Journal of Modern Accounting and Auditing, ISSN 1548-6583
July 2013, Vol. 9, No. 7, 997-1004

# Financial Innovation as a Competitive Strategy: The Kenyan Financial Sector

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The world business environment is rapidly changing and becoming intensely competitive. In this context, most organizations are realizing that knowledge is the most important resource in creating sustainable competitive advantage. Knowledge management (KM) as a discipline is designed to provide strategy, process, and technology to increase organizational efficiency and effectiveness. The survival and success of a firm are dependent on the capacity of management to generate new ideas. One such a topical idea is financial innovations. Economies and businesses across the world have embraced creativity and innovation to circumvent market imperfections. Kenya as an economy has been hailed as a regional financial hub. This paper is a narrative review seeking to establish the extent of financial innovation in Kenya and how this enhances competitiveness. The research finds out that the Kenyan financial sector has made some remarkable strides towards financial innovations. However, it is noted that there is still enormous untapped potential that can enhance Kenya's economy further.

*Keywords:* knowledge management (KM), financial innovations, market imperfections

## Introduction

Many organizations are agreeing that to grow, stay competitive and survive, they have to constantly change their strategies to meet new business demands and this explains the growth of interest in knowledge management (KM). Several studies have proposed KM frameworks and models to help organizations improve their performance. Most of them have identified technology, leadership, strategy, and organizational culture as the enablers. Those organizations that work as if their environment is still stable are not only losing competitive advantages, but are also facing huge financial losses (Mosoti & Masheka, 2010). According to Shariq (1997), we are entering into an era where the future will be essentially determined by our ability to wisely use knowledge, a precious global resource that is the embodiment of human intellectual capital and technology. Our future is only limited by our imagination and ability to leverage mankind. The future of the world lies in

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front of us unexplored and uncharted and is full with great opportunities through use of knowledge. In the dynamic markets of today, superior performance lies in the ability to constantly develop organizational capabilities that form the basis for products and services offered by the firm (Nielsen, 2006). It is against this backdrop that firms in the financial sector are aggressively engaging in innovation in order to stay afloat and leapfrog competition. Financial markets have continued to produce a multitude of new products. It is an ongoing process whereby private parties experiment to try and differentiate their products and services, responding to both sudden and gradual changes in the economy. The Kenya vision 2030 blueprint aims to create a vibrant and globally competitive financial sector. It envisions Kenya as the leading financial centre in Eastern and Southern Africa, in competition with similar centers in the Western Indian Ocean rim. The Kenyan financial sector has leveraged KM to revolutionalize her financial system. In the recent past, Kenya's financial system has experienced remarkable financial innovations (Misati, Lucas, Anne, & Shem, 2010). This paper seeks to document these innovations and explore how they enhance competitiveness.

## Theoretical Perspective

According to Tufano (2002), financial innovation is the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions, and markets. Different reasons have been advanced as to the triggers of innovations, but broadly, they have been described by many as being optimal responses to various basic problems or opportunities, occasioned by incomplete (imperfect) markets that prevent risk shifting or asymmetric information. DeGennaro (2005) defined market imperfection as anything that interferes with trade. He gave examples as transaction costs, taxes, information asymmetry, and asset indivisibilities. According to him, imperfections cause a rational market participant to deviate from his/her preferred risk level and refrain from holding the market portfolio. However, he claimed that market imperfections also generate business opportunities, that is, institutions or individuals that can lower costs which trace to imperfections have a competitive advantage and can earn economic rents. Miller (1986) wrote that the major impulses to successful financial innovations have come from regulations and taxes. Modern finance theory assures us that securities can be used to transmute one form of income into another, in particular, higher taxed forms to lower taxed ones. For a variety of reasons, including especially the desire to blunt the force of previous successful innovations by taxpayers, most governments prefer to keep changing the structure, thereby altering the internal rate differentials and creating new opportunities for financial innovation. Other authors, such as Harris and Raviv (1991) argued that persistent conflicts of interest between outside capital providers and self-interested managers and asymmetric information between informed insiders and uniformed outsiders lead to an equilibrium in which firms issue a multiplicity of securities. Outside investors cannot easily assess the value of their assets, the institutions turn to investment banks to place these securities with their network of clients. These investment banks innovate, creating new pools of these low-grade assets. Agency considerations interact with marketing costs to produce innovation.

Another contribution is made by Levich (1988) who argued that a major cause of financial innovations is transaction costs. Trading requires time, which includes both search costs, or the time to gather information (including a trading partner), and the time to make the trade itself. Minimizing these costs represents a profit opportunity. One partial solution is to automate the process by means such as automatic electronic payments. Other reductions in the time required to trade are sure to follow, both because technology continues to advance and because the opportunity cost of time tends to rise over time. Advances in communications and data-handling technology have reduced not only the costs of trade to a fraction of what they were just a few years ago but also the time needed to make trades. The problem of asset indivisibility is yet another cause of financial innovations. Degennaro and Robotti (2007) argued that if assets were infinitely divisible, then investors could hold an arbitrarily small portion of each asset. This practice would permit all investors, even those with little to invest, to hold the market portfolio of all investable assets. In fact, though assets are lumpy, the minimum traded unit is finite. This means that most investors must decide whether to hold the smallest traded unit of an asset or to omit it from their portfolios. For wealthy investors, asset indivisibility is a smaller problem than it is for less wealthy ones. Combined with trading costs which usually have a fixed component, asset indivisibility makes it harder for investors of limited means to begin investing, because their portfolios tend to lie farther below the capital market line. Asset indivisibilities are an important reason for the existence of mutual funds and derivative securities. By pooling funds from many investors, they permit investors to hold portfolios that more nearly approximate the market portfolio.

According to Duffie and Rahi (1995), by a recent count, there are now over 1,200 different types of derivative securities in use, most of which are traded in the over-the-counter (OTC) market. The innovator, often an investment bank, usually acts as an intermediary. In addition, to innovation via the intermediation of new derivative securities, a securities firm also innovates through its underwriting business, acting as a design and pricing consultant, as well as marketing agent, to firms that will use a new financial product, usually as an vehicle for raising capital. A major example of innovation by securities firms is the creation of asset-backed securities, such as collateralized mortgage obligations. An asset-backed security is one of a family of securities whose cash flows are collectively backed by some assets, not necessarily securitized itself. Other examples of backing assets are portfolios of credit-card receivables or auto-loan payments. The issuer of an asset-backed security is often motivated to securitize assets because of regulatory restrictions on the size of the issuer's balance sheet relative to its capital. For example, risk-based capital requirements make it advantageous for a bank to securitize some of its credit-card portfolios in order to liberate capital for purpose of additional intermediation.

## Methodology

This paper is a narrative review article on financial innovations and their contribution to competitiveness. Narrative literature review articles have an important role in continuing education, because they provide readers with up-to-date knowledge about a specific topic (Clarke & Oxman, 2006). The study focuses on Kenyan financial sector. Literature related to the subject matter is analyzed from secondary sources, including publications, unpublished work, and financial press.

## Financial Innovations in Kenyan Financial Sector

Kenya has a relatively well-developed financial services sector in comparison to other African states. The sector includes banks, microfinance institutions, savings and credit cooperatives, insurers, foreign exchange bureaus, non-bank financial institutions, mortgage finance houses, building societies, and a postal service offering savings products. Kenya's banks dominate the financial service industry in terms of asset size, but are dwarfed in numbers by the Savings and Credit Cooperative (SACCO) movement that includes a large number of relatively small institutions (FSD[1] Kenya, 2007). The Kenyan financial sector has undergone tremendous changes in the last two decades. A lot of reforms have been undertaken in the sector that have led to proliferation of financial products, activities, and organizational forms that have improved and increased the efficiency of the financial system. A lot of these changes have been motivated by the following market imperfections.

**Transaction Costs**

One of the most notable innovations in the Kenyan financial sector is the roll out of mobile phone financial services. Cruz, Neto, Gallego, and Tommi (2010) said that mobile banking caters for financial transactions using mobile devices (cell phones, personal digital assistants (PDAs), smartphones, etc.), such as viewing account balances, making transfers between accounts, or paying bills. Generally speaking, mobile banking operations can be categorized as mobile accounting, mobile brokerage, and mobile financial information services. Most services in the categories designated as accounting and brokerage are transaction-based, such as domestic and international fund transfers, commercial and bill payment processing, cell phone recharging, micro payment handling, or asset management. Mobile financial information services are basically non-transaction-based services of an informational nature. Some examples of current non-transaction-based mobile services include: monitoring of recent transactions, alerts on account activity or the passing of set thresholds, access to loan and card statements, and the status of checks, among others. According to Professor Njuguna Ndung'u[2], the Kenyan mobile financial services story has become a much acclaimed global case study. He further stated that over 15 million Kenyans transfer about Ksh.3 billion to each other daily with over one million transactions. This has presented Kenya with an opportunity to significantly upscale access to financial services cost effectively. Another notable process innovation that happened in Kenya is the automation of the Nairobi Securities Exchange (NSE). According to Kestrel Capital[3], the NSE in 2006 introduced an Automated Trading System (ATS) which ensures that orders are matched automatically and are executed on a first come/first serve basis. The ATS has since been linked to the Central Bank of Kenya and the Central Dynamic Store (CDS), thereby allowing electronic trading of government bonds. Nyangosi (2008) wrote that in mid-2005, Kenya's banking industry moved a milestone by introducing Real Time Gross and Settlement (RTGS) system which was renamed Kenya Electronic Payment and Settlement System (KEPSS). This was meant to facilitate the interbank financial data transfer. This led to the decongestion of banking halls. It has a significant contribution in covering the cost of offering financial services. RTGS can substantially reduce the duration of credit and liquidity exposures. To the extent that sufficient covering funds are available at the time of processing, settlement lags will approach zero and so the primary source of risks in interbank fund transfers can be eliminated. Once settlement is effected, the receiving bank can credit the funds to its customers, use them for its own settlement purposes in other settlement systems, or use them in exchange for assets immediately without facing the risk of the funds being revoked. This capability also implies that, if an RTGS system was linked to other settlement systems, the real-time transfer of irrevocable and unconditional funds from the RTGS system to the other systems would be possible. The use of RTGS could therefore contribute to linking the settlement processes in different fund transfer systems without the risk of payments being revoked. The major

[1] Financial Sector Deepening.
[2] Speech on the launch of the mobile pay Tangaza e-commerce and money transfer service Sankara hotel, Nairobi, Monday, January 24, 2011, by Professor Njuguna Ndung'u, governor of Central Bank of Kenya.
[3] Retrieved from http://www.kestrelcapital.com/kestrel_capital_nairobi_stock_exchange_overview.html.

indicator of process innovation is probably Automatic Teller Machine (ATM) banking. According to FSD Kenya (2007), Barclays and Standard Chartered deployed the first ATMs in Kenya in the 1990s. Since then, virtually all the other banks have deployed ATMs. Almost all banks in Kenya now have ATMs or automated teller machines at their branches. The primary purpose of an ATM is to provide a customer with a quick method of withdrawing and depositing cash and checking the balance of their bank accounts without having to wait for a teller. The machines also provide access to cash outside of the bank's business hours.

The innovations discussed above have been as a response to the market imperfection of transaction costs. The list is by no means exhaustive, but it represents what can be regarded as the major transaction cost-related innovations that are visible in the Kenyan financial sector.

**Religious Restrictions**

In response to religious restrictions, financial innovation has made it possible to churn out new financial products and institutions without offending the religion. One such an innovation in Kenya is the Islamic banking and the associated financial products. According to Ghayad (2008), Islam prohibits Muslims from taking or giving interest (riba) regardless of the purpose for which such loans are made and regardless of the rates at which interest is charged. Islamic banking has the same purpose as conventional banking, except that it claims to operate in accordance with the rules of *shari'a*, known as *Fiqh al-Muamalat* (Islamic rules on transactions). Amongst the common Islamic operations used in Islamic banking are profit sharing (*Mudharabah*), joint venture (*Musharakah*), cost plus (*Murabahah*), and leasing (*Ijarah*). Information obtained from the Daily Standard (2011) claimed that the impact of Islamic banking is slowly being felt in the Kenyan financial system. Analysts say that the growth of Islamic finance in Kenya is linked to the reformist nature of the Central Bank of Kenya that reviewed its banking laws and has influenced a similar review in the insurance industry and now the capital markets. Kenya's experience with *Shari'ah* compliant banking is already being shared by Tanzania and Uganda, as they seek to enact similar laws. Two Kenyan banks are waiting for banking laws to be reviewed in Uganda and Tanzania to expand there.

**Information Asymmetry**

Lofgren (2002) wrote that asymmetric information is a common feature of market interactions. One side of the market is better informed than the other. The borrower knows more than the lender about his/her credit worthiness; the seller knows more than the buyer about the quality of his/her car; the chief executive officer (CEO) and board of a firm know more than the shareholders about the profitability of the firm; and insurance clients know more than the insurance company about their accident risks. The Kenyan banking sector was in the 1980s and 1990s saddled with a momentous non-performing loans (NPLs) portfolio. This invariably led to the collapse of some banks. One of the catalysts in this scenario was "serial defaulters" who borrowed from various banks with no intention of repaying the loans. This market imperfection of information asymmetry has prompted financial innovation in the form of credit reference bureaus (CRBs). According to Professor Njunguna Ndung'u, the Central Bank of Kenya licensed the first CRB in the year 2008, and more would be coming in due course. The purpose of the bureau is to collect, collate, analyze, and disseminate credit information among credit providers. Credit information sharing provides credit history (information capital) as an alternative form of collateral to the traditional physical collateral, to secure credit facilities from banks. On the other hand, the bank benefits from the mechanism, since it will address the problem of information asymmetry that is typically used to raise a risk premium on loans. The problems of moral hazard and adverse selection are also minimized. Banks play a central role in extending financial services within an economy. In support of this role, credit bureaus help lenders make faster and more accurate credit decisions. Credit histories not only provide necessary input for credit underwriting, but also allow borrowers to take their credit history from one financial institution to another, thereby making lending markets more competitive and, in the end, more affordable. CRBs assist in making credit accessible to more people and enabling lenders and businesses to reduce risk and fraud. Sharing of information between financial institutions in respect of customer credit behavior, therefore, has a positive economic impact.

**Exchange Rate and Price Movement Risk**

Financial innovation has led to creation of financial instruments known as derivatives whose role is to mitigate price movement and exchange rate risk. Notable derivative instruments include options, futures, forwards, and swaps. Kenyan financial sector has not yet made major strides in this respect. But according to *Business Daily* (2012), the Capital Market Authority (CMA) is in the process of setting up a futures market. The futures market is expected to stabilize food prices, especially grains which fluctuate widely during harvest and low seasons. Price volatility reduces crops yields by discouraging farmers from planting for fear of making losses. The futures exchange is expected to bring transparency in the markets, since it will provide a central place for buyers and sellers, helping improve price discovery.

**Asset Indivisibility**

As noted earlier, asset indivisibility is another trigger of financial innovations. It makes it difficult for investors of limited means to begin investing, because their portfolios tend to lie farther below the capital market line. Asset indivisibilities are an important reason for mutual funds and other collective investment schemes. By pooling funds from many investors, they permit investors to hold portfolios that more nearly approximate the market portfolio. Collective investment schemes are pools of funds that are managed on behalf of investors by professional managers. They are arrangements made or offered by any company under which the contributions or payments made by the investors are pooled and utilized with a view to receiving profits, income, produce, or property, and are managed on behalf of investors according to specific investment objectives that have been established for the scheme. According to CMA[4], currently in Kenya, we have unit trusts, investment clubs, mutual funds, and employee share ownership plans. For instance, in the year 2008, CMA put the number of licensed unit trusts in Kenya at 11.

It is to be noted that the above discussion is just but a snapshot of the financial innovations in the Kenyan financial sector. The entirety of all the available innovations cannot be exhaustively explored in this paper.

## Financial Innovation and Competitiveness

There are many definitions of competitiveness, but the one that captures the theme of this paper is the definition formulated by Porter (1985). He has identified three generic strategies that an organization can follow in order to be competitive. The first one is cost leadership, whereby the organization aims to be the lowest cost producer within the industry. Secondly, an organization can adopt differentiation, through which it seeks some unique dimensions in its product/service that is valued by consumers. Finally, there is focus strategy, whereby the organization determines the way in which the strategy is focused at particular parts of the market. Phalad and Hamel (1990) added their voice and proposed three tests to identify core competences.

[4] Retrieved from http://www.cma.or.ke/index.php?option=com_docman&task=cat_view&gid=7.

They argued that a competence should provide potential access to a wide variety of markets, make a significant contribution to the perceived customer benefits of the end product, and be tough for imitators to imitate. Thomson and Strickland (1995) claimed that successful differentiation allows a firm to set premium prices for its products, to increase unit sales, and to gain customer loyalty. Furthermore, differentiation strategies provide cost management to companies.

Competitiveness here is taken to mean the possession of the capabilities needed for sustained economic and financial growth in an internationally competitive environment, in which there are others that have a set of capabilities of their own. If the Kenyan financial sector is competitive, the same is expected to naturally extend into Kenya's competitiveness as an economy. The different dimensions of competitiveness articulated by the authors above mirror the challenges that financial innovations seek to address as discussed previously. For instance, cost reduction is regarded as giving a firm competitive edge: In this regard, financial innovations such as automation of NSE, mobile banking, ATM machines, and CRBs are meant to address transaction costs and information search costs. In addition, collective investment schemes also reduce transaction costs on the part of the fund managers. This innovation enables them to pool small deposits and package them into sizable cost effective investment vehicles. Secondly, innovation has made it possible to differentiate products that suit customer requirements. A good example is Islamic banking products that are tailored to suit Muslim customers without offending their religion. Mobile banking has also been valuable in designing services that make banking more convenient for the customers, and of course not forgetting the ATM machines. Finally, another competitive dimension noted is that of being able to reach a wider market. Mobile banking has effectively made this possible by reaching a huge previously unbanked population. Furthermore, the introduction of any new financial products like Islamic banking has meant an expanded market. All these advantages being enjoyed in the Kenyan financial sector are expected to translate into a competitive Kenyan economy.

## Conclusions and Implications

It is clear that the Kenyan financial sector has experienced a fair share of innovations. However, notwithstanding the strides made in the Kenyan financial sector, there is still enormous untapped potential for financial innovations. For instance, Rambo (2009) noted that the Higher Education Loans Board (HELB) has no capacity to provide assistance to learners outside regular academic programmes, due to the limited support from the exchequer. Yet, we know that the need for higher education financing in Kenya is substantial. Fisher and Jordan (1995) wrote that there is a rapidly expanding segment of the securities market, known as asset-backed securities which involve securitizing debt such as car loans, credit card debt, student loans, or home equity loans. HELB has given loans to students since 1952; the institution can be innovative enough and package student loan repayments (receivables) into a security (bond) that can be issued to the market to raise substantial finances. This is clearly an area that has not been explored in the Kenyan economy. Banks can also make use of this innovation by packaging credit card receivables, auto loans, and other revenue streams into asset-backed securities. The year 2011 was very bad for the Kenyan Shilling. Sources from the parliamentary Service Commission (2011) noted that the Kenya Shilling was on a free fall since the start of the year. It had lost 6% to the dollar from Ksh.80.80 to the dollar on January 3, 2011, to a mean rate of Ksh.102 to the dollar on September 26, 2011. Such volatility is definitely not good for business. In this particular instance, the importer particularly felt the blunt. Foreign exchange rate exposure can be avoided by businesses, if the Kenyan financial sector was creative enough to introduce currency derivatives. Madura (2008) defined currency derivative as a contract whose price is partially derived from the value of the underlying currency that it represents. Examples of currency derivatives include forwards contracts, futures contracts, and currency options. Multinational corporations commonly take positions in currency derivatives to hedge their exposure to exchange rate risk. The commission further noted that inflation was also rising steadily, hitting 17.32 as at September 2011. However, as indicated earlier in the literature, it is worth noting that the CMA is currently in the process of putting in place a commodities futures exchange to help in stabilizing commodity prices. Those few examples are just but an indication of the huge potential for financial innovation in the Kenyan economy. The authors recommend that the Kenyan financial sector should not be complacent but actively engage in rolling out new innovations in the unexplored areas.

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