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Moderating Effect of Economic Growth on the Relationship Between Foreign Private Capital Flows and Securities Market Development: Evidence from Kenya

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Abstract
Over the last decade, Kenya witnessed a surge in foreign capital flows through Diaspora remittances. Locally, Diaspora remittances attraction is one of the dominant development strategies with the potential of contributing to financial development. The surge in such foreign capital flows raises important questions about their impact on the financial sector, specifically, the securities market. Understanding the linkages between foreign capital flows and the securities market is critical, especially in Kenya where these inflows are rapidly increasing even amidst the global financial crisis and the global economic slowdown which should have contracted them. Available evidence shows that foreign financial flows affects financial development, and that economic growth also influence operations in the financial sector. A research gap still exists as to how the effect of foreign financial flows on securities market development may be influenced by economic growth. Using data collected from the NSE and CBK, this study examined the relationship between foreign financial flows and securities market development, while attempting to answer the critical question of how economic growth influences this relationship in Kenya. The empirical results show that there is a distinct positive relationship between foreign capital flows and securities market development in Kenya. The results further show that this relationship is moderated by the level of economic growth within the economy. This study fronts for policies aimed at promoting cheaper flow of remittances and increasing growth rate of the Kenyan economy.
Keywords: Foreign Private Capital Flows, Diaspora Remittances, Securities Market Development, Nairobi Securitas Exchange, Kenya

1. Introduction

Securities markets in many emerging economies have in the recent past been characterized by very high volatility. This followed liberalization of foreign transactions that swept across continents in the last few decades. The opening up of capital account saw economies that were hitherto closed to foreign investments open to various kinds of foreign capital flows across their borders. The role of foreign capital flows assumed special importance and generated renewed academic research focus in the period following the global financial meltdown and sovereign debt crisis. The two severely affected the developed economies implying that growth in developing nations were highly dependent on such flows, like Kenya, would negatively be affected due to contracted demand and high unemployment levels in the developed economies.

Diaspora remittances form the most important forms of foreign capital flows in Kenyan financial markets. In Kenya, remittances not only form a major part of foreign exchange earnings but also supplement disposable incomes of many individuals. A portion of remittances, however, may be used to smoothen consumption over time and spending would be delayed via saving and investing in the securities market either temporarily or as a long term investment venture. In addition, foreign investors have emerged as major participants in the Kenyan securities market, through investment in existing shares or liquidation of their investments in securities traded at the Nairobi Securities Exchange (NSE).

Existing studies have shown that securities market development is a function of macroeconomic environment, institutional quality, financial liberalization, and banking sector development. Consequently, studies have explored and found significant relationships between macroeconomic stability, trading liquidity, institutional and political risk and securities market development (Odhiambo, 2010; Onyuma, 2017). Although a few studies have analyzed the relationship between foreign capital flows and securities market growth and development, most of them have concentrating on the effect of foreign direct investment yet other forms of foreign capital flows, particularly Diaspora remittances, are equally important.

Though evidence exists on the effect of remittances on financial development, scanty empirical literature exists that pinpoint the effects of remittances on securities market development, and how this relationship may be moderated by economic growth. Most of the literature focuses on remittances-banking sector development or remittances-financial sector development linkages yet the effect of remittances may be different depending on the level of economic growth of different countries. This is particularly important for developing nations, like Kenya, whose level of economic growth substantially differs from each other, yet the development of their economies, especially during economic and financial shocks, may depend on Diaspora remittance flows.

Moreover, the lack of consensus on theory and empirical evidence on the relationship between Diaspora remittances and securities market development calls for the need to lucidly establish these linkages, particularly for economies where Diaspora remittance attraction is one of the ascendant development stratagems. Realization of the fact that effective attraction and effective utilization of remittances have different effects on growth necessitates deeper empirical analysis of how remittances affects securities market performance, an important channel of economic growth, and which in turn influence such relationship.

Regrettably, the relationship between foreign financial flows through Diaspora remittances and securities market development has not been fully explored in many developing countries, such as Kenya. Previous studies have mainly concentrated on the relationship between macroeconomic stability and banking sector development and securities market development, while ignoring the possible effect of Diaspora remittances. In addition, these studies have concentrated mainly on Asian and Latin America, leaving many African countries with little coverage. Moreover, majority of these studies suffer from major weaknesses of not espousing on how economic growth may influence the relationship between determinants of financial development such as foreign financial flows and securities market development, and over-reliance on the cross-sectional data, which may not adequately address the country-specific issues and which, therefore, creates a research gap.

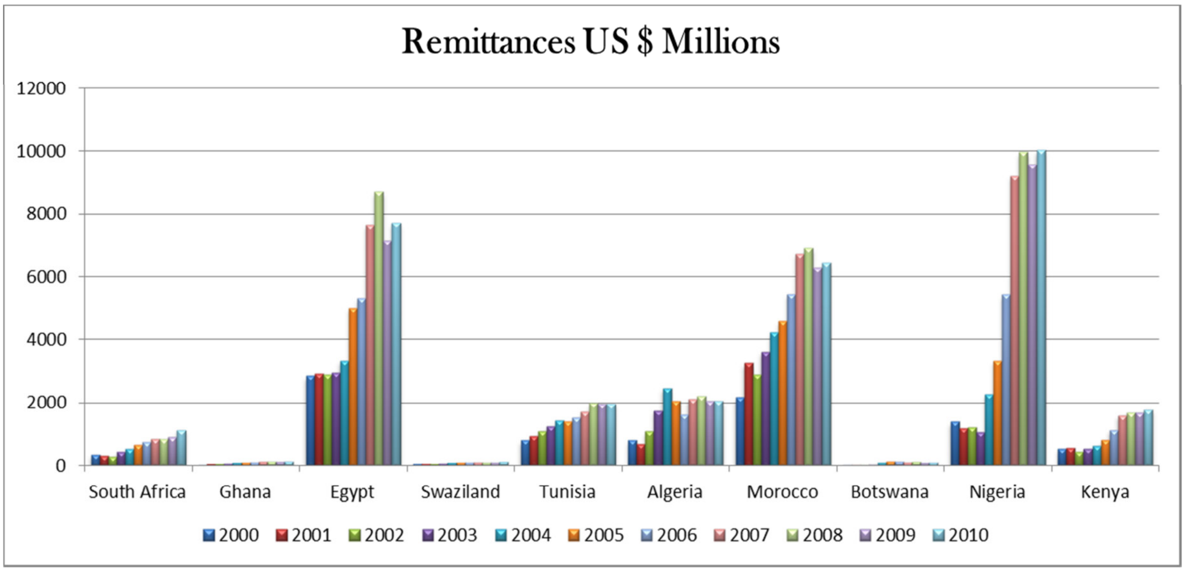
This study therefore fill this this gap by examining the moderating effect of economic growth on the relationship between foreign financial flows and securities market development in Kenya. Specifically, the study attempts to answer the critical question of how the relationship between foreign financial flows through Diaspora remittances and securities market development is moderated by economic growth. It contributes to the existing literature through the use of both the size indicator and the liquidity measure of securities market development nuanced into a market development index – a first of its kind. This is important because such empirical results are habitually highly sensitive to the indicator used and it is not infrequent to obtain different and even conflicting results depending on the choice of indicator of market development. Furthermore, the study investigates in depth the relationship between foreign capital flows, particularly Diaspora remittances and securities market development, in light of how economic growth may moderate such effect. Moreover, the study analyses the relative importance of this type of capital flows to securities market development in Kenya. This is critical in Kenyan whose developmental goals are not only constrained by inadequate domestic capital, but also in the light of the recent global financial meltdown and sovereign debt crisis, which affect remittance flows from Kenyans in the Diaspora. An understanding of these relationships has the potential of providing insights for policy makers on improving economic growth, as well as where to focus on in prescribing strategies aimed at pushing up foreign capital flows for enhanced securities market development.

The rest of the paper is structured as follows: Section 2 discusses the salient features of Diaspora remittance flows, and section 3 examines the securities market development in Kenya. Section 4 reviews the germane literature, while section 5 deals with the research methodology applied. Section 6 presents and discusses the findings, and finally Section 7 presents conclusions and possible recommendations for policy.

2. Foreign Capital Flows through Diaspora Remittances

The role of foreign capital flows has gained importance and generated renewed research focus following the recent global financial meltdown as well as sovereign debt crisis within the Euro region. Diaspora remittances form the most important forms of foreign capital flows in many developing financial markets. Diaspora remittances are transfers of money by foreign workers – migrants/remitters – who live and work in other countries, typically to their families, relatives who are still living in their home countries, or to their financial or investment agents back home to aid consumption, social activities and different types of investment. The Figure below shows the trend in Diaspora remittances in Kenya compared to other African nations.

Although the use of Diaspora remittances varies from country to country, the recipients of remittances commonly rely on them for funding consumption, education, and business and investments of varied nature. It is difficult to measure Diaspora remittances, since a good portion is transferred informally and does not appear in official balance-of-payments statistics. Therefore, gathering accurate data on international remittances has been very difficult (Onyuma, 2017), due to the fact that a good portion of the transfers is made on an informal basis and that African commercial and central banks have just began recording Diaspora remittances just recently.



Source: World Bank (2016)

In 2001, migrants from developing economies sent back home $96.5 billion. This increased to $167 billion in 2005, with World Bank (2010) reporting that the true amount could be 50 percent higher. In 2006, the World Bank reported that remittances grew to $206 billion; others putting the figure at $298 billion (World Bank (2010). This trend in remittance flows from the Diaspora suggests the growth of remittances has exceeded private capital flows and official development assistance to developing countries. Moreover, remittances are a reliable source of foreign capital. During the 1990s, and recently during the 2007-2009 global financial meltdown and 2010-2013 Euro area sovereign debt crisis, remittances were the least volatile source of foreign exchange in the affected economies.

This transnational economic network also helps foreign policy and development efforts in countries seeking foreign investments. Diversity has always been a source of strength for countries like USA, but never in its 223 years had the USA government thought of how to use Diaspora as a development tool (Srinivasan, 2012). African countries, like Kenya, must not fall into this trap because the country has to take advantage of the diversity in the country since diversity will be Kenya's strength. In many developing countries, such as Kenya, remittances constitute a significant source of foreign exchange and income. According to the World Bank (2010), more than 10 million African migrants are scattered around the world and are capable of mobilizing more than $100 billion a year to help in development. There is around $40 billion a year in officially recorded remittances and an estimated $50 billion in Diaspora savings that could be leveraged for low-cost project financing.

There are several reasons behind the interest in the effect of Diaspora remittance flows to developing economies. Analysis of economic impact of remittances in Africa underlines their positive impact on financial inclusion through access to finance, fostering economic growth, and promoting financial development. Remittances have increased significantly and become a major source of income for developing countries. On a global scale, Diaspora remittances now account for almost a third of global external finance. For many of the developing nations they flow into, remittances can increase the national GDP by a significant percentage. For example, in 2004 remittances accounted for approximately 31 percent, 25 percent, and 12 percent of Tonga's, Haiti's, and Nicaragua's GDP, respectively.

Developing countries are among the top recipients of Official Development Assistance and Diaspora remittances. According to the World Bank's (2011), the total amount of Diaspora remittances received by developing countries is three times the level of foreign aid, which positions Diaspora remittances among the top external sources of finance in the developing world. There are existing studies on the countercyclical responsiveness of Diaspora remittances when countries are facing various types of shock, such as exchange rate shocks, natural disasters, conflict, oil shocks and financial crises (Dabla-Norris et al., 2010). Since the year 2000, remittances to developing countries have increased on average by 15 percent in annual terms. Though at least some part of the growth is attributable to better reporting by recipient countries, it appears that over the last decade Diaspora remittances have outpaced private capital flows and official development assistance (World Bank 2011). Diaspora remittances through informal channels could add at least 50 percent to the globally recorded flows (World Bank 2006). Even where migrants use formal channels, the reporting of small remittances is not mandatory in most countries.

Diaspora remittances are perceived as being more stable than other external financial flows. Given their countercyclical behaviour, remittances tend to act as a form of insurance against macroeconomic shocks for origin countries (Chami, Hakura, & Montiel, 2009). Remittances can be procyclical when they are sent for financial investment purposes, as they sometimes are in middle-income countries (Lueth and Ruiz-Arranz 2008). In Sub-Saharan Africa, where private capital flows have fluctuated considerably from period to period, remittances have been more stable than both FDI and private debt and even foreign portfolio equity flows. In fact, the global financial crisis (2007-2009) and the sovereign debt crisis (2010-2016) affected many regions in the world, mostly whose economies have closer links with the USA and European economies (Karuitha & Onyuma, 2013). This financial and economic meltdown did not affect many African countries, including Kenya, thanks to the large remittance flows which followed the onset of the crises.

Diaspora remittances have also been found to foster financial development. Remittances flow may enable poor unbankable households to access the financial markets through the use of money transfer systems. They may also enable the design of certain financial instruments which are tradable in the securities markets. This might lead to financial as well as securities market development in developing countries such as Kenya. An assessment by Giuliano and Ruiz-Arranz (2006) found that the effect of remittances on economic growth is inversely correlated to financial sector development in the recipient country. These flows promote financial development in developing countries as they increase both disposable income and the aggregate level of deposits and credit intermediated by domestic banking sector. In fact, a large share of remittance transfers occurs through more or less formal money transfer systems. The stability of these inflows also opens up an opportunity for developing countries to lower borrowing costs in international capital markets by securitizing future flows of remittances.

Within economies in which the financial system is underdeveloped, such as those in Africa, Diaspora remittances may alleviate liquidity and credit constraints and help finance small firm investments, thereby effectively acting as a substitute for financial development (Giuliano & Ruiz-Arranz (2009). The authors found evidence that the impact of remittances on growth is stronger when the level of financial development is weaker, and that remittances have the greatest impact on growth when the share of the broad money supply in GDP – an indicator of financial development – is below 28 percent, as it is in most African economies.

In addition, Ratha (2005) estimates that for source countries, inward remittance was \$150 billion surpassing net official flow of Official Development Assistance of \$79.5billion. Yang and Choi (2007) reveals new evidence of the crucial role of Diaspora remittances in poor countries that high volatility in rural and urban slums combined with the near-absence of micro-insurance markets requires household to find ways to cope with household-specific risks. One way is to rely on remittances from abroad. The implication is that if these flows are channeled into investments at the micro level, they can lead to the development of microfinance and micro-insurance institutions in rural and peri-urban areas.

The effect of remittances on economic growth, however, is still an open question. Solimano (2003) argues that Diaspora remittance flows have a positive impact on recipient country growth as they finance both consumption and investment and ease the balance of payments situation in foreign exchange constrained economies. Diaspora remittances can affect economic growth directly, by raising consumption and investment expenditures; by increasing expenditures on health, education, and nutrition that contribute to long-term productivity; and by improving the stability of consumption and output at both the household and macroeconomic level (Chami, Hakura, and Montiel 2009). These benefits in turn increase the supply of investment from both domestic and foreign sources by increasing financial intermediation (Aggarwal, Demirgüç-Kunt, & Martinez-Peria (2006)), which can ultimately contribute to higher growth. A survey of 109 countries between 1990–2003 by Acosta, Baerg, and Mandelman (2009) shows that a well-developed financial sector can more effectively intermediate Diaspora remittances with investment and that the impact of remittance inflows on exchange rate appreciation is smaller when the level of financial development is higher. Increased receipt of Diaspora remittances is also associated with higher securities market capitalization, a key indicator of securities market development (Billmeier & Massa 2009). A higher sovereign rating as a result of Diaspora remittances can translate into greater access of sovereign entities to international capital markets, thereby increasing the level of investment in the economy.

3. Securities Market Development in Kenya

The Kenyan securities market, by African standards, is considered to be robust, liquid and fairly developed. In Kenya, dealing in financial securities, particularly shares, informally started in the 1920s, with no physical trading floor. Created in 1954, the Nairobi Securities Exchange is currently one of the largest securities exchanges in Africa by market capitalization. The Exchange is a major player in the African Securities Exchanges Association – formed in 1993 – and hosts its secretariat in Nairobi. Currently, some of the listed Kenyan securities, including those issued by listed commercial banks, according to Makau, Onyuma and Okumu (2015), have been cross-listed and currently trade simultaneously in Nairobi, Dar es Salaam, Kampala, and Kigali.

Whereas the Exchange launched its central depository system in November 2004, in September 2006 live trading on the automated trading system was implemented. These initiatives essentially automated the trading, depository, clearance and settlement functions of the market, improving trading speed and delivery versus settlement (Onyuma, 2012). It also led to extension of the trading hours from two to five.

In preparation for wider African securities market integration, the Exchange signed a merger MoU with the Uganda Securities Exchange in 2006 as well as another one on mass cross listing, which allow listed firms in both the two exchanges to dualist and engineer their future growth and development of a regional securities market (Onyuma, 2006a). In February 2007, the NSE upgraded its system to enhance easy and faster access to accurate and timely trading data and listed firms' information, which has facilitated and boosted its data vending business. A wide area network platform was also implemented in 2007, which eradicated the need for securities brokers to send their traders/dealers to the Exchange trading floor to conduct business (Onyuma, Okumu & Karuitha, 2016). Although trading is currently being conducted from brokers' offices through the wide area network, the brokers still under certain circumstances have to conduct trading from the floor of the Exchange. A consequence of these automation initiatives, according to Onyuma (2009), saw the NSE 20-Share Index recording an all-time high value of 6161.46 points on 12th February 2007 since its inceptions, compared to 100 points base set in 1966.

In 2008, the NSE All Share Index was introduced, as an alternative index, to measure the overall market performance. The Index incorporates all the listed shares and focuses on the overall market capitalization rather than the price movements of select counters. Following increased cases of fraudulent activities committed by brokerage firms between 2007 and 2009 at the NSE, the Complaints Handling Unit was launched in August 2009 to bridge the confidence gap with securities investors. This unit provides a convenient way to have any concerns processed and resolved by forwarding the issues via e‑mail and SMS and ability to track progress on‑line. In order to further deepen that market, the NSE launched automated trading in government Treasury bonds through the ATS in December 2009. This marked a significant step in the efforts by the NSE and CBK towards providing the necessary market liquidity.

Having corporatized to improve its governance structure in September 2011, the NSE changed its name to the Nairobi Securities Exchange Ltd converting from a company limited by guarantee to a company limited by shares and adopted a new Memorandum and Articles of Association reflecting the change (Onyuma, 2011). The change of name reflected the strategic plan of the Exchange to evolve into a full-service securities exchange which supports trading, clearing and settlement of equities, bonds, derivatives and other associated financial instruments. During this period, the NSE lowered its equity delivery and settlement cycle from T+5 to the current T+3; a move which allow investors who sell their shares, to get their money three days after the transaction day. This development was followed with the launch of the Broker Back Office system in October 2011, which enables the Exchange to remotely view what goes on at the back offices of it broker members.

In addition, the NSE modernized its operations in November 2011 with the launch of a new indexing system in conjunction with the FTSE – FTSE NSE Kenya 15 and FTSE NSE Kenya 25 Indices Series – albeit being made available on the NSE website in March 2012. The new indexing system reflect the growing interest in new domestic investment and diversification opportunities in the East African region. It also provide international investors with an indexing system with which they are familiar. Furthermore, the NSE became a member of the Financial Information Services Division of the Software and Information Industry Association. These initiatives provide investors the opportunity to access current information and provides a reliable indication of the Kenyan equity market's performance during trading hours.

Moreover, in June 2014 the NSE Ltd performed an IPO in which it subsequently self-listed its shares on its trading board thereby, according to Onyuma (2017), completing its demutualization process. The listing made the NSE to join the JSE in being the only exchanges in Africa, which are self-listed. In September 2014, the Exchange launched STT system for trading corporate bonds and state Treasury Bonds. This system allows on-line trading of debt securities and is integrated with the settlement system at the CBK, thus enabling the Exchange to continue achieving a true DvP and hence mitigating investor's risk. This system is also more efficient, scalable and flexible, and can support trading in bonds that have been issued in foreign currencies. It also presents other enormous opportunities in the bonds market such as; ability to support market making, a two-way quote trading model, ability to integrate with regulators' surveillance systems, and being able to report transactions that are concluded over the counter for purposes of settlement. In March 2015, the NSE joined the United Nations Sustainable Stock Exchanges in which members make a voluntary pledge to inform their stakeholders of the importance of integrating sustainability in their capital markets. As a result of all these innovative developments, the Exchange was in 2016 awarded the *Most Innovative African Stock Exchange* by Ai Capital Markets and Index Series Awards. This was the second time the NSE was receiving this prestigious award, having won the same in 2013.

The NSE has also made inroads into trading on derivatives with the creation of the NSE Derivatives Market (NEXT) in 2016 to facilitate trading of Futures contracts across a variety of asset classes, such as equities. The NEXT was established as a result of the increased volatility in asset prices local and international financial markets, a consequence of increased integration of the Kenyan financial markets with the international markets, and due to increasing need for more sophisticated risk management tools and strategies. Through NEXT, investors can trade in two securities: equity index futures and single stock futures. Nevertheless, NEXT has not been launched for trading yet and the NSE planned to launch its Derivatives Market in last quarter of 2017 commencing with index and single stock futures.

The NSE took a bold step in introducing new financial innovative products in March 2017, which marked a profound achievement in the history of Kenya's capital markets, by listing its first exchange traded fund (EFT) – the Barclays *NewGold* ETF) – which track the performance of Gold. The ETF was issued as Gold Bullion Debentures by *NewGold*, a South African SPV owned by *NewGold* Owner Trust. Globally, gold has emerged as one of the most reliable safe havens of wealth, remaining largely unchanged in the long-run despite the short-term market volatilities, and offering perfect hedge against inflation, deflation and currency risk.

For decades, the Kenyan securities market was highly regulated through practices that were enforced by the NSE. Member brokerage firms operated both as stock brokers and securities trading principals, in addition to owning the Exchange (Onyuma, 2006b). Membership was also limited to Kenyans with unlimited liability. Commercial banks, as limited liability companies, were thus excluded from membership. However, following the financial collapse of four stockbrokers and financial distress of many brokers in late 2007/2009, structural changes were imposed on the NSE in 2011, which resulted in a need to increase their capitalization.

The NSE Ltd is one of the sub-Saharan Africa's largest market with 65 listed firms. It is among the top 5 African exchanges, with others being JSE, Egyptian Exchange, Nigerian Stock Exchange, and Morocco Stock Exchange. During second quarter of 2017, the NSE was the sixth best performing securities market in Africa in terms of market returns in US dollar terms. By the end of June 2017, the Egyptian Exchange had a 96.72 percent rate of return – the highest among the continent's top performers. The Morocco Stock Exchange came in a distant second at 22.36 percent, followed by Malawi Stock Exchange (21.35 percent), Mauritius Stock Exchange (18.49), Nigeria Stock Exchange (10.31 percent), Nairobi Securities Exchange (8.52 percent), Uganda Securities Exchange (-2.23 percent) and Dar es Salaam Stock Exchange (-14.73 percent). Over the years, Exchange fundamentals represented by market turnover velocity, value traded ratio as well as market capitalization ratio, according to Onyuma (2017), have shown impressive growth.

Currently, there is a heightened competition between commercial banks and securities brokers as a number of commercial banks also own licensed stock brokerage/investment-banking subsidiaries. However, the competition between commercial banks and the securities market is not yet levelled. This is due to a wide arrange of restrictions on the issue of commercial papers and corporate bonds, which make it virtually impossible at present to use the securities market as a competitive alternative source for small business finance.
While the bank-based financial development in Kenya has consistently shown a mixed trend, the securities market development has shown a more or less upward trend since 2006. For instance, throughout the period from 2007, the annual securities market capitalization ratio, value traded ration, as well as market turnover ratio have been higher than that of the periods before. All these issues define how the Exchange has been evolving into a modern, developed market within the East African Community.

4. Reviewed Literature

Foreign Private Capital Flow through Diaspora Remittances

Diaspora remittances to developing countries have substantially grown, more than twice the amount of official development aid and over half of foreign direct investments (FDI) flows (Lucas & Spatafora, 2012). In Kenya, the CBK conducts a survey on remittance inflows every month through the formal channels that include commercial banks and other authorized international remittances service providers. Diaspora remittance inflows to Kenya in February 2015 increased by 11.6 per cent to USD 123.2 million from USD 110.4 million in February 2014. Similarly, the 12 month cumulative inflows in February 2015 increased by 10.6 per cent to USD 1,445 million from USD 1,307 million in the year to February 2014. The 12 month average flow maintained an upward trend during the year peaking at to USD 120.4 million by February 2015 (CBK, 2015).

Several studies have shown that remittance have a positive significant impact on economic development along multiple dimensions including financial development (Beck & Peria, 2011). The financial development of many developing nations is influenced by remittances as it is one of the major stable sources of revenues, coming from outside, which helps to finance imports and service foreign debt (Canagarajah & Kholmatov, 2010). Also, remittances are a less volatile source of external income and these have a strong impact on the reduction of the risk of financial crisis in the receiving country (Shelburne & Palacin, 2007). On the micro-level, the inflow of financial resources from outside the country helps people to overcome the lack of cheap credit, meaning loans can be made within their family and community (EBRD, 2006). In less-developed countries remittances promote financial literacy among the local population and positively influence the spread of the banking system in the country. The implication is that Diaspora remittances form the financial makeup of many developing nations.

In addition, Aggarwal, Demirguç-Kunt and Peria (2006) maintains that remittances promote financial development in a sample of 99 developing countries since they contribute to increasing the aggregate level of deposits and credit intermediated by local banking sector. Ambrosius (2011) findings underline the fact that remittances are not only spent on daily consumption, but that receiving households do have a demand for monetary savings options and asset-building strategies. The implication is that remittances can push up the level of domestic savings in the financial markets.

Furthermore, Solimano (2003) argues that remittance flows have a positive impact on recipient country growth as they finance both consumption and investment and ease the balance of payments situation in foreign exchange constrained economies. While IMF (2005) found no relationship at the country level between remittances and growth in a worldwide sample of 100 countries over the period 1970–2003, Giuliano and Ruiz-Arranz (2009) found, in a sample of 100 developing countries for the same period, that the impact of remittances on economic growth was inversely correlated to financial sector development in the recipient country.

Formal remittances do flow through financial system. As a result, Huang and Temple (2005) has found that remittances may influence financial development because trade openness tends to boost financial development. The importance of foreign direct investment and remittances for securities market development has also been discussed by Claessens *et al*., (2001), who found that the two are positively correlated with securities market capitalization and the amount of value traded. In addition, Aggarwal *et al* (2006) have reported that remittances promote financial development in a sample of 99 developing countries. While Billmeier and Massa (2007) found that remittances have significant explanatory power for financial development in Middle East and Central Asia, Kugler, Levintalb and Rapoport (2013) concluded that remittances have a positive impact on foreign direct investment. In fact, Gupta, Patillo and Wagh (2007) have come to a similar conclusion for Sub-Saharan Africa.

Also, remittances have been found to be relevant in countries like Nigeria, Egypt, Morocco, Jordan, Pakistan, and Tunisia, where a sizeable share of the workforce has been migrating to countries in the Middle East, USA, Europe, and Souther Africa (Adams 2006). There appears to be a consensus in the literature that remittances promote financial development in developing countries as they increase both disposable income and the aggregate level of deposits and credit intermediated by the local commercial banks. In fact, a large share of remittance transfers occurs through more or less formal money transfer systems. From an institutional perspective, there is evidence that commercial banks and other institutions, which operate money transfer systems grow with the amount of money transferred and contribute to professionalizing the financial sector in the recipient country (Chami, Fullenkamp & Jahjah, 2003). It is important to note that Kenya is a pioneer in mobile money transfer systems, which have even been linked to other international money payment networks such as MoneyGram and Western Union.

Moreover, recipients do not necessarily consume all of the received transfer, and the residual may remain in an account with the transferring entity, especially, deposit-taking banks (World Bank, 2006) while some may find its way in the securities markets through financial securities investment. This positive effect on the financial development is due to the fact that most remittances pass through money transfer networks, as well as the banking sector.

Some migrants who return home have been reported to contribute to governance and management style change in the financial institutions in which they work (Ozden *et al* 2011). This may be so because banks, stock brokerage firms, capital markets regulatory agencies, and even securities exchanges do employ foreign trained individuals due to their training and experience working in foreign host countries – thereby contributing to financial skill development in capital markets. These institutions are positively affected by the average level of human capital in migrant home country in addition to the size of their Diaspora remittances. This is important to the centrality of these institutions' financial development. The possible contribution of Diaspora remittance flows, a measure of financial globalization (Beck *et al*., 2010), on financial market development formed the gist of this study. This was necessary since it was possible that the above effect could also be trickling into the development of securities markets in a receiving county like Kenya.

5. Methodology

This study assessed whether the level of economic growth moderates the relationship between foreign capital flows as captured by Diaspora remittances and securities market development. Following Onyuma (2017), a moderator analysis was conducted to assess this relationship in Kenya. The study adopted a correlational research design of a predictive nature since it is more formalized and typically structured with clearly stated hypotheses or investigative questions. The population of interest comprised all the listed firms at the NSE since they are the ones that deal with the securities market and are subject to the regulatory rules in place. There are currently 65 listed firms at the NSE, in addition to a REIT, and an EFT. Out of these, 50 are classified under MIMS, 10 are under the AIMS, and 5 SMEs in the GEMS. Due to the few number of listed firms at the NSE, a complete enumeration procedure was used to select all the listed firms during the study period and used their stock trading information for analysis.

The NSE database contains information on market statistics such as securities prices, listed firms' shares issued, securities traded volumes, corporate actions by listed firms, value of the NSE 20 Share Index spanning

1997 to date. This study utilized secondary data collected from the NSE and CBK databases for the period 1997-2016. This period of analysis assisted in avoiding biases in the findings due to financial recession and securities market booms. The reason for selecting monthly data was because most previous studies related to determinants of securities market development used annual or quarterly data. Monthly data was used for several reasons (Onyuma, 2017): first, yearly data often reported by CMA are collected on the last trading day of the month of December each year, and may not provide more insights about the annual market trading. Even if data were to be averaged annually, such data suffers from over-averaging. Whereas, monthly data has not been utilized in the case of Kenya, the use of monthly data was therefore meant to make the most of the observations, and to seize the long-standing dynamic fluctuations in the securities market development process, and thus, diminish the possibilities of high degree of multicollinearity. Given that the values of both market capitalization and GDP are measured at the end of the year, this study also used monthly data to solve the stock-flow problem. El-Nader and Alraimony (2013) have also used monthly market data in Jordan.

The data collected was analyzed using OLS regression to test the research hypothesis to determine the existence of any significant relationship between the variables under study and to ascertain the predictive power of financial intermediary development on securities market development, as well as how economic growth moderates this relationship. Securities markets, like financial intermediaries, intermediate savings to investments. Usually the larger the savings, the higher the amount of capital flows through the securities market. In this study, the financial intermediary development was measured through the gross domestic private savings calculated in billions of Kenya shillings, as percentage of GDP.

Data was first transformed into logarithm and centered – by subtracting their mean from their values – in order to reduce any possible multicollinearity between the variable and the interaction term, and to facilitate better interpretation of the results.

Following Onyuma (2017), the dependent variable was measured as follows: m*arket capitalization ratio (MCR) is* the value of listed shares divided by GDP, an indicator of the size of the market relative to the size of the economy; v*alue traded ratio (VTR)* is value of shares traded on the exchange divided by GDP, a measure of the degree of liquidity that the securities market provides in the economy; while *market turnover ratio (MTR) is* the value of total shares traded divided by market capitalization, a measure of the activity of the securities market relative to its own size. MTR complements the MCR and measures the amount of re-valuation that takes place in the market. A large but inactive market can have a large market capitalization ratio but a small turnover ratio. The MTR also complements the VTR, and measures trading relative to the size of the securities market. A small liquid market can have a high turnover ratio but a small value traded ratio.

These variables were measured, following Onyuma (2017), as follows:

$\mathrm{MC} = DMP \times NSI$ ……………………………………….….(Eq.1)

$\mathrm{MCR} = \frac{MC}{GDP}$ ……………………………..……………………(Eq.2)

$\mathrm{VTR} = \frac{VST}{GDP}$ …………………………………………………… (Eq.3)

$\mathrm{MTR} = \frac{VST}{MC}$ ……………………………………………………(Eq.4)

Securities market development was measured by creating a market development index (MDI), following Onyuma (2017), by taking into account MCR, VTR and MTR.

$\mathrm{MDI} = \beta_0 + \beta_1 \mathrm{LnDREM} + \varepsilon_i$ ………………………………Eq.5

MDI = Securities market development index.

LnDREM = Logarithm of Diaspora remittances, a proxy for foreign capital flows, as a percent of GDP, in percentage.

LnGDPg = Logarithm of growth rate in gross domestic product, a proxy for economic growth, measured in percentage.

β_0 = Autonomous market development resulting without any of the interventions.

β_i = The coefficients to be measured.

ε_i = The error tern capturing variations in securities market development not explained by the predictor variable(s).

The study employed a hierarchical moderator multiple regression analysis, where foreign private capital flows and economic growth were regressed. First, foreign private capital and economic growth were entered into the regression model. Secondly, the study created an interaction term between foreign private capital flows and economic growth. The interaction term was then added into the analysis model. The significance of the change in F-statistic, as well as the change in R-square, was then observed and used to assess any moderating effect of economic growth.

6. Results and Discussion

The study tested whether the level of economic growth moderates the relationship between foreign private capital flows – as captured by Diaspora remittances – and securities market development. The results in Table 1 show that LnDREM and LnGDPg alone accounted for a significant amount of variations in securities market development, where $R^2 = .576$; $F(2, 237) = 144.519$, and $p < .05$.

Table 1: The Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.759[a]	.576	.572	.54550883	.576	144.519	2	237	.000
2	.771[b]	.595	.589	.53414684	.019	10.158	1	236	.002

Based on the result in Table 1 and Table 2, it is evident that the two models were statistically significant at the 5 percent level, and the amount of the variance accounted for in Model 2 with the interaction term with an F(3, 236) = 103.875; and p<.05 was significantly more than that for Model 1 without the interaction [F(2, 237) =144.519; and p <.05].

Table 2: Analysis of the Variance

Model		Sum of Squares	Df	Mean Square	t	Sig.
1	Regression	86.012	2	43.006	144.519	.000[b]
	Residual	63.385	237	.298		
	Total	149.397	239			
2	Regression	88.910	3	29.637	103.875	.000[c]
	Residual	60.486	236	.285		
	Total	149.397	239			

Moreover, the results contained in Table 3 further revealed that the addition of the interaction term accounted for a significant amount of variation in securities market development, as revealed by change in $R^2 = .019$; change in $F(1, 236) = 10.158$; $P = .002$; $\beta = -7.758$; $t(236) = -3.187$; and $p < .05$. This shows that there was a change in the R^2 by 1.9 percent.

From the first model whose results are presented in Table 3, shows that the coefficient for Diaspora remittances was positive and significantly influenced securities market development at the 5 percent level [F(2, 237) = 144.519; p = .000; β = 1.454; t(237) = 12.217]. This implies that a unit change in foreign capital flows through Diaspora remittances leads to 1.681 unit variation in securities market development in Kenya.

Table 3: Moderator Effect of Economic Growth on Influence of Foreign Financial Flow

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.877	.377		12.945	.000	4.135	5.620
	LnDREM	1.454	.119	.571	12.217	.000	1.219	1.688
	LnGDPg	2.968	.389	.357	7.634	.000	2.201	3.734
2	(Constant)	5.707	.451		12.641	.000	4.817	6.597
	LnDREM	1.693	.139	.665	12.215	.000	1.420	1.966
	LnGDPgt	-23.573	8.336	-2.836	-2.828	.005	-40.005	-7.141
	LnDREMxLnGDPg	-7.758	2.434	-3.169	-3.187	.002	-12.556	-2.960

From the second model whose results are also presented in Table 3, the coefficient for the interaction term shows moderation effect of economic growth on the influence of foreign capital flows on the level of securities market development. Therefore, economic growth moderates the relationship between foreign capital flows and securities market development in Kenya.

Based on the above findings, economic growth moderated the relationship between foreign capital flows and the level of securities market development in Kenya. The findings are similar to those of Zou and Wang (2017) that currency undervaluation affects financial development through economic growth in Asia. The results are also in line with Anghe, Nita and Badiu (2017) whose findings show that remittances in Romania had a significant and positive effect on financial sector development especially during times when the economy was in growth projectile. The findings are also in line with Onyuma (2017) findings that economic growth moderates the influence of the financial deepening determinants on securities market development in Kenya. In addition, the study results also mirrors finding by Onyuma and Kibet (2017), who found that the relationship between financial intermediary development and securities market development in Kenya was fully moderated by the level of economic growth.

The implication is that the influence of foreign financial flows on securities market development is moderated by the level of economic growth. Economic growth is, therefore, important for securities market development, and this influence is exerted through its catalytic moderation effect of the influence of foreign financial flows on securities market development. It can be concluded, therefore, that economic growth fully moderates the relationship between the foreign financial flows – particularly via Diaspora remittances – and securities market development in Kenya.

7. Conclusion and Recommendation for Policy

This study examined how the relationship between foreign capital flows and securities market development in Kenya is moderated by the level of economic growth. The empirical results show that there is a distinct positive relationship between foreign capital flows and securities market development in Kenya. Efforts to promote the development of the securities market in Kenya, therefore, must address issues relating to migration and Diaspora policies which will promote securities market development to grow the economy. Therefore, policies aimed at lowering price/cost for remitting and receiving remittance as well maintaining commercial bank savings accounts in foreign currencies and keeping inflation and interest rates moderate are critical in securing the development of securities market in Kenya. Innovative financing mechanisms such as securitization of future remittance flows and issuance of Diaspora bonds, together with other forms of Diaspora investment funds, could help finance large infrastructure projects that are critical for Kenyan economic transformation. However, since remittances are private transfers, foreign borrowing against such flows would only be possible with additional stipulations like surrender requirements, and removal of prohibition of foreign currency accounts and/or taxes on remittances. Because remittance receipts are widely dispersed, they may not cause the real exchange rate to appreciate; they may also obviate the deleterious effect on home country institutions observed in short-lived natural resource booms.

In fact, a strategy to encouraging remittances from the Diaspora can be used to relax the problem of securities market liquidity and thin trading since with more remittances recipients can be able to boost their incomes and investable funds. Likewise, given secure and reliable trading technology, those in the Diaspora will be able to invest directly through the securities market. Again, a strategy to facilitate more listing by firms could act to increase the amount of tradable financial instruments in order to excite those in the Diaspora.

Therefore, there is a need for implementation of effective policies to channel Diaspora remittances for investment purposes to support both economic growth as well as securities market development. In order to increase Diaspora remittances contributions to the financial investment it is important to embed Diaspora remittances facilitation in Kenya’s policy agenda, covering reducing transaction costs and increasing the inventory of tradable financial instruments for domestic remittances’ recipients and remitters. Formal Diaspora remittance service providers are currently heavily regulated as the CBK defines the limits on single money transfer transactions for commercial banks and forex bureaus and the threshold amounts for reporting to the CBK. In addition, these service providers must also report suspicious transactions, such as attempts to split large Diaspora remittance transfers to stay within the set threshold. Commercial banks and forex bureaus are also expected to demand production of identification documents by senders and recipients of Diaspora remittances. All these are meant to check money laundering as well as financing of terrorism. These requirements substantially limit the possible effect of remittances in the in financial development.

The government should, therefore, not attempt to control Diaspora remittances and their receivers, but rather it should allow those in the Diaspora to remit remittances unrestricted. Such unabated flow of Diaspora remittances will allow these transfers to adjust to cyclical fluctuations in the Kenyan economy in a manner that has positive implications for both economic stability and financial market development. In addition to encouraging the productive investment of remittances, the Kenya government should pursuing macroeconomic policies that allow a stable and auspicious financial investment climate and to license institutions, which will make remitting and receiving Diaspora remittances to be less burdensome and costly, as well as make financial investments more attractive.

In order to better channel Diaspora remittances for financial investment purposes, the Kenya government should institutionalize a centralized remittance bureau, whose mandate would be to promote the use of remittances for both financial and economic development. Such a bureau could, for instance, offer reasonable tax markdown for remitters investing in securities market securities such as bonds, shares, REITs. And, to be able to qualify for such incentives, remitters/recipients must be made to provide evidence of sending/receiving remittances. Such a mechanism would be a strategy to begin engaging those in the Diaspora in both economic and capital market development by leveraging the Diaspora’s financial potential, which over the decades has been snubbed in Kenya.

Furthermore, the Kenya government should design and implement a migration strategy as part of its macroeconomic and financial sector development policies. The design of such a strategy should recognize that there is a need for an agency empowered with significant influence among government institutions to implement and facilitate migration-focused policies. This agency should be in possession of evidence-based policy instruments, supported by expert knowledge and with sufficient migration and Diaspora remittance data. The relevant Ministries of Labour and Foreign Affairs should develop a migration strategy and make considerable efforts to improve labour market institutions in Kenya. This should include comprehensive reforms of wage regulation, labour taxes and pension system, unemployment security system and creation of institutions for socially accountable corporate restructuring.

The results further showed that the positive relationship between foreign capital flows and securities market development was further moderated by the level of economic growth in the economy. This study found a moderating effect of economic growth on the relationship between the foreign capital flows and the level of securities market development. The growth in real gross domestic product is therefore, vital in bringing about development in the securities market as it catalyzes the influence of the foreign financial flow on securities market development. Efforts to promote the development of the securities market in Kenya, therefore, must address issues relating to fiscal and monetary policies which will promote national production and trade to grow the GDP to propel the growth rate of the economy. Therefore, policies aimed at price stability by keeping inflation rate moderate, are critical in securing the development of securities market in Kenya. Any monetary, fiscal and other policies aimed at growing the economy would also have the influence of driving the development of the securities market in Kenya. This may be caused by growth in the real output of the economy impacting in the growth and development of the securities market. The finding of a moderating effect of economic growth over financial intermediaries on securities market development also have important policy implications for Kenya. First, the evidence indicates that economic growth plays an important moderating role in securities market development.

Therefore, the government to increasingly liberalize the economy when undertaking financial market development. Every fiscal and monetary policies as well as infrastructure development undertaken by the government should be aimed at growing the economy. The promotion of the development of the securities market in Kenya, therefore, calls for fiscal and monetary policies, which will promote national production and private sector trade to grow the economy. In addition, policymakers should implement policies which raise macroeconomic stability, banking sector development considering the interaction between economic growth and these determinants of securities market development. This is because such efforts will also assist in ensuring that the Kenyan securities market continue to grow and develop.

References

Adams, R. H. (2006). Remittances and Poverty in Ghana. World Bank Policy Research Paper 3838, Washington: World Bank.

Aggarwal, R., Demirguç-Kunt, A. & Peria, M. S. (2006). Do Workers' Remittances Promote Financial Development? *World Bank Policy Research Working Paper* 3957, Washington: World Bank.

Billmeier, A. and Massa, I. (2007). What Drives Stock Market Development in the Middle East and Central Asia: Institutions, Remittances, or Natural Resources? *IMF Working Paper* No. 07/157. IMF, Washington, DC.

Chami, R., Fullenkamp, C. & Jahjah, S. (2003). Are Immigrant Remittance Flows a Source of Capital for Development? IMF Working Paper 03/189. IMF, Washington, DC.

Chami, R., Hakura, D. & Montiel, P. (2009) Remittances: An Automatic Stabilizer. IMF Working Paper 09/91, International Monetary Fund, Washington, DC.

Dabla-Norris, E.; Minoiu, C. & Zanna, L. F. (2010). Business Cycle Fluctuations, Large Shocks, and Development Aid: New Evidence, IMF Working Papers 10/240, International Monetary Fund.

Giuliano, P., & Ruiz-Arranz, M. 2005. Remittances, Financial Development, and Growth. IMF Working Paper 05/234. IMF, Washington, DC.

Gupta, S., Pattillo, C., & Wagh, S. (2007). Impact of Remittances on Poverty and Financial Development in Sub-Saharan Africa. *IMF Working Paper* No. 07/38, Washington: International Monetary Fund.

Huang, Y., & Temple, J. R. W. (2005). Does External Trade Promote Financial Development? *CEPR Discussion Paper.*

Karuitha, J. K & Onyuma, S.O. (2013) Management of Financial Crises: Priorities for Rebuilding the Financial Architecture in Africa. *African Management Development Review,* 10 (4), 34-49.

Kugler, M. and Rapoport, H. (2007). International Labour and Capital Flow: Completeness or Substance: *Economic Letters*, 94 (2): 155-62.

Lucas, R. E. B and Oded S. (1985). Motivations to Remit: Evidence from Botswana. *Journal of Political Economy*, Vol. 93(Oct), pp. 901–18.

Lucas, R. E. B., 1987. Emigration to South Africa's Mines. *American Economic Review*, 77(3): 313–30.

Lueth, E. and Ruiz-Arranz, M. (2007). Are Workers' Remittances a Hedge Against Macroeconomic Shocks? The Case of Sri Lanka. *Asia-Pacific Development Journal*, 14: 25 – 39.

Makau, S. M., Onyuma, S. O. and Okumu, A. N. (2015) Impact of cross-border listing on stock liquidity: Evidence from East African Community. *Journal of Finance and Accounting,* 3(1): 10-18.
Odhiambo, N. M. (2010) Are banks and stock markets positively related? Empirical evidence from South Africa. Journal of Applied Business Research, 26 (6): 17-26.
Onyuma, S. O. & Kibet, L. K. (2017). Does economic growth influences the relationship between financial intermediaries and securities market development in Kenya. *Journal of Economics and Sustainable Development*, 8(15): forthcoming.
Onyuma, S. O. & Shem, A. O. (2007). Reorganizing corporate governance structures in African stock exchanges. *African Journal of Business & Economic*, 2(1), 60-85.
Onyuma, S. O. (2006a). Regional integration of stock exchanges in Africa. *African Review of Money, Banking & Finance* (Supplement Issue) December, 97-122.
Onyuma, S. O. (2006b). Demutualization of stock exchanges in Africa: Prospects and problems. *OSSREA Bulletin,* 3(3), 25-35.
Onyuma, S. O. (2009). Day-of-the-week and month-of-the-year effect on the Kenyan stock market returns. *East African Social Science Research Review*, XXV (2), 53-74.
Onyuma, S. O. (2011) Developing the Management and Ownership Structures of African Stock Exchanges. *African Management Development Review,* 10 (1), 35-66.
Onyuma, S. O. (2012) Capital Markets Development in Emerging Economies: Institutions, Macroeconomic & Microstructure Reforms Determining Stock Markets Development in Kenya. Saarbrucken, Germany: Lambert Academic Publishing.
Onyuma, S. O. (2013) Capital Markets Development in Emerging Economies: Institutions, Macroeconomic & Microstructure Reforms Determining Stock Markets Development in Kenya. Saarbrucken, Germany: Lambert Academic Publishing.
Onyuma, S. O. (2013). *Capital markets development in emerging economies: institutions, macroeconomic & microstructure reforms determining stock markets development in Kenya*. Saarbrucken, Germany: LAP Publishing.
Onyuma, S. O. (2015). Paradigm shift in stock exchanges: automation, competition, governance, integration & regulation of stock markets in Africa. Senegal, CODESRIA.
Onyuma, S. O. (2017) Analysis of financial deepening determinants influencing securities market development in Kenya. Unpublished PhD Thesis (Laikipia University, Kenya).
Onyuma, S. O., Mugo, R. K & Karuitha, J. K. (2012) Does cross-border listing (still) improve firm financial performance? *Journal of Business Economics & Finance*, 1(1): 92-109.
Onyuma, S. O., Okumu, A.N. & Karuitha, J. K. (2016) Effect of automation on efficiency of the Nairobi Securities Exchange. Paper Presented at the 3rd International Conference on Enhancing Utilization of Research, Science & Technology for Innovation and Sustainable Development in Africa, held at Laikipia University, Nyahururu – Kenya.
Ratha, Dilip (2005). Workers' Remittances: An Important and Stable Source of External Development Finance. In Samuel Mlambo, and Dilip Ratha, eds., Remittances: Development Impact and Future Prospects. Washington, World Bank.
Ratha, Dilip, and Ketkar, Suhas (2010). Diaspora Bonds: Tapping the Diaspora during Difficult Times. *Journal of International Commerce, Economics and Policy*, 1 (2): 252.
Solimano, A., (2003). Workers' Remittances to the Andean Region: Mechanisms, Costs and Development Impact. Paper prepared for the Multilateral Investment Fund-IDB's Conference on Remittances and Development in Quito, Ecuador. Retrieved 18th June 2017 from; available at: www.iadb.org/publication6/
Srinivasan, S. (2012) Global Diaspora Forum for 2012 held at Washington. Forbes India, 11th August. Retrieved 20th June 2017 from http://forbesindia.com/printcontent/33560.
World Bank (2007). Migration and Remittances: Eastern Europe and the Former Soviet Union, Washington: World Bank.
World Bank (2010) Migration and Remittances Factbook. Washington, DC: World Bank.
World Bank (2011). *Migration and Remittances Factbook 2011*. Washington, DC: World Bank.
World Bank (2016). Migration and Development: Outlook for Remittance Flows 2017-2018. World Bank.
Yang, D. and Choi, H. (2007). Are Remittances Insurance? Evidence from Rainfall Shocks in the Philippines. *World Bank Economic Review*, 21 (2): 219-248.
Yartey, C. A. (2008). The Determinants of Securities Market Development in Emerging Economies: Is South Africa Different? IMF Working Paper No. WP/08/32.