The Non-Bank Financial Intermediaries and Economic Growth in Tanzania: An Empirical Analysis 1967–2011

Edna D. Chuku* & Michael O. A. Ndanshau**

Abstract

This study examines the impact of development of Non-Bank Financial Intermediaries (NBFIs) on economic growth in Tanzania using time series data for the period 1967–2011. It employs Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration and error correction method to investigate the existence of long-run and short-run dynamics in the relationship between NBFIs and economic growth in Tanzania. Stationarity property of the series was tested by using Phillips-Perron (PP) and Zivot-Andrews methods. Results from the study confirmed the existence of a stable long-run relationship between economic growth, the NBFIs and other determinants— investment, inflation, interest rate, and trade openness. Notable, however, the study found that the development of NBFIs, as measured by lending to the government, exerted a significant positive effect on economic growth in the short-run but not in the long-run. CUSUM and CUSUMQ test results revealed a lack of evidence of any significant structural instability among variables used in the study. The results suggest that it is important to have appropriate policies aimed at developing the non-banks financial sector to foster economic growth over the long-run period.

Key words: *non-banks, economic growth, cointegration, error correction model, ARDL method, Tanzania.*

JEL Classification: *E2, E4, E5.*

1. Introduction

Tanzania implemented financial sector reforms since early 1990s as part of broader market-oriented economic reforms programmes began in the mid-1980s. Among others, the government enacted a Banking and Financial Institutions Act (BFIA) in 1991 that lifted entry restrictions to private sector participation in the financial sector. Moreover, it enacted a Foreign Exchange Act in 1992 that allowed holding and/or trading foreign currency and deposits denominated in domestic currency in the country. Furthermore, over the period 1991–2012 the government also restructured and subsequently privatized state-owned commercial banks. In addition, it enhanced the legal framework for licensing, supervising and regulating financial institutions by the central bank, that is, the Bank of Tanzania (BoT). The change in legal and institutional framework targeted, among others, to provide for the existence of an environment supportive

* Department of Economics, University of Dar es Salaam Tanzania, Dar es Salaam, Tanzania: email@yahoo.com/ email@udsm.ac.tz

** Department of Economics, University of Dar es Salaam Tanzania, Dar es Salaam, Tanzania: email@gmail.com/ email@udsm.ac.tz

to development and growth of an efficient, sound, stable and deeper financial system able to effectively and efficiently mobilize and channel savings to high return investment that would spur economic growth and impact positively on poverty eradication initiatives in the country.

The change in the legal framework governing the financial system in Tanzania led to the licensing of the business of local and foreign banks and non-bank financial intermediaries (NBFIs).[1] Between 1991 and 2012 the number of licensed banks in operation had risen from 2 to 41, of which 19 were foreign-owned (Chuku, 2013; Bagachwa, 1996). A similar increase characterized the NBFIs whose number rose from 10 in 1991 to 28 in 2012 (Nyagetera, 1997; Kimei, 1987). Besides, following the liberalization of foreign exchange markets, 211 *bureau de changes* became licensed and operational during the 1992–2012 years. In accordance with the traditional theory that informed financial sector liberalization in Tanzania, a positive impact on economic growth would be a logical outcome from developments experienced in the financial sector in Tanzania; among others, increase in financial deepening from increase in the number of banks and NBFIs. In practice, however, the contribution of banks to economic growth would ensure increase in savings mobilization and short-term lending finance to private economic activities. Also, the contribution of the NBFIs to economic growth would also result from increase in savings mobilization and lending long-term to finance private and public economic activities (Ziorklui et al., 2001: 7).

The purpose of this paper is to investigate the contribution of the NBFIs (hereafter also referred to as either non-banks or non-banking sector) to economic growth in Tanzania during the period 1967–2011. The value addition of this paper is two-fold. First, it fills a gap that exists in the literature. There exists only one study that has focused on the economics of NBFIs whose focus was, nonetheless, on their impact on the effectiveness of monetary policy (Manzi, 1997). Second, the empirical results of the study could be used to inform policy design to effective and increased contribution of the non-banks sector to economic growth and development in Tanzania.

The rest of this paper is organized as follows. Apart from this Section, Section 2 briefly presents an overview on non-banks in the context of economic growth in Tanzania. Section 3 reviews relevant theoretical and empirical literature on the nexus between NBFIs and economic growth. Methodology of the study is presented in Section 4; and Section 5 presents and discusses empirical results. Section 6 concludes with a presentation of major empirical findings, their policy implications and areas for further research in Tanzania.

---

[1] Apart from banks that do not offer demand deposits (current account) service, the NBFIs also include leasing, investment companies, contractual savings institutions, institutional investors (pension funds, insurance companies, and mutual funds) and collective investment schemes. The NBFIs could be defined to include also quasi-formal and cum-informal financial intermediaries, for example, Savings and Credit Cooperative Societies (SACCOS).

2. The Non-Banks Financial Sector in Tanzania: An Overview

The financial system in Tanzania and most other developing countries constitutes of two major types of financial institutions: banks, and non-bank financial intermediaries (NBFIs). In Tanzania, as in other countries, a bank is defined as "… a financial institution authorized to receive money on current account subject to withdrawal by cheque" (URT, 1995: 6; 1991: 5). In contrast, a non-bank financial intermediary is defined as "… any person authorized by or under the Banking and Financial Institutions Act (BFIA) … to engage in banking business not involving the receipt of money on current account subject to withdrawal by cheque" (BoT, 1995: 7–8).

Since the 1960s the banking and non-banking sector in Tanzania was characterized by an increase of players and changes in structural composition, occasioned by shift in policy regime. Between the attainment of political independence in 1961 and the promulgation of the Arusha Declaration in 1967 there were only 7 NBFIs (BoT, 1997).[2] They included a Post Office Savings Bank (POSB), established by the British colonial government in 1925 to mobilise and promote saving habits in the economy; the Housing Finance Company, which mobilized savings and lent them to finance the housing sector that was established soon after independence in 1961; the National Insurance Corporation (NIC), which was established in 1963 and offered contractual savings schemes through insurance products; the National Provident Fund (NPF), established by Act No. 58 in 1964 to provide basic social security service to public sector employees; the Tanganyika Development Finance Limited (TDFL), which financed large-scale investment in manufacturing and agriculture; the wholly government-owned National Insurance Corporation (NIC) in 1963; the National Cooperative and Development Bank (NCDB), established in 1964 to finance agriculture; and the National Development Credit Agency (NDCA), which was also established in 1964 out of the former Agricultural Credit Agency (ACA), which was converted to the National Development and Cooperative Bank in 1964 (BoT, 2011; Ndanshau, 1996; Mabele & Msambichaka, 1979; URT, 1970). The others included the government-owned Peoples Bank of Zanzibar (PBZ), which operated in Zanzibar and had been established from the nationalization of the branches of Standard Bank and National Grindlays Bank in Zanzibar; and a privately-owned Diamond Jubilee Investment Trust (T) Limited (DJIT), established in 1945 to mainly serve the Ismailia Asian Community in the then Tanganyika.

The number of NBFIs and economic activities they financed experienced rapid increase after the promulgation of the Arusha Declaration in 1967 that led to the implementation of nationalisation and rural development policies constituted in the Second Five Year Development Plan (SFYP) that was implemented during the

---

[2]According to the Bank of Tanzania (2011), the "NBFIs which were present on the day of independence included the Post Office Savings Bank, Land Bank, Local Development Loan Fund, African Productivity Loan Fund and a few housing and loan associations catering mainly for Asians and white settlers" (p. 43).

period 1969/70–1973/74.[3] The nationalisation impacted on the non-banks sector in two ways. First, the government established the National Insurance Corporation (NIC) that took over the operations of the private insurance nationalised in 1967. Second, the government established development finance institutions (DFIs) to finance public enterprises (PEs) from the nationalised private firms in key sectors of the economy, among others, in agriculture, industry and the financial sectors (Mittelman, 1978). In this context, the government established the Tanzania Investment Bank (TIB) by Act No. 20 of 1970. In tandem was the government amendment of the Bank of Tanzania Act of 1965 in 1971 that led to the establishment of two DFIs in 1972: the Tanzania Rural Development Bank (TRDB) for the financing of agriculture, and the Tanzania Housing Bank (THB) for lending to the housing sector. Third, owing to the dramatic growth of employment in the public sector occasioned by the growth in the number of PEs, the government enacted Act No. 14 of 1978 that established the Parastatal Pension Fund (PPF) to serve as a specialized social security institution for employee in PEs (elsewhere referred to as parastatals).[4] Fourth, the government also made several amendments of the BoT Act of 1965 during 1970s to enhance the developmental role of NBFIs. In 1978 the BoT Act was amended, first, to provide for the establishment of credit guarantee facilities for lending by banks and NBFIs to agriculture and industry. Second, the amendment empowered the BoT to prepare Annual and Finance Credit Plan (AFCP) and Foreign Exchange Plans (FEP) that relates to the preferred sectors at concessional interest rates.

Over the period 1967–1991 DFIs solely lent to designated sectors, including smallholder agriculture, commercial large-scale agriculture, construction of buildings, and allied industries and services (Maganya, 2014: 11). On the other hand, the POSB, NIC and NPF lent to the government by purchasing short-term to long-term government securities. Notable, however, save for the POSB, the thrift of NBFIs scarcely mobilized private savings. Available anecdotal evidence shows that the NBFIs accounted for less than 10% of the total financial liabilities of the financial system in Tanzania during the period 1967–1991. As a result, DFIs and both deposit and non-deposit taking NBFIs operated like conveyor belts of donor funds and government fiscal agents for lending to agriculture and industry at subsidized rates, on directed planned volume of resources.

It is acknowledged that donor dependence syndrome and financial repression—occasioned by both government ownership and controls—undermined the performance and contribution of both banks and NBFIs to economic growth during the 1967–1991 period. Among others, the Presidential Commission of Enquiry into the Monetary and Banking System in Tanzania (elsewhere referred to as Nyirabu Commission), noted inefficiency and the existence of a large volume

---

[3]The early years of financial sector reforms were characterized by fall in the number of NBFIs due lo liquidation of THB in 1995 and conversion of the TRDB into a commercial bank in 1986, the Government enacted the Cooperatives and Rural Development Bank (CRDB) Act No. 12.

[4] According to Moshi (1994) the number of PES rose from 42 in 1967 to 425.

of non-performing assets in the financial sector caused by government-owned monopolistic financial intermediaries "… whose day-to-day operations were interfered by ruling party and government officials…" (BoT, 2007: v; URT, 1990).

The findings and recommendations of the Nyirabu Commission led to significant legal, structural and organizational reforms in the financial sector in Tanzania during the 1991–2012 period. In the legal front, the government enacted several legislations, including the Banking and Financial Institutions Act No. 12 of 1991 that lifted entry restrictions to local and foreign private sector participation in the financial sector in the country.[5] Moreover, a Foreign Exchange Act (FEA) was enacted in 1992 to liberalize the foreign exchange market. Among others, the FEA led to the establishment of a very a specialized type of NBFI, namely *bureau de change,* that trade foreign currency (BoT, 2007: 7). Furthermore, the government enacted the Capital Markets and Securities Act No. 5 in 1994 (amended by Act No. 4 of 1997) to "… facilitate introduction of a market for mobilizing and allocating savings for medium and long-term investments" (BoT, 2007: 5). The establishment of the CMSA led to the establishment of the Dar es Salaam Stock Exchange (DSE) in September 1996 that became operational in April 1998. Furthermore, the government enacted an Insurance Act No. 18 of 1996 that liberalized the insurance industry; and by Act No. 28 of 1997 the government reformed and transferred the NPF to a National Social Security Fund (NSSF).[6]

By 2012 the number of NBFI had risen to 29.[7] Also notable, 211 *bureaux de change* had become operational in July 2012. Also, the number of regional unit banks rose from 0 to 8, insurance companies rose from 2 to 24 in 2009; and insurance brokerage firm rose from 1 in 1996 to 47; and a stock market was operational. The establishment of a policy and legal framework for micro-finance operators saw the establishment of 40 MFIs and 1,500 SACCOS as of 2007 (BoT, 2007: 8). By 2009 there were 5,332 SACCOS with 820,670 members, and savings amounting to TZS133,146m (Swai, 2013: 49). There were 1,899 NGO MFIs by 2009; and 3 public sponsored deposits banks, namely TPB, Twiga BankCorp, and TIB.

The non-banks sector also became diversified as it became constituted of five layers of financial institutions, namely: insurance companies, development finance institutions (DFI), contractual savings institutions, hired purchase company, and deposit (thrift) taking institutions. The increase in the number of NBFIs occurred more in the insurance and pension sub-sector. By June 2010 the pension sub-sector had 7 pension funds covering formal sector employees, an

[5]Prior to 1991 the banks and NBFIs operated under individual charters.
[6]In tandem the government also repealed the BFIA of 1991 and the BoT Act of 1995 by both BFIA and BoT Act enacted in 2006 to enhance the supervisory role of the central bank of the banks and non-banks.
[7]The NBFI that became operational, by dates, are: Meridien BIAO (1993), Eurafrika Bank (T) Ltd. (1995), presently known as Africa (T) Ltd, Trust Bank (T) Ltd. (was closed in 2000 due to systemic failure from sister bank in Kenya), Greenland Bank (T) Ltd. (1995) (was closed in 1999), Habib Africa Bank (T) Ltd., Saving & Finance (T) Ltd., First Adili Bankcorp (transferred to Azania Bankorp in 2000 after been taken over by debtors and put under BoT management).

increase from only 2 in 1991.[8] The share of the NBFIs sector in total assets of the financial system in Tanzania also rose, but more so in insurance and pension sectors that accounted for 21% of the total assets of the financial system. Notable, the three largest pension funds held about 85% of the total assets of the non-banks sector (Chuku, 2013). The establishment of the DSE enhanced the mobilization of capital for long-term investment. By June 2011 there were 16 companies listed by DSE, including 2 local banks, and 1 foreign bank listed on cross-listing basis (Barclays and Standard Charter Bank).[9]

Albeit the significant institutional developments that took place since 1991, a joint IMF/World bank Financial Sector Assessment Programme (FSAP) report (2003: 1) observed that the financial system in Tanzania played "… a limited role in the economy, and its current depth and efficiency fall short of what is needed to support economic growth." Specifically, credit to private sector remained very small, and mostly short-term. Interest rates spreads were also high and banks accumulated extensive holdings of government paper and sizable offshore dollar placements (Mugizi, Ndanshau & Aikael, 2011; URT, 2007b: 1). It is also noted that the investment policy of the Insurance Act proved restrictive because since 1998 it required insurers to have 20% of admissible assets invested in government securities; 30% of admissible assets invested in bank deposits; and that deposits in one bank should not exceed 5% of admissible assets. In addition, since September 2004 insurance companies became obliged to maintain statutory deposits in the BoT equal to 50% of their prescribed minimum paid-up capital (URT, 2007b: 53). Notable, the high reserve requirement on the minimum share capital of insurance companies, which differs significant with that of Kenya (10%) and Zambia (10%), constrained them from investment in long-term projects that would spur economic growth.

Available evidence shows, however, that NBFIs, particularly pension firms, have been a significant source of liquidity to the banking system.[10] Chuku (2013) shows that by June, 2011, the volume of deposits of the pension sector in the top ten banks were 3.3% of the total private deposits in the banking system in Tanzania. Likewise, the total volume of the deposits of the insurance companies in the top ten banks as of 30th June, 2011, were about 1.2% of the total deposits of the banking system. Also notable, deposits of insurance companies in the banking system accounted for about 50% of insurance sector investment portfolio, followed by investment in real estate accounting for about 20%; while holdings of government securities account for about 10% (BoT, 2011).

---

[8]They included Public Services Pension Fund (PSPF), the Parastatal Pension Fund (PPF), the Government Employees' Provident Fund (GEPF), Zanzibar Social Security Fund (ZSSF), National Social Security Fund (NSSF), Local Authorities Provident Fund (LAPF), and the National Health Insurance Fund (NHIF).

[9]Mostly the major NBFIs are in the business of insurance and pensions sector where insurance companies do not involved in long-term lending while pension funds that are all owned by government engage in long term development financing (LTDF) but cautiously (Tanzania, 2007b: 84).

[10]Interaction between non-banks, particularly insurance and pension funds, and financial markets, banks and other financial intermediaries appear to be characterized by significant growth since the early 1990s. Over the period insurance companies and pension funds sub-sector appear to have become important determinants of the financial stability, depending on their size, their interconnectedness and importance of their economic functions.

According to Chuku (2013), the total volume of NBFIs' investment in government securities rose from TZS918.2bn in 2010 to TZS1292.3bn in 2011. At the end of December 2011, total Government outstanding Treasury bills were TZS1,250bn, whereby TZS453.3bn (that is about 20% of the total), were held by NBFIs. In aggregate, pension funds held 0.03% of the Treasury bills that amounted to TZS37bn; and insurance companies held TZS127bn, equivalent to about 10% of the total (Chuku, 2013). The remaining was held by other types of NBFIs. On the other hand, the total outstanding stocks and bonds were about TZS3,216bn, of which NBFIs held TZS839bn, equivalent to 26% of the total. Out of these, insurance companies held TZS133bn (0.04%), whereas TZS698bn was held by pension funds, which accounted for a significant 22% of the total. In the period 1992–2010 the share of the assets of the NBFIs in total assets of the NBFIs in total assets of the financial system was about 24%, and that of commercial banks was 76% (Chuku, 2013).
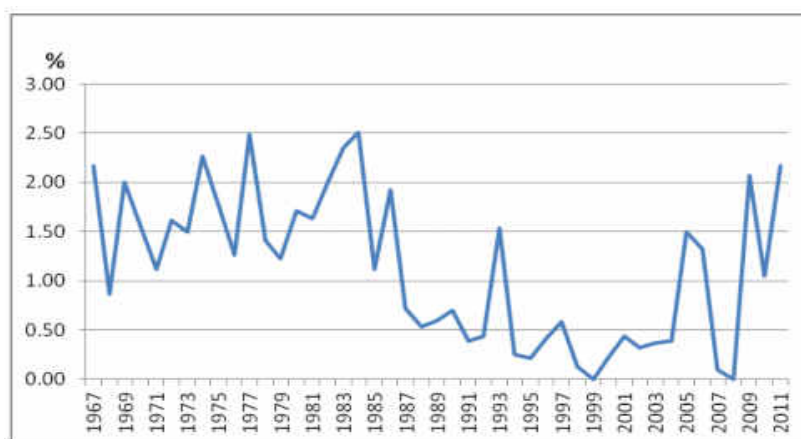

Figure 1: Ratio of Nominal NBFI Credit to the GDP, 1967–2011 (%)
  Source: BoT (2011)

Generally, Fig. 1 shows that the trend in NBFIs lending to the government as a ratio of nominal GDP. The importance of non-banks in lending to the government generally increased during the period 1967–1985, decreased during 1986–2005 period, and rose after 2006. The increase during the period 1967–1985 resulted more from the establishment of DFIs and pension funds that invested in government papers. The decreased in lending to the government during 1986–2005 resulted from the decrease in importance of DFIs soon after the launch of financial sector reforms. The increase in lending to the government by the NBFIs since 2006 resulted more from increase in the number of social security and pension funds during the period. It should be noted, however, that the "… social security funds have been often been directed to areas with limited potentials to stimulate economic growth… [probably because there have not been a] … clear guidelines for directing investment of social security funds at the national level" (URT, 2007b: 42). The FSAP observed that "… that investment policy for insurance companies is too restrictive and biased towards government securities and bank deposits" (URT, 2007b: 49).

In the overall, it suffices to note that the NBFIs sector in Tanzania experienced dramatic ups-and-downs during the sample period. How its transition from a small nascent sector impacted upon growth is not quite clear in the descriptive discussion. An econometric approach is nonetheless used to investigate on existence of a positive effect of NBFIs on economic growth in Tanzania during the sample period.

3. Literature Survey
3.1 Theoretical Literature
There exist in the literature several hypotheses on the link(s) between financial development and economic growth. One, and most common, is a hypothesis that financial development leads to economic growth and development. The other is a hypothesis that financial development follows economic growth. The early version of the 'finance leads growth' hypothesis is associated with Schumpeter (1911) who contended that well-functioning banks stimulate technological innovation by identifying and funding entrepreneurs with the best chances of successfully implementing innovative products and production processes.

The seemingly new version of the 'finance leads growth' hypothesis is associated with McKinnon (1973) and Shaw (1973), and suggests that deliberate creation of financial institutions as well as markets increase the supply of financial services, and thus leads to real economic growth. The hypothesis is that financial development is driven by economic growth, that is, it is growth-led as it depends upon the existence of demand for financial services. Specifically, Robinson (1952: 86) notes that "where enterprise leads, finance follows." It suggests, therefore, that rapid economic growth is a prerequisite for growth in demand for financial services, and vice versa. The possibility that there may exist in an economy either bi-directional influence from finance to growth and vice versa, or lack of the effect of finance on economic growth, constitutes two other hypotheses referred to in the literature as dual causality and casino hypotheses. For example, Lucas (1988) and Chandavarkar (1992) stand for the lack—and even the existence—of any link between finance on growth. In particular, Lucas (1988: 6) contended that "… the importance of financial factors is very badly over-stressed."

Notable, however, is that financial development is structural-distinct as it encapsulates two developments in two segments: the banking and the non-banks segments. While both segments may bear influence on economic growth, the non-banks segment is specially singled out as more important for promoting economic growth. The argument is that non-banks segments mainly promote growth by providing long-term financing to productive investment activities where financing activities of the conventional banking system are limited.

3.2 Empirical Literature
The empirical literature is replete with several studies on the relationships between financial development and economic growth.[11] Some key examples are studies by

---

[11]For studies on Middle Eastern countries, elsewhere referred to as MENA countries, see Ayadi, Arbak, Naceur and De Groen (2013).

Levine et al., (2000), Levine (1997), Neusser and Kugler (1998) and King and Levine (1993a, b) that wholesomely supports the finance lead hypothesis. However, first, the majority of the studies are finance-growth nexus in developed countries, mostly in Europe, Latin America and the Far East. Dominant in such studies is a focus on the nature of the link between capital markets and economic growth.[12] Implicitly, studies on Sub-Saharan African (SSA) and North African countries are very few. Second, most of the studies in and outside developing countries focus on the effect of the entire financial sector developments on economic growth. Granted, there are only few studies on the nature of the link between the non-banks sector segment and economic growth in developing countries.

In North Africa, a study by Vittas (1997) which covered Egypt and some Middle East and North Africa (MENA) countries, analysed the effect on economic growth of development of the major components of NBFIs, particularly pension funds and life insurance institutions that dominated the non-banks sector. Notable, the study on Egypt by Abu-Bader and Abu-Qarn (2008), which used tri-variate VAR model, found the existence of a two-way directional causality in Egypt during the period 1960 to 2001. The results, therefore, suggested that finance-led economic growth and economic growth induced financial development in Egypt during the sample period.

Murphy and Musalem (2004) conducted an empirical study on the effect of accumulation of pension funds financial assets on national savings on a panel of 43 countries, including several developed and developing countries over the period 1960 to 2002. By using Ordinary Least Squares (OLS) and two-stage least squares (2SLS) estimation methods, they found that accumulation of pension funds financial assets tend to increase national savings in cases where the funds were a result of a mandatory pension program. Conversely, pension funds' assets that were a result of a voluntary savings program lacked a significant effect on national savings. Consistently, Granville and Mallick (2004) also found positive and significant correlation between total national savings and pension savings in the case of the UK.

In Asia, a study by Islam and Osman (2012) employed ARDL bounds testing to cointegration to investigate whether a long-run and causal relationship between NBFIs and economic growth existed in Malaysia over the period 1974 to 2004. The Granger causality test in a multivariate vector error correction mechanism (VECM) framework was carried out to ascertain the direction of causality. Results of the study suggested that non-banks and economic growth were cointegrated, only that the latter was used as a dependent variable. Results also suggested the existence of a unique long-run causality that ran from non-banks to growth in per capita economic growth, but not vice versa. In a related study, which was based on an

---

[12]Some examples are studies on OECD by Impavido et al. (2003, 2000); Davis and Hu (2004) in a study of 38 countries that included 18 countries in the OECD and 20 in the so-called Emerging Market Economies (EMEs).

Autoregressive Distributed Lag (ARDL) testing approach to cointegration over the period 1974 to 2004, Islam and Osman (2011) found that development of the non-banks sector NBFIs—and also investment, trade openness and employment—had a long-run effect on the change in capita real GDP in Malaysia.

In SSA, a study by Odhiambo (2008) applied dynamic tri-variate Granger causality test and an error correction model (ECM) to data set for the period 1969-2005. The study established the existence of a one-way causality from economic growth to finance in Kenya. The finding suggested that the role of finance on economic growth in Kenya was negligible! Odhiambo (2011) carried out another study, which used data for the period 1960–2006, and involved the examination of the dynamic causal relationship between financial development, economic growth, and poverty reduction by using a tri-variate causality model and the ECM modelling. He found that economic growth Granger cause financial development in South Africa. Accordingly, Odhiambo (ibid.) maintained that the hypothesis of finance-led growth was irrelevant, or not applicable in South Africa.

Another study by Gries, Kraft and Meierrieks (2009) tested causality between financial deepening, trade openness and economic development by using annual time series data for 16 SSA countries. The study, which used Hsiao-Granger method, the Vector Auto-Regression (VAR), and the Vector Error Correction Model (VECM), established that there was sparse support for the hypothesis that finance lead economic growth. This suggests that the adoption of a more balanced policy approach may reduce financial system deficiencies among SSA countries.

Moreover, a study by Bangake and Eggoh (2011) used different Panel cointegration estimation approaches, (i.e., Dynamic OLS and panel VECM approaches) and covered 71 countries that included 18 developing countries for the period 1960–2004. The study established that both financial development and economic growth had an influence on one another. The study suggested that a long-run policy approach may prove beneficial among developing countries. An almost similar study by Hassan et al. (2011) covered 168 low- and middle-income countries during the period 1980–2007, and established the existence of a strong long-run linkage between financial development and economic growth. The study also found the existence of two-direction causality between financial development and economic growth in SSA, East Asian, and the Pacific countries. The study emphasized on the need to adopt long-run policy measures for financial development in developing countries.

In Tanzania, there are several studies on the link between finance and economic growth, mostly done after the liberalization of the financial sector in 1991.[13] A study by Nkoba (1997) analysed the link between financial sector performance in Tanzania and economic growth for the period from 1967–1994. However, in the study, Nkoba (ibid.) solely focused on the commercial banking sector, which

---

[13] For some studies prior to the liberalization of the financial sector, among others, see Wagao (1976), Maje (1981) and Ndanshau (1982).

dominated the financial sector in Tanzania. Nevertheless, the results suggested that the effect on growth of financial development, which was measured by six proxies—total commercial bank lending, commercial bank credit to the private sector, commercial bank credit to the public sector, commercial bank deposits, commercial bank deposit rates, and commercial bank lending rate—was positive and significant as expected. In another study on Tanzania, Mushi (1998) found that financial development was negatively and significantly related to economic growth. Nevertheless, the study found that financial sector development, measured by the share of private sector investment in total domestic credit, had a strong positive impact on economic growth; and that the main channel of transmission of financial development that affect economic growth was through efficiency of investment rather than the volume of total assets.

Notable, however, a study by Ruhara (2001) on Tanzania covering the period 1989–1996 established the existence of a positive statistically insignificant association between economic growth and three proxy measures of financial development, namely: credit to the private sector as a proportion of total domestic assets, ratio of extended broad money (M3) to GDP, and credit to private sector as a proportion of GDP. On this account, Ruhara (ibid.) concluded that there was no strong evidence that finance leads economic development as maintained and established by some of the previous studies in and outside Tanzania, for example by Nkoba (2008).

On the basis of the surveyed empirical studies there is no study that has been undertaken in Tanzania to analyse the effect of NBFIs in explaining economic growth. So far there is limited literature related to the NBFIs sector in Tanzanian economy. Only the study by Manzi (1997) focuses on the effects of NBFIs on money demand, while other studies focus on the effect of financial development on economic growth. Furthermore, the time spans covered by other studies were too short to get meaningful results. Also, most of the other used VAR, GMM and OLS as estimation techniques models, which is different from that of the current study. This study aims to expand the knowledge on NBFIs especially by considering their effect on economic growth, as well as by paying special attention to the rapid growth of NBFI liabilities. Unlike other studies, this study employed time series data that range from 1967–2011 and used ARDL bounds testing approach to cointegration to investigate long-run equilibrium relationship among variables.

4. Methodology of the Study
4.1 The Estimation Model
The estimation model put to use builds on a Neo-Classical type growth model used by King and Levine (1993a), which is about similar that used in the so-called growth regression studies by, among others, Barro (1991). The model reads as,

$$g_t = \propto + \beta F_t + \gamma X_t + \varepsilon_t \qquad (1)$$

where g measure economic growth, F is a measure of financial development, X is a vector of control (growth conditioning) variables, α, β, γ are parameters, and ε is a stochastic error term.

The *X* include inflation (π), investment (*inv*), trade openness (*op*), and real interest rate (*r*). Specifically, therefore, equation (2) is re-stated as a semi-log function that reads as:

$$g_t = \propto_0 + \propto_1 inv_t + \propto_2 F_t + \propto_3 \pi_t + \propto_4 r_t + \propto_5 op_t + \varepsilon_t \qquad (2)$$

where *t* is time signature and other variables are as already defined.

For the purpose of this study, economic growth (g_t) is measured as the first difference of the log of real GDP, which is nominal GDP deflated by consumer price index (CPI). The first difference of the log of CPI is used as a measure of inflation (π). Real interest rate (r) is measured as nominal short-term lending interest rate adjusted for current inflation rate.[14] Moreover, the ratio of nominal Gross Capital Formation (GCF) to nominal GDP is used as a proxy for investment level (*inv*); and the measure of non-banks (*F*) is the share of NBFIs' lending to the government. Trade openness (*op*) is measured as a ratio of sum of imports and exports to GDP.

4.2 Data Type and Estimation Methods
The analysis is based on time series data for the period 1967–2011. Data for real GDP, lending rates and lending of NBFIs to the government were obtained from economic and operation reports (various) and quarterly reports of the BoT. Moreover, data for GCF) were from the International Financial Statistics (IFS) of the IMF. Data for imports and exports that were used to generate the measure of on trade openness, inflation, and CPI were from World Development Indicators published by the World Bank.

The Autoregressive Distributed Lag model (ARDL) approach—introduced by Pesaran and Shin (1999) and further extended by Pesaran et al. (2001)—was used to estimate the long-run equilibrium relationship (cointegration) between NBFIs and economic growth in Tanzania. The ARDL was preferred because of the weaknesses known to characterize the other approaches to test for cointegration, for example, the Engle-Granger (1987), Johansen maximum likelihood approach (1988, 1991) and Jahansen and Juselius (1990) tests.[15] Among others, empirical evidence by Kremers et al. (1992) suggests that in small samples no cointegration can be established among variables if they are integrated of order I(1).[16]

---

[14]Real interest rate is obtained by taking lending rate offered by Commercial Banks minus the current level of inflation.

[15]The ARDL is considered to have several benefits over the other methods. One, the ARDL can be applied irrespective of whether underlying regressors are entirely I(0), entirely I(1) or mutually co-integrated (Pesaran & Shin, 1999). Second, the method performs better than other cointegration tests on small samples. Third, the ARDL removes problems associated with omitted variables and autocorrelations; and provides unbiased as well as efficient estimates. Besides, the ARDL method provide for an estimation of the long-run and the short-run components of the model simultaneously without losing important required information (Narayan, 2004).

[16]For example, Engle-Granger technique requires two variables to be integrated in the same order (Enders, 2004). A study by Mah (2000) argue that cointegration approach of Engle and Granger (1987), Johansen (1988), and Johansen and Juselius (1990) are unreliable for studies that have a small sample size.

Following Pesaran and Shin (1999) and equation (2), the ARDL model for estimation reads as:

$$\Delta g_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta g_{t-1} + \sum_{i=0}^{l} \beta_2 \Delta inv_{t-i} + \sum_{i=0}^{m} \beta_3 \Delta F_{t-i} + \sum_{i=0}^{n} \beta_4 \Delta \pi_{t-i} + \sum_{i=0}^{o} \beta_5 \Delta r_{t-i}$$
$$+ \sum_{i=0}^{p} \beta_6 \Delta op_{t-i} + \propto_1 g_{t-1} + \propto_2 inv_{t-1} + \propto_3 F_{t-1} + \propto_4 \pi_{t-1}$$
$$+ \propto_5 r_{t-1} + \propto_6 op_{t-1} + \varepsilon_t \qquad (3)$$

where all the variables are as already defined, Δ is a first difference operator, β_0 is a drift component, and (*k, l, m, n, o, p*) are the maximum lag length selected for each variable. Notable, the $\beta_1, \ldots., \beta_6$ represents the short-run dynamics of the model; and the $\propto_1 \ldots \propto_6$ represents the long-run relationship.

Although bounds test for cointegration do not require pre-testing of variables for unit root, it is necessary that such a test is conducted to ensure that the series are not integrated of an order higher than 1, and also to avoid the problem of spurious regression. So, the Phillips-Perron (PP) test was employed since it takes into account serial correlation in residuals and time-dependent heteroscedasticity. Since the study covered the period 1967–2011, in which there were policy changes, the Zivot-Andrews unit root test that takes into account structural breaks was also used.

Once the order of integration was defined, a test for cointegration among the variables was made whereby the null hypothesis of no cointegration relationship–i.e., no cointegration relationship $\propto_1 = \propto_2 = \propto_3 = \cdots = \propto_6 = 0$—was tested against the alternative hypothesis of the existence of cointegrating relationship such that $\propto_1 \neq \propto_2 \neq \propto_3 \neq \cdots \neq \propto_6 \neq 0$. The cointegration test was based on the F-statistics or Wald statistics of equation (3). The critical values for cointegration provided by Pesaran and Pesaran (1997) and Pesaran et al. (2001) were put to use, whereby the lower critical bound assumes that all variables are I(0), meaning that there is no cointegration among the variables, while the upper bound assumes that all the variables are I(1).[17] If the computed F-statistic is greater than the upper critical bound, then the null hypothesis will be rejected, suggesting that there exists a cointegrating relationship among the variables. If the F-statistic falls below the lower critical bounds value, it implies that there is no cointegration relationship. However, when the F-statistic lies within the lower and upper bounds, then the test is inconclusive.

---

[17]Critical values were based on the sample size. Pesaran and Pesaran (1997) and Pesaran et al. (2001) generated critical values based on sample size of 500 and 1000 observations, respectively. Since our sample size is smaller (only 45 annual observations), we employed critical values given by Narayan (2004).

Given the cointegration of the variables the long-run and error correction model was estimated by using an ARDL (*k, l, m, n, o, p*) model that reads as:

$$g_t = \propto_0 + \sum_{i=1}^{k} \propto_1 g_{t-i} + \sum_{i=0}^{l} \propto_2 inv_{t-i} + \sum_{i=0}^{m} \propto_3 F_{t-i} + \sum_{i=0}^{n} \propto_4 \pi_{t-i}$$
$$+ \sum_{i=0}^{o} \propto_5 r_{t-i} + \sum_{i=0}^{p} \propto_6 op_{t-i} + \varepsilon_t \qquad (4)$$

The order of lag structure of the ARDL model was selected by using Schwarz Bayesian Criterion (SBC). Notable, however, recommendation by Pesaran and Shin (1999) that two lags are appropriate for annual data was adopted.

Given the presence of cointegration, short-run elasticities were derived by constructing an error correction model (ECM) that reads as:

$$\Delta g_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta g_{t-i} + \sum_{i=0}^{l} \beta_2 \Delta inv_{t-i} + \sum_{i=0}^{m} \beta_3 \Delta F_{t-i} + \sum_{i=0}^{n} \beta_4 \Delta \pi_{t-i} + \sum_{i=0}^{o} \beta_5 \Delta r_{t-i}$$
$$+ \sum_{i=0}^{p} \beta_6 \Delta op_{t-i} + \varphi ECM_{t-1} + \varepsilon_t \qquad (5)$$

where φ measures the speed of adjustment to equilibrium, $\beta's$ are coefficients relating to the short-run dynamics of the model's convergence to equilibrium, ECM_{t-1} is the error correction term, and φ is its coefficient whose value should lie between -1 and 0, and is statistically significant and captures proportion disequilibrium in GDP growth in one period that is corrected in the next period (Bannerjee et al., 1998). The larger it is, the faster the economy's return to the equilibrium rate of growth following a shock.

The soundness of the ARDL bounds testing was subjected to diagnostic and stability tests. The sensitivity analysis was characterized by serial correlation, ARCH test, functional form of model, normality of residual term and white heteroscedasticity linked with empirical equation. The stability test of the long- and short-run estimates was tested by using the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares (CUSUMQ) of the recursive residuals. The method was required to establish the consistency of the ARDL bounds testing approach.

5. Econometric Results and Discussion

5.1 Summary Statistics
Table 1 presents key descriptive statistics pertaining to variables of the estimation model.

Table 1: Summary Statistics of the Data

	g	*F*	*inv*	*π*	*op*	*r*
Mean	29.496	13.175	28.205	17.196	3.812	-1.097
Median	29.413	12.787	28.090	12.950	3.822	0.920
Maximum	30.517	16.577	29.524	36.150	4.398	17.180
Minimum	28.739	8.313	26.786	3.490	3.098	-26.140
Std. Dev.	0.479	2.230	0.549	10.609	0.289	11.202
Skewness	0.506	-0.063	0.040	0.337	-0.520	-0.494
Kurtosis	2.358	1.925	3.769	1.623	3.023	2.225
Jarque-Bera	2.694	2.196	1.120	4.408	2.033	2.955
Probability	0.260	0.333	0.571	0.110	0.362	0.228
Sum	1327.256	592.854	1269.237	773.830	171.552	-49.360
Sum Sq. Dev.	10.104	218.798	13.283	4951.833	3.679	5521.580
Observations	45	45	45	45	45	45

Source: Own calculations.

The summary statistics suggests that all variables exhibit normality at 1% level of significance since the Jarque-Bera (JB) probability is not statistically significant at that level. This finding could be attributed to a priori use of the natural logarithm operator to transform the data of all variables, except the real interest rate.

5.2 Unit Root Test Results

By including both stochastic and deterministic trend in the stationarity test, the Phillips-Perron **(**PP) unit root test results in Table 2 indicates that all variables of the estimation model were integrated of order one I(1), implying that they are stationary at first difference.

Table 2: Phillips-Perron (PP) Unit Root Test

Variable	At level			At first Difference		
	Adj. t-statistic	p-value	Lag	Adj. t-statistic	p-value	Lag
g	-2.499	0.327	1.000	-6.603***	0.000	6
F	-3.006	0.142	0.000	-12.048***	0.000	20
inv	-2.106	0.528	1.000	-6.147***	0.000	0
op	-1.605	0.775	3.000	-5.102***	0.001	2
π	-2.080	0.542	1.000	-7.720***	0.000	6
r	-2.561	0.299	0.000	-8.334***	0.000	7

Note: *** is 1% level of significance.

Since the sample period (1967–2011) was characterized by several shifts in policy regime and institutional changes, the Zivot-Andrews unit root test, which takes into account structural breaks, was also used. The results in Table 3 suggest the absence of unit root. The F was integrated of order zero I(0) at level; and the rest of the level variables were stationary at order one I(1).[18]

---

[18]The break date for each time series reported in Table 3 has significant implications as understanding of break point is central for accurate evaluation of any program intended to bring about structural changes such as economic reforms, financial reforms and different regime shifts.

Table 3: Zivot-Andrew Unit Root Test Results

Variable	At level			At first Difference		
	Adj. t-statistic	Lag	Break Year	Adj. t-statistic	Lag	Break Year
g	-3.783	0.000	1998	-7.804***	0.000	1998
F	-5.977***	0.000	2004	-		
inv	-4.922	0.000	1999	-6.800***	0.000	1984
op	-2.522	0.000	1986	-5.895***	0.000	1996
π	-4.335	0.000	1980	-7.951***	0.000	1976
r	-3.937	0.000	1987	-8.704***	0.000	1985

Note: *** is 1% level of significance. The critical values for Zivot-Andrews test are -5.57 and -5.08 at 1% and 5%, respectively.

This finding slightly differs with the PP unit root test results, which reveals that all variables were integrated of order I(1) and first difference stationary. Generally, therefore, the unit root test results suggest that all variables are integrated of an order not more than 1 and thus, support the use of ARDL bounds approach to determine the long-run relationships among the variables.

5.3 ARDL Bounds Cointegration Test Results
Cointegration test results suggested the existence of a long-run relationship in variables of the estimation model. At a maximum lag of 2, the calculated F-statistic, F(g/inv, F, π, r, , op) was 9.279 for ARDL (1, 0, 0, 0, 1, 2), which was greater than that of upper critical value of 5.598 at 1% significance test level (Table 4).

Table 4: Bound Test Results for Cointegration

Critical Value	Lower Bound I(0)	Upper Bound I(1)	F-statistics (calculated)
1%	4.030	5.598	
5%	2.922	4.268	9.279
10%	2.458	3.647	

Note: Critical values for the bounds test: Case III restricted intercept and trend, with the number of regressors = 5 and 45 observations in Narayan (2004).

5.4 Long-run Estimation Results
The estimated long-run coefficients of the selected ARDL model with lag structure (1,0,0,0,1,2) and real GDP (g), used as a dependent variable, indicate that the NBFIs lending to the government have positive effect on economic growth as expected, though it is not significant over the long-run period. The results in Table 5 suggest that finance of government by the NBFIs is not utterly an important determinant of economic growth. The poor results could be attributed to the small size of the non-bank segment in the financial system in Tanzania, explained by its nascence. This argument is indirectly supported by theory consistent and significance of most growth conditioning (control) factors included in the estimated ARDL.

Table 5: Long-run Estimates Based on SBC-ARDL (1, 0, 0, 0, 1, 2)

Panel A: Long-run Estimates			
Regressor	Coefficient	Standard Error	T-Ratio[Probability]
inv	0.065**	0.029	2.278 [0.030]
F	0.002	0.010	0.205[0.839]
π	-0.013***	0.002	-7.797 [0.000]
r	-0.013***	0.002	-7.229 [0.000]
op	0.211***	0.041	5.112 [0.000]
Constant	26.205***	0.676	38.754[0.000]
Trend	0.039***	0.002	22.759[0.000]

Panel B: Diagnostic Tests		
Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)=0 .003[0.960]	F(1, 31)= 0 .002[0.967]
B:Functional Form	CHSQ(1)= 3.654 [0.056]	F(1,31)= 2.8797[0.100]
C:Normality	CHSQ(2)= 0.815[0.665]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 2.035 [0.154]	F(1, 41)= 2.037[0.161]

Key: A: Lagrange multiplier test of residual serial correlation
      B: Ramsey's RESET test using the square of the fitted values
      C: Based on a test of skewness and kurtosis of residuals
      D: Based on the regression of squared residuals on squared fitted values
Note: *, ** and *** denote significance level at 10%, 5% and 1% levels, respectively.

As in Keynesian macroeconomic theory, the coefficient on investment is positive signed and statistically significant at 5% test level; the coefficient on investment is about 0.065, suggesting that over the long-run a unity increase in investment would increase the real GDP by 0.065 units. Besides, the coefficient on inflation rate is negative signed and statistically significant at 1% test level. The negative but marginal (0.013) effect of inflation on economic growth is consistent with theory and the modest inflation experienced in Tanzania during the sample period. The coefficient on real interest rate also has the expected negative sign and is statistically significant at 1% level. The estimated semi-elasticity interest rate coefficient of real interest rate suggests that a unit rise in the level of the interest rate would reduce growth in real GDP by about 0.013 units. Like the other control variables, trade openness bears the expected positive sign and is statistically significant at the 1% test level. Notable, however, the elasticity of openness with respect to GDP growth is very small (0.211), suggesting that free trade would lead to only 0.21% rise in real GDP over the long-run period.[19]

5.5 Short-run Dynamics
The results of short-run dynamics associated with ARDL (1,0,0,0,1,2) suggest that changes in NBFIs lending to the government have a positive significant

---

[19]The deterministic trend and constant variables both exert positive and significant effect on explaining the long-run relationship among real GDP and its explanatory variables. This means that the constant term is important in explaining functional form of the model and that means when factors affecting economic growth used in this study are kept constant, economic growth will change by 26.2 amounts in the long-run, while the trend variable is important in explaining the behavior of the dependent variable in the model over time. Their presence indicates that the model is well specified as was proved in diagnostic tests in Table 6.

effect on economic growth. The estimated coefficient suggests that the effect of NBFI on growth is very small, about 0.001 at 10% significance level. This finding suggests that short-run lending to the government by NBFIs has an important effect on economic growth.

Table 6: Short-run Dynamic Results, SBC-ARDL (1, 0, 0, 0, 1, 2)

Regressor	Coefficient	Standard Error	T-Ratio[Probability]
Δinv	0.025*	0.012	1.987 [0.055]
ΔF	0.001*	0.416E-3	1.801 [0.084]
$\Delta \pi$	-0.005***	0.962E-3	-5.155[0.000]
Δr	-0.004***	0.001	-3.996[0.000]
Δop	0.036	0.023	1.577 [0.124]
$\Delta op1$	0.038*	0.021	1.804 [0.085]
Constant	9.927***	2.631	3.774 [0.001]
Trend	0.015***	0.004	3.813 [0.001]
ecm (-1)	-0.379***	0.100	-3.782[0.001]

ecm = g -0.065* inv − 0.002* F + 0.013* π + 0.013* R -0.21056* op -26.205*CONS - 0.039070*T

R-Squared 0.699	R-Bar-Squared 0.605
S.E. of Regression 0.015	F-stat. F(8, 34) 9.279[0.000]
Mean of Dependent Variable 0.040	S.D. of Dependent Variable 0.024
Residual Sum of Squares 0.007	Equation Log-likelihood 125.779
Akaike Info. Criterion 114.779	Schwarz Bayesian Criterion 105.092
DW-statistic 1.974	

Note 1: *, ** and *** denote significance level at 10%, 5% and 1% levels, respectively and 'Δ' denotes the first difference of the variable.

In particular, a 1% increase in NBFIs lending to the government would raise real GDP by about 0.001%. In policy, the results suggest that the development and growth of NBFIs are important determinants of economic growth over the short-run period in Tanzania. This could be a result of government use of funds from NBFIs to finance productive (direct or indirect) public sector investments.

It is notable, however, that the effect of such public investment on economic growth is very small (about 0.001%), mainly because of the small size of non-banks segments in Tanzania's financial sector.

The coefficient of short-run changes in the level of investment was also positive and statistically significant at 10% level. The positive and significant effect of investment on economic growth is consistent with results by Khan et al. (2005) in Pakistan. The results further suggest that real interest rate and inflation rate exert statistically significant negative effects on economic growth over a short-run period. The results also suggest that the contemporaneous effect on trade openness on economic growth is positive, but statistically insignificant at the conventional test levels. Notable, however, over a lag period of two years the effect of trade openness on economic growth is positively and significant at 10% level. This suggests that further trade openness is needed to facilitate economic growth.

The results reported in Table 6 also show that the error-correction term has a correct negative sign and is statistically significant at 1%. This confirms the existence of a long-run relationship among the variables. Besides, it represents the speed of adjustment to restore equilibrium in the dynamic model following disturbance. The coefficient of the ECM was about -0.379, suggesting that a deviation from the long-run equilibrium following a short-run shock was corrected by about 38% in less than a year. This also indicates that following a shock, there is a slow return to the equilibrium growth rate of GDP in the following year.

5.6 Diagnostic and Stability Tests

The diagnostic tests of the estimated ARDL (1, 0, 0, 0, 1, 2) model indicate the absence of serial correlation in the error terms of the ARDL estimators. The function form test showed the model was properly specified. Likewise, the normality test revealed that variables were normally distributed, and heteroscedasticity tests demonstrated the independence of the error terms from regressors (homoscedasticity) as indicated in Panel B of Table 6. On the other hand, a stability test of the long-run parameter coefficients of the estimated ARDL model by the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) stability tests, as proposed by Pesaran and Pesaran (1997), failed to reject the null hypothesis that all coefficients in the selected error correction representation of the ARDL model were stable over time at the conventional test level. In general, the results suggested the lack of a significant structural instability, and thus the ARDL model estimated did not suffer from a misspecification problem (Figs. 2 and 3).
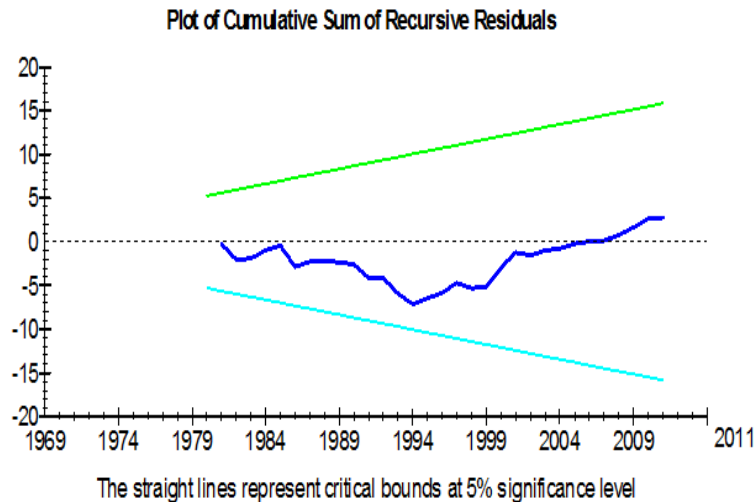
Plot of Cumulative Sum of Recursive Residuals

The straight lines represent critical bounds at 5% significance level

Figure 2: Cumulative Sum (CUSUM) of Recursive Residuals

Plot of Cumulative Sum of Squares of Recursive Residuals

The straight lines represent critical bounds at 5% significance level
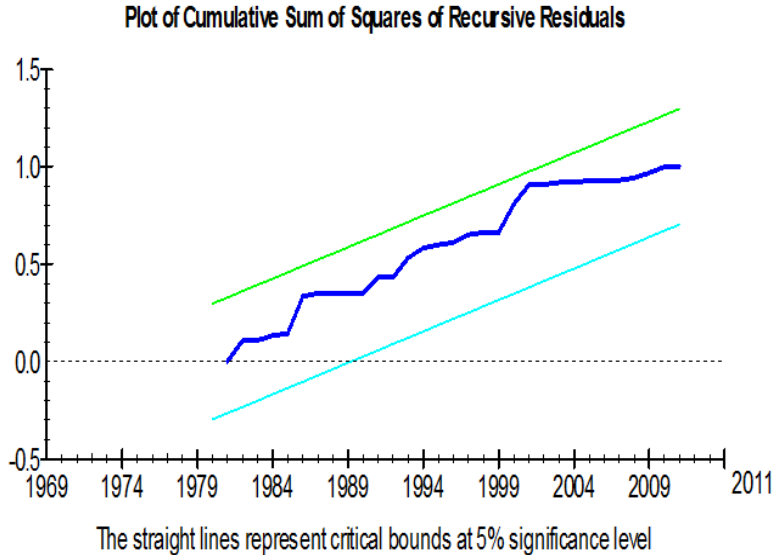
Figure 3: Cumulative Sum of Squares (CUSUMQ) of Recursive Residuals

The stability of the ARDL model established by this study compares favourably with that obtained by, among others, Davis and Hu (2004), Harichandra and Thangavelu (2004), Murphy and Musalem (2004), Cheng and Degryse (2010), Mojekwu et al. (2011) and Islam and Othman (2012).

6. Conclusion

The main objective of this paper was to examine the effect of NBFIs on economic growth in Tanzania. The paper made use of ARDL bounds testing approach to cointegration and data for the period 1967–2011. The models estimated were also subjected to stability test by using the CUSUM and CUSUMQ methods.

The study established that the development of NBFIs, measured by their lending to the government, had a significant but small positive effect on economic growth in the short-term but not in the long-run period. The analysis found that all other conditioning (determinants of) economic growth had the expected negative signs and significant effect on economic growth over both short- and long-run periods. The results from the cointegration estimation suggested the existence of a stable long-run relationship between real economic growth and the development of the non-bank sector, investment, trade openness, inflation and real interest rate. The existence of a stable long-run relationship was further confirmed in the error correction model (ECM) estimated.

For the purpose of policy, the findings of this study underscore the importance of enhancing growth of the small segment of the non-bank sector to enhance the process of economic growth in Tanzania. The results also suggests that the effect

of financial non-bank sector development on economic growth would be aided by policies that target to reduce interest rates, fight inflation, increase investment and increase trade openness in Tanzania. Such polices could also be complemented by the creation and guaranteed existence of legal and regulatory frameworks that would enhance long-term lending by non-banks to productive economic activities instead of lending to the banking sector or holding reserve with the central bank. It should be noted that the policy implication arising from the findings of the study are only suggestive than definitive due to some inadequacies in the data used, and methodological issues not uncommon in this and other similar studies. Morel studies are called for to increase the knowledge on the role of non-banks in economic development in and outside Tanzania.

References

Abu-Bader, S. & A. Abu-Qarn. 2008. Financial Development and Economic Growth: The Egyptian Experience. *Journal of Policy Modelling*, 30: 887–898.

Ayadi, R., E. Arbak, S.B. Naceur & W.P. De Groen. 2013. Determinants of Financial Development Across the Mediterranean. MEDPRO Technical Report No. 29, February.

Bagachwa, M.S.D. 1996. Financial Linkage and Development in Sub-Saharan Africa: The Role of Formal Financial Institutions in Tanzania. Overseas Development Institute, Regent's College*, Working Paper* No.87, London, February.

Bangake, C. and C.J. Eggoh,. 2011. Further Evidence on Finance-Growth Causality: A Panel Data Analysis. *Economic Systems, Elsevier*, 35(2): 176–188.

Bank of Tanzania (BoT). 2011. *Tanzania Mainland's 50 Years Of Independence: A Review of the Role and Functions of the Bank of Tanzania. 1961—2011.* mimeo, June.

—. 2007. *The Second Generation Financial Sector Reforms, Volume I: Main Report.* Mimeo, June.

—. (various). *Economic and Operations Annual Report*. Mimeo.

—. (various). *Monetary Policy Statement*. Mimeo.

—. (various). *Quarterly Economic Bulletin*. Mimeo.

—. 2011. *Financial Stability Report*, September.

Bannerjee, A.V., J. Dolado and R. Mestre, 1988. Error-Correction Mechanism Tests for Cointegration in Single Equation Framework. *Journal of Time Series Analysis,* 19: 267–283.

Barro, R.J. 1991. Economic Growth in a Cross Section of Countries. *Quarterly Journal of Economics*, 106: 407–43.

Beck, T., R. Levine and N. Loayza. 2000. Finance and the sources of growth. *Journal of Financial Economics,* 58(1–2): 261–300.

Chandavarkar, A. 1992. Of Finance and Development: Neglected and Unsettled Questions. *World Development*, 20(1): 133–142.

Cheng, A. & H. Degryse. 2010. The Impact of Bank and Non-Bank Financial Institutions on Local Economic Growth in China. *Journal of Financial Services Research,* 37: 179–199.

Chuku, E.D. 2013. The Non-Bank Financial Intermediaries in Tanzania: Evolution and Impact on Economic Growth 1967–2011. MA Dissertation, University of Dar es Salaam, September.

Enders, W. 2004. *Applied Econometric Time Series.* 2nd Edition. John Wiley and Sons Inc.

Engle, R.F. & C.W. Granger. 1987. Cointegration and Error Correction Representation: Estimation and Testing. *Econometrica*, 55: 251–276.

Granville B. & S. Mallick. 2004. Pension Reforms and Savings Gains in the UK. *Journal of Policy Reform*, 7(2): 123–136.

Gries, T.K. & M.D. Meierrieks. 2009. Linkages between Financial Deepening, Trade Openness and Economic Development: Causality Evidence from Sub Saharan Africa, *"World Development Paper*, 37: 1849–1860.

Harichandra, K. & S.M. Thangavelu. 2004. Institutional Investors, Financial Sector Development and Economic Growth in OECD Countries. Working Paper no.0405, Department of Economics, National University of Singapore.

Hassan, K., B. Sanchez & J. Yu. 2011. Financial Development and Economic Growth: New Evidence from Panel Data. T*he Quarterly Review of Economics and Finance*, 51: 88–104.

Impavido, G. & A.R Musalem. 2000. Contractual Savings, Stock and Asset Markets. World Bank, WPS 2490.

Impavido, G., A. R Musalem & T. Thierry. 2003. The Impact of Contractual Saving Institutions on Securities Market. World Bank, WPS 2948.

International Labor Office. 2008. Tanzania Mainland: Social Protection Expenditure and Performance Review and Social Budget. *Executive Summary,* Social Security Department-Geneva, ILO.

International Monetary Fund (IMF). 2011. *International Financial Statistics.* Washington DC.

Islam, M. 2012. An Empirical Analysis of Causality Between Development of Non-Bank Financial Intermediaries and the Economic Growth in Malaysia. *European Journal of Social Sciences,* 30(4): 654–664.

Islam, M. & J. Osman. 2011. Development Impact of Non-Bank Financial Intermediaries on economic growth in Malaysia: an empirical investigation. *International Journal of Business and Social Science,* 2(14): 187–198.

Johansen, S. 1988. Statistical Analysis of Cointegrating Vectors. *Journal of Economic Dynamics and Control*, 12: 231–254.

—. 1991. Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models. *Econometrica*, 59: 1551–1580.

Johansen, S. & K. Juselius. 1990. Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for Money. *Oxford Bulletin of Economics and Statistics,* 52: 169–210.

Kar, M., S. Nazlioglu & H. Agir. 2011. Financial Development and Economic Growth Nexus in the MENA Countries: Bootstrap Panel Granger Causality Analysis. *Econometric Modelling,* 28(1–2): 685–693.

Khan, M.A., A. Qayyum & S.A. Skiekh. 2005. Financial Development and Economic Growth: The Case of Pakistan. *Paper Presented at 21st Annual Meeting and Conference,* PIDE, Quid-I-Azam, University Campus, Islam Abad.

Khan, S.M. & A.S. Senhadji. 2000. Financial Development and Economic Growth: An Overview. *IMF Working Paper*, WP/00/209.

Kimei, C.S. 1987. *Tanzania's Financial Experience in the Post War Period*. Uppsalla, ACTA Universitat Upsaliasis.

King, R.G. & R. Levine. 1993b. Finance, Entrepreneurship and Growth. *Journal of Monetary Economics,* 32: 30–71.

—. 1993a. Finance and Growth: Schumpeter Might be Right. *The Quarterly Journal of Economics*, 108: 681–737.

Kremers, J.J.M., N.L. Ericsson & J. Dolado. 1992. The Power of Cointegration Tests. *The Journal of Econometrics,* 52: 389–402.

Levine, R. 1997. Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, 35: 688–726.

—. 2003. More on Finance and Growth: More Finance, More Growth? *Review of Federal Reserve Bank of St. Louis,* 85, No.4: 31–46.

Levine, R., N. Loayza & T. Beck. 2000. Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics*, 46(1): 31–77.

Lucas, R. E. 1988. On the Mechanics of Economic Development. *Journal of Monetary Economics*, 22: 3–42.

Maganya, M.H. 2014. Determinants of Capital Structure of the Firms in Tanzania: A Panel Data Analysis. PhD. dissertation, University of Dar es Salaam.

Mah, J.J. 2000. An Empirical Examination of the Disaggregated Import Demand of Korea-the Case of Information Technology Products. *Journal of Asian Studies*, 11: 233–244.

Maje, E.H. 1981. Financial Intermediation and Savings in Tanzania. MA thesis, Department of Economics, University of Dar es Salaam.

Manzi, F. 1997. Non-Bank Financial Intermediaries and the Demand for Money in Tanzania. 1967–1996). MA dissertation, University of Dar es Salaam.

McKinnon, R. 1973. *Money and Capital in Economic Development*. Washington DC: Brookings Institution.

Mittelman, J.H. 1978. Underdevelopment and Nationalisation: Banking in Tanzania. *The Journal of Modern African Studies*, 6(4): 597–617.

Mojekwu, J. N., S. O. Agwuegbo & F.F. Olowokudejo. 2011. The Impact of Insurance Contributions on Economic Growth in Nigeria. *Journal of Economics and International Finance,* 3(7): 444–451.

Moshi, H.P.B. 1994. The limits of Privatization in Africa: Some Preliminary Observations. Economic Research Bureau, University of Dar es Salaam, mimeo.

Msambichaka, L.A. & R.B. Mabele. 1979. Agricultural Credit and Development of Ujamaa Villages in Tanzania. K. Kim, R.B. Mabele, and M. Shultheis, Eds., *Political Economy of Tanzania*. Nairobi: Heinemann: 207–15.

Mugizi, F.M. P., M.O.A. Ndanshau & J. Aikaeli. 2011. The Determinants of Interest Rate Spread in Developing Countries: Evidence on Tanzania 1991–2009. *African Journal of Finance and Management*, 34(1 & 2).

Murphy, P.L. & A.R. Musalem. 2004. Pension Funds and National Savings. World Bank, WPS 3410.

Mushi, F.A. 1998. Financial Development and Economic Growth in Tanzania. MA Dissertation, University of Dar es Salaam.

Narayan, P. K. 2004. Reformulating Critical Values for the Bounds F-statistics Approach to Cointegration: An Application to the Tourism Demand Model for Fiji. Melbourne, Monash University.

Ndanshau, M.O.A. 1982. An Analysis of the Links Between Output, Capital Formation and Money in Tanzania, 1996–1980. MA dissertation, University of Dar es Salaam.

Neusser K. & M. Kugler. 1998. Manufacturing Growth and Financial Development: Evidence from OECD Countries. *Review of Economics and Statistics*, 80(4): 636–646.

Nkoba, A.J. 1997. Relationship Between Banking Performance and Economic Growth: The Case of Commercial Banking in Tanzania. 1967–1994. Linz, Universitatsverlag Rudolf Trauner.

—. 2008. Financial Sector Reform and Its Impacts on Economic Growth in Tanzania. PhD thesis, University of Dar es Salaam.

Nyagetera, B.M. 1997. Financial Repression in Tanzania, its Impact on Savings, Investment, Credit and Growth. PhD thesis, University of Dar es Salaam.

Odhiambo, M. 2011. Financial Intermediaries versus Financial Markets: A South African Experience. *International Business and Economic Research Journal,* 10(2): 77–84.

Pesaran, M. H. & B. Pesaran. 1997. *Working with Microfit 4.0.* Camfit Data Ltd., Cambridge, England.

Pesaran, M., Y. Shin & R. Smith. 1996. Testing for the Existence of a Long-run Relationship. *DAE Working Paper* 9622, Department of Applied Economics, University of Cambridge.

Pesaran, M., Y. Shin & R. Smith. 2001. Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics,* 16(3): 289–336.

Phillips, P.C & P. Peron. 1988. Testing For a Unit Root in the Series Regression. *Biometrika*, 75: 335–346.

Robinson, J. 1952. The Generalization of the General Theory. In *Rate of Interest and Other Essays*, London: Macmillan, pp. 67–142.

Romer, D. 1996. *Advanced Macroeconomics*, McGraw-Hill Press U.S.

Ruhara, F.M. 2001. Finance and Development in Tanzania and Policy Implication for Rular Development Banking. *The African Journal of Finance and Management*, 10(1): 83–95.

Schumpeter, J. 1912. *The Theory of Economic Development*. Translated by Redvers Opie, Cambridge, MA: Harvard U. Press.

Shaw, E.S. 1973. *Financial Deepening in Economic Development*. New York: Oxford University Press.

Swai, T.A. 2013. Determinants of Capital Structure and Portfolio Behavior of Commercial Banks in Tanzania. PhD thesis, University of Dar es Salaam, November.

Tanzania Country Scan Microfinance for Hivos/Micro Ned, Dar es Salaam, December 2007.

United Republic of Tanzania (URT). 2007a. *The Second Generation Financial Sector Reforms. Vol. 1. Main Report*. Mimeo, Bank of Tanzania, June.

—. 2007b. *The Second Generation Financial Sector Reforms. Vol. II. Backgroun Papers*. Mimeo, Bank of Tanzania, June.

—. 2011. *The Executive Summary of the Report on the Fifty Years of Independence of Tanzania Mainland 1961-2011,* Dar es Salaam, December.

—. 1991. The Banking and Financial Institution Act, 1991. Dar es Salaam: Government Printer.

—. 1996. Bank of Tanzania Act, 1995. Dar es Salaam: Government Printer.

—. 1970. Statistical Abstract. Dar es Salaam: Government Printer.

Vittas, D. 1997. The Role of Non-bank Financial Intermediaries in Egypt and other MENA Countries. *Development Research Group*, World Bank.

Wagao, J.H. 1976. Reflection of Some Aspects of Commercial Banking Sector in the Post Arusha Tanzania: 1967–1975. MA thesis, University of Dar es Salaam.

Wangwe, S. & M. Lwakatare. 2004. Innovation in Rural Finance in Tanzania. Paper Prepared for The Third Annual Conference on Microfinance held from 15th to 17th March, Arusha.

World Bank (WB). 2011. *World Development Indicators 2011*. Washington DC: Oxford University Press.

—. 1996. *Financial Market Fragmentation and Reforms in Sub-Saharan Africa*. Washington, DC.

Ziorklui, S.Q. 2001. Capital Market Development and Growth in Sub-Saharan Africa: The Case of Tanzania. Discussion Paper Number 79, African Economic Policy, February.