of by autonomous factors (capital market intermediaries), and just 10% is caught by the mistake term. This suggests that the model fits well since the logical factors are together huge at a 1% degree of importance. In addition, the

model (ARDL gauges) is liberated from the issues of sequential connection, useful structure heteroskedasticity, and ordinariness as uncovered in the LM and F adaptations of tests since we can't dismiss the invalid speculation of each test measurement.

The assessment results, introduced in Table 4.7, showed that the conversion standard (emergency room) is negative and measurably critical at the 1% level. Holding different things consistent, a 1% ascent in lnER will cause a 0.5% decrease in financial development (lnGDP) in Zimbabwe. This shows that swapping-scale unpredictability in the capital market in Zimbabwe is joined by a decrease in monetary development. All the more in this way, the slack lnER (2 and 3) periods are likewise negative yet not genuinely critical, and their impact on monetary development can't be perceived.

Furthermore, the coefficient for market capitalization (lnMC) in period one is negative and measurably huge at a 10% degree of importance. The slack lnMC in periods (2, 3, and 4) are additionally negative and genuinely important at 1%, 5%, and 10% degrees of importance, respectively. It very well may be shown that a 1% expansion in market capitalization in the (1, 2, 3, and 4) periods will make the lnGDP increment by 2.5%, 6.3, 3.4, and 6.5% separately. Then again, esteem exchange (VT) is positive and measurably huge at a 10% degree of importance. That is, it is shown that, taking everything into account, a 1% increment in VT will make lnGDP increment by 1%, and in the slack period, assuming VT increments by 1%, financial development will ascend by 0.7%.

In addition, the concentration likewise shows that stock files (lnSI) in the ongoing time frame are positive and measurably huge at 1% degree of importance. That is, a 1% increment in lnSI will impart a 0.9% increment in financial development. Likewise, the slack lnSI (2 and 3) are positive and genuinely huge at 1% and 5% degrees of importance, respectively. Their change of 1% causes a 0.3% and 1.2% expansion in monetary development in Zimbabwe.

4.7 ARDL regression with lnGDP the dependent variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	0.165017	0.147535	1.118495	0.283
LGDP(-2)	-0.427140	0.164884	-2.590544	0.022*
LGDP(-3)	0.279254	0.181228	1.540896	0.143
LGDP(-4)	0.769121	0.232486	3.308253	0.005*
ER	0.003180	0.003226	0.985968	0.341

ER(-1)	-0.004017	0.004170	-0.963321	0.3530
ER(-2)	0.001476	0.003895	0.379056	0.7108
ER(-3)	-0.005446	0.003066	-1.776342	0.0991*
LMC	0.019930	0.080886	0.246400	0.8092
LMC(-1)	-0.255147	0.135703	-1.880189	0.0827*
LMC(-2)	-0.630961	0.162689	-3.878334	0.0019**
LMC(-3)	-0.342578	0.188146	-1.820815	0.0917*
LMC(-4)	0.655850	0.132061	4.966282	0.0003***
SI	0.002690	0.001830	1.470011	0.1653
SI(-1)	0.008861	0.001853	4.782205	0.0004***
SI(-2)	0.003721	0.001724	2.158738	0.0501*
SI(-3)	0.012031	0.001827	6.583999	0.0000***
TR	-0.013141	0.009070	-1.448887	0.1711
TR(-1)	-0.030769	0.009304	-3.307264	0.0057**
VT	0.014375	0.005519	2.604504	0.0218*
VT(-1)	0.008517	0.005587	1.524514	0.1513
VT(-2)	0.010573	0.005169	2.045453	0.0616*
VT(-3)	-0.007206	0.003643	-1.978226	0.0695*
C	-12.09524	8.253175	-1.465526	0.1665
@TREND	-0.056742	0.023485	-2.416105	0.0311**
R-squared	0.983599	Mean dependent var		22.97077
Adjusted R-squared	0.953321	S.D. dependent var		0.550208
S.E. of regression	0.118875	Akaike info criterion		-1.178341
Sum squared resid	0.183705	Schwarz criterion		-0.100982
Log likelihood	47.38848	Hannan-Quinn criter.		-0.795025
F-statistic	32.48509	Durbin-Watson stat		2.976745
Prob(F-statistic)	0.000000			

Source: Own estimation using Eviews version 12. *, **, and * shows 10%, 5% and 1% level of significance respectively; the null hypothesis is that there is a unit root**

4.8 The ARDL short-run results

Table 4.8 presents the short-run coefficients and the mistake amendment model gauge ECMt-1 of the ARDL model. The blunder remedy model (ECM) has a negative sign and is huge at the 1% level. The speed of change of the factors from short-hurry to long-run harmony for the mistake rectification model is moderate and is -0.213749 (21%). The finding reflects the fact that the last period's disequilibrium is revised at a rate of 21% every year. One legitimization for this low speed of change is the unpredictability of the capital market because of the idea of swapping scale in Zimbabwe.

As per the outcomes, the impact of conversion scale (lnEX) in the short run is positive and genuinely huge at 5% degrees of criticality in the slack period; that is, ceteris paribus, a 1% change in conversion scale will add to a 0.5% change in financial development. Market capitalization has a negative coefficient and is genuinely critical at all degrees of importance; that is to say, in completely slack periods (D(lnMC, 1, 2, 3)), an adjustment of market capitalization causes a negative change in financial development in Zimbabwe.

Additionally, esteem exchanged (VT) decidedly affects financial development and is measurably huge at a 10% degree of importance. Taking a gander at the long-run results in Tables 4.8 and 4.9, it is shown that there is consistency on short-run and long-term impacts. Capitalization and liquidity have affected the capital market adversely. This present circumstance brings up issues about the reality of the endeavours done by Zimbabwe Stock Exchange (ZSE). capital market to foster the capital market and spike financial advancement.

4.8 The ARDL ECM with dependent variable D (lnGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.09524	1.204148	-10.04464	0.0000***
@TREND	-0.056742	0.006639	-8.546696	0.0000***
D(lnGDP(-1))	-0.621235	0.105556	-5.885379	0.0001***
D(lnGDP(-2))	-1.048375	0.136999	-7.652442	0.0000***
D(lnGDP(-3))	-0.769121	0.151362	-5.081346	0.0002***
D(lnER)	0.003180	0.002429	1.309219	0.2131
D(lnER(-1))	0.003969	0.002422	1.638711	0.1252

D(lnER(-2))	0.005446	0.002161	2.519523	0.0256*
D(lnMC)	0.019930	0.055682	0.357934	0.7261
D(lnMC(-1))	-0.944233	0.119467	-7.903707	0.0000***
D(lnMC(-2))	-0.313272	0.120689	-2.595698	0.02228*
D(lnMC(-3))	-0.655850	0.107786	-6.084717	0.0000***
D(lnSI)	0.002690	0.001301	2.068231	0.0591*
D(lnSI(-1))	-0.015752	0.001889	-8.339496	0.0000***
D(lnSI(-2))	-0.012031	0.001401	-8.585218	0.0000***
D(lnTR)	-0.013141	0.005202	-2.526123	0.0253**
D(lnVT)	0.014375	0.003023	4.754743	0.0004*
D(lnVT(-1))	-0.003367	0.002965	-1.135707	0.2766
D(lnVT(-2))	0.007206	0.002589	2.783720	0.0155*
CointEq(-1)*	-0.213749	0.021568	-9.910342	0.0000***
R-squared	0.896482	Mean dependent var		0.034102
Adjusted R-squared	0.787214	S.D. dependent var		0.219005
S.E. of regression	0.101024	Akaike info criterion		-1.441499
Sum squared resid	0.183705	Schwarz criterion		-0.579612
Log likelihood	47.38848	Hannan-Quinn criter.		-1.134846
F-statistic	8.204396	Durbin-Watson stat		2.976745
Prob(F-statistic)	0.000021			

Source: Own estimation using Eviews version 12. *, **, and * shows 10%, 5% and 1% level of significance respectively; the null hypothesis is that there is a unit root**

4.9 ARDL long run results

The assessed coefficients show that gross capital stream, human resources, and transparency of exchanging decidedly affect monetary development, which is in accordance with the hypothetical contention that capital stream, human resources, and receptiveness emphatically add to financial development. All the more explicitly, the flexibility of the capital stream demonstrated that a 10% expansion in the capital stream prompts a 4.265% increment in monetary development overall, keeping different factors consistent. Essentially, the long-run versatility of human resources is 31.0953 and the transparency of exchanging is 0.071, which suggests that a 10% ascent in human resources and the receptiveness of exchanging result in around 31.0953 and 0.071 percent expansion in monetary development, separately.

Table 4.9 Estimated long run results using ARDL Bound test approach and selected model ARDL (4, 3, 4, 3, 1, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob
lnER	-0.022485	0.024435	-0.920162	0.3742
lnMC	3.317057	3.504895	0.946407	0.3612
lnSI	0.127737	0.117784	1.084503	0.2978
lnTR	-0.205430	0.123867	-1.658476	0.1211
lnVT	0.122850	0.066374	1.850881	0.0870*

R-squared	0.896482
Adjusted R-squared	0.787214
F-statistic	8.204396
Prob(F-statistic)	0.000021
Durbin-Watson stat	2.976745

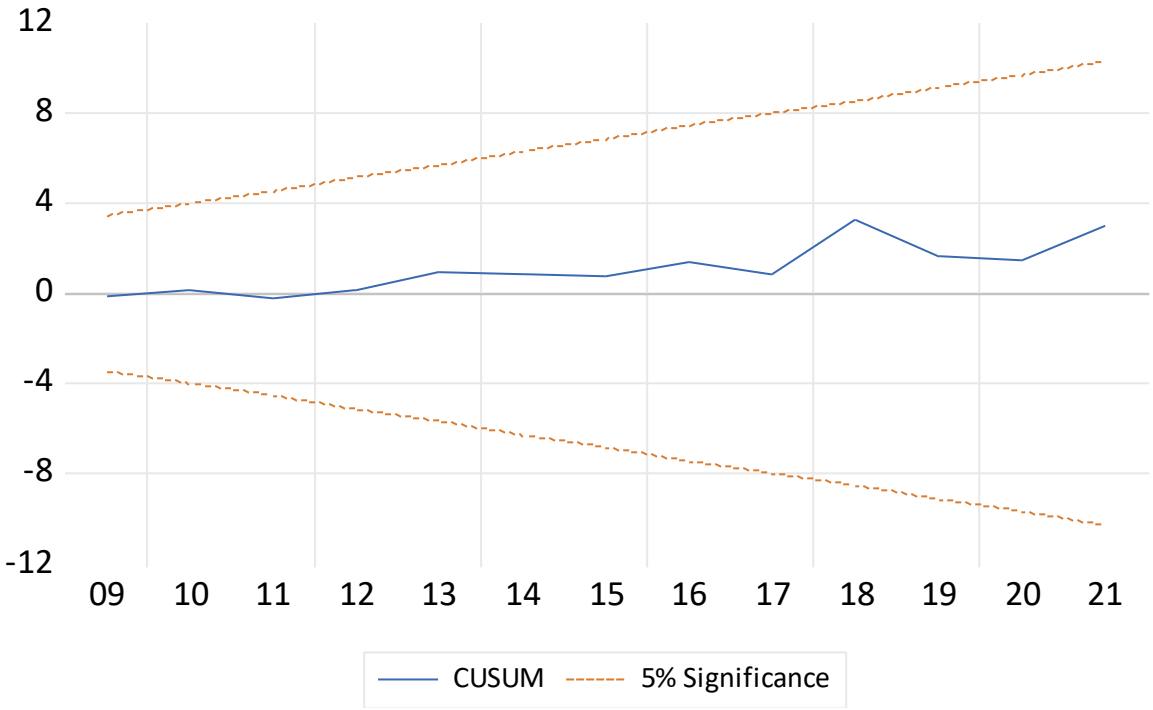
Source: Own estimation using Eviews version 12. *, **, and * shows 10%, 5% and 1% level of significance respectively; the null hypothesis is that there is a unit root**

Table 4.9 presents the estimated coefficients of the ARDL long-run relationship of the model. Based on the results, the long-run growth equation is given as:

lnGDP = -0.0225lnER + 3.3171lnMC + 0.127lnSI -0.2054lnTR + 0.1228lnVT

4.10 Stability Test

The stability of the long-run coefficient is tested by the short-run dynamics. Once the Error correction model has been estimated the cumulative sum of recursive residuals (CUSUM) test is applied to assess the parameter stability (Pesaran, 1997).



4.11 Interpretation of ARDL results

The ARDL model outcomes show that market capitalization is negative and altogether factual at 10% in both short-run and long-run periods in Zimbabwe. Esteem exchanged has a negative, a 10 percent increment in the securities exchange cost share file would advance per-capita development by 0.08 percent. This market part communicates the proficiency of the securities exchange for financial backers' portfolios. It chooses the heading of the securities exchange and assumes a part in empowering financial backers to partake in interest on the lookout. For example, the expansion in stock records, stock worth added, and stock turnover will draw in additional investable assets into the market. This would yield an improvement in monetary intermediation and, therefore, a spike in speculation, which would upgrade financial development. Of equivalent significance, different things are equivalent: 1% expansion in capitalization leads to a lessening in lnGDP by 0.031 percent. Essentially, a 10% ascent in swapping scale slack one year would cause a decrease in lnGDP by 0.0075 percent. In this manner, the literature conversion standard is utilized by financial backers to affirm the securities exchange pattern. The number of shares had the startling sign and isn't genuinely critical.

By the way, capitalization and liquidity had a clear adverse consequence on per-capita monetary advancement and were genuinely huge at 5%. Our outcomes are consistent with analysts' discoveries in financial writing where the capital market adversely influences monetary development in a few emerging nations. It is persuading to take note of the fact that the speed of intermingling from short rush to long run is 21%. This low speed of change is legitimate in light of the fact that the capital market is unpredictable because of swapping scale unpredictability. At the same time, long-run gauges are reliable for short-run discoveries. Causality tests uncovered a unidirectional causality running from lnER to lnGDP and a unidirectional causality running from market capitalization to lnGDP. Besides, factual tests uncovered the security of the model. Finally, the results acquired here are in accordance with the discoveries of Lei et al. (2016), Onuora (2019), Kehinde et al. (2013), Yadirichukwu and Chigbu (2014), Alrassi et al. (2019), and others.

CHAPTER V

CONCLUSION AND RECOMMENTATIONS

5.0 Introduction

The previous chapter introduced and deciphered the discoveries of this review. Hence, this chapter presents a synopsis and finishes the review. It likewise gives strategy suggestions and proposals gleaned from this review. The restrictions of the review and regions for additional examination are likewise featured in the last segment.

5.1 Summary

The study studied on the effect of the capital market on financial development in Zimbabwe somewhere between 1980 and 2021. The data was initially examined for stationarity test, using Augmented Dickey-Fuller (ADF), and the outcomes showed that the factors are coordinated of various requests, I(0) and I(1) separately. In accordance with this, an ARDL-bound approach was utilized to appraise the model. The outcome from the bound test showed a stable long-run connection between the dependent and free factors, as upheld by the more noteworthy bound worth of 11.82. The blunder revision term in the short-run dynamic model has a genuinely huge coefficient with a suitable negative sign, and this is a prerequisite for the dynamic steadiness of the model.

As determinants of monetary development (lnGDP), the long-run coefficients of the regular logarithm of market capitalization, turnover proportion, and capital versatility are positive and measurably huge at a 5% degree of importance, suggesting that these three factors emphatically affect development over the long haul. Notwithstanding, the long-run coefficients of significant worth exchanged and the conversion scale have altogether adverse consequences for financial development.

Essentially, ARDL-based short-run dynamic modelling (Mistake Remedy Model) for financial development shows that market capitalization, turnover proportion, and capital portability significantly affect development in the short-run. Moreover, the strength of the assessed boundaries of both short-run and long-run connections is upheld by the CUSUM soundness test.

The heading of causal relationship among market capitalization and financial development and other control factors, for example, turnover proportion, capital portability, conversion scale,

and worth exchanged, was performed under Granger causality. The outcome uncovered that there is bidirectional causality between market capitalization and monetary development, turnover proportion and financial development, and between capital versatility and financial development, with a 1% degree of criticality. Be that as it may, a negative and unidirectional causality was accounted for between financial development and conversion scale and between worth exchanged and monetary development in Zimbabwe.

5.2 Policy Implication

Regulatory Adjustments

- **Enhancing Market Stability:** Policymakers may need to implement regulations aimed at stabilizing capital markets to prevent volatility that can negatively impact GDP growth.
- **Improving Transparency:** Increasing transparency in financial markets can help restore investor confidence and encourage investment.

Monetary Policy Interventions

- **Interest Rate Adjustments:** Central banks may consider lowering interest rates to stimulate borrowing and investment if capital markets are not functioning effectively.
- **Quantitative Easing:** Implementing quantitative easing could provide liquidity to capital markets, encouraging investment in businesses.

Fiscal Policy Measures

- **Government Spending:** Increasing public investment in infrastructure or technology can stimulate economic activity and potentially improve capital market performance.
- **Tax Incentives:** Offering tax breaks for investments in capital markets could encourage both individual and institutional investors to participate more actively.

Encouraging Innovation and Entrepreneurship

- **Support for Startups:** Providing funding or support for startups can enhance economic dynamism, which might positively influence capital market performance.
- **R&D Investments:** Incentivizing research and development can lead to innovation, driving economic growth and potentially improving capital market conditions.

Trade Policies

- **Export Promotion:** Policies that promote exports can help improve GDP, potentially leading to better performance in capital markets as companies grow.
- **Import Regulations:** Adjusting import regulations to protect local industries might stabilize GDP growth, which could have a positive effect on capital markets.

Addressing Structural Issues

- **Labor Market Policies:** Improving labor market conditions through training and education can enhance productivity, positively affecting both GDP and capital markets.
- **Financial Literacy Programs:** Enhancing financial literacy can empower individuals to participate in capital markets, potentially improving market dynamics.

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APPENDIX

ARDL Error Correction Regression
Dependent Variable: D(LGDP)
Selected Model: ARDL(4, 3, 4, 3, 1, 3)
Case 5: Unrestricted Constant and Unrestricted Trend
Date: 11/20/24 Time: 16:36
Sample: 1980 2021
Included observations: 38

ECM Regression
Case 5: Unrestricted Constant and Unrestricted Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.09524	1.204148	-10.04464	0.0000
@TREND	-0.056742	0.006639	-8.546696	0.0000
D(LGDP(-1))	-0.621235	0.105556	-5.885379	0.0001
D(LGDP(-2))	-1.048375	0.136999	-7.652442	0.0000
D(LGDP(-3))	-0.769121	0.151362	-5.081346	0.0002
D(ER)	0.003180	0.002429	1.309219	0.2131
D(ER(-1))	0.003969	0.002422	1.638711	0.1252
D(ER(-2))	0.005446	0.002161	2.519523	0.0256
D(LMC)	0.019930	0.055682	0.357934	0.7261
D(LMC(-1))	-0.944233	0.119467	-7.903707	0.0000
D(LMC(-2))	-0.313272	0.120689	-2.595698	0.0222
D(LMC(-3))	-0.655850	0.107786	-6.084717	0.0000
D(SI)	0.002690	0.001301	2.068231	0.0591
D(SI(-1))	-0.015752	0.001889	-8.339496	0.0000
D(SI(-2))	-0.012031	0.001401	-8.585218	0.0000
D(TR)	-0.013141	0.005202	-2.526123	0.0253
D(VT)	0.014375	0.003023	4.754743	0.0004
D(VT(-1))	-0.003367	0.002965	-1.135707	0.2766
D(VT(-2))	0.007206	0.002589	2.783720	0.0155
CointEq(-1)*	-0.213749	0.021568	-9.910342	0.0000

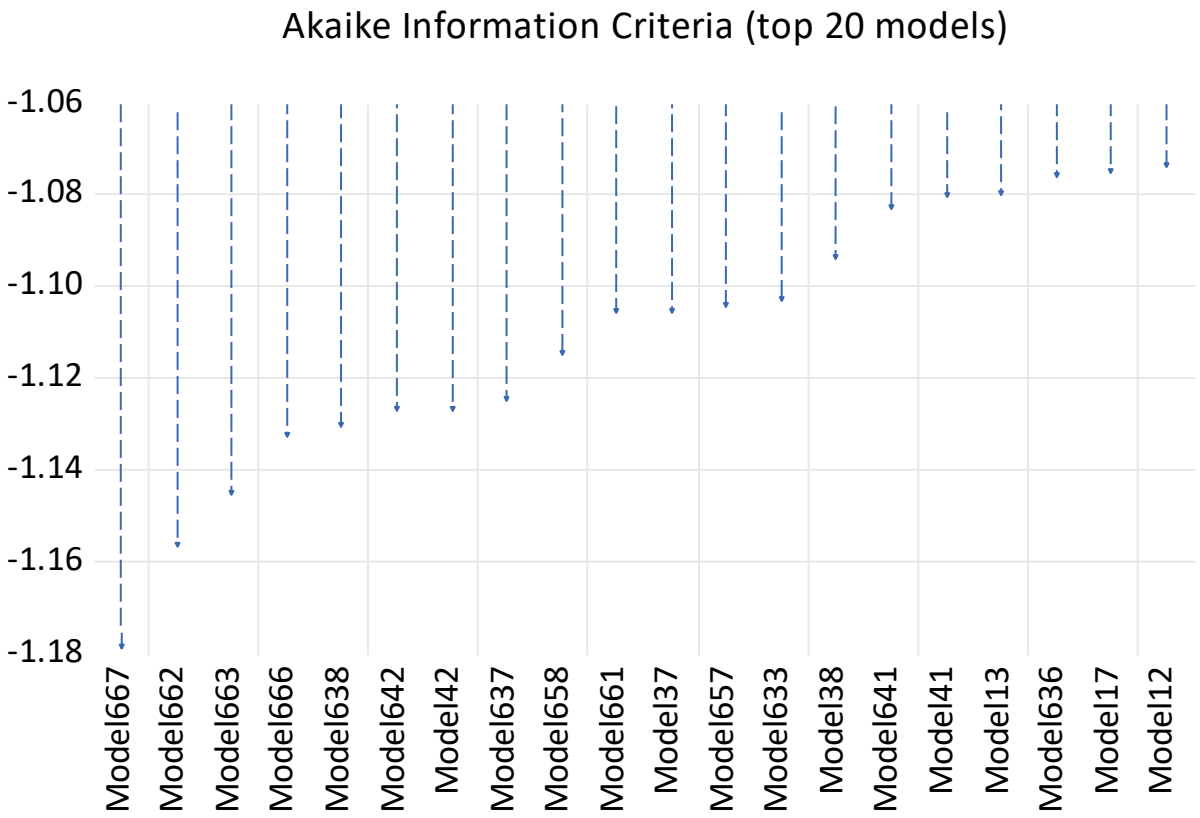
R-squared	0.896482	Mean dependent var	0.034102
Adjusted R-squared	0.787214	S.D. dependent var	0.219005
S.E. of regression	0.101024	Akaike info criterion	-1.441499
Sum squared resid	0.183705	Schwarz criterion	-0.579612
Log likelihood	47.38848	Hannan-Quinn criter.	-1.134846
F-statistic	8.204396	Durbin-Watson stat	2.976745
Prob(F-statistic)	0.000021		

* p-value incompatible with t-Bounds distribution.

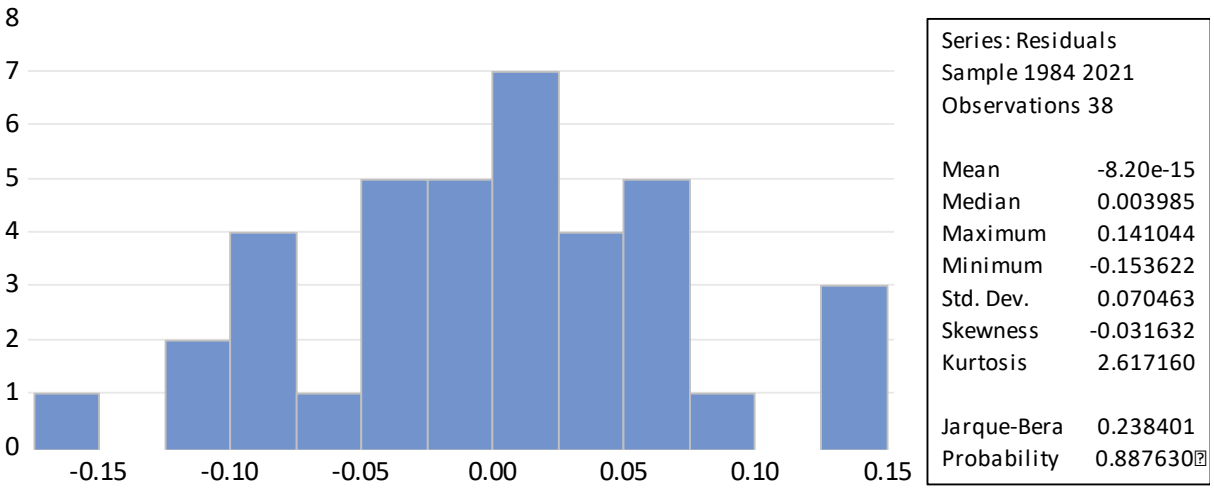
F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	11.82216	10%	2.75	3.79
k	5	5%	3.12	4.25
		2.5%	3.49	4.67
		1%	3.93	5.23

t-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-9.910342	10%	-3.13	-4.21
		5%	-3.41	-4.52
		2.5%	-3.65	-4.79
		1%	-3.96	-5.13



Model667: ARDL(4, 3, 4, 3, 1, 3)
Model662: ARDL(4, 3, 4, 3, 2, 3)
Model663: ARDL(4, 3, 4, 3, 2, 2)
Model666: ARDL(4, 3, 4, 3, 1, 4)
Model638: ARDL(4, 3, 4, 4, 2, 2)
Model642: ARDL(4, 3, 4, 4, 1, 3)
Model42: ARDL(4, 4, 4, 3, 1, 3)
Model637: ARDL(4, 3, 4, 4, 2, 3)
Model658: ARDL(4, 3, 4, 3, 3, 2)
Model661: ARDL(4, 3, 4, 3, 2, 4)
Model37: ARDL(4, 4, 4, 3, 2, 3)
Model657: ARDL(4, 3, 4, 3, 3, 3)
Model633: ARDL(4, 3, 4, 4, 3, 2)
Model38: ARDL(4, 4, 4, 3, 2, 2)
Model641: ARDL(4, 3, 4, 4, 1, 4)
Model41: ARDL(4, 4, 4, 3, 1, 4)
Model13: ARDL(4, 4, 4, 4, 2, 2)
Model636: ARDL(4, 3, 4, 4, 2, 4)
Model17: ARDL(4, 4, 4, 4, 1, 3)
Model12: ARDL(4, 4, 4, 4, 2, 3)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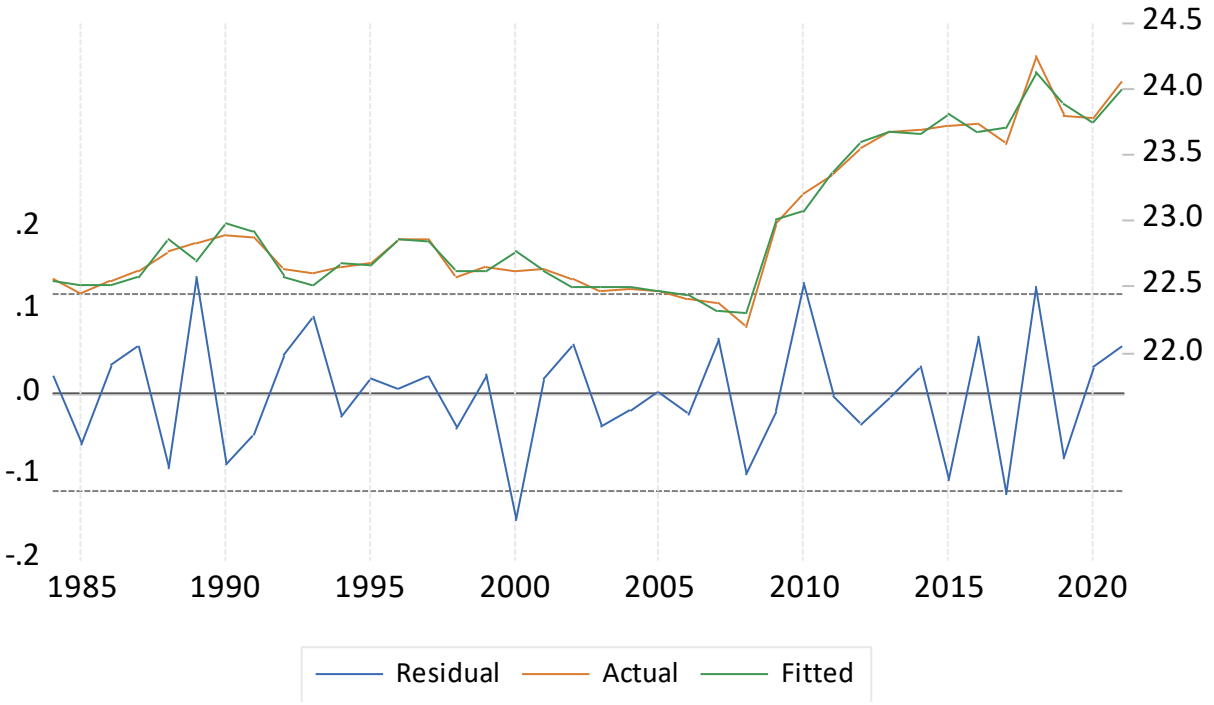
Series: Residuals
Sample 1984 2021
Observations 38
Mean -8.20e-15
Median 0.003985
Maximum 0.141044
Minimum -0.153622
Std. Dev. 0.070463
Skewness -0.031632
Kurtosis 2.617160
Jarque-Bera 0.238401
Probability 0.887630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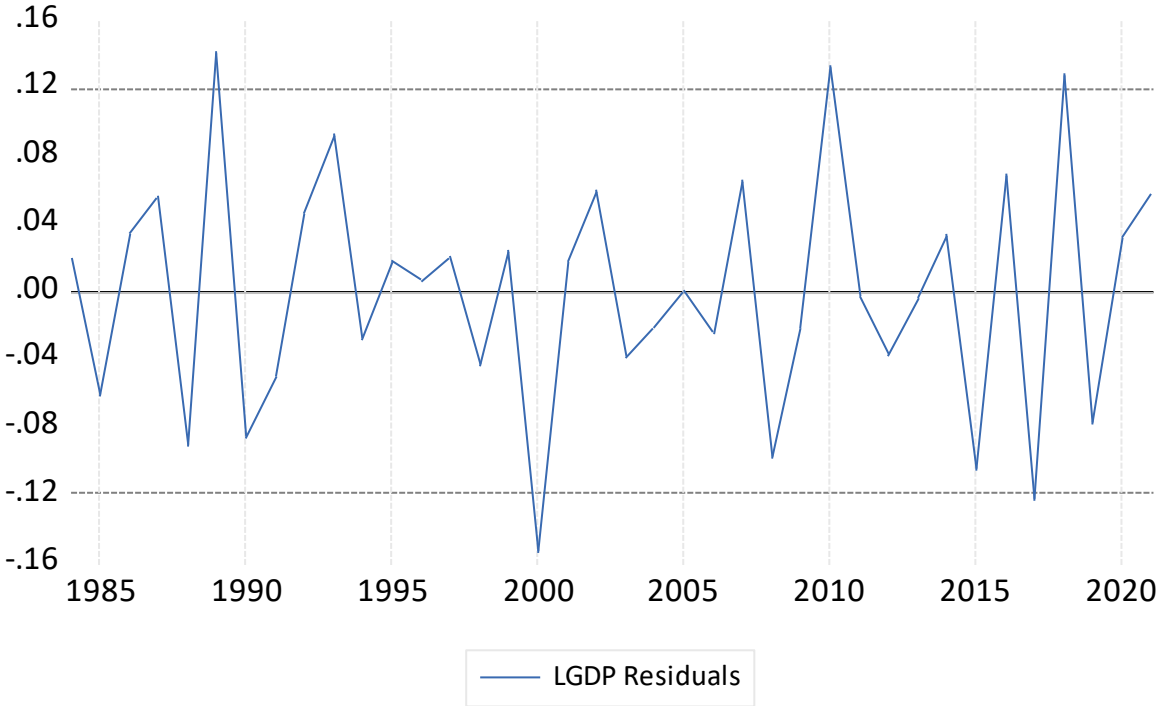

Dependent Variable: LGDP
Method: ARDL
Date: 11/20/24 Time: 16:31
Sample (adjusted): 1984 2021
Included observations: 38 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): ER LMC SI TR VT
Fixed regressors: C @TREND
Number of models evaluated: 12500
Selected Model: ARDL(4, 3, 4, 3, 1, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	0.165017	0.147535	1.118495	0.2836
LGDP(-2)	-0.427140	0.164884	-2.590544	0.0224
LGDP(-3)	0.279254	0.181228	1.540896	0.1473
LGDP(-4)	0.769121	0.232486	3.308253	0.0057
ER	0.003180	0.003226	0.985968	0.3421
ER(-1)	-0.004017	0.004170	-0.963321	0.3530
ER(-2)	0.001476	0.003895	0.379056	0.7108
ER(-3)	-0.005446	0.003066	-1.776342	0.0991
LMC	0.019930	0.080886	0.246400	0.8092
LMC(-1)	-0.255147	0.135703	-1.880189	0.0827
LMC(-2)	0.630961	0.162689	3.878334	0.0019
LMC(-3)	-0.342578	0.188146	-1.820815	0.0917
LMC(-4)	0.655850	0.132061	4.966282	0.0003
SI	0.002690	0.001830	1.470011	0.1653
SI(-1)	0.008861	0.001853	4.782205	0.0004
SI(-2)	0.003721	0.001724	2.158738	0.0501
SI(-3)	0.012031	0.001827	6.583999	0.0000
TR	-0.013141	0.009070	-1.448887	0.1711
TR(-1)	-0.030769	0.009304	-3.307264	0.0057
VT	0.014375	0.005519	2.604504	0.0218

VT(-1)	0.008517	0.005587	1.524514	0.1513
VT(-2)	0.010573	0.005169	2.045453	0.0616
VT(-3)	-0.007206	0.003643	-1.978226	0.0695
C	-12.09524	8.253175	-1.465526	0.1665
@TREND	-0.056742	0.023485	-2.416105	0.0311

R-squared	0.983599	Mean dependent var	22.97077
Adjusted R-squared	0.953321	S.D. dependent var	0.550208
S.E. of regression	0.118875	Akaike info criterion	-1.178341
Sum squared resid	0.183705	Schwarz criterion	-0.100982
Log likelihood	47.38848	Hannan-Quinn criter.	-0.795025
F-statistic	32.48509	Durbin-Watson stat	2.976745
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LGDP)
Selected Model: ARDL(4, 3, 4, 3, 1, 3)
Case 5: Unrestricted Constant and Unrestricted Trend
Date: 11/20/24 Time: 11:34
Sample: 1980 2021
Included observations: 38

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.09524	8.253175	-1.465526	0.1665
@TREND	-0.056742	0.023485	-2.416105	0.0311
LGDP(-1)*	-0.213749	0.182556	-1.170867	0.2627
ER(-1)	-0.004806	0.003545	-1.355668	0.1983
LMC(-1)	0.709016	0.201918	3.511415	0.0038
SI(-1)	0.027304	0.004594	5.943657	0.0000
TR(-1)	-0.043910	0.014535	-3.021054	0.0098
VT(-1)	0.026259	0.011040	2.378439	0.0334
D(LGDP(-1))	-0.621235	0.200160	-3.103693	0.0084
D(LGDP(-2))	-1.048375	0.211408	-4.959022	0.0003
D(LGDP(-3))	-0.769121	0.232486	-3.308253	0.0057
D(ER)	0.003180	0.003226	0.985968	0.3421
D(ER(-1))	0.003969	0.003401	1.166949	0.2642
D(ER(-2))	0.005446	0.003066	1.776342	0.0991
D(LMC)	0.019930	0.080886	0.246400	0.8092
D(LMC(-1))	-0.944233	0.200544	-4.708349	0.0004
D(LMC(-2))	-0.313272	0.167930	-1.865491	0.0848
D(LMC(-3))	-0.655850	0.132061	-4.966282	0.0003
D(SI)	0.002690	0.001830	1.470011	0.1653
D(SI(-1))	-0.015752	0.002667	-5.905556	0.0001
D(SI(-2))	-0.012031	0.001827	-6.583999	0.0000
D(TR)	-0.013141	0.009070	-1.448887	0.1711
D(VT)	0.014375	0.005519	2.604504	0.0218
D(VT(-1))	-0.003367	0.005585	-0.602882	0.5570

D(VT(-2))	0.007206	0.003643	1.978226	0.0695

* p-value incompatible with t-Bounds distribution.

Levels Equation
Case 5: Unrestricted Constant and Unrestricted Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ER	-0.022485	0.024435	-0.920162	0.3742
LMC	3.317057	3.504895	0.946407	0.3612
SI	0.127737	0.117784	1.084503	0.2978
TR	-0.205430	0.123867	-1.658476	0.1211
VT	0.122850	0.066374	1.850881	0.0870

EC = LGDP - (-0.0225*ER + 3.3171*LMC + 0.1277*SI -0.2054*TR + 0.1228 *VT)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	11.82216	10%	2.75	3.79
k	5	5%	3.12	4.25
		2.5%	3.49	4.67
		1%	3.93	5.23
			Finite Sample: n=40	
Actual Sample Size	38			
		10%	3.032	4.213
		5%	3.577	4.923
		1%	4.885	6.55
			Finite Sample: n=35	
		10%	3.087	4.277
		5%	3.673	5.002
		1%	5.095	6.77