A Legal Analysis of the Use of Innovative Technology in the Promotion of Financial Inclusion for Low-Income Earners in South Africa

H Chitimira* and PT Magau**

Online ISSN 1727-3781

P·E·R
Pioneer in peer-reviewed, open access online law publications

Authors

Howard Chitimira
Phemelo Magau

Affiliation

North-West University, South Africa

Emails

Howard.Chitimira@nwu.ac.za
ptmagau@gmail.com

Date Submission

28 October 2020

Date Revised

19 April 2021

Date Accepted

21 June 2021

Date published

30 June 2021

Editor Dr TV Warikandwa

How to cite this article

Chitimira H and Magau PT "A Legal Analysis of the Use of Innovative Technology in the Promotion of Financial Inclusion for Low-Income Earners in South Africa" *PER / PELJ* 2021(24) - DOI http://dx.doi.org/10.17159/1727-3781/2021/v24i0a10740

DOI
http://dx.doi.org/10.17159/1727-3781/2021/v24i0a10740

Abstract

The promotion of financial inclusion is important for the combating of financial exclusion in many countries, including South Africa. Nonetheless, most low-income earners living in rural areas and informal settlements are still struggling to gain access to basic financial products and financial services in South Africa. This *status quo* has been caused by a number of factors such as the absence of an adequate financial inclusion policy, the geographical remoteness of financial institutions to most low-income earners, rigid identity documentary requirements, a lack of access to reliable and affordable Internet connection by low-income earners living in informal settlements and rural areas, a lack of financial illiteracy, the high costs of financial services, unemployment and poverty, over-indebtedness, and cultural and psychological hindrances to low-income earners in South Africa. Consequently, these factors have somewhat limited the access to financial services offered by financial institutions to low-income earners living in rural areas and informal settlements. In many countries, including South Africa, the financial sector is relying on innovative technology, especially in banking institutions, to aid in the offering of financial services to their customers. It is against this background that this article discusses selected legal and related challenges affecting the regulation and use of innovative technology to promote financial inclusion for low-income earners in South Africa. The article further discusses possible measures that could be adopted by the government, financial institutions and other relevant regulatory bodies to promote the use of innovative technology to combat the financial exclusion of low-income earners in South Africa.

Keywords

Financial inclusion; financial exclusion; low-income earners; innovative technology; challenges.

……………………………………………………….

1 Introductory remarks

Financial inclusion can be defined as the provision of access to affordable and useful financial products and services offered by the government, financial institutions and other relevant stakeholders to all financial consumers, including low-income earners.[1] To promote financial inclusion the government and financial institutions must be able to create an environment where sustainable economic investment could take place in order to improve the lives of financial consumers.[2] Moreover, to achieve more financial inclusion in South Africa, a greater part of the population should have access to financial institutions and the services they offer through the use of innovative technology.[3] Innovative technology entails new products, processes and technological changes of products and processes used to deliver various financial services and banking products to financial consumers.[4] Innovative technologies include mobile banking,[5] online banking,[6] Internet banking,[7] online marketing[8] and Automated Teller Machines (ATMs).[9] Innovative technology is currently used in the banking sector since it provides a convenient, fast and cheap way of transacting as well as transparency and lower operating costs to the banks.[10] Nonetheless, the use of innovative technology has not been comprehensively regulated to promote financial inclusion and curb the financial exclusion of low-income

* Howard Chitimira. LLB (*cum laude*) LLM (UFH) LLD (NMMU). Research Professor and Professor of Securities and Financial Markets Law, Faculty of Law, North-West University, South Africa. E-mail: Howard.Chitimira@nwu.ac.za. Orcid: https://orcid.org/0000-0003-1881-1242.

** Phemelo Magau. LLB LLM (NWU). Lecturer and LLD candidate, Faculty of Law, North-West University, South Africa. E-mail: ptmagau@gmail.com. Orcid: https://orcid.org/0000-0002-1971-3401. This article was initially presented at the 2nd Annual Colloquium on Corporate and Financial Markets Law at North-West University, Faculty of Law, on 29-30 October 2020. In this regard, the author wishes to acknowledge the expert input of Prof H Chitimira.

1 Sharma *Dynamics of Indian Banking* 100; Chitimira and Ncube 2020 *Acta Universitatis Danubius* 25; Mago and Chitokwindo 2014 *MJSS* 222; Barruetabeña 2020 *Economic Bulletin, Banco de España* 1-2; Ozili 2020 *IFR* 3-4. There is no universally accepted definition of the concepts of "financial inclusion" and "financial exclusion".

2 Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 5.

3 Mohammed, Mensah and Gyeke-Dako 2017 *AFJ* 2; Williams 2017 *IJRESS* 266.

4 See related comments by Isayeva and Velieva "Consequences and Prospects" 147-149; Chavda and Solanki 2014 *IJCBM* 2319.

5 Lawack 2013 *Wash J L Tech & Arts* 319.

6 Mlitwa and Tshetsha 2012 *iBusiness* 364.

7 Singh 2004 *Aslib Proceedings* 190.

8 See Chavda and Solanki 2014 *IJCBM* 2319; also see related comments by Isayeva and Velieva "Consequences and Prospects" 147-149.

9 Mohammed, Mensah and Gyeke-Dako 2017 *AFJ* 2; Williams 2017 *IJRESS* 266.

10 Chavda and Solanki 2014 *IJCBM* 2319; Lawack 2013 *Wash J L Tech & Arts* 320.

earners in South Africa. Financial exclusion refers to the failure or inability of low-income earners to access and utilise reasonably cheap and suitable financial services in the formal financial system in a particular country.[11] In this regard, the promotion of financial inclusion is vital for the combating of financial exclusion in South Africa. This is owing to the fact that financial inclusion is also key to the development of a viable economy and stable financial markets in South Africa. Most low-income earners, especially those living in rural areas and informal settlements, are still struggling to access basic financial products and financial services in South Africa. This has been caused by several factors such as the absence of a financial inclusion policy, the geographical remoteness of financial institutions to most low-income earners,[12] rigid identity documentary requirements, a lack of access to reliable and affordable internet connection by low-income earners living in informal settlements and rural areas, financial illiteracy,[13] the high costs of financial services,[14] unemployment and poverty[15] and over-indebtedness,[16] as well as cultural and psychological hindrances to low-income earners in South Africa.[17] Moreover, most financial institutions are now constantly using innovative technology to offer financial services and financial products to financial consumers in South Africa. Accordingly, the South African government and other relevant stakeholders should adopt more sustainable measures that will advance and expedite the financial inclusion of low-income earners with the use of innovative technology.

It is against this background that this article focusses on the use and regulation of innovative technology to adequately promote financial inclusion for low-income earners in South Africa. In this regard, legal and other related challenges that may arise from the use of innovative

11 Mohammed, Mensah and Gyeke-Dako 2017 *AFJ* 2; Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy* 173; Chitimira and Ncube 2020 *Acta Universitatis Danubius* 25-26; Ngwenya, Pelser and Chivaura 2018 *SAJEMS* 3.

12 Mishi, Vacu and Chipote 2021 https://www.econrsa.org/system/files/workshops/papers/2012/mishi-financial-literacy.pdf 7-8.

13 Chibba 2009 *EJDR* 214; Emmons 2005 *St Louis U Pub L Rev* 353; Zait and Bertea 2014 *Journal of Accounting and Management* 38.

14 Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 8.

15 Chitimira and Ncube 2020 *J Afr L* 337-355; Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 4.

16 Chitimira and Ncube 2020 *J Afr L* 337-355.

17 Chitimira and Ncube 2020 *Acta Universitatis Danubius* 25-26; Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy* 173; Mago and Chitokwindo 2014 *MJSS* 222.

technology to promote financial inclusion for low-income earners in South Africa are discussed.

2 Selected legal and related challenges affecting the regulation and use of innovative technology to promote financial inclusion for low-income earners in South Africa

2.1 The lack of a specific and comprehensive legal framework for financial inclusion

Currently there is no specific legislation that deals with the regulation and use of innovative technology to promote financial inclusion for low-income earners in South Africa. For instance, financial inclusion is poorly regulated in statutes such as the *National Credit Act* (the NCA),[18] the *Financial Sector Regulation Act* (the *FSR Act*)[19] and the *Consumer Protection Act* (the CPA).[20] These statutes are often confusing and not comprehensive enough regarding the promotion of financial inclusion for low-income earners in South Africa. This lack of a specific and detailed legal framework for the promotion of financial inclusion has contributed to the low levels of financial inclusion for low-income earners in South Africa. Furthermore, the lack of a comprehensive legal framework regulating the use of innovative technology to promote financial inclusion has led most low-income earners to rely on informal financial services in South Africa.[21] This is owing to the fact that the informal financial sector provides easy access to cash which often comes at a higher interest rate than in the formal financial sector. Thus, the high interest rates that are associated with the informal financial sector threatens financial inclusion in South Africa.[22]

Nevertheless, it is encouraging to note that the NCA[23] provides for financial inclusion through the extension of credit to the poor and low-income earners who could not access credit in the past. In an effort to achieve the extension of credit to the poor and low-income earners and protect such financial

---

18 *National Credit Act* 34 of 2005 (NCA) preamble, s 3.

19 Financial Sector Regulation Act 9 of 2017 (*FSR Act*) ss 57, 58.

20 *Consumer Protection Act* 68 of 2008 (CPA) ss 3, 4.

21 De Koker and Jentzsch 2013 World *Development* 277.

22 De Koker and Jentzsch 2013 World *Development* 277.

23 Section 3(a) of the NCA provides that one of of its purposes is to promote and advance the social and economic welfare of South Africans, to promote a fair, transparent, competitive, sustainable, responsible, efficient, effective and accessible credit market and industry, and to protect consumers by promoting the development of a credit market that is accessible to all persons, and in particular, those who have historically been unable to access credit under sustainable market conditions.

consumers *inter alia* from over-indebtedness and reckless credit, the NCA has established the National Credit Regulator (NCR).[24] The NCR promotes financial inclusion for all consumers *inter alia* by making the credit market and credit industry accessible to all financial consumers, especially historically disadvantaged persons, the poor and low-income earners,[25] but the NCR is not expressly and solely empowered as a regulatory body that deals with the promotion of financial inclusion under the NCA.[26] Similarly, the CPA[27] establishes a legal framework for the achievement and maintenance of a consumer market that is fair, accessible and responsible for the benefit of all consumers including financial consumers. The *FSR Act* has also introduced the Prudential Authority (the PA)[28] and the Financial Sector Conduct Authority (the FSCA)[29] *inter alia* to have a regulatory and supervisory oversight role over financial services and financial products offered by the financial institutions with the aim of protecting the financial consumers. In this regard, the *FSR Act* obliges the PA[30] and the FSCA[31] to adopt measures that promote financial inclusion in South Africa. Such measures include promoting fair treatment and the financial education of financial consumers to enhance their financial literacy and financial inclusion.[32] However, such measures have not been adopted, and it remains to be seen whether they will be successfully adopted in order to enhance the promotion of both financial inclusion and financial education, especially for low-income earners in South Africa.

Notwithstanding these commendable legislative efforts, there are no provisions in the NCA, the CPA and the *FSR Act* that specifically regulate and promote the use of innovative technology to curb the financial exclusion of low-income earners in South Africa.[33] For instance, the *FSR Act* does not make any clear stipulation on how the FSCA may oblige financial institutions to promote financial inclusion for low-income earners in South Africa through innovative technology. To this end, the authors submit that the legislature should enact a statute that will expressly and specifically deal

---

24 See s 12 of the NCA; Chitimira and Ncube 2020 *Acta Universitatis Danubius* 30.

25 See ss 13(a)-(d) of the NCA; Chitimira and Ncube 2020 *Acta Universitatis Danubius* 30.

26 See ss 12-25 of the NCA; also see Mondlana 2017/2018 *FSB Bulletin* 16.

27 Section 3(1)(a) of the CPA.

28 The Prudential Authority (PA) is established in terms of the *FSR Act*; see ss 32-55.

29 The Financial Sector Conduct Authority (FSCA) is also another regulatory body established in terms of the *FSR Act*; see ss 56-72.

30 See s 34(1)(e) of the *FSR Act*.

31 See s 58(1)(e) of the *FSR Act*.

32 Section 57(b) of the *FSR Act*.

33 See related comments by Lawack 2013 *Wash J L Tech & Arts* 323; also see generally Chitimira and Ncube 2020 *J Afr L* 337-355.

with the use and regulation of innovative technology to promote financial inclusion in South Africa. For oversight purposes, the authors also submit that such a statute should be effectively enforced to promote financial inclusion in South Africa. Most importantly, it is submitted that such legislation should be clear on how innovative technology will be used and regulated to promote the financial inclusion of low-income earners. The issue of financial inclusion is broad, which may make it difficult for the legislature to provide single legislation on the issue. Nonetheless, the advantage of having a single piece of legislation regulating the promotion of financial inclusion through the use of innovative technology would be that it would eliminate the confusion which might result where there are different statutes dealing with the same issue. Thus, there is a need to adopt new legislation that would include provisions on the use of innovative technology to promote the financial inclusion of low-income earners in South Africa. This could increase financial inclusion through the use of innovative technology to curb the financial exclusion of low-income earners in South Africa.[34]

2.2 The poor access to financial institutions by low-income earners living in informal settlements and rural areas

The South African banking sector has undergone drastic changes and developments in recent years.[35] Most changes were related to the regulatory aspects, the offering of new financial products and financial services as well as engaging low-income earners and the previously unbanked market.[36] There has been a notable growth in the banking sector since 1994, which has led to the introduction of a number of banks and financial products to date.[37] For instance, the distribution of ATMs has increased to a network of more than 5000 branches and approximately 30 000 ATMs have been made available in most urban areas in South Africa.[38]

Notwithstanding the discussion above, most persons who reside in informal settlements and rural areas are still struggling to access bank branches and ATMs due to the uneven concentration of such financial institutions in South African urban areas.[39] Most providers of financial services and most banking institutions are still highly concentrated in urban areas rather than rural

34 Lawack 2013 *Wash J L Tech & Arts* 345.
35 Sharock *Law of Banking and Payment* 63.
36 Sharock *Law of Banking and Payment* 63.
37 Chitimira and Ncube 2020 *J Afr L* 337-355.
38 Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy* 179.
39 Rouse and Verhoef 2017 https://mpra.ub.uni-muenchen.de/78006/1/MPRA_paper_78006.pdf 10.

areas.[40] As a result, financial consumers who reside in rural areas and other informal sectors struggle to access such financial services providers and banks in their communities. Thus, despite the advent of mobile money, instant cash, the use of innovative technology and other measures that have been adopted to enhance financial inclusion, most low-income earners in rural areas and informal settlements are still largely excluded from accessing basic financial services and financial products. It is submitted that there is an uneven balance and concentration of banks and other financial institutions in urban areas rather than in rural areas and informal settlements of South Africa.[41] The aforesaid imbalance has indirectly increased the financial exclusion of low-income earners in South Africa.[42] The authors submit that more measures on the use of innovative technology that are relevant to the particular circumstances of people living in rural areas and informal settlements should be adopted to promote their financial inclusion. For instance, more ATMs should be installed in rural areas and informal settlements to ensure that financial consumers residing in such areas are not financially excluded and that they no longer have to travel a long distance to access financial services and products.

2.3 Poor access to reliable and affordable Internet facilities for low-income earners living in informal settlements and rural areas

Notably, there have been some commendable technology-related developments and changes in the manner of how banking services are offered to financial consumers in South Africa over the years.[43] Such developments include the use of websites and mobile banking apps which make banking easier, especially for the poor and low-income earners living in informal settlements and rural areas, who cannot always afford to travel to access the banking services offered by physical bank branches.[44] All these commendable developments and measures may be undertaken, but if they do not reach the intended target audience, financial inclusion will not be fully achieved, thus missing out on the golden opportunity to increase financial inclusion through the use of innovative technology to curb the financial exclusion of low-income earners in South Africa.[45] Most financial institutions provide useful information on their websites and banking apps, which are beyond the reach of those in informal settlements and rural areas

40 Chitimira and Ncube 2020 *J Afr L* 337-355.
41 Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy* 179-180, 196.
42 Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy* 180-196.
43 Sharock *Law of Banking and Payment* 63.
44 See related comments by Sharock *Law of Banking and Payment* 63.
45 Lawack 2013 *Wash J L Tech & Arts* 345.

with poor Internet connectivity. In this regard, the promotion of financial inclusion may not necessarily be an issue for financial institutions alone, but the government and other relevant stakeholders must also help to bring the financial services and products that are offered by financial institutions closer to those in informal settlements and rural areas via Internet access to avoid forcing such people to travel to urban areas to access the relevant financial services and financial products.

In South Africa, the reality is that most low-income earners living in informal settlements and rural areas have smartphones that can access the Internet and can transact or access various financial services and financial products. However, poor Internet connectivity in their areas makes it difficult for such financial consumers to access various financial services and financial products without travelling to the physical branches of the financial service providers. Accordingly, poor Internet connectivity negatively affects the promotion of financial inclusion for low-income earners in South Africa. In this regard, the Independent Communications Authority of South Africa (ICASA)[46] must address the issues of high data costs to allow people in informal settlements and rural areas to easily access financial services and financial products. Financial institutions, government and other relevant stakeholders must ensure that financial services and financial products are easily accessible to the poor and low-income earners in informal settlements and rural areas in South Africa *inter alia* through the provision of stable Internet access and cheap data costs to the low-income earners in informal settlements and rural areas.

2.4 Financial illiteracy and the lack of appropriate financial education

Financial literacy is defined as the knowledge, ability and opportunity to make sound money management choices by financial consumers to improve their finances.[47] Put differently, financial literacy refers to the ability to make well-informed judgements and decisions about the management of one's finances, taking into account any change that could occur in economic events and/or related aspects.[48] On the contrary, financial illiteracy is the inability of financial consumers to manage their cash, payments and future

46 ICASA is an independent regulatory body established in 2000 by the *Independent Communications Authority of South Africa Act* 13 of 2000 (*ICASA Act*) to regulate both the telecommunications and broadcasting sectors in the public interest. See ss 3 and 4 of the *ICASA Act*.

47 Section 1 of the NCA as amended by the *National Credit Amendment Act* 7 of 2019; see Coetzee 2018 *THRHR* 609.

48 See Zait and Bertea 2014 *Journal of Accounting and Management* 37, 38.

financial needs.[49] Although financial consumers may take high-risk financial decisions with the relevant information, the consistent and robust promotion of financial education is needed to help low-income earners with the management of their finances. On the other hand, the term financial education is not adequately defined in any piece of legislation that relates to financial inclusion and the protection of financial consumers in South Africa.[50] Nonetheless, financial education could entail the process by which financial consumers or investors improve their understanding of financial products, concepts and risks, through information, instruction and/or objective advice from financial service providers.[51] Financial education is given to financial consumers to develop their skills and confidence to become more aware of financial risks and opportunities, to make informed financial decisions, to know where to go for help and to take other effective actions to improve their financial well-being.[52]

The financial sector is becoming more innovative and at the same time more complicated for financial consumers.[53] This places a substantial burden on them regarding their financial decision making and management. The poor promotion of financial education by financial institutions, the government and/or other relevant stakeholders remains a huge challenge for the majority of financial consumers, especially low-income earners in South Africa.[54]

In South Africa, financial illiteracy problems stem from poor planning, lack of financial planning, and a lack of relevant knowledge and understanding of the various financial products at the disposal of financial consumers.[55] Such problems are caused by a lack of financial education initiatives and

---

49 Emmons 2005 *St Louis U Pub L Rev* 353; also see Zait and Bertea 2014 *Journal of Accounting Management* 38.

50 See ss 3, 4, 60-66 and 72 of the NCA; also see ss 57(b) and 58 of the *FSR Act*; also see ss 3, 4 and 8-78 of the CPA, which relate to supposedly helping financial consumers to make better informed decisions and judgements regarding their finances.

51 OECD *Improving Financial Literacy*; also see Akpinar and Koch *Contemporary Educational Researches* 21.

52 OECD *Improving Financial Literacy*; also see Akpinar and Koch *Contemporary Educational Researches* 21.

53 Nanziri and Leibbrandt 2018 *SAJEMS* 1; Prinsloo 2019 https://www.ebnet.co.za/single-post/2019/09/20/Barriers-to-achieving-financial-literacy-in-South-Africa; Prinsloo 2019 https://www.iol.co.za/personal-finance/opinion-the-high-cost-of-financial-illiteracy-33319438.

54 See related comments in Sibanda and Sibanda *Financial Education* 5; also see Ssebagala 2017 *Journal of Financial Counseling and Planning* 237.

55 See Sibanda and Sibanda *Financial Education* 1, 5; Ssebagala 2017 *Journal of Financial Counselling and Planning* 235, 237.

programmes for financial consumers.[56] Most low-income earners do not have the appropriate financial education to understand basic financial services and financial products in South Africa.[57] They are susceptible to taking up financial services they do not understand and end up being over-indebted due to a lack of appropriate financial education to equip them financially.[58] Financial education must be promoted through the use of innovative technology by the government, regulatory bodies and other relevant stakeholders to enable financial consumers to understand the array of financial services and financial products available in South Africa.[59] In addition to this, financial education should be promoted through non technology-orientated methods of providing information such as regular site visits to rural areas, and the use of community newspapers and community radio to provide rural communities with financial education. Moreover, the government, regulatory bodies and other relevant stakeholders should find other innovative means to make information about financial products and services easy to understand to all financial consumers. This would ensure that financial consumers were better positioned to make sound financial choices and decisions. There is a strong possibility that the majority of consumers who are financially illiterate and end up taking high-cost loans owing to their limited financial education, which would result in over-indebtedness.[60] It is important that the government, regulatory bodies and other stakeholders equip low-income earners with knowledge on saving and money management. This would help not only to avoid the over-indebtedness of such consumers but also to ensure that they are not financially excluded from accessing the basic financial services and financial products available in South Africa.[61] The lack of appropriate financial education and the poor use of innovative technology could have contributed to the financial exclusion of low-income earners in South Africa.[62]

56 Sibanda and Sibanda *Financial Education* 5.

57 The problem of financial illiteracy is not restricted to low-income earners. Even members of the middle classes and the rich are ignorant of the basic financial services and products at their disposal. See Chitimira and Ncube 2020 *Acta Universitatis Danubius* 27; see related comments in Nanziri 2016 *Journal of African Development* 110-114.

58 Rootman and Antoni 2015 *JEF* 475.

59 Mishi, Vacu and Chipote 2021 https://www.econrsa.org/system/files/workshops/papers/2012/mishi-financial-literacy.pdf 2.

60 Lusardi and Mitchell 2014 *JEL* 25.

61 Wentzel "Financial Literacy in South Africa" 329, 332; Arun and Kamath 2015 *IIM Bangalore Management Review* 271.

62 Chitimira and Ncube 2020 *Acta Universitatis Danubius* 25.

One of the objectives of the enactment of the NCA was to balance the negotiating power between consumers and creditors through consumer education.[63] The aim was to help consumers to make better financial decisions regarding how they manage their finances and make use of credit.[64] In addition, the NCA also established the NCR to implement financial literacy programmes to enlighten consumers so that they could make informed financial decisions.[65] Notwithstanding this, only about 50% of the adult population in South Africa is financially literate.[66] Low-income earners form a small fraction of this percentage. The offering of financial education as provided under the NCA[67] is vague in that the standard of training to be provided to financial consumers is not outlined in the Act.[68] Moreover, the infrastructure to carry out this obligation by the NCR is also currently not in place.[69] The omission of the standard of training required in terms of the NCA might cause confusion to financial consumers, who have different backgrounds and varying levels of education.[70] Moreover, the NCA is silent on how financial education is to be promoted and enforced. This lack of clarity of the policy provided under the NCA negatively affects the promotion of financial education for low-income earners in South Africa.

The *FSR Act*[71] established the FSCA as one of the institutions responsible amongst other things for consumer protection, consumer financial literacy and financial education.[72] The FSCA came into operation in 2018, replacing the Financial Services Board (FSB). However, the FSCA has not yet done much to promote financial education in South Africa. The FSCA has not yet adopted adequate initiatives to effectively promote financial education

63 Section 3(e) of the NCA; Atkinson and Messy *Promoting Financial Inclusion* 15.

64 See s 3(e) of the NCA; Atkinson and Messy *Promoting Financial Inclusion* 15.

65 See ss 12-25 of the NCA; also see Mondlana 2017/2018 *FSB Bulletin* 16.

66 Nanziri and Leibbrandt 2018 *SAJEMS* 6.

67 Section 87A(2)(b) of the NCA, when the NCR considers an application for debt intervention and the National Consumer Tribunal (NCT) makes a suspension order the debtor is required to complete a programme on financial literacy; Magau *Statutory Analysis of Debt Relief Measures* 63.

68 Sections 86A(5)(a) and (b) of the NCA; Magau *Statutory Analysis of Debt Relief Measures* 63.

69 The NCA was amended in August 2019 by the *National Credit Amendment Act* 7 of 2019, which is not yet fully enforceable; accordingly, debt intervention has not yet come into force, because the NCR does not yet have the capacity to carry out its obligations in terms of this new debt relief measure. Currently, NCR offices may be found only in Gauteng, Midrand. South Africa has nine provinces and the NCR does not have offices in each of these nine provinces, which might make it difficult for it to relate to financial consumers.

70 See Coetzee 2018 *THRHR* 609; also see Leathern *Consideration of the Proposed Debt Intervention Procedure* 65.

71 See s 57 of the *FSR Act*.

72 Section 57(b)(ii) of the *FSR Act*; Godwin 2018 *LFMR* 151-152.

amongst low-income earners in South Africa. Under the FSB, financial literacy levels were at approximately 49% in 2017.[73] Currently, most low-income earners are yet to receive appropriate financial education on how to access basic financial services and productsin South Africa.[74] In this regard, it is submitted that the FSCA should adopt a robust approach to enhancing the promotion of financial education and enable all financial customers to make informed financial decisions in order to avoid over-indebtedness and other related challenges in South Africa.[75] For instance, the FSCA could roll out financial education programmes through innovative technology, the Internet and media platforms such as television, radio and the print media. Over-indebtedness[76] could also be curbed by financial education to discourage reckless borrowing and lending amongst low-income earners and other financial consumers in South Africa.[77]

The CPA[78] was promulgated *inter alia* to curb the challenges of financial literacy that discourage low-income earners from accessing financial services and financial products in South Africa.[79] The CPA has established Provincial Consumer Affairs Offices (PCAOs) across South Africa to provide financial consumers with financial education, advice and information to enhance their financial literacy.[80] However, the levels of over-indebtedness among low-income earners remains high in South Africa.[81] This indicates that most low-income earners still need proper financial education. The CPA has not been robustly and consistently applied to address the problem of financial illiteracy among financial consumers, including low-income earners in South Africa. Consequently, there is a need for law reform to ensure that financial education is consistently and robustly promoted, especially among low-income earners in South Africa.

Despite some commendable efforts to promote financial education to curb financial illiteracy and financial exclusion, most South African low-income earners remain financially illiterate and financially excluded. In this regard, it is submitted that the use of innovative technology and media platforms such as radio and television interviews could enhance financial consumer

73 Nanziri and Leibbrandt 2018 *SAJEMS* 7.
74 See Chitimira and Ncube 2020 *Acta Universitatis Danubius* 27.
75 See Wentzel "Financial Literacy in South Africa" 329.
76 See s 3(g) of the NCA; Magau *Statutory Analysis of Debt Relief Measures* 50.
77 Sibanda and Sibanda *Financial Education* 1, 5, 6.
78 See s 3(1)(a)-(f) of the CPA.
79 See s 3(1)(a)-(f) of the CPA.
80 According to section 3 of the CPA, by implication, the PCAOs were established to ensure that uneducated financial consumers are equipped with financial knowledge so that well-informed financial decisions are made.
81 Nanziri and Leibbrandt 2018 *SAJEMS* 6.

literacy and increase financial inclusion in South Africa.[82] Neither the NCR nor the FSCA has adopted any robust innovative technology measures to promote financial education. For instance, since its inception in 2017 the FSCA has not yet achieved any desirable success in providing adequate financial education and financial literacy to increase financial inclusion.[83] Likewise, the NCR has been struggling to adopt innovative ways to promote financial education through sustainable programmes, workshops, conference presentations, brochures, radio and television interviews to enhance financial consumer literacy and increase financial inclusion in South Africa.[84] Innovative technology could be adopted and optimised to bridge the gaps which exist in the role played by the regulatory bodies to promote financial education to the low-income earners and curb financial exclusion in South Africa. For instance, online campaigns and programmes on television and radio on how to spend money wisely, invest appropriately and save smartly should be implemented by the NCR, the FSCA and other regulatory bodies in South Africa. This could also benefit the financial sector and be seen as an online marketing strategy that benefits both financial services providers and financial consumers. Thus, financial education and inclusion could be promoted through online marketing campaigns.

2.5 Mistrust of formal financial institutions and the fear of fraud by low-income earners

According to Schmulow, most low-income earners in South Africa have very minimal or no trust at all in the formal banking sector.[85] This has contributed to their exclusion as they are reluctant to open bank accounts.[86] Transparency and honesty are crucially important in the financial sector, to increase the confidence of consumers. To this end, financial institutions must have financial integrity and enhance the promotion of financial

---

82 See ss 13(a)-(c) and 16(1)(a)-(c), read with s 12 of the NCA; also see Pearson, Stoop and Kelly-Louw 2017 *PELJ* 14.

83 Chitimira and Ncube 2020 *J Afr L* 337-355.

84 Chitimira and Ncube 2020 *J Afr L* 337-355; see Sibanda and Sibanda *Financial Education* 1, where it is submitted that the NCR made great efforts to reach financial consumers through various financial education initiatives between 2013 and 2014 in South Africa. Notwithstanding this, the NCR has managed to reach only approximately half of the total population of South Africa with its financial education programmes to date. This is not entirely commendable, considering that low-income earners form only a fraction of the people who have sufficient financial education in South Africa.

85 Schmulow 2016 *Competition and Consumer Law Journal* 8; see related comments by Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 5; also see Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 8-15.

86 Mondlana 2017/2018 *FSB Bulletin* 16; Nanziri and Leibbrandt 2018 *SAJEMS* 11.

inclusion for low-income earners, who have limited disposable income.[87] If financial institutions have financial integrity financial customers will have trust and confidence in the formal financial sector and this could increase financial inclusion.

The most recent incident which contributed to the mistrust of the financial institutions in South Africa was the Experian data breach.[88] Experian is a consumer credit reporting company that experienced a breach of data that exposed some of the personal information of about 24 million people and about 793 749 business entities in South Africa to a suspected fraudster.[89] Another incident was the recent mismanagement and embezzlement of funds at the Venda Building Society (VBS) Mutual Bank.[90] Incidents of this nature contribute to the mistrust of the banking sector by financial consumers, especially low-income earners. Consequently, most financial consumers end up resorting to using cash to transact as a way of avoiding dealing with banks and other financial institutions.[91] A reliance on cash to transact increases the possibility of reckless spending by low-income earners. The use of cash does not inculcate a culture of saving money among financial consumers and it discourages financial inclusion in South Africa.[92]

Although most low-income earners do not prefer using online banking and mobile money due to fears of being exposed to fraudulent activities,[93] the use of innovative technology could go a long way towards the promotion of financial inclusion for low-income earners in South Africa. It is submitted that the use of innovative technology, such as artificial intelligence (AI) could enhance financial transactions and increase the financial inclusion of the poor and low-income earners. AI measures could also be utilised to curb financial crimes such as corporate fraud, market abuse and money laundering. AI could include computer systems which could acquire

87 Ncube *Statutory Regulatory Analysis of Financial Inclusion* 10.

88 Staff Writer 2020 https://businesstech.co.za/news/technology/431484/personal-information-of-south-africans-posted-on-dark-web-after-major-data-breach-heres-what-leaked/.

89 Staff Writer 2020 https://businesstech.co.za/news/technology/431484/personal-information-of-south-africans-posted-on-dark-web-after-major-data-breach-heres-what-leaked/.

90 Kgosana and Afrika 2018 https://www.businesslive.co.za/bd/companies/financial-services/2018-06-24-the-great-vbs-bank-heist/; Masondo and Van Rensburg 2018 https://www.news24.com/citypress/business/how-vbs-was-plundered-20181208-4.

91 Ncube *Statutory Regulatory Analysis of Financial Inclusion* 75.

92 Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 6.

93 Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 3; Ncube *Statutory Regulatory Analysis of Financial Inclusion* 75.

knowledge from the input of experiences and provide solutions to complicated problems in different situations.[94] AI computer systems can perform tasks that were previously thought to be capable of being performed only by humans.[95] Notable advancements made by AI applications include innovative ways and means of crime detection, for instance, by the use of automated facial recognition (AFR) technology. AI can be used to promote financial education and financial inclusion for low-income earners in South Africa.[96] Currently, AI is not specifically regulated in any legislation in South Africa. In this regard, it is submitted that the legislature should consider enacting a robust statute to regulate the use of AI to promote financial inclusion in South Africa. In addition, financial institutions should consider investing in innovative technology that is fast, robust, efficient, affordable and more secure to financial consumers to promote financial inclusion in South Africa.

2.6 Challenges in complying with identity document requirements

Most low-income earners are financially excluded from opening bank accounts and accessing other financial products owing to the strict and often cumbersome requirements relating to the possession of identity documents.[97] Banks are further required to know and establish the identity of their customers and satisfy the customer due diligence requirements through keeping and documenting the information of their customers under the *Financial Intelligence Centre Act*.[98] This process often discourages low-income earners from opening bank accounts owing to the fact that they usually do not have the required documents to open and access bank accounts.[99] Banks usually require certain documents including *inter alia* valid identity documents, bank statements, proof of income, proof of residence and a minimal balance prior to the opening of an account, and most of the poor and low-income earners do not have such documents.[100] Moreover, the process of approval for new bank accounts often takes too long. This discourages most low-income earners from having bank accounts

94 Aldrich 2000 *SAJCE* 27; Kadameteme and Twinomurinzi 2019 *Open Innovations* 252-261.

95 Norwegian Data Protection Authority *Report* 5.

96 Van der Merwe *et al Information Communication Technology Law* 368.

97 Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 8.

98 See ss 21, 22 and 22A of the *Financial Intelligence Centre Act* 38 of 2001 (FICA); also see Karlan, Ratan and Zinman 2014 *Review of Income and Wealth* 45-46.

99 Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 8.

100 Karlan, Ratan and Zinman 2014 *Review of Income and Wealth* 46; Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 9.

and accessing other financial services and financial products. Banks also have strict identity document requirements for the granting of loans, which further discourages low-income earners from accessing such loans.[101] As a result, most low-income earners end up resorting to informal credit providers which offer instant cash with no lengthy procedural requirements.[102] Although the financial assistance from informal sources is offered without daunting documentary requirements for the low-income earners, it often comes at high interest rates.[103] In this regard, the authors submit that the adoption of innovative technology that can streamline the process of gathering financial consumer information could help to promote financial inclusion for the low-income earners in South Africa. For instance, banks could also adopt online marketing strategies that require fewer documentary requirements for bank accounts. This could promote financial inclusion for low-income earners, who are often excluded owing to the fact that they do not possess the relevant documents required to open bank accounts.

2.7 Over-indebtedness as a threat to financial inclusion for low-income earners

Most low-income earners in South Africa are over-indebted and struggle to extract themselves from their debts.[104] Over-indebtedness occurs when a financial consumer is unable to timeously satisfy all the accrued debt obligations under any credit agreement and/or facility to which he or she is a party.[105] Many South African households rely too much on credit for their day-to-day needs.[106] Most of this credit emanates from informal sources such as stokvels, loan sharks (who charge high interest rates) and borrowing from family and friends.[107] These informal credit sources remain unregulated and detrimental to the promotion of financial inclusion for low-

101 Chitimira and Ncube 2020 *J Afr L* 337-355; Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 9.

102 Chitimira and Ncube 2020 *J Afr L* 337-355; Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 9.

103 De Koker 2006 *Journal of Financial Crime* 27; Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 9; Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 6.

104 Sibanda and Sibanda *Financial Education* 10.

105 Section 79(1) of the NCA; also see De Wet, Botha and Booyens 2015 *JEF* 84.

106 Ssebagala 2017 *Journal of Financial Counseling and Planning* 236; Chitimira and Magau 2020 *Euro Economica* 211.

107 Storchi 2018 http://saveact.org.za/wp-content/uploads/2018/11/FMT_Stokvels-and-SGs-Report_10-October-2018_final.pdf 3; Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa 6; De Koker 2006 *Journal of Financial Crime* 27; Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ 9.

income earners in South Africa.[108] Moreover, most of them struggle to extract themselves from their over-indebtedness due to several factors such as inaccessible debt relief measures, unemployment, poverty, limited disposable income and high bank fees.[109] Consequently, low-income earners end up seeking credit loans from informal sources that often charge high interest rates.[110] In this regard, it is submitted that the use of innovative technology that could detect the reckless granting of credit could militate against the financial exclusion of low-income earners in South Africa. At the end of December 2019, the credit bureaus had records of more than 55.07 million individuals on their databases in South Africa.[111] From these records, there were 25.20 million (45.76%) credit-active financial consumers.[112] Credit-active consumers are consumers who are obliged by authorities such as the NCR to pay their creditors.[113] Despite these catastrophic statistics of over-indebtedness in South Africa, the NCR has to date failed to adopt robust and consistent measures to curb over-indebtedness and prohibit the reckless granting of credit to low-income earners.[114] In this regard, it is submitted that the NCR must carefully monitor the consumer credit market and credit industry[115] through adopting and using innovative technology measures that can detect any reckless credit granting to low-income earners in South Africa.

3 Concluding remarks

More still needs to be done to promote financial inclusion for low-income earners in South Africa. Accordingly, the South African government, the regulatory bodies and other relevant stakeholders must address all the challenges and flaws affecting the regulation and promotion of financial inclusion for low-income earners, as indicated above. In this regard, policy makers should consider introducing adequate measures to encourage the use of innovative technology to promote financial inclusion for low-income earners in South Africa. Policy makers should further consider enacting specific legislation that deals with the regulation of financial inclusion in South Africa to curb the financial exclusion of low-income earners. Such legislation should clearly outline how innovative technology could be used

---

108 Verhoef 2001 *Historia* 523; Wentzel, Diathab and Yadavallic 2016 *Development Southern Africa* 203-212.

109 Ssebagala 2017 *Journal of Financial Counseling and Planning* 236.

110 Chitimira and Ncube 2020 *J Afr L* 337-355.

111 NCR 2019 https://www.ncr.org.za/documents/CBM/CBM%20Q4%202019.pdf.pdf 2.

112 NCR 2019 https://www.ncr.org.za/documents/CBM/CBM%20Q4%202019.pdf.pdf 2.

113 NCR 2019 https://www.ncr.org.za/documents/CBM/CBM%20Q4%202019.pdf.pdf 8.

114 Sections 3(c)(i) and (ii) of the NCA; De Wet, Botha and Booyens 2015 *JEF* 83; Pearson, Stoop and Kelly-Louw 2017 *PELJ* 12.

115 See ss 14-15 read with ss 16-25 of the NCA.

to promote financial education and financial inclusion in South Africa. Innovative technology could also be used to enhance the accessibility of financial services and financial products in rural areas and informal settlements in South Africa. Moreover, more banks, financial institutions and ATMs should be introduced in rural areas and informal settlements to increase the access to financial services and financial products for the poor and low-income earners.

The government, financial institutions and other relevant stakeholders must take adopt appropriate measures to improve Internet access and connectivity in the rural areas and informal settlements to effectively promote financial inclusion for low-income earners in South Africa. In this regard, the government and the ICASA[116] must incentivise and reduce data costs for people in rural areas and informal settlement so as to promote financial inclusion.

Regulatory bodies such as the NCR and the FSCA should adopt innovative ways of promoting financial education through sustainable programmes, workshops, conference presentations, brochures, radio and television interviews to enhance and increase financial inclusion in South Africa.[117] Online campaigns and programmes on television and radio media platforms on how to spend money wisely, invest appropriately and save smartly should be implemented by the NCR, the FSCA and other financial institutions. It is further submitted that financial institutions should invest more in AI and other innovative technology that protects the confidential information of their consumers, to encourage all people to trust in the banks and the formal financial sector.

It is submitted that innovative technology should be used to streamline the process of gathering financial information by banks so as to promote financial inclusion of low-income earners in South Africa. This would promote financial inclusion for low-income earners, who are often excluded due to their lack of the required documentation for the opening of bank accounts. Moreover, this would discourage low-income earners from relying on the informal financial sector, which charges high interest rates for most

116 See ss 3 and 4 of the *ICASA Act*; Oke and Fernandes 2020 *Journal of Open Innovation* 1-22.

117 Chitimira and Ncube 2020 *J Afr L* 337-355; see Sibanda and Sibanda *Financial Education* 1, where it is submitted that the NCR made great efforts to reach financial consumers through various financial education initiatives between 2013 and 2014. Nevertheless, the NCR has to date managed to reach only approximately half of the total population of South Africa with its financial education programmes. This is not entirely commendable, considering that the low-income earners only form a fraction of the people who have sufficient financial education in South Africa.

financial services and financial products. It is further submitted that the NCR, the FSRA and other relevant bodies must utilise innovative technology to detect and curb the reckless granting of credit and over-indebtedness in order to promote the financial inclusion of the poor and low-income earners in South Africa.

Bibliography

Literature

Akpinar and Koch *Contemporary Educational Researches*
Akpinar ND and Koch S *Contemporary Educational Researches: Theory and Practice in Education* (Books on Demand Norderstedt 2019)

Aldrich 2000 *SAJCE*
Aldrich C "What is AI and is It Better than Classical Process Control?" 2000 *SAJCE* 27-49

Arun and Kamath 2015 *IIM Bangalore Management Review*
Arun T and Kamath R "Financial Inclusion: Policies and Practices" 2015 *IIM Bangalore Management Review* 267-287

Atkinson and Messy *Promoting Financial Inclusion*
Atkinson A and Messy F *Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice - OECD Working Papers on Finance, Insurance and Private Pensions No 34* (OECD Paris 2013)

Barruetabeña 2020 *Economic Bulletin, Banco de España*
Barruetabeña E "Impact of New Technologies on Financial Inclusion" 2020 *Economic Bulletin, Banco de España* 1-14

Chavda and Solanki 2014 *IJCBM*
Chavda M and Solanki A "Innovative Banking Products: Win-Win Situation for Customers and Banks" 2014 *IJCBM* 2319-2828

Chibba 2009 *EJDR*
Chibba M "Financial Inclusion, Poverty Reduction and the Millennium Development Goals" 2009 *EJDR* 213-230

Chitimira and Magau 2020 *Euro Economica*
Chitimira H and Magau P "An Analytical Precis of Debt Relief Measures under the Insolvency Act 24 of 1936" 2020 *Euro Economica* 210-227

Chitimira and Ncube 2020 *J Afr L*
Chitimira H and Ncube M "Legislative and Other Selected Challenges Affecting Financial Inclusion for the Poor and Low Income Earners in South Africa" 2020 *J Afr L* 337-355

Chitimira and Ncube 2020 *Acta Universitatis Danubius*
Chitimira H and Ncube M "The Role of Regulatory Bodies and Other Role-Players in the Promotion of Financial Inclusion in South Africa" 2020 *Acta Universitatis Danubius, Juridica* 24-37

Coetzee 2018 *THRHR*
Coetzee H "An Opportunity for No Income No Asset (NINA) Debtors to Get Out of Check? An Evaluation of the Proposed Debt Intervention Measure" 2018 *THRHR* 593-611

De Koker 2006 *Journal of Financial Crime*
De Koker L "Money Laundering Control and Suppression of Financing of Terrorism: Some Thoughts on the Impact of Customer Due Diligence Measures on Financial Exclusion" 2006 *Journal of Financial Crime* 26-50

De Koker and Jentzsch 2013 *World Development*
De Koker L and J Jentzsch "Financial Inclusion and Financial Integrity: Aligned Incentives?" 2013 *World Development* 267-280

De Wet, Botha and Booyens 2015 *JEF*
De Wet S, Botha I and Booyens M "Measuring the Effect of the National Credit Act on Indebtedness in South Africa" 2015 *JEF* 83-104

Emmons 2005 *St Louis U Pub L Rev*
Emmons WR "Consumer-Finance Myths and Other Obstacles to Financial Literacy" 2005 *St Louis U Pub L Rev* 335-362

Godwin 2018 *LFMR*
Godwin A "Introduction to Special Issue – The Twin Peaks Model of Financial Regulation and Reform in South Africa" 2018 *LFMR* 151-153

Isayeva and Velieva "Consequences and Prospects"
Isayeva PG and Velieva MS "Consequences and Prospects of Using Innovative Technologies in Banks" in *International Scientific Conference* (28-30 April 2013 Salzburg) 147-150

Kadameteme and Twinomurinzi 2019 *Open Innovations*
Kadameteme E and Twinomurinzi H "The Ineffectiveness of Technology Adoption Models in the 4IR Era: A Case of SMEs in South Africa" 2019 *Open Innovations* 252-261

Karlan, Ratan and Zinman 2014 *Review of Income and Wealth*
Karlan D, Ratan AL and Zinman J "Savings by and for the Poor: A Research Review and Agenda" 2014 *Review of Income and Wealth* 36-78

Lawack 2013 *Wash J L Tech & Arts*
Lawack VA "Mobile Money, Financial Inclusion and Financial Integrity: The South African Case" 2013 *Wash J L Tech & Arts* 317-346

Leathern *Consideration of the Proposed Debt Intervention Procedure*
Leathern R *Consideration of the Proposed Debt Intervention Procedure from a Debt Relief Perspective* (LLM-dissertation University of Pretoria 2018)

Louis and Chartier 2017 *Journal of Comparative Urban Law and Policy*
Louis L and Chartier F "Financial Inclusion in South Africa: An Integrated Framework for Financial Inclusion of Vulnerable Communities in South Africa's Regulatory System Reform" 2017 *Journal of Comparative Urban Law and Policy* 170-196

Lusardi and Mitchell 2014 *JEL*
Lusardi A and Mitchell OS "The Economic Importance of Financial Literacy: Theory and Evidence" 2014 *JEL* 5-44

Magau *Statutory Analysis of Debt Relief Measures*
Magau PT *A Statutory Analysis of Debt Relief Measures for Low-Income Earners in South Africa* (LLM-dissertation North-West University 2019)

Mago and Chitokwindo 2014 *MJSS*
Mago S and Chitokwindo S "The Impact of Mobile Banking on Financial Inclusion in Zimbabwe: A Case for Masvingo Province" 2014 *MJSS* 221-230

Mlitwa and Tshetsha 2012 *iBusiness*
Mlitwa N and Tshetsha N "Adoption of Cell-Phone Banking among Low-Income Communities in Rural Areas of South Africa" 2012 *iBusiness* 362-370

Mohammed, Mensah and Gyeke-Dako 2017 *AFJ*
Mohammed JI, Mensah L and Gyeke-Dako A "Financial Inclusion and Poverty Reduction in Sub-Saharan Africa" 2017 *AFJ* 1-22

Mondlana 2017/2018 *FSB Bulletin*
Mondlana S "Role of Language in Financial Inclusion and Literacy" 2017/2018 Quarter 4 *FSB Bulletin* 1-16

Nanziri 2016 *Journal of African Development*
Nanziri EL "Financial Inclusion and Welfare in South Africa: Is there a Gender Gap?" 2016 *Journal of African Development* 109-134

Nanziri and Leibbrandt 2018 *SAJEMS*
Nanziri EL and Leibbrandt M "Measuring and Profiling Financial Literacy in South Africa" 2018 *SAJEMS* 1-17

Ncube *Statutory Regulatory Analysis of Financial Inclusion*
Ncube M *A Statutory Regulatory Analysis of Financial Inclusion for the Poor and Low-Income Earners in South Africa* (LLM-dissertation North-West University 2018)

Ngwenya, Pelser and Chivaura 2018 *SAJEMS*
Ngwenya B, Pelser T and Chivaura T "Perceptions of Post-Multicurrency Regime Financial Inclusion Confidence Challenges in Zimbabwe" 2018 *SAJEMS* 1-15

Norwegian Data Protection Authority *Report*
Norwegian Data Protection Authority *Report on Artificial Intelligence and Privacy* (Norwegian Data Protection Authority Oslo 2018)

OECD *Improving Financial Literacy*
Organisation for Economic Co-operation and Development *Improving Financial Literacy: Analysis of Issues and Policies* (OECD Paris 2005)

Oke and Fernandes 2020 *Journal of Open Innovation*
Oke A and Fernandes FAP "Innovations in Teaching and Learning: Exploring the Perceptions of the Education Sector on the 4th Industrial Revolution (4IR)" 2020 *Journal of Open Innovation: Technology, Market and Complexity* 1-22

Ozili 2020 *IFR*
Ozili PK "Optimal Financial Inclusion" 2020 *IFR* 1-18

Pearson, Stoop and Kelly-Louw 2017 *PELJ*
Pearson G, Stoop PN and Kelly-Louw M "Balancing Responsibilities-Financial Literacy" 2017 *PELJ* 1-55

Rootman and Antoni 2015 *JEF*
Rootman C and Antoni X "Investigating Financial Literacy to Improve Financial Behaviour among Black Consumers" 2015 *JEF* 474-494

Schmulow 2016 *Competition and Consumer Law Journal*
Schmulow AD "Curbing Reckless and Predatory Lending: A Statutory Analysis of South Africa's National Credit Act" 2016 *Competition and Consumer Law Journal* 1-24

Sharma *Dynamics of Indian Banking*
Sharma M *Dynamics of Indian Banking: Views and Vistas* (Atlantic Publishers and Distributors New Delhi 2008)

Sharrock *Law of Banking and Payment*
Sharrock R *The Law of Banking and Payment in South Africa* (Juta Cape Town 2016)

Sibanda and Sibanda *Financial Education*
Sibanda S and Sibanda T *Financial Education in South Africa: Overview of Key Initiatives and Actors* (International Labour Organisation Geneva 2016)

Singh 2004 *Aslib Proceedings*
Singh AM "Trends in South African Internet Banking" 2004 *Aslib Proceedings* 187-196

Ssebagala 2017 *Journal of Financial Counseling and Planning*
Ssebagala RA "Relieving Consumer Over-Indebtedness in South Africa: Policy Reviews and Recommendations" 2017 *Journal of Financial Counseling and Planning* 235-246

Van der Merwe *et al Information Communication Technology Law*
Van der Merwe DP *et al Information Communication Technology Law* 2nd ed (LexisNexis Durban 2016)

Verhoef 2001 *Historia*
Verhoef G "Savings and Survival in a Modern African Economy: Informal Savings Organisations and Poor People in South Africa" 2001 *Historia* 519-542

Wentzel "Financial Literacy in South Africa"
Wentzel A "Financial Literacy in South Africa" in Aprea C *et al* (eds) *International Handbook of Financial Literacy* (Springer Science+Business Media Singapore 2016) 329-339

Wentzel, Diathab and Yadavallic 2016 *Development Southern Africa*
Wentzel JP, Diathab KS and Yadavallic VSS "An Investigation into Factors Impacting Financial Exclusion at the Bottom of the Pyramid in South Africa" 2016 *Development Southern Africa* 203-214

Williams 2017 *IJRESS*
Williams HT "Role of Financial Inclusion in Economic Growth and Poverty Reduction in a Developing Economy" 2017 *IJRESS* 265-271

Zait and Bertea 2014 *Journal of Accounting and Management*
Zait A and Bertea PE "Financial Literacy – Conceptual Definition and Proposed Approach for a Measurement Instrument" 2014 *Journal of Accounting and Management* 37-42

Legislation

Consumer Protection Act 68 of 2008

Financial Intelligence Centre Act 38 of 2001

Financial Sector Regulation Act 9 of 2017

Independent Communications Authority of South Africa Act 13 of 2000

National Credit Act 34 of 2005

National Credit Amendment Act 7 of 2019

Internet sources

Ikdal 2017 https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/
Ikdal A 2017 *6 Challenges to Financial Inclusion in South Africa* https://www.weforum.org/agenda/2017/04/financial-inclusion-south-africa/ accessed 17 June 2021

Kessler *et al* 2017 https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa
Kessler K *et al* 2017 *Improving Financial Inclusion in South Africa* https://www.bcg.com/en-za/publications/2017/globalization-improving-financial-inclusion-south-africa accessed 17 June 2021

Kgosana and Afrika 2018 https://www.businesslive.co.za/bd/companies/financial-services/2018-06-24-the-great-vbs-bank-heist/
Kgosana C and Afrika M 2018 *The Great VBS Bank Heist* https://www.businesslive.co.za/bd/companies/financial-services/2018-06-24-the-great-vbs-bank-heist/ accessed 17 June 2021

Masondo and Van Rensburg 2018 https://www.news24.com/citypress/business/how-vbs-was-plundered-20181208-4
Masondo S and Van Rensburg D 2018 *How VBS was Plundered* https://www.news24.com/citypress/business/how-vbs-was-plundered-20181208-4 accessed 17 June 2021

Mishi, Vacu and Chipote 2021 https://www.econrsa.org/system/files/workshops/papers/2012/mishi-financial-literacy.pdf
Mishi S, Vacu NP and Chipote P 2021 *Impact of Financial Literacy in Optimising Financial Inclusion in Rural South Africa: Case Study of the Eastern Cape Province* https://www.econrsa.org/system/files/workshops/papers/2012/mishi-financial-literacy.pdf accessed 17 June 2021

NCR 2019 https://www.ncr.org.za/documents/CBM/CBM%20Q4%202019.pdf.pdf
National Credit Regulator 2019 *Credit Bureau Monitor Report Fourth Quarter, December 2019* https://www.ncr.org.za/documents/CBM/CBM%20Q4%202019.pdf.pdf accessed 6 September 2020

Prinsloo 2019 https://www.ebnet.co.za/single-post/2019/09/20/Barriers-to-achieving-financial-literacy-in-South-Africa
Prinsloo J 2019 *Barriers to Achieving Financial Literacy in South Africa* https://www.ebnet.co.za/single-post/2019/09/20/Barriers-to-achieving-financial-literacy-in-South-Africa accessed 23 June 2020

Prinsloo 2019 https://www.iol.co.za/personal-finance/opinion-the-high-cost-of-financial-illiteracy-33319438
Prinsloo J 2019 *Opinion: The High Cost of Financial Illiteracy* https://www.iol.co.za/personal-finance/opinion-the-high-cost-of-financial-illiteracy-33319438 accessed 26 June 2020

Rouse and Verhoef 2017 https://mpra.ub.uni-muenchen.de/78006/1/MPRA_paper_78006.pdf
Rouse M and Verhoef G 2017 *Mobile Banking in Sub-Saharan Africa: Setting the Way towards Financial Development - Munich Personal Research Papers No 78006* https://mpra.ub.uni-muenchen.de/78006/1/MPRA_paper_78006.pdf accessed 17 June 2021

Staff Writer 2020 https://businesstech.co.za/news/technology/431484/personal-information-of-south-africans-posted-on-dark-web-after-major-data-breach-heres-what-leaked/
Staff Writer 2020 *Personal Information of South Africans Posted Online after Major Data Breach – Here's what Leaked* https://businesstech.co.za/news/technology/431484/personal-information-of-south-africans-posted-on-dark-web-after-major-data-breach-heres-what-leaked/ accessed 5 November 2020

Storchi 2018 http://saveact.org.za/wp-content/uploads/2018/11/FMT_Stokvels-and-SGs-Report_10-October-2018_final.pdf

Storchi S 2018 *Impact Evaluation of Savings Groups and Stokvels in South Africa: The Economic and Social Value of Group-Based Financial Inclusion* http://saveact.org.za/wp-content/uploads/2018/11/FMT_Stokvels-and-SGs-Report_10-October-2018_final.pdf accessed 5 November 2020

List of Abbreviations

AFJ	African Finance Journal
AI	Artificial Intelligence
ATM	Automated Teller Machine
CPA	Consumer Protection Act
EJDR	European Journal of Development Research
FSB	Financial Services Board
FSCA	Financial Sector Conduct Authority
FSR Act	Financial Sector Regulation Act
ICASA	Independent Communication Authority of South Africa
IFR	International Finance Review
IIM	Indian Institute of Management
IJCBM	International Journal of Commerce, Business and Management
IJRESS	International Journal of Research in Economics and Social Sciences
J Afr L	Journal of African Law
JEF	Journal of Economic and Financial Sciences
JEL	Journal of Economic Literature
LFMR	Law and Financial Markets Review
MJSS	Mediterranean Journal of Social Sciences
NCA	National Credit Act
NCR	National Credit Regulator
OECD	Organisation for Economic Co-operation and Development
PA	Prudential Authority
PCAOs	Provincial Consumer Affairs Offices
PELJ	Potchefstroom Electronic Law Journal
SAJCE	South African Journal of Chemical Engineering
SAJEMS	South African Journal of Economic and Management Sciences

St Louis U Pub L Rev	Saint Louis University Public Law Review
THRHR	Tydskrif vir Hedendaagse Romeins-Hollands Reg
Wash J L Tech & Arts	Washington Journal of Law, Technology and Arts