



Received: 27 August 2018  
Accepted: 08 January 2019  
First Published: 14 January 2019

\*Corresponding author: Kehinde Damilola Ilesanmi, Department of Economics, University of Zululand, Private Bag X1001, KwaDlangezwa 3886, South Africa  
E-mail: [ilesanmi.kd@gmail.com](mailto:ilesanmi.kd@gmail.com)

Reviewing editor:  
Christian Nsiah, Baldwin Wallace University, USA

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## GENERAL & APPLIED ECONOMICS | REVIEW ARTICLE

# Management of shadow banks for economic and financial stability in South Africa

Kehinde Damilola Ilesanmi<sup>1\*</sup> and Devi Datt Tewari<sup>2</sup>

**Abstract:** The global increase in the regulation of banks has encouraged the channeling of investment funds into less regulated institutions such as shadow banks to avoid restriction. Shadow banks are institutions that operate outside the regulatory framework of the traditional banking system and because of that, they lack adequate safety compared to the traditional banks. These among others have raised serious concerns, especially after the recent financial crisis as they see these institutions as a major source of risk and instability in the financial system and the economy as a whole. This study examined the link between shadow banking and financial stability in South African by employing a modest desktop literature review approach. Although the shadow banking in South Africa is advantageous in terms providing alternative source of credit to support economic activities by extending banking services and investment opportunities to the unbanked as well as those who lack knowledge of how to access capital, however, issues of regulations, management and transparency have not been adequately dealt with. These create a great risk to the economy if not properly addressed. Protecting the interest and investment of customers should be a major concern of government or regulatory

### ABOUT THE AUTHORS

Kehinde Damilola Ilesanmi is a student in the Department of Economics, University of Zululand. He obtained his bachelor degree (Economics) from Adekunle Ajasin University, Nigeria and Master of Commerce (MCom) degree in Economics from University of Zululand, South Africa. He has published a number of articles ranging from energy economics to education. His current area of research is Systemic Risk and Financial Stability.

Devi Datt Tewari is Dedicated Economist, having more than 25 years of teaching, research, and consulting and managerial experience. Have taught at the Indian Institute of Management, Ahmedabad, India; University of Natal and University of KwaZulu-Natal, Durban, University of Zululand, South Africa; HEC- Montreal, Canada; and, School of Economics at the University of Shangdong, China. Major areas of research include among others natural resource economics (energy, water, and forestry); educational economics; financial economics and financial stability analysis. He has published widely in refereed international journals, chapters, and books.

### PUBLIC INTEREST STATEMENT

Shadow banks are organizations that operate outside the administrative structure of the conventional banking system. The global increase in the regulation of banks has encouraged the diversion of investment funds into less regulated institutions such as shadow banks to avoid restriction. This study examined the link between shadow banking and financial stability in South African by employing a modest desktop literature review. Although the shadow banks are good for the economy as they serve as an alternative means of making credit facilities/capital available to the common man, however, issues of control, management and transparency have not been addressed. These create a great risk to the economy if not properly addressed. Protecting the interest and investment of customers should be a major concern of government or regulatory authorities without necessarily jeopardising the interest of shadow banking operators. Also, a proper risk measurement technique that fits the shadow banking system is necessary.

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**Subjects: Regulation; Banking & Finance Law; Development Economics; Finance; Banking; Credit & Credit Institutions; Risk Management**

**Keywords: financial stability; management; shadow banking; South Africa; regulation**  
**JEL classification: G1; G2; O1; O5**

## 1. Introduction

The global increase in the regulation of banks which affect the profit margin of banks across the globe has encouraged the channeling of investment funds into less regulated institutions such as shadow banks to avoid restriction. For example, in the United Kingdom, some major financial institutions such as Barclays, RBS, HSBC, Lloyds, and Standard Chartered suffered about 40% decline in combined profit due to regulatory fines, redress of customer provisions, and accounting consequences (Reenen, 2013). Shadow banks are institutions that operate outside the regulatory framework of the traditional banking system and because of that, they do not have the same safety net as the traditional banks, although they conduct operations similar to that of the traditional banks. These among others have raised serious concerns about shadow banking institutions, especially after the recent financial crisis as bank regulators and other stakeholders within the financial sector see these institutions as a major source of risk and instability in the financial system. In addition to being a major source of risk and instability to the financial system, failure to protect customers due to the inadequate regulatory framework and proper management of such institutions pose a lot of threat to the financial system as well as the economy as a whole (Akinbami, 2011).

The financial sector in South Africa is well regulated with 19 registered banks which are legally recognized to take a deposit (Reenen, 2013). South African financial institutions were rated as the second most sound of the 144 countries surveyed by the World Economic Forum's Global Competitive Index in 2012/13 (Reenen, 2013). Despite this feat, concerns have been raised about the growth of unsecured lending, rising household debts, especially among the low-income earners (Paile, 2013). Data from the National Credit Regulator (NCR) shows that total personal loans and advances grew from R1.21 trillion in 2011 Q1 to R1.32 trillion in 2012 Q1. Of this R110 billion growth, R40 billion (36.4%) can be attributed to pure unsecured credit and a further R15 billion (13.6%) to credit facilities (Reenen, 2013).

Shadow banking is an alternative source of credit to support economic activities. It is a complement to the traditional banking sector since it provides a broader access to more people and thereby contributing to economic growth (South African Reserve Bank [SARB], 2015). Through the shadow banking system, lenders and borrowers actively transact using all forms of banking assets. In South Africa, shadow banking system accounts for about 25% of total assets in the financial system compared to the traditional banking sector (31%) and insurance and pension (40%) (SARB, 2014). It also accounts for 27%<sup>1</sup> of gross domestic product (GDP) (Table 1). A major reason for the success recorded in the shadow banking sector can be attributed to losses suffered by the banking sector during the financial crisis and tight regulatory framework (Constâncio, 2015).

Although shadow banking can be said to be advantageous as it creates a veritable channel which contributes to the financing of the real economy, spur economic growth by making financial services cheaper and more widely available, yet, issues such as customer protection and systemic risk needed to be addressed. Particularly because they perform banking functions such as maturity, liquidity transformation, and leverage thereby exposing it to the same financial risk as the traditional banks without the same degree of oversight and regulations (Financial Stability Board,

**Table 1. Shadow banking, other financial intermediaries (OFIs) and banks as a percentage of GDP at the end of 2014**

Emerging markets	Shadow banking (% of GDP)	OFIs (% of GDP)	Banks (% of GDP)
Brazil	33	60	91
China	26	29	271
India	19	17	95
Russia	4	5	109
South Africa	27	61	108

Source: Financial Stability Board (2015a).

2015a; Ghosh, Mazo and Otker-Robe, 2012). This often leads to a trade-off in terms of providing an alternative safe source of funds to the private sector and reduced financial stability (Financial Stability Board, 2015a; Ghosh et al., 2012).

The objective of this study is to examine the link between shadow banking and financial stability within the South African context as well as establishing how shadow banks can be managed or regulated. Understanding the implications of growing shadow banking system on the stability of the financial sector and the real economy is germane in order to strengthen the management oversight of this sector and as well ensure that shadow banking sector is more resilient. The approach used in this study includes a modest desktop literature review, and relying on data, particularly on South Africa and some other emerging economies for a period up to end of 2014. The rest of the paper is structured as follows: Section two provides the theoretical foundation for the study. Section three gives an overview of shadow banks in South Africa. A brief discussion on financial stability is presented in section four while the impact of shadow banking and financial stability is discussed in section five. The link between shadow banking and “credit bubbles” is discussed in section six. Conclusions and policy implications are provided in section seven.

## 2. Theoretical framework: management of shadow banking

Consumer protection is the mandate that financial regulatory authorities possess to ensure transparency and fair treatment across the entire financial institution. The aim of such authorities is to ensure sound ethical practices are adhered to in a bid to protect customers' interest and investment in the institution in the event of adverse situation (Abdulai, 2016). With the regulatory authorities given the mandate to ensure a balance of interest of customers on the one hand and credit intermediaries (shadow banks) on the other hand, consumer protection can be approached in terms of direct intervention or non-intervention (Akinbami, 2011).

The non-interventionist approach is based on the Rational Choice Theory (RCT); the efficacy of free market as a means of allocating scarce resources among the different market forces is trusted. In other words, the buyers and sellers have the freedom to bargain without external influence from the government or regulator (Akinbami & McKeenie, 2011). This is based on the proposition that given a set of choices, human beings will pick the option that will maximize their own self-interest, satisfaction or utility (Akinbami, 2011; Stigler, 1982). This is also known as the rational choice theory. This approach relies on the use information disclosure and caveat emptor as a warning to potential customers. It is believed that while making their choice, consumers have adequate information about the options before them and have the ability to process the information so as to make the right choice (Ogus, 2004). This, therefore, means that there should not be any external interference. The major weakness of this approach is that human beings do not always make a rational choice due to inadequate or incomplete information, unlimited cognitive abilities among others (Camerer, Issacharoff, Loewenstein, O'donoghue, & Rabin, 2003).

The Interventionist approach, on the other hand, is typified by a greater level of influence from the government or regulators in the management of institutions in a bid to ensuring that the interest and investment of consumers are protected. This approach involves the use of bans and regulation, altering the default rules and risk-sharing (Howells, 2005). Scholars or proponent (Camerer et al., 2003; Peter & Olson, 2008) of the interventionist approach believe that the RCT is a “simplistic theory that has little correspondence with the real world” (Akinbami & McKecnie, 2011, p. 136). They (Camerer et al., 2003; Peter & Olson, 2008) opined that choices made by human beings depend on a number of factors either directly or indirectly. Such factors include, among others psychological, socio-cultural and environment factors. All these factors put together influence decision made by an individual at any point in time. This implies that the application of the RCT does not work for all consumers all the time and in all situations (Jacoby, 2000).

Another argument put forward by the proponent of the interventionist approach to consumer protection is information inadequacy (Akinbami, 2011). The popular maxim which states that “information is power” is applicable here; consumers must have adequate knowledge of the product or services being offered. This will help them evaluate the characteristics of the product and services and be able to make right and informed decisions. However, this is not always the case because one of the parties to a transaction may deliberately try to mislead or deceive the other party. By doing so conveying false information or omitting important facts which will, in turn, hinder them from making a quality assessment of the product. Also, the fact that consumer may not be financially literate enough (in the case of shadow banks) to evaluate the authenticity of financial services rendered by such institution poses a very strong justification for regulation (Akinbami, 2011). Proper management or regulation of shadow banks will help in determining the nature of social protection provided to customers’ investment against adverse or unfavourable events. An overview of shadow banking in South Africa is given in the next section.

### 3. An overview of shadow banking in South Africa

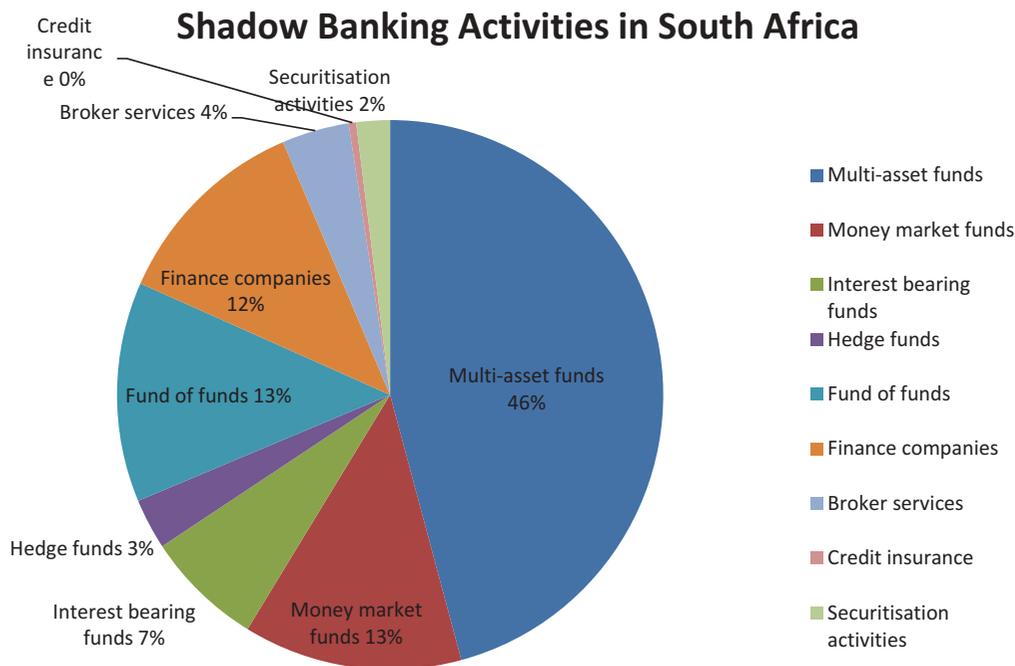
Shadow banking, a term coined in 2007 by Paul McCulley, is seen as a credit intermediation involving entities and activities outside the regular banking system which, if done properly, promote economic growth, helps in diversifying channels of credit, building competition with banks, which *ceteris paribus* drives down the cost of credit. But the reverse has been the case. There is usually a trade-off in terms of reduced financial stability (Elliott, Kroeber, & Qiao, 2015). This is because the operation of shadow banks is oftentimes at the expense of safety margin. It was a primary factor in the subprime crisis of the 2007–2008 and the global recession that followed (Krugman, 2016).

The multi-asset funds, money market funds, fixed income funds, mobile payment system, hedge funds, non-bank loan companies, microfinance companies specialising in credit provision to small enterprises, peer-to-peer lending channels, and forms of retail-oriented loan providers are the major components of shadow banking in South Africa (Hannoun, 2008; SARB, 2015, 2017). Traditional banks and investment banks also conduct some of their businesses in the shadow banking system through the structured investment vehicle (SIV) (Hannoun, 2008). A breakdown of shadow banks in activities in South Africa, which is dominated by the multi-asset funds, is presented in Figure 1. The multi-asset funds accounts for 46% of the South African shadow banking activities. This is followed by the money market funds, funds of funds which account for 13% each of the shadow banking activities. Others, such as finance companies, interest rate bearing funds, broker services, hedge funds etc. account for the remaining 28%.

There has been a significant global increase in shadow banking activities since 2000 which is as a result of increased regulation of banks (Constâncio, 2015; Li, 2014). Prior to the crisis, the US shadow banking system was estimated to the tune of \$25 trillion, although it fell to \$24 trillion in 2011 (Financial Stability Board, 2012). Globally, shadow banking system is estimated to be about \$67 trillion in 2012, \$75.2 trillion in 2013 and \$80 trillion in 2014-up from \$60 trillion in 2011 while in South Africa, it is estimated to be over R2 trillion (Donnelly, 2015;

**Figure 1. Shadow banking activities in South Africa.**

Source: SARB (2017).



Financial Stability Board, 2014; Moshinsky & Brunnsden, 2012). For emerging economies, shadow banking is growing faster than what is being experienced in developed economies (Liansheng, 2015); for example, in 2013, shadow banking sector of Argentina grew more than 50%, followed by China, Turkey and South Africa which each expanded by 20% (Liansheng, 2015). In fact, seven countries with the highest development rate were all emerging markets (Financial Stability Board, 2014). The average annual growth rate of shadow banks during 2011–2014 period for China, Russia, India, Brazil and South Africa were 48.7, 32, 17.4, 15.1 and 9.1% respectively compared to their GDP growth, which with an annual average of 11.7, 11.4, 11.3, 9.2 and 8.4% in that order (Table 2). The size of the shadow banking system is capable of creating systemic risk if the appropriate regulatory framework is not put in place to mitigate the buildup of risk.

Shadow banking in emerging markets continues to grow strongly, outpacing the banking sector growth. This is not unconnected to the rise in the pension, sovereign wealth and insurance fund as well as deepening of the financial markets (International Monetary Fund [IMF], 2014). This shadow banking sector growth is important for South Africa as an emerging market base on the need to improve financial inclusion and increase access to finance (South African Reserve Bank, 2015).

**Table 2. Annual average GDP growth rate versus shadow banking growth rates (in percentage/ annum) in emerging markets, 2011–2014**

Emerging markets	Shadow banking growth (%)	GDP growth (%)
Brazil	15.1	9.2
China	48.7	11.7
India	17.4	11.3
Russia	32.0	11.4
South Africa	9.1	8.4

Source: Financial Stability Board (2015a).

Since 2012, South Africa has been taking an active part in the financial stability monitoring exercise of shadow banking. Despite the fact that the share of total financial assets of shadow banks increased to about 24% in the fourth quarter of 2013 from about 11% in 2002, it only provides about 11% of the total credit extension (unsecured) in the South African financial system (Gillian, 2014; SARB, 2016). This unsecured lending by non-banks is very useful in assessing systemic risk. Although for South Africa, the risk posed by unsecured lending declined marginally from 11.9% at end of the second quarter in 2013 to 11.7% in January 2014 (Gillian, 2014), the rate is still high enough to put the financial as well as the whole economy at risk. For example, credit default by the customer will lead to loan loss, lower profit by banks as well as increase funding cost especially at a time like this when the nation is experiencing relatively weak economic growth, falling value of the rand and high unemployment rate (Gillian, 2014). This will negatively affect the ability of the household to service their debts.

Currently, the focus of the supervisory agency is on commercial banks, while little or no regulatory attention is being paid to property securities and other non-loan assets. Trust companies and security traders engage in activities that may be high-risk, with high returns as well which is at the expense of safety margin. Traditional banks are required to have more capital and liquidity which makes them safer, unlike shadow banks which often forego collateral protection. This makes shadow banks to be less stable and because Shadow banks are not within the safety protection net of the regulatory authority, instability in this institution can spread faster to other sectors (Pozsar, Adrian, Ashcraft, & Boesky, 2010).

Just like the traditional banks, shadow banks engage in the business of borrowing short and lending long (Adrian, 2014). Considering the money market fund where funds (liquid) contributed by investors which can be likened to bank deposits are invested in long term securities which can sometimes be up to a year for it to fully mature. Often times, small and medium scale business find it difficult to access funds from the traditional banks due to non-availability of collateral or other requirement, shadow banks can readily fill this gap thereby providing the much-needed capital to critical sectors of the economy although very risky (Łasak, 2015).

#### **4. Shadow banking and financial stability risks**

Financial stability though not an end in itself is a precondition for sustainable economic growth and employment creation (South African Reserve Bank, 2016). It refers to a financial system that is resilient to financial shock, facilitates efficient financial intermediation and mitigates the macro-economic costs of financial disruption in order to maintain confidence in the system (South African Reserve Bank, 2016). In a broader sense, it encompasses the smooth functioning of a complex nexus of relationships among financial markets and institutions operating within the given legal, fiscal and accounting framework (Gadanecz & Jayaram, 2008).

According to the definition given by the (European Central Bank [ECB], 2007; Kama, Adigun, & Adegbe, 2013) financial stability can be likened to as a condition in which the financial system which comprises of the financial intermediaries, market, and market infrastructure is capable of being resilient against shocks and unravelling financial imbalances. This helps in mitigating the tendency of disruption in the financial intermediation process which can significantly obstruct the allocation of savings to profitable investment opportunities. The global financial crisis which resulted in a substantial cost to the global economy including rising government debt, increasing unemployment etc. resulted in a policy shift from that of ensuring price stability to financial stability (Cunningham & Friedrich, 2016). This led to a global comprehensive reform agenda to ensure that the financial system is more resilient to withstand shocks and reduce the risk of future crisis (Cunningham & Friedrich, 2016).

Shadow banking often enhancing the efficiency of the financial sector by enabling risk sharing and maturity transformation but as revealed by the global financial crises, in the event of inadequate regulation, shadow banks can put the stability of the financial system at risk (Claessew et al., 2012). Considering the cost and benefit of shadow banking to the financial system, policy makers are faced

with the challenge of how to maximize its benefits while minimizing the systemic risk that it may pose to the stability of the system as well as the economy as a whole.

As noted earlier, there is usually a trade-off between shadow banking and financial stability in terms of providing a source of funds to the real economy and reduced financial stability (Elliott et al., 2015). One of the reasons for the trade-offs is that the flexibility and price competitiveness of shadow banks is usually at the expense of safety margins (Elliott et al., 2015). It was a primary factor in the US subprime crisis of the 2007–2008 and the global recession that followed (Krugman, 2016). The re-emergence of shadow banks after the 2007–2008 financial crises has raised issues with regard to the need for a strong regulatory and the management framework of these institutions. Regulation of bank-like activities outside the traditional banking sector is necessary owing to the level of risk such activities (for example, credit provision and maturity transformation) pose to the stability of the financial system as well as the entire economy. Several concerns have been raised over the establishment of shadow bank ranging from the fact that many operators of shadow banks may not be able to afford the level of capital required by the regulators to the danger that entities conducting sound and well-regulated operations will be detrimentally affected among others.

Specific risks associated with the shadow banking system are identified which clearly show the level of interconnectedness between the regular banking system and shadow banking system (Financial Stability Board, 2013a, 2015b). This will assist regulatory authorities to develop policies to mitigate such potential financial stability risks emanating from shadow banking and help to transform it into resilient market-based financing that will support sustainable economic growth. They include spill-over effects to the banking sector, Susceptibility of Money Market Funds (MMFs) to “runs”, leverage and maturity mismatch build-up by securitization, pro-cyclicality, and customer confidence (KPMG South Africa, 2014). They are explained below.

#### **4.1. Spill-over effects to the banking sector**

The shadow banking sector was not considered systemically important prior to the global financial crisis which made it less subject to regulatory oversight, unlike the formal banking sector. This made it impossible for regulators to monitor the build-up of risk and leverage within the system and were also unaware of its spill-over effects on the stability of the banking sector as well as the entire financial system as a whole (Goodspeed, 2011).

Lending and the provision of credits activities carried out shadow banks (activities outside the traditional banking system) which are usually funded by short-term liabilities may have some spill-over effects on the banking sector as there may be a problem of identifying the entities providing such credits as well as their funding profiles (IMF, 2014). This poses a great danger to the well-regulated and sound entities. For example, during booms, shadow banks may contribute substantially to asset price bubbles and also engage in risky financial activities due to less regulatory oversight status they enjoy (IMF, 2014; Pozsar, Tobias, Ashcraft, and Boesky, 2013). All these activities stress up the system which can as well be transmitted to the rest of the financial system through ownership linkages, a flight to quality, and fire sales in the event of runs (IMF, 2014). According to Adrian and Shin (2009), this stress should be managed using macro-prudential regulation through internalizing the externalities generated by the sector.

#### **4.2. Susceptibility of money market funds (MMFs) to runs**

Since shadow banks perform credit intermediation with little or no regulatory oversight, they are subject to a number of bank-like sources of risk, including run risk which is always as a result of credit exposures on the asset side consolidated with high leverage on the liability side and additional liquidity and maturity mismatches between assets and liabilities (Adrian, 2014; Ricks, 2010). In any case, these risks are typically more prominent at shadow banks since they have no formal official sector liquidity backstops and are not subject to bank-like prudential standards and supervision (Adrian, 2014; Bakk-Simon et al., 2011). Also, since shadow banks rely on short term uninsured funds, engaging in liquidity transformation will definitely make them susceptible to

“bank run” since they operate outside the safety nets available to the traditional banks. This “bank runs” can be transmitted to the traditional banking sector (to the extent of their interconnectedness) due to the dynamic nature of financial market (Bakk-Simon et al., 2011).

Prior to the financial crisis of 2007, the money market funds was believed to be immune to runs as they are seen as a major contributor to financial stability. But as revealed by the crises, inadequate regulation of the sector (Shadow banking) can make the financial system vulnerable to risk (Financial Stability Board, 2013b). For example, during the crises, shadow banking sector suffered from asset price drops in advanced economies such as the US, this was as a result of the large-scale withdrawal of funds by investors under a short notice. This makes the industry vulnerable to runs which also spread quickly to the traditional banking sector and contributed to the general financial instability that prevailed during that period (Financial Stability Board, 2013c). This calls for an increased oversight and regulation of the sector.

#### **4.3. Leverage and maturity mismatch build-up by securitization**

The shadow banking system is a credit intermediation channel that involves funding long-term lending with short term borrowing which relied on the repurchased agreement (repo) and Asset Backed Commercial Paper market. These activities can be highly leveraged in the light of the fact that these assets can be used as a guarantee to raise more finances, which can then be utilised to purchase more assets that can be utilised as securities for more finances (Ghosh et al., 2012).

This maturity mismatch combined with a high leverage ratio that often causes instability in the system just as it was experienced during the financial crisis (Brunnermeier, 2009). During periods of crises, the collateral value falls while margins increase thereby leading to an abrupt deleveraging and margin spiral which in turn threatens the provision of credit to the non-financial sector (Brunnermeier & Pedersen, 2009; Financial Stability Board, 2013c; IMF, 2014; Praet, 2012).

#### **4.4. Pro-cyclicality**

Pro-cyclicality is seen as the likelihood of transactions within the shadow banking system to perpetuate itself. Pro-cyclicality of shadow banks as revealed during the crisis includes regulatory arbitrage, mark-to-market rules, the evolution of margin requirement and lending standards relative to collateral values and the design of compensation packages although the important dimension with which they lead to pro-cyclicality is unknown (Claessens et al., 2012). This could be minimised through margins or haircuts for specific classes of assets to have minimums or to be calibrated through the cycle (Committee on the Global Financial System [CGFS], 2010; Fegatelli, 2010; Financial Stability Board, 2012; Valderrama, 2010). According to Reenen (2013), the asset-backed paper was the first to show signs of distress as the underlying assets devalued during the crisis although it was revealed that certain compensation has lured some stakeholder to over expose themselves to assets with underestimated risk. In such a situation where shadow banks play a major role in capital market intermediation, monetary policy is affected.

Furthermore, other financial intermediaries including shadow banks flourish in an environment pervaded by low-interest rate because they offer higher returns. In the event of a turn in the economic cycle, this will have a negative effect on fiscal policy as it will be challenging to bail out these non-bank financial intermediaries (Reenen, 2013). This calls for an appropriate policy response.

#### **4.5. Systemic risks**

Non-bank intermediation channels can lead to systemic risk as these institutions operate within a less regulatory framework, thereby not enjoying the safety net protection by the regulatory authorities unlike the traditional banking system (South African Reserve Bank, 2016). Systemic risks that arise through the shadow banking system can either be direct or indirect. Risks that emanate from Shadow banks’ maturity, credit, and liquidity transformation activities can be said to constitute a direct systemic risk (Bakk-Simon et al., 2011; Goodspeed, 2011). This is due to the dynamic nature of the financial market and the fact that shadow banks rely on short term funds which are not backstopped.

On the other hand, shadow banks can constitute systemic risk indirectly due to the fact that it is closely interlinked with the traditional banking system via credit intermediation. Banks often participate in shadow banking activities through their off-balance sheet transactions known as the structured investment vehicle (SIV) alongside other funds provider. Furthermore, the traditional banks also often invest in, underwrite or provide liquidity support to the debt securities issued by shadow banking entities (Goodspeed, 2011). The failure of an institution in the shadow banking sector could then generate significant contagion and affect the overall financial system stability (Ghosh et al., 2012).

#### **4.6. Customer confidence**

Instability in the banking system can be attributed to several factors ranging from both internal and external macroeconomic volatility to sharp product mix repricing (especially credit risk) which creates liquidity problems thereby lowering customer confidence (Hussein, 2010). The level of confidence customers have for banks compared to other financial and non-bank financial institutions such as shadow banking are based on several factors such as banks serve as financial intermediaries which screen potential borrowers on behalf of their depositors (Freixas & Santomero, 2003; Hussein, 2010). Banks also provide liquidity such as granting of loans and facilitating financial transaction. Banks provide adequate monitoring to minimize the rate credit defaults (Grossman, 1994; Hussein, 2010). Since shadow banks engage in short-term borrowing in the money market for long-term funding and these funds are not backstopped by the government, a loss of confidence can lead to “runs” within the system just as what happened during the 2007/08 financial crisis. Regulatory authority must ensure that adequate regulation is extended to the shadow banking sector so as to boost public confidence and as well ensure the stability of the financial system Ditto the real economy.

#### **5. Shadow banking versus credit bubbles**

While shadow banks are viewed beneficial to the economy because they provide alternative sources of credit within the economy, they can be sources of serious threat to the stability of the financial sector and the economy as a whole. For instance, Nerina Visser who is a board member of CFA South Africa said: “*some parts of shadow banking provide a significant and valuable source of non-bank finance that can support real economic activity*”. Although she stated that shadow banks pose a great risk to the stability of the system if not managed adequately. This stance was also affirmed in the speech delivered by Hendrik Nel (who is the head of the reserve bank’s Financial Stability Department) at the launch of the 2014 Financial Stability Review. Less regulated Shadow banks can serve as a means of by-passing the regulated traditional banking system thereby avoiding rules designed to prevent financial crises. Given the rapid growth of shadow banks in emerging markets including South Africa, if left without proper check is capable of creating financial bubbles thereby leading to another crisis just as it was experienced in the US in 2007 (Carney, 2014).

The source of the US “credit bubbles” could be traced to the government’s monetary and housing policy which distorted interest rate and asset prices as well as financial institutions. The problem first started as lender expanded the volume of their mortgages with high default risk which led to the rise in housing prices (White, 2009). House prices peaked and fell thereby making borrowers without adequate income relative to their debts to default due to the fact that many of them had relied on being able to borrow against the higher value in the future in order to meet their monthly mortgage payment (White, 2009). This led to a high default rate. Just like the US subprime loans, the unsecured credit which is not backed by asset is the highest in South Africa’s credit market especially for the low-income earners (Colombo, 2014). The percentage of total unsecured credit to total credit for all categories of income earners has increased since 2014 Q3 but for income earners less than R3,500 per month, as at 2015 Q3 it now represents 85.5% of total credit and 50% for all earning less than R 15, 000 per month (South African Reserve Bank, 2016).

Credit extended to household increased from 3.6% 2014 Q4 to 4.5% in 2015 Q4. Mortgage and advances to households increased to 4.4% in 2015 Q4 from 3.8% in 2014 Q4 (South African

Reserve Bank, 2016). Although Household debt as a percentage of disposable income decreased from 88.8% in 2008 to around 84.4% at the end of 2015, it is still higher than it was before the global financial crisis (South African Reserve Bank, 2016). As at December 2015, South Africa's personal debt as a percentage of GDP was 37% (South African Reserve Bank, 2016). Out of the total credit to the household sector, mortgage advances comprise of 58% of banks' total credit to households.

The South Africa's housing price surge is being financed by increased mortgage lending, which has been on the increase for the past decade, which has kept the household mortgage debt as a percentage of disposable income high (Colombo, 2014). Therefore, any house price shock tends to affect both the banking institutions and households' balance sheet thereby creating another credit bubbles. There is a high possibility that continuous credit expansion will turn into burst and banks will be faced with losses in their credit portfolio resulting from customer credit defaults.

## 6. Conclusions and policy implications

Factors responsible for the growth and successes recorded in the shadow banking sector can be attributed to losses suffered by the banking sector during the financial crisis and tight regulatory framework. The shadow banking sector is said to be advantageous in terms of extending banking services and investment opportunities to the unbanked as well as to those who lack knowledge of how to access capital respectively, however, issues about regulations and transparency have not been adequately dealt with. Furthermore, the risk posed by a high debt default rate, which is as a result of high unemployment and weak growth is another source of concern for the stability of the financial system and the economy as a whole. For example, high unemployment levels could fuel social unrest, and could result in an increase in loan defaults, and that this could hurt the banking sector and could ultimately affect South Africa's financial stability. There have been calls from policy makers and other stakeholders within the financial sector about the need to extend the traditional regulatory framework to the shadow banks, but this alone cannot solve the problem associated with shadow banking as there are unintended consequences (increased cost of compliance, diseconomies of scale which squeezes small players out of the industry) associated with increased regulation.

The continual growth of the shadow banking system has serious policy implications for regulatory authorities, stakeholders and stability of the financial system as this might lead to a state whereby we have "too big to fail" assets, funds, and investment managers just as what happened to the traditional banking sector before the 2007/08 crisis. Stability of the system thus requires a proper understanding of the nexus that exists between the traditional banking system and shadow banking as well as how they relate to the prevailing economic condition. A strategic measure such as the provision of credit to the unbanked should be taken to block the loopholes within the traditional banking sector that shadow banking sector is taking advantage of. Also, a proper risk measurement technique that fits the shadow banking system is necessary. There is a need for a close working relationship between regulatory authorities and shadow banking operators in a bid to develop a proper and responsive regulatory legislation. Shadow banking association can be formed whereby shadow banking operators manage their operations themselves in order to curb the nefarious activities of some members. This is so because it is easier for them to identify themselves as in the case of other trade associations. The regulatory authorities can then work with the executives of shadow banking associations to influence their activities. This will ensure a balance between government regulation and market competition.

In conclusion, protecting the interest and investment of customers should be a major concern of government or regulatory authorities without necessarily jeopardising the interest of shadow banking operators. This can be achieved through the development and implementation of pro-consumer protection policies for effective management of shadow banking activities within the financial system and the economy as a whole.

### Funding

The authors received no direct funding for this research.

### Author details

Kehinde Damilola Ilesanmi<sup>1</sup>

E-mail: [ilesanmi.kd@gmail.com](mailto:ilesanmi.kd@gmail.com)

ORCID ID: <http://orcid.org/0000-0003-3671-3240>

Devi Datt Tewari<sup>2</sup>

E-mail: [TewariD@unizulu.ac.za](mailto:TewariD@unizulu.ac.za)

<sup>1</sup> Department of Economics, University of Zululand, Private Bag X1001, KwaDlangezwa 3886, South Africa.

<sup>2</sup> Faculty of Commerce, Administration and law, University of Zululand, Private Bag X1001, KwaDlangezwa 3886, South Africa.

### Citation information

Cite this article as: Management of shadow banks for economic and financial stability in South Africa, Kehinde Damilola Ilesanmi & Devi Datt Tewari, *Cogent Economics & Finance* (2019), 7: 1568849.

### Note

1. As a percentage of GDP.

### Data Sources

Authors confirm that the data used in this study are available within the article and they are appropriately referenced.

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