

Washington University Journal of Law & Policy

Volume 61 *The Rise of Fintech*

2020

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Recommended Citation

Jonathan Greenacre, *What Regulatory Problems Arise When Fintech Lending Expands into Fledgling Credit Markets?*, 61 WASH. U. J. L. & POL'Y 229 (2020),
https://openscholarship.wustl.edu/law_journal_law_policy/vol61/iss1/16

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WHAT REGULATORY PROBLEMS ARISE WHEN FINTECH LENDING EXPANDS INTO FLEDGLING CREDIT MARKETS?

Jonathan Greenacre*

ABSTRACT

Fintech lending, which involves non-bank firms providing credit to consumers, has expanded rapidly around the world. Between 2013 and 2016, fintech credit increased from \$11 billion to \$284 billion.¹

This article argues that when moving into fledgling credit markets—namely communities in which a significant portion of the population has never had access to formal consumer loans—fintech lending can cause significant adverse economic consequences to the public and create significant regulatory gaps that require addressing. These economic consequences include inaccurate risk-pricing as firms determine how to accurately process and use the range of information at their disposal as well as potential behavioral problems leading to widespread default as members of low-income communities, particularly those without a bank account (the so-called “unbanked”), access formal credit for the first time. Regulatory gaps emerge because supervisory frameworks tend to focus on consumer credit emerging from the banking sector, not fintech.

This article focuses on the spread of fintech lending in Kenya since 2012 as a case study for its broader argument. Over fifty lenders have entered the Kenyan consumer credit market. The majority of these lenders are fintech firms (also known as “fintechs”). Many of these digital lenders have grown rapidly. For example, one company, Branch, was launched in Kenya in 2015 and by January 2019 had issued over ten million loans.²

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1. Stijn Claessens, Jon Frost, Grant Turner & Feng Zhu, *Fintech Credit Markets Around the World: Size, Drivers and Policy Issues*, BIS Q. REV., Sept. 2018.

2. *Branch International Raises KSH 500M; Issues 10 Millionth Loan in Kenya*, NAIROBI

The policy implication from this article is that regulatory frameworks for fintech lending may require fresh thinking, involving moving away from bank-based approaches. But there is little guidance on what form such frameworks should take. This is because mass consumer credit is relatively new in Kenya and there is little data on how consumers analyze and use loans. In addition, while regulatory frameworks for banks in Kenya have evolved, regulatory thinking about fintechs is relatively underdeveloped. This article examines potential starting points for developing regulatory frameworks for fintech lending.

INTRODUCTION

Non-bank (so-called “fintech,” for “financial technology”) firms provide a small but growing portion of consumer credit. Globally, between 2013 and 2016, fintech credit increased from \$11 billion to \$284 billion.³ Lending from fintech firms accounted for a third of unsecured personal loans in 2017 in the United States.⁴ Fintech lending comprised fifteen percent of total lending to consumers and small- and medium-sized enterprises in the UK in 2016.⁵

Fintech lending is novel because it usually does not require formal collateral.⁶ Instead, fintech lending platforms provide unsecured personal loans and tend to charge higher interest rates than other formal financial institutions such as banks, although the precise form of such loans can vary significantly.⁷

GARAGE (Jan. 14, 2019), <https://nairobiagarage.com/branch-international-raises-ksh500m/> [<https://perma.cc/VQ6R-ZSET>].

3. Claessens et al., *supra* note 1.

4. John Detrixhe, *Americans are Splurging on Personal Loans Thanks to Fintech Startups*, QUARTZ (July 24, 2018), <https://qz.com/1334899/personal-loans-are-surgin-in-the-us-fueled-by-fintech-startups/> [<https://perma.cc/6JS2-Q3RD>].

5. Claessens et al., *supra* note 1, at 34.

6. WORLD ECONOMIC FORUM, THE FUTURE OF FINTECH: A PARADIGM SHIFT IN SMALL BUSINESS FINANCE (2015), http://www3.weforum.org/docs/IP/2015/FS/GAC15_The_Future_of_FinTech_Paradigm_Shift_Small_Business_Finance_report_2015.pdf [<https://perma.cc/823C-9BN8>].

7. Some fintech firms do not act as regular financial lenders. For example, Prosper acts as an intermediary between borrowers and private investors willing to lend their money. This means it holds no money of its own nor does it lend its own money. Instead, Prosper acts as an underwriter and profits from fees charged. See *Legal Compliance*, PROSPER FUNDING LLC,

The growth of fintech lending will eventually require policymakers in the United States and other developed countries to explore risks and appropriate regulatory frameworks, but there is little guidance on these issues. This is because, traditionally, consumer credit has been overwhelmingly bank-based.⁸

Developing regions, particularly Africa, provide insights on potential regulatory problems that can emerge when fintechs provide a much bigger proportion of consumer credit than what we normally observe in a developed country. This is because the relative lack of penetration of the banking system in Africa has created a vacuum into which fintechs have begun to spread.⁹ Even as late as 2014 the majority of the population was “unbanked,” meaning they did not have an account with a formal financial institution.¹⁰ Likewise, just fifteen percent of sub-Saharan Africa’s population obtained consumer credit from formal financial institutions, specifically banks.¹¹

Technological change, particularly the spread of mobile phones and related payment services, infrastructure developments, and regulatory amendments have enabled fintechs to enter African jurisdictions and provide growing numbers of loans.¹² The number of mobile phones in

<https://www.prosper.com/plp/legal/compliance/> [<https://perma.cc/QNE9-5LVX>]. Conversely, Avant, another fintech lender, uses its own funds to provide loans to consumers. See Peter Rudegair & Telis Demos, *Funding Deal Values Avant at Nearly \$2 Billion*, WALL STREET J. (Sept. 29, 2015, 7:10 PM), <https://www.wsj.com/articles/funding-deal-values-avant-at-nearly-2-billion-1443568252>. Interest rates usually range from 9.95% to 35.99%. *Our Rates and Terms*, AVANT, https://www.avant.com/rates_terms [<https://perma.cc/8SSM-M527>].

8. Christian Löw, *How Traditional Lenders Can Find New Opportunities in Consumer Financing*, EY (Jan. 25, 2019), https://www.ey.com/en_gl/banking-capital-markets/how-traditional-lenders-can-find-new-opportunities-in-consumer-financing [<https://perma.cc/E2HZ-6RR5>].

9. LUCY CORKIN, FINANCING DEVELOPMENT: FINTECH IN AFRICA, OBSERVER RESEARCH FOUND. ISSUE BRIEF NO. 284 (2019), https://www.orfonline.org/wp-content/uploads/2019/03/ORF_IssueBrief_284_Fintech.pdf [<https://perma.cc/NA4G-XCMX>].

10. In 2014, only fifty-five percent of the region’s adults had a formal financial account. See *Financial Inclusion Data—Kenya*, WORLD BANK, <http://datatopics.worldbank.org/financialinclusion/country/kenya> [<https://perma.cc/4DFC-6L9J>].

11. *Id.*; Peer Stein, *Access to Finance: Sub-Saharan Africa*, (World Bank Grp., Working Paper No. 94882, 2013), <http://documents.worldbank.org/curated/en/599611468202144127/Access-to-finance-Sub-Saharan-Africa> [<https://perma.cc/V3MP-437D>].

12. Stuart Jackson, *Three Reasons Why Fintech Is Driving Change in Africa*, FINEXTRA (June 10, 2019), <https://www.finextra.com/blogposting/17342/three-reasons-why-fintech-is-driving-change-in-africa> [<https://perma.cc/P3MY-PTX9>].

Africa went from virtually zero in 2006 to 444 million by 2017.¹³ Greater use of mobile phones generated a range of information on the population, such as their contacts, spending habits, and location history that banks and later fintech firms could use to screen potential borrowers.¹⁴ “Mobile money” was a related development. Mobile money is a mobile phone-based payment service that spread quickly throughout Africa.¹⁵ By 2018 around ten percent of the GDP in sub-Saharan Africa occurred through mobile money.¹⁶ As will be explored below, a combination of mobile phone and mobile money usage has helped stimulate the design of innovative fintech lending models, which have enjoyed considerable growth across Africa.

This article focuses on Kenya as a case study for its broader claim, which is that when moving into new credit markets—whether in Kenya or more-developed countries—fintech lending can cause significant adverse economic consequences to the public and create significant regulatory gaps that require addressing. These economic consequences include inaccurate risk pricing as fintech firms determine how to accurately process and use the vast range of information at their disposal, and potential behavioral problems leading to widespread default as low-income communities, particularly the unbanked, access formal credit for the first time. Kenya is an appropriate case study of a “fledgling” credit market. This is because bank-based consumer credit has traditionally reached a small proportion of the economy, and the majority of lending has taken place through informal mechanisms.¹⁷

13. Cesar Calderon, Gerard Kambou, Vijdan Korman, Megumi Kubota & Catalina Cantu Canales, *An Analysis of Issues Shaping Africa's Economic Future*, AFRICA'S PULSE, Apr. 2019, at 94, <https://openknowledge.worldbank.org/handle/10986/31499> [<https://perma.cc/EL98-54WR>].

14. Benno Ndulu & Tebello Qhotsokoane, *Harnessing Fintech For A Big Leap In Financial Inclusion- Lessons From East African Success*, PATHWAYS FOR PROSPERITY COMMISSION, <https://pathwayscommission.bsg.ox.ac.uk/blog/harnessing-fintech-big-leap-financial-inclusion-lessons-east-african-success> [<https://perma.cc/Z84W-T454>].

15. Wiza Jalaski, *After Years of Rapid Growth in Africa We're About to Enter the Age of Mobile Money 2.0*, QUARTZ AFRICA (Oct. 4, 2019), <https://qz.com/africa/1721818/africa-mobile-money-industry-is-entering-its-next-stage-of-growth/> [<https://perma.cc/7BK9-SWY3>].

16. Amadou N.R. Sy, *Fintech in Sub-Saharan Africa: A Potential Game Changer*, IMFBLOG, (Feb. 14, 2019), <https://blogs.imf.org/2019/02/14/fintech-in-sub-saharan-africa-a-potential-game-changer/> [<https://perma.cc/S7H9-AKNC>].

17. Isaac Wachira Mwangi, *Determinants of Access to Credit by Individuals in Kenya: A Comparative Analysis of the Kenya National FinAccess Surveys of 2006 and 2009*, 3 EUR. J. BUS. & MGMT., no. 3, 2011 at 206-227 (2011).

Policymakers in Kenya and other developing countries face complex trade-offs, particularly due to “financial inclusion” goals. “Financial inclusion” describes enabling unbanked communities to access financial services, including credit, for the first time.¹⁸ Financial inclusion is now a policy goal for more than eighty countries, including Kenya.¹⁹ As this article will explore, financial inclusion goals can conflict with consumer protection objectives, involving the use of regulatory intervention in fintech credit markets to address high default rates and extensive use of loans for non-consumption purposes.²⁰

Furthermore, fintech lending has created a regulatory gap in Kenya. This is because the Central Bank of Kenya (CBK)—the main financial regulatory agency in Kenya—has legislative authority to regulate bank-based consumer credit and other financial credit products. Such authority would cover fintech firms, but this oversight is not exclusive and is shared by a number of other regulators including Kenya’s insurance and communication regulators.²¹ This means that no single regulator has overarching responsibility for regulation of fintech products, which might allow a number of products to fall through regulatory gaps.²²

The policy implication is that—in contrast to financial inclusion goals—regulatory frameworks for fintech credit require fresh thinking, which involves moving away from traditional bank-based approaches. However, there is little guidance on the potential forms of fresh thinking, given how

18. *Financial Inclusion*, UNITED NATIONS SECRETARY-GENERAL’S SPECIAL ADVOC. FOR INCLUSIVE FIN. FOR DEV., <http://www.unsgsa.org/about/financial-inclusion>, [https://perma.cc/2LT3-792P]; see also *Financial Inclusion Glossary*, CTR. FOR FIN. INCLUSION AT ACCION (2019), <https://www.centerforfinancialinclusion.org/financial-inclusion-glossary> [https://perma.cc/TT3P-YF2U] (“Financial inclusion” is a “state in which all people who can use them have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Financial services are delivered by a range of providers, most of them private, and reach everyone who can use them, including disabled, poor, rural, and other excluded populations.”).

19. *Member Institutions*, ALLIANCE FOR FIN. INCLUSION, <https://www.afi-global.org/members/> [https://perma.cc/35J7-GUXG].

20. Vincent Di Lorenzo, *Fintech Lending Risks and Benefits*, THE FINREG BLOG (Nov. 18, 2018), <https://sites.duke.edu/thefinregblog/2018/11/14/fintech-lending-risks-and-benefits/> [https://perma.cc/369A-AV8X].

21. Sonal Sejpal & Dominic Rebello, *Kenya: Fintech 2019*, ICLG (May 10, 2019), <https://iclg.com/practice-areas/fintech-laws-and-regulations/kenya> [https://perma.cc/X4FW-LEAP].

22. *Id.*

little we understand about how people use fintech lending. This article examines potential avenues for this to take place.

This article explores this argument by examining three models of digital, fintech-based credit that have emerged in Kenya. It explains that there are patterns across these models and explores their form and regulatory consequences. It is organized into four parts. The first part describes traditional challenges involved in extending consumer credit in Kenya and explains how technology and regulatory amendments facilitated the growth of digital credit. The second part explores how fintech lending addresses several challenges that have traditionally impeded the extension of credit to Kenya. This section focuses on the three digital credit models. The third part explains several regulatory issues that have emerged through these and other fintech models in Kenya. Finally, the fourth part explores the policy implications of the rise of fintech lending and advocates for fresh thinking on regulatory frameworks for this sector.

I. THE RISE OF FINTECH LENDING IN KENYA

Like other African countries, access to formal consumer credit has been limited in Kenya, making it a fledgling consumer credit market suitable for analysis in this article.²³ In 2014, when fintech-related consumer lending was launched in Kenya, only ten percent of the population borrowed money from a formal financial institution.²⁴

Without access to formal consumer credit, Kenyans have traditionally relied upon informal credit systems, which have tended to face a range of problems.²⁵ People have traditionally used informal mechanisms of credit

23. *Expanding Access to Banking and Credit in Sub-Saharan Africa*, THE OPIC BLOG (Oct. 23, 2012), <https://www.opic.gov/blog/opic-in-action/expanding-access-to-banking-and-credit-in-sub-saharan-africa> [<https://perma.cc/QZB4-F8PG>].

24. WORLD BANK, *supra* note 10.

25. For example, in 2009, seventy-four percent of Kenyans used informal finance as a means of saving, as opposed to just thirty-six percent who used formal financial institutions to handle their affairs. Sources of such informal credit ranged from family and friends to Accumulated Savings and Credit Associations (ASCA). Even within these varied sources a majority of Kenyans who borrow from informal sources do so from their family and friends. See Isabella Chepkogei Sile & Julius Bett, *Determinants of Informal Finance Use in Kenya*, 6 RES. J. OF FIN. & ACCT., no. 7, 2015, at 6.

due to convenience, accessibility, and because usually interest is not charged on some informal loans.²⁶

Evidence suggests that informal sources of finance meet the immediate goals of borrowers but provide limited assistance in the long run.²⁷ Borrowing from informal sources can lead directly to greater investments in local agriculture and small enterprises, but also often appears to lead to debt spirals that compound existing problems of indebtedness.²⁸ In particular, local money-lenders often charge high rates of interest which borrowers struggle to repay.²⁹ Borrowing from family and friends is often interest-free, but puts social relations at risk in the case of a default.³⁰

Several supply-based economic and institutional factors impeded the efforts of financial institutions, particularly banks, to extend the reach of consumer credit to most of Kenya's population. One factor has been a lack of information on the creditworthiness of Kenya's population.³¹ Gathering this information in 2012 was costly because seventy-five percent of Kenya's population lived in rural areas, far from physical infrastructure with little, if any, formal financial history and identification.³² Furthermore, banking outreach was limited. Kenya had 5.17 bank branches per 100,000 people, significantly lower than the global average of 11.14 branches per 100,000 people.³³ Further, Kenya had 9.51 ATMs per 100,000 people, significantly lower than the global average of 33.28.³⁴ Unsurprisingly, then, a majority of the population was unbanked.³⁵

26. Isabella Chepkogei Sile & Julius Bett, *Determinants of Informal Finance Use in Kenya*, 6 RES. J. OF FIN. & ACCT., no. 21, 2015, at 6, 7.

27. Mwangi, *supra* note 17, at 206.

28. GEORGE OWUOR & A.O. SHEM, INFORMAL CREDIT AND FACTOR PRODUCTIVITY IN AFRICA: DOES INFORMAL CREDIT MATTER? 5 (2012).

29. *Id.*

30. Alexander Karaivanov and Anke Kessler, *(Dis)Advantages of Informal Loans-Theory and Evidence*, 102 EUR. ECON. REV. 100 (2018).

31. Mwangi, *supra* note 17.

32. *Rural Population – Kenya*, WORLD BANK GRP., <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=KE> [<https://perma.cc/87PN-FAD5>].

33. *Commercial Bank Branches – Kenya*, WORLD BANK GRP., <https://data.worldbank.org/indicator/FB.CBK.BRCH.P5?locations=KE> [<https://perma.cc/6XMR-3CMJ>].

34. *Automated Teller Machines*, WORLD BANK GRP., <https://data.worldbank.org/indicator/FB.ATM.TOTL.P5> [<https://perma.cc/GQ6D-J7US>].

35. Along with this, forty-two percent of the Kenyan population owned a bank account in 2011. See *Global Financial Inclusion*, WORLD BANK GRP.,

Banks faced high enforcement costs in relation to consumer credit due to the limitations of Kenya's public infrastructure, institutions and enforcement. In 2018 for example, the average time to enforce a loan contract in Kenya was 429 days (about fourteen months),³⁶ and the average cost of such enforcement was 40.7% of the claim value.³⁷ By comparison, the average time to enforce a contract in the United States that year was 300 days and the average cost was 18.4% of the claim value.³⁸

Several important factors have changed in Kenya in the last fifteen years, facilitating the entry of fintechs into the consumer credit sector of the economy. One of these is the rapid spread of mobile phones, which provided a great deal of additional information for bank and fintech lenders. Between 2002 and 2006, the number of mobile phones in Kenya increased from one million to ten million.³⁹ By 2018, mobile phone penetration in Kenya stood at over ninety percent, while internet penetration stood at eighty-four percent.⁴⁰ Mobile money services expanded rapidly in Kenya. One service, M-Pesa, had over twenty-five million users by 2018, accounting for more than half of Kenya's mobile users and providing a range of information on customers, later used by banks and other fintech firms, as explored below.⁴¹

A second factor that has facilitated the entry of fintech lending is changes in Kenya's regulatory arrangements. The CBK, the government agency tasked with a range of regulatory and supervisory oversight functions, permitted several different fintech-related lending services to emerge without substantive regulatory frameworks. For example, in 2010, the CBK allowed Equity Bank and Safaricom to partner in the launch of a mobile

<https://databank.worldbank.org/reports.aspx?source=1228> [<https://perma.cc/A9VF-JSDY>].

36. *Ease of Doing Business in Kenya*, WORLD BANK GRP., <https://www.doingbusiness.org/en/data/exploreconomies/kenya#> [<https://perma.cc/32MB-BQ7X>].

37. *Id.*

38. *Historical Data Sets and Trends Data*, WORLD BANK GROUP, <https://www.doingbusiness.org/en/custom-query> [<https://perma.cc/KT4J-9KU5>].

39. Harry McGee, *How the Mobile Phone Changed Kenya*, IRISH TIMES (May 14, 2016), <https://www.irishtimes.com/news/world/africa/how-the-mobile-phone-changed-kenya-1.2646968> [<https://perma.cc/2NSJ-9AZT>].

40. Pauline Masese & Lilian Makena, *Kenya Mobile Report 2019*, JUMIA (2019), <https://www.jumia.co.ke/mobile-report/> [<https://perma.cc/C4ZD-Y9R7>].

41. George Obulutsa, *M-Pesa Has Completely Changed Kenyans' Access to Financial Services, This is How...*, CNBC AFRICA (Apr. 3, 2019), <https://www.cnbcfric.com/news/east-africa/2019/04/03/m-pesa-has-completely-changed-kenyans-access-to-financial-services-this-is-how/> [<https://perma.cc/HN8L-AYFY>].

product called M-Kesho.⁴² In 2012, the CBK extended this permission to a partnership between the Commercial Bank of Africa and Safaricom, titled “M-Shwari” and described below.⁴³ The CBK also permitted fintechs to enter the Kenyan market without imposing extensive regulatory frameworks for the sector.⁴⁴

A third change in Kenya’s consumer credit landscape was the establishment of three credit reference bureaus (CRBs).⁴⁵ Kenya has three licensed CRBs—Creditinfo, Metropole, and Credit Reference Bureau Africa—which were all launched in 2010 by CBK.⁴⁶ These actors enable financial institutions to share information about defaulters and the creditworthiness of consumers with each other.⁴⁷ This is because all financial institutions must share all credit-related information with CRBs, including defaults. Other financial institutions can access this data when determining whether to provide digital credit to people.⁴⁸

Finally, technological developments have greatly reduced transaction costs in relation to processing information and developing credit scores. This is because technological innovations can process an increasing amount of information gathered digitally. However, these technological innovations still appear to be at an early stage, as will be discussed below.

42. *M-Kesho in Kenya: A New Step for M-Pesa and Mobile Banking*, NYU WAGNER FIN. ACCESS INITIATIVE BLOG, (May 27, 2010), <https://www.financialaccess.org/blog/2015/7/16/m-kesho-in-kenya-a-new-step-for-m-pesa-and-mobile-banking> [https://perma.cc/L4V5-HXTF].

43. *Safaricom, CBA Launch Groundbreaking Mobile Banking Service M-Shwari*, AFI (Nov. 28, 2012), <https://www.afi-global.org/news/2012/11/safaricom-cba-launch-groundbreaking-mobile-banking-service-m-shwari> [https://perma.cc/376U-ULDC].

44. David Herbling & Zeke Faux, *Kenya’s Mobile Lenders Could Be Supervised by Central Bank*, BLOOMBERG (Oct. 24, 2019), <https://www.bloomberg.com/news/articles/2019-10-24/kenya-draft-law-proposes-central-bank-supervises-mobile-lenders> [https://perma.cc/PA63-KVVK].

45. A CRB is an institution that has been established to monitor the behavior of borrowers and reduce the risk of loan default. *The Credit Reference Bureau*, CREDITINFO, <https://ke.creditinfo.com/2019/03/04/credit-reference-bureau/> [https://perma.cc/6P8R-P47J].

46. Nancy Wanjiru Gaiho, *Role of Credit Reference Bureaus on Credit Access in Kenya: A Survey of Commercial Banks in Kenya*, EUR. SCI. J., May 2018, at 301, 303. The overarching regulation that governs the conduct and powers of the CRB is CENTRAL BANK OF KENYA, CREDIT REFERENCE BUREAU REGULATIONS, 2019, <https://www.centralbank.go.ke/wp-content/uploads/2019/05/DRAFT-CREDIT-REFERENCE-BUREAU-REGULATIONS-2019.pdf> [https://perma.cc/56YA-57MJ].

47. Jared Getenga, *Parliamentary Petition To Disband The CRB Mechanism is Retrogressive*, FSD KENYA BLOG (May 23 2019), <https://fsdkenya.org/blog/parliamentary-petition-to-disband-the-crb-mechanism-is-retrogressive/> [https://perma.cc/22K7-HHBA].

48. *Id.*

II. THE OPERATION OF FINTECH LENDING IN KENYA

Fintech lending has significantly expanded the outreach of credit to low-income and unbanked communities in Kenya, primarily because firms can calculate credit scores by using and processing information obtained through mobile phone-related technological innovations. Furthermore, technological development allows firms to quickly process such information and often provide credit scores within a few minutes to a few hours.⁴⁹

By relying on mobile phones, fintech lending enjoys demand-side benefits over traditional bank-based consumer credit. In particular, a customer can apply for a loan remotely using her phone without needing to incur the significant transportation costs she would otherwise face in reaching a bank branch to apply for a loan in person.⁵⁰ This is a significant advantage given the relatively high proportion of the population that lives in rural areas in Kenya.⁵¹

Initially, banks were at the forefront of making use of the supply and demand benefits of digital credit, particularly through partnering with mobile money providers.⁵² More recently, fintech firms have begun obtaining, processing and using information from a wider range of sources, including location information, phone contacts, and SMS history, for consumer credit-related purposes such as lending and setting interest rates.⁵³ The material below explores these models in greater depth.

49. Greg Chen & Rafa Mazer, *Instant, Automated, Remote: The Key Attributes of Digital Credit*, CGAP BLOG (Feb. 8, 2016), <https://www.cgap.org/blog/instant-automated-remote-key-attributes-digital-credit> [<https://perma.cc/J4HG-AQY8>].

50. Di Lorenzo, *supra* note 20.

51. As of 2018, 73% of Kenya's population lived in rural areas. *Rural Population*, WORLD BANK, <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS> [<https://perma.cc/PZA4-JNUR>].

52. Gerald Chappell et al., *The Lending Revolution: How Digital Credit Is Changing Banks From the Inside*, MCKINSEY & CO. (Aug. 2018), <https://www.mckinsey.com/business-functions/risk/our-insights/the-lending-revolution-how-digital-credit-is-changing-banks-from-the-inside> [<https://perma.cc/4GLL-56J4>].

53. See *infra* Sections II.B, II.C, and II.D (describing three modern lending programs in Kenya).

A. M-Shwari

The Commercial Bank of Africa (CBA) and Safaricom (a mobile network operator) launched M-Shwari in November 2012, making it the first mass digital credit service in Kenya.⁵⁴ To launch M-Shwari, CBA and Safaricom leveraged their pre-existing relationship, which had emerged because Safaricom had stored all customers' funds obtained through its M-Pesa product in a bank account with the CBA.⁵⁵ Safaricom was gathering a significant amount of information through its M-Pesa product. In 2012, Safaricom had approximately 14.91 million subscribers in Kenya, whose information could be leveraged for additional purposes.⁵⁶

M-Shwari provides two related services. The first of these is a bank deposit. A borrower can transfer funds from her M-Pesa account to a linked M-Shwari bank deposit provided by the CBA. Unlike M-Pesa, M-Shwari was specially designed, regulated, and marketed as a savings service.⁵⁷ A customer can obtain an interest rate of six percent through her M-Shwari deposit.⁵⁸ Further, M-Shwari deposits are fully protected by bank regulation.⁵⁹ This functionality is useful for M-Pesa customers, who cannot obtain interest payments on their M-Pesa accounts, nor enjoy coverage from Kenya's full body of bank regulation for their M-Pesa funds.⁶⁰

The second service provided by M-Shwari is a credit score, which CBA develops by leveraging information moving through the M-Pesa system. This information includes the "know-your-customer" details used to open

54. Tamara Cook & Claudia McKay, *How M-Shwari Works: The Story So Far*, ACCESS TO FIN. FORUM 10 (Apr. 2015), <https://www.cgap.org/research/publication/how-m-shwari-works-story-so-far> [<https://perma.cc/8XG3-SKMJ>]

55. *Id.*

56. SAFARICOM, ANNUAL REPORT & GROUP ACCOUNTS FOR THE YEAR ENDED 31ST MARCH 2012, https://www.safaricom.co.ke/images/Downloads/Annual_Reports/Annual_Report_2012_Final.pdf [<https://perma.cc/2FDK-T3MM>].

57. *M-Shwari & KCB M-Pesa*, SAFARICOM, <https://www.safaricom.co.ke/personal/m-pesa/do-more-with-m-pesa/loans-and-savings> [<https://perma.cc/F2AF-NK3Q>].

58. *Id.*

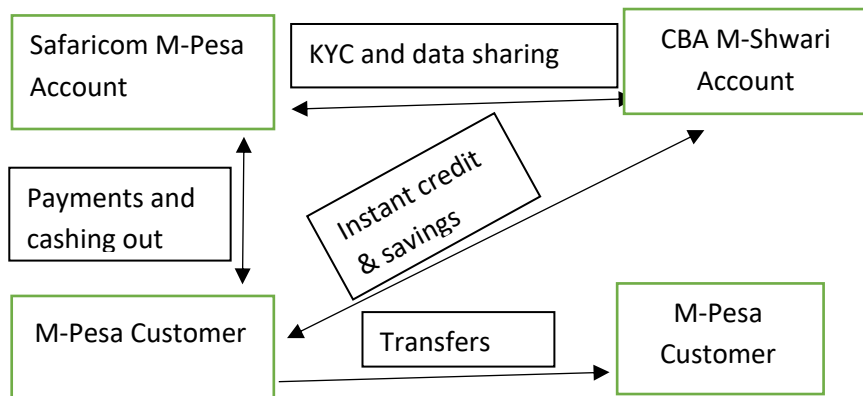
59. *Id.*

60. Olga Morawczynski, *Why M-PESA Should Offer Savings Accounts*, CGAP BLOG (Sept. 28, 2009), <https://www.cgap.org/blog/why-m-pesa-should-offer-savings-accounts> [<https://perma.cc/T9FC-ARGU>].

an M-Pesa account.⁶¹ Thus, M-Shwari does not require borrowers to open a separate account or provide any additional physical material.

The CBA also monitors a customer's use of M-Pesa, particularly the transaction history of buying and using mobile phone credit. This data is used for a dual purpose. The first is to allow borrowers to build their own credit history through a number of small transactions over a period of four to five months.⁶² Second, once sufficient history is built, the CBA uses this data to determine the amount of credit the borrower can initially access, which is then increased as the borrower begins repaying the initial loans.⁶³

Figure 1: M-Shwari Information Flow



The CBA enforces loans in a graduated way, entirely remotely. A borrower can repay a loan anytime within thirty days of the initial date of taking out the loan.⁶⁴ The CBA sends frequent text messages about upcoming loan repayment dates. It also sends a confirmation SMS after

61. *Id.*

62. *How M-Shwari Works*, COM. BANK OF AFR. (Jan. 2013), <https://cbagroup.com/m-shwari/how-m-shwari-works/> [<https://perma.cc/U8JC-GJLN>].

63. *Id.*

64. COMMERCIAL BANK OF AFRICA, TERMS AND CONDITIONS FOR THE OPENING AND USE OF THE M-SHWARI ACCOUNT [hereinafter M-SHWARI TERMS], <https://cbagroup.com/m-shwari/terms-and-conditions/> [<https://perma.cc/YQ3E-JEHV>].

every transaction, and allows customers to check the loan balance via SMS.⁶⁵

The CBA also uses a graduated system of increasing interest rates. If a customer does not repay her loan by the end of day thirty, she receives a text message and is charged a 7.5% facilitation fee.⁶⁶ The CBA's text message also reminds the borrower that she will be reported to a credit bureau should she not repay her loan on time.⁶⁷ If the borrower does not repay the loan in the next sixty days, funds in her M-Shwari deposit account are deducted as repayment of loan amount.⁶⁸ The CBA also reminds the borrower that continued failure to repay the loan will result in a report to any of the three registered CRBs.⁶⁹ After ninety days, the CBA sends a final text message reminder to the borrower. On the 120th day the CBA reports the person to the CRB and writes off the loan from its books.⁷⁰

M-Shwari grew rapidly in Kenya. By 2015 one fifth of Kenyans were using M-Shwari in some capacity, either to make deposits or access credit.⁷¹ M-Shwari's loan product increased its borrower base from 13,000 to 2.6 million borrowers between its launch in 2013 and 2015.⁷² Other Kenyan banks soon launched similar products. For example, Kenya Commercial Bank used a lending app called KCB-MPESA to increase the number of loans granted from 200,000 in 2015, the year of its launch, to four million in 2018—a twenty-fold increase.⁷³

65. Safaricom, *M-Shwari FAQs*, SAFARICOM, <https://www.safaricom.co.ke/faqs/faq/273> [<https://perma.cc/7GFR-9G2X>] (last visited Sept. 19, 2019).

66. M-SHWARI TERMS, *supra* note 64, at 4.

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.* It is important to note that a customer's relationship with M-Pesa is not affected by non-repayment of an M-Shwari loan. A Customer can still access her M-Pesa account and use the money present in it. *See* Safaricom, *supra* note 65.

71. EILIN FRANCIS, JOSHUA BLUMENSTOCK & JONATHAN ROBINSON, *DIGITAL CREDIT IN EMERGING MARKETS A SNAPSHOT OF THE CURRENT LANDSCAPE AND OPEN RESEARCH QUESTIONS* (2017).

72. EDOARDO TOTOLA & PAUL GUBBINS, *FSD KENYA, DIGITAL CREDIT IN KENYA: EVIDENCE FROM DEMAND-SIDE SURVEYS 3* (2018), <https://fsdkenya.org/publication/digital-credit-in-kenya-evidence-from-demand-side-surveys/> [<https://perma.cc/KT5B-J2VE>].

73. *Id.*

B. Tala

Tala is global fintech company which seeks to use technology in innovative ways to provide digital credit.⁷⁴ In 2014, Tala launched its app in Kenya, which it uses to facilitate instant lending to customers.⁷⁵ A customer first downloads the Tala app and grants access to her personal data.⁷⁶ She then fills out a brief form with a set of eight personal questions.⁷⁷ Tala develops a credit score for each person by using a range of social-media related information, such as contact lists, call logs, photos, videos, social media accounts, text messages, call records, location, and social networking.⁷⁸ A customer can access larger loan sizes after making regular repayments.⁷⁹

Tala uses two categories of data to provide loans: Android device data and behavioral data.⁸⁰ This data is accessed directly from the customer's Android mobile phone, with permission from the customer.⁸¹ Android data includes the device type, the operating system, and the apps on the phone.⁸² Behavioral data, on the other hand, refers to the manner in which a borrower moves through the Tala app itself, including the kind of pages visited on the app.⁸³ Machine learning algorithms determine the relative weight given to each individual data point.⁸⁴ These algorithms are then in turn used to evaluate the data points picked up from the potential borrower's phone to determine initial extent of the loan.⁸⁵

Tala also differs from M-Shwari in other ways. For example, Tala provides credit on an unsecured basis and does not have access to a customer's savings balance, unlike the CBA's access to funds in a

74. TALA, <https://tala.co.ke/about/> [<https://perma.cc/TMZZ-KPDG>].

75. *Id.*

76. *Privacy*, TALA, <https://tala.co/privacy-policy-ke/> [<https://perma.cc/6RVS-LNZM>].

77. *Download the TALA Android App*, TALA, <https://tala.co.ke/tala-app-download-google-play-store-kenya/> [<https://perma.cc/5QLN-3AZ8>].

78. *Privacy*, *supra* note 76.

79. *Tala Support*, TALA, <https://talasupport.zendesk.com/hc/en-us/articles/360022064651-How-can-I-increase-my-loan-limit-> [<https://perma.cc/VS3U-GE7N>].

80. *Data Ethics at Tala*, TALA, <https://tala.co/data-ethics/> [<https://perma.cc/4F8P-GUCX>].

81. *Id.*

82. *Id.*

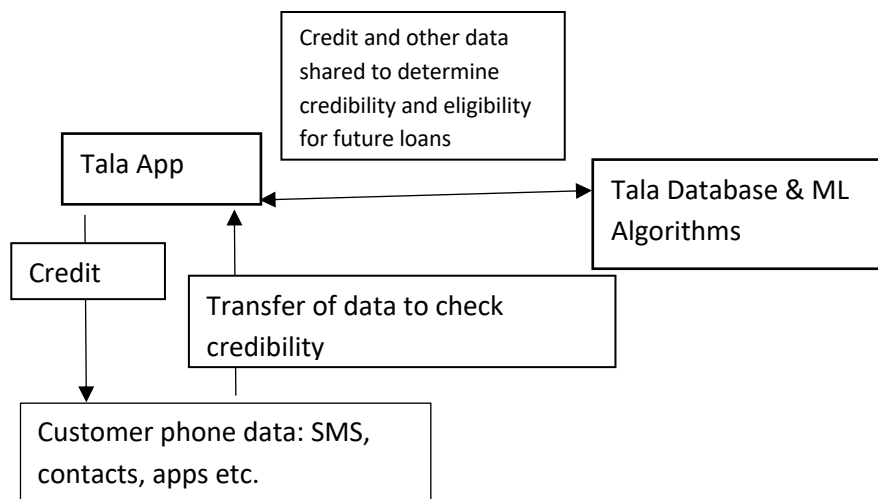
83. *Id.*

84. *Id.*

85. *Id.*

customer's M-Shwari deposit.⁸⁶ Furthermore, Tala lends its own capital to customers, posing balance sheet risks for the firm.⁸⁷ Tala has grown rapidly. Since its launch in 2014, more than one million Kenyans have downloaded Tala from Kenya's Google Store.⁸⁸ Tala claims that it processes eighty-five percent of loan requests within ten minutes and has a ninety-two percent repayment rate.⁸⁹

Fig 2: Tala Information Flow



86. Gabriel Araujo, *Tala: Providing Loans for Those Without a Financial Identity*, HARV. BUS. INITIATIVE (Nov. 13, 2018), <https://digital.hbs.edu/platform-rctom/submission/tala-providing-loans-for-those-without-a-financial-identity/> [<https://perma.cc/YB3F-LZNY>].

87. DM, *Tala: Using Machine Learning to Provide Access to Credit for the World's Unbanked*, HARV. BUS. SCH.: DIGITAL INNOVATION & TRANSFORMATION (Apr. 9, 2018), https://digital.hbs.edu/platform-digit/submission/tala-using-machine-learning-to-provide-access-to-credit-for-the-worlds-unbanked/#_edn1 [<https://perma.cc/KHQ2-S2RZ>].

88. Ken Macharia, *Mobile Lending App Tala Closes Sh6.5b Investment, to Expand to India and Mexico*, CAPITAL FM (Apr. 18, 2018), <https://www.capitalfm.co.ke/business/2018/04/mobile-lending-app-tala-closes-sh6-5b-investment-to-expand-to-india-and-mexico/> [<http://perma.cc/9X8T-G2CU>].

89. *This Startup Wants to Solve the Identity Verification Problem in Fin Services*, CBINSIGHTS (June 21, 2018), <https://www.cbinsights.com/research/tala-lending-identity-verification-future-fintech/> [<http://perma.cc/997R-REWT>].

C. Branch

Branch is an exclusively mobile-based credit lending platform. Branch primarily aims to target people with little to no credit history or savings.⁹⁰ Branch does so by involving a seemingly greater range of information than Tala to screen potential borrowers. The firm relies on smartphone data such as handset details, SMS logs, repayment history, GPS data, and contact lists to build a user's financial risk profile.⁹¹

Initially, customers can only borrow up to one thousand Kenyan shillings (Ksh) (approximately US\$9.60), but this limit increases as the users regularly repay the amounts borrowed.⁹² A person downloads the Branch app, allows access to her smartphone data, creates an account, and applies for the required loan, which is usually approved in several minutes.⁹³ Before the loan is approved, however, Branch uses its machine learning algorithms to process the data points collected and create a set of personalized loan options for the customer.⁹⁴ In particular, Branch's algorithms use a technique called "similarity detection," which ties each account to a phone's unique "digital fingerprint" to screen potential borrowers.⁹⁵ A combination of the algorithms and the "digital fingerprint" allows Branch to provide small loans that are customized to each individual's needs and creditworthiness while reducing the incidence of fraud⁹⁶.

Like Tala, Branch holds the loans on its own balance sheet.⁹⁷ Branch does not securitize its loans.⁹⁸ In case of a loan default, Branch retains the right to send the defaulter's information to any of the credit reference bureaus, which ensures that the defaulter cannot borrow from any other

90. *How It Works*, BRANCH, <https://branch.co/how-it-works> [http://perma.cc/8D3T-6MH6].

91. *Id.*

92. Venic Nyanchama, *Branch Loan Application, Interest Rates and Re-payment*, TUKO (Oct. 19, 2018), <https://www.tuko.co.ke/288632-branch-loan-application-interest-rates-repayment.html> [http://perma.cc/EEU4-HMK7].

93. *How It Works*, *supra* note 90.

94. *Id.*

95. Aswin Mannepalli, *Tested by Adversity, Fintech Branch Emerges Stronger (And Better at Risk Management)*, FORBES (July 24, 2017, 5:29 PM), <https://www.forbes.com/sites/aswinmannepalli/2017/07/24/tested-by-adversity-fintech-branch-emerges-stronger-and-better-at-risk-management/#4caf36fefdd3> [perma.cc/7M9K-WJ9Q].

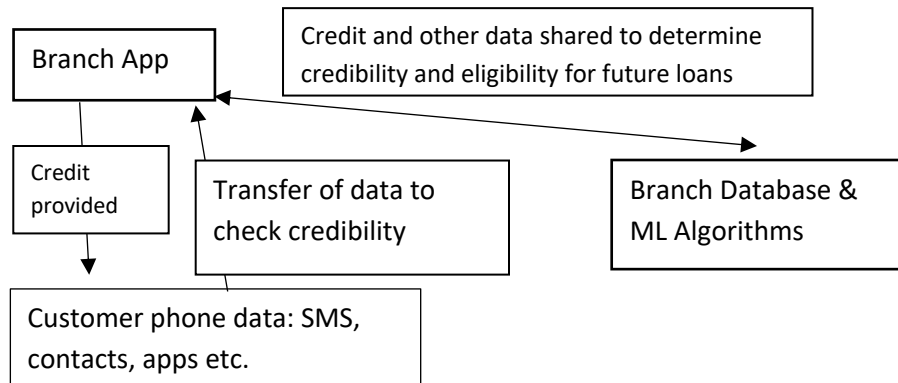
96. *Id.*

97. *Id.*

98. *Id.*

financial platform or institution.⁹⁹ Branch can also terminate any existing agreement that may exist with the defaulter.¹⁰⁰

Fig 3: Branch Information Flow



The ability of each of these digital credit models to gather a wide range of information on Kenyans, including low-income and unbanked communities, is fueling a significant outreach of formal consumer credit. Doing so is consistent with Kenyan financial-inclusion goals. However, this spread has also created a range of regulatory issues, discussed in the next section.

III. REGULATORY CHALLENGES CREATED BY FINTECH LENDING

The rapid influx of fintech lending appears to create significant consumer protection problems. Such lending has been associated with inaccurate risk-pricing as firms determine how to accurately process and use the vast range of information at their disposal and mitigate potential behavioral

99. *Terms of Use*, BRANCH, <https://branch.co/tou/ke> [<https://perma.cc/SS9D-2NLU>].

100. *Id.*

problems.¹⁰¹ These factors have contributed to widespread default as low-income communities, particularly the unbanked, access formal credit for the first time.¹⁰² Since the introduction of fintech lending, an estimated two million people have been reported to the Kenya Credit Bureau for failure to repay M-Shwari loans.¹⁰³

Empirical material on the impact of fintech lending on Kenya is relatively limited. The most substantive contribution is from the World Bank, which conducted a phone survey of over 1,100 digital borrowers in Kenya to better understand the market dynamics and risks associated with digital credit.¹⁰⁴ This presented a first-of-its kind dataset of loans in Kenya.

This empirical material found that over fifty percent of the people who have borrowed money via digital credit firms in Kenya have repaid their due amounts late and twelve percent have defaulted.¹⁰⁵ First time borrowers, who are usually drawn from low-income and unbanked populations, tend to default at the highest rates. Furthermore, these people tend to pay too early or too late, leading to higher annual percentage interest rates.¹⁰⁶ For example, Branch charges monthly interest rates ranging from 2% to 16%, which translates to annual percentage rate between 12% and 180%.¹⁰⁷ Such rates are generally higher than those charged by traditional Kenyan banks, which are capped by law at four percentage points above the bank lending rate (about 12.8% in 2018).¹⁰⁸ Such interest rates charged by the fintech platforms can contribute to default given most borrowers in Kenya have no primary repayment mechanism and no collateral.¹⁰⁹

101. Juan Carlos Izaguirre, Michelle Kaffenberger & Rafe Mazer, *It's Time to Slow Digital Credit's Growth in East Africa*, CGAP: BLOG (Sept. 25, 2018), <https://www.cgap.org/blog/its-time-slow-digital-credits-growth-east-africa> [<http://perma.cc/CA3J-M4W6>].

102. *Id.*

103. EILIN FRANCIS, JOSHUA BLUMENSTOCK & JONATHAN ROBINSON, DIGITAL CREDIT: A SNAPSHOT OF THE CURRENT LANDSCAPE AND OPEN RESEARCH QUESTIONS 2 (2017), <https://escholarship.org/uc/item/88r1j7sz> [<https://perma.cc/3S4B-EJZG>].

104. Izaguirre et al., *supra* note 106.

105. *Id.*

106. Juan Carlos Izaguirre & Rafe Mazer, *How Regulators Can Foster More Responsible Digital Credit*, CGAP BLOG (Nov. 5, 2018), <https://www.cgap.org/blog/how-regulators-can-foster-more-responsible-digital-credit> [perma.cc/D5WK-SNUW].

107. *Frequently Asked Questions*, BRANCH, <https://branch.co.ke/faq> [perma.cc/76P4-R7KY].

108. James Ochieng, *Interest Rate Cap Two Years On: Outcomes for Kenya's Economy*, KENYA INST. FOR PUB. POL'Y RES. & ANALYSIS (Feb. 18, 2019), <https://kippra.or.ke/interest-rate-cap-two-years-on-outcomes-for-the-kenyan-economy/> [<https://perma.cc/7A6H-KTLA>].

109. *Borrowing by Mobile Phone Gets Some Poor People into Trouble*, ECONOMIST (Nov. 17,

Furthermore, increased access to credit is amplifying the potential and probability that people will engage in excessive risk-taking.¹¹⁰ Such risk-taking is particularly prevalent among first-time borrowers. These communities borrow for their private consumption, rather than income-generating activities and enterprises.¹¹¹ Only about thirty-three percent of the borrowers used credit for business purposes and only ten percent of borrowers used credit for emergencies.¹¹² There is anecdotal evidence to suggest that a significant amount of borrowers use digital credit to fund gambling.¹¹³ In turn, this appears to lead to compounding debt problems. Sixteen percent of borrowers in Kenya had to borrow more money to pay off an existing digital loan.¹¹⁴

At least part of this problem appears to emerge from lack of understanding of the terms of fintech loans. Around nineteen percent of the borrowers in Kenya stated they did not understand the costs and fees associated with their loans.¹¹⁵ Such lack of transparency makes it more difficult for users to make informed borrowing decisions, affecting their ability to repay.¹¹⁶

Fintech lending also has created a regulatory gap in Kenya, meaning that fintechs operate with little if any substantive regulatory oversight.¹¹⁷ This is because there is no specific regulatory framework for digital lending.¹¹⁸ The CBK has authority to regulate bank-based consumer credit products such as M-Shwari.¹¹⁹ This is because a bank provides the relevant service and so is regulated as per Kenya's Banking Act.¹²⁰ However, it is less clear whether,

2018), <https://www.economist.com/finance-and-economics/2018/11/17/borrowing-by-mobile-phone-gets-some-poor-people-into-trouble> [<https://perma.cc/7BZS-Q6X8>].

110. *Id.*

111. Izaguirre et al., *supra* note 106.

112. *Id.*

113. Charles Mwaniki, *Mobile Loan Borrowers Shun Betting*, BUS. DAILY AFR. (June 24, 2019), <https://www.businessdailyafrica.com/datahub/Mobile-loan-borrowers-shun-betting/3815418-5169438-qcivc3/index.html> [<https://perma.cc/U4T5-YGRF>].

114. Izaguirre et al., *supra* note 106.

115. *Id.*

116. Mwaniki, *supra* note 113.

117. Sejpal & Rebello, *supra* note 21.

118. *Id.*

119. *Bank Supervision*, CENTRAL BANK OF KENYA, <https://www.centralbank.go.ke/bank-supervision/> [<https://perma.cc/Q58K-CTRL>].

120. *Id.*

and if so, how the CBK or other Kenyan policymakers can regulate specifically non-bank fintech lenders such as Branch or Tala. This is because related regulatory frameworks, such as the Central Bank of Kenya Act, the Banking Act, the National Payment Systems Act, and the Money Remittance Regulations do not specifically address fintech lenders.¹²¹ Such lenders are non-banks and so presumably do not fall under the Banking Act.¹²² Further, they provide more than payments and remittances and so will not be regulated wholly or exclusively through the National Payment Systems Act or the Money Remittance Regulations.¹²³

Policymakers have begun exploring reforms that can potentially address this regulatory gap in Kenya.¹²⁴ Such explorations began in 2018, when the governor of the CBK, Patrick Njoroge, called for more extensive regulation of this sector.¹²⁵ In the same year, the Kenyan government introduced new legislation, the Financial Markets Conduct Authority Bill, which aimed to create an independent regulator for the digital credit and finance sector.¹²⁶ This regulator, to be called the Financial Markets Conduct Authority (Authority), would be tasked with regulating and supervising the provision of financial products and services, including credit, to retail financial customers.¹²⁷ The bill also provided the Authority with the power to issue licenses to launch digital financial products¹²⁸ and to punish any platform or individual for contravening the bill.¹²⁹ The bill did not put a cap on interest rates that can be charged by fintech platforms, but clarified that no lender can charge an interest rate that is higher than the one specified in the loan

121. Sonal Sejpal & Dominic Rebelo, *Kenya: Fintech 2019*, INT'L COMPARATIVE LEGAL GUIDES (May 10, 2019), <https://iclg.com/practice-areas/fintech-laws-and-regulations/Kenya> [<https://perma.cc/NM4W-DXGS>].

122. Herbling & Faux, *supra* note 44.

123. *Id.*

124. *See, e.g.* Maggie Fick, *Kenya's Central Bank Governor Calls for Regulation of Fintech Lenders*, REUTERS (May 29, 2018), <https://www.reuters.com/article/us-kenya-fintech/kenyas-central-bank-governor-calls-for-regulation-of-fintech-lenders-idUSKCN1IU0N4> [<https://perma.cc/8Z79-FKTT>].

125. *Id.*

126. *Id.*

127. The Financial Markets Conduct Bill (2018) § 13 (Kenya), <http://www.treasury.go.ke/tax/finance-bills.html?download=784:draft-financial-markets-conduct-bill-2018> [<https://perma.cc/QG27-BQHL>].

128. *Id.* § 37.

129. *Id.* §§ 34-50.

contract.¹³⁰ It also envisaged the establishment of a Financial Sector Ombudsman, with the power to hear and resolve complaints by retail financial customers against financial service providers, and prescribe a resolution either in the form of repayment or a change in the terms of the contract.¹³¹

Kenya's proposed regulatory frameworks require additional examination. For example, the relationship between the Authority and the CBK is not clear. The CBK has warned that the establishment of the Authority will mean banks can develop digital fintech products in ways that bypass traditional bank regulatory frameworks.¹³² This may be because fintech firms would not be subject to the kind of capital regulatory requirements, mandatory information disclosures, and public policy measures such as interest rates caps to which traditional banks are subject.¹³³ Any overlapping jurisdictions may impede innovation because fintech firms may be unsure which regulator to contact to obtain the necessary permissions to launch a new product.¹³⁴

IV. POLICY IMPLICATIONS

Kenyan policymakers have little guidance on how to address the regulatory challenges discussed in Part III, partly because of the recent focus on financial inclusion which involves extending rather than restricting the growth of digital credit. As discussed above, like policymakers in other developing countries, the CBK has financial inclusion goals, which involve

130. *Id.* § 87.

131. *Id.* § 134.

132. Duncan Miriri, *Kenya's Proposed Regulator Will Not Infringe on Central Bank, Finance Minister Says*, REUTERS (June 21, 2018), <https://af.reuters.com/article/investingNews/idAFKBN1JH13H-OZABS> [<https://perma.cc/7WCP-UAS6>].

133. John Sykei, *Kenyan Regulatory Net Widens to Include Fintech Lenders*, BOWMANS (July 2, 2018), <https://www.bowmanslaw.com/insights/intellectual-property/kenyan-regulatory-net-widens-to-include-fintech-lenders/> [<https://perma.cc/QDL7-6YMQ>].

134. Tamara Kalunda & Irene Hu, *Groundbreaking New Policy and Regulatory Initiatives May Spur More Fintech Innovation in Kenya*, FSD KENYA BLOG (July 5, 2018), <https://fsdkenya.org/blog/groundbreaking-new-policy-and-regulatory-initiatives-may-spur-more-fintech-innovation-in-kenya/> [<https://perma.cc/DM7B-BU6J>].

further exploring how to assist the continued spread of fintech and bank-based lending throughout the Kenyan economy.¹³⁵

In relation to fintech lending, however, financial inclusion goals appear to conflict with other traditional regulatory objectives, such as consumer protection.¹³⁶ For example, several legislators along with traditional banks in Kenya have proposed the introduction of interest rate caps on fintech credit.¹³⁷ Traditional banks and financial institutions have been subject to similar caps since 2016.¹³⁸ The Kenyan government has not taken up this proposal. For example, the Financial Markets Conduct Authority Bill does not mention any cap on the interest rates that fintech platforms may charge, but only mentions that such platforms cannot charge more than the rate mentioned in the initial loan contract.¹³⁹

While interest rate caps may contribute to consumer protection objectives by reducing over-indebtedness, such rules can create challenges for financial inclusion. This is because such rules reduce the compensation available to fintech lenders, which in turn may impede their ability to reach into unbanked and other low-income communities in Kenya.

A second potential policy option is simplifying disclosure about digital consumer credit, a topic which has received policy attention.¹⁴⁰ In theory, doing so can lead to more informed decision-making and fewer loan defaults. However, evidence from developed countries suggests that more streamlined or otherwise “improved” disclosure has little, if any, positive impact on behavioral practices and financial choices.¹⁴¹ Empirical literature

135. The CBK’s initiatives include facilitating and supervising the Microfinance Act, participation in the East African Community Microfinance Policy and Implementation Strategy, and implementing measures designed to increase transparency in the pricing of lending. CENT. BANK OF KENYA, BANK SUPERVISION ANNUAL REPORT 2017 15-17 (2017), https://www.centralbank.go.ke/uploads/banking_sector_annual_reports/873911276_2017%20Annual%20Report.pdf [https://perma.cc/2NKP-8AYH].

136. Maggie Fick, *Kenya’s Central Bank Governor Calls for Regulation of Fintech Lenders*, REUTERS (May 29, 2018), <https://www.reuters.com/article/us-kenya-fintech/kenyas-central-bank-governor-calls-for-regulation-of-fintech-lenders-idUSKCN1IU0N4> [https://perma.cc/58SP-CDUA].

137. *Kenya Moves to Regulate Digital-Fueled Lending Craze*, VOICE OF AM. (May 26, 2018), <https://www.voanews.com/africa/kenya-moves-regulate-digital-fueled-lending-craze> [https://perma.cc/59TZ-JSFZ].

138. Ochieng, *supra* note 108.

139. The Financial Markets Conduct Bill § 87.

140. Izaguirre & Mazer, *supra* note 106.

141. Omri Ben-Shahar & Carl F. Schneider, *The Failure of Mandated Disclosure*, 159 U. PA. L. REV. 647, 704–28 (2011).

reports that those people in developed countries who are less well-educated tend to be more likely to make financial mistakes.¹⁴² Given much lower rates of general education and financial experience in Kenya than in developed countries, it appears that Kenyans are likely to be particularly prone to making mistakes, regardless of the quality of disclosure.¹⁴³

Moving forward, fresh thinking on regulatory proposals for fintech lending in Kenya and other developing countries is required. This thinking should differ from the type used for bank-based regulatory frameworks and focus on two components: studying the behavioral practices of low-income communities and determining which regulators should have jurisdiction over fintech lending. First, we need to better understand the way in which low-income communities, particularly the unbanked and other disadvantaged groups, process financial information, particularly in relation to loans.

Second, another key starting point for regulatory frameworks involves determining which regulator or regulators in Kenya should have jurisdiction over fintech lending, which involves developing a “functional” approach. At least some of the regulatory confusion emerges because of a prevailing institutional approach, regulating firms based on their formal title. Such an approach creates confusion in relation to fintech lending because a firm that is not classified as a bank is providing a bank function—in this case, consumer credit.¹⁴⁴ Moving forward, regulators should use a functional approach, which involves regulating firms based on their activities.¹⁴⁵ In the case of fintech lending, this approach would enable Kenyan regulators to regulate the activities of consumer creditors in the same way, regardless of whether the firm was labeled as a “bank” or any other type of institution.

142. John Y. Campbell, *Household Finance*, 61 J. FIN. 1553, 1579–84 (2006); see also Annamaria Lusardi & Peter Tufano, *Debt Literacy, Financial Experiences, and Overindebtedness*, (Nat’l Bureau of Econ. Res., Working Paper No. 14808, 2009).

143. Note that education has improved in Kenya. See Nick Clark, *Education in Kenya*, WORLD EDUC. NEWS & REVS. (June 10, 2015), <https://wenr.wes.org/2015/06/education-kenya>. However, as of 2019, there are significant ongoing limitations. *Education Statistics*, WORLD BANK GRP., <https://datatopics.worldbank.org/education/country/kenya> [<https://perma.cc/2B4M-HTG9>].

144. Rob Nichols, *Bank or No Bank, Fintech Must Be Regulated*, AM. BANKER (Feb. 18, 2016), <https://www.americanbanker.com/opinion/bank-or-no-bank-fintech-must-be-regulated> [<https://perma.cc/C3WY-QSJB>].

145. See generally JOHN ARMOUR ET AL., *PRINCIPLES OF FINANCIAL REGULATION* (2016).

CONCLUSION

Fintech lending is growing in the United States and other developing countries, raising novel regulatory and supervisory issues that require attention. Such topics have attracted relatively limited policy and scholarly attention thus far.

Developing regions, particularly in Africa, provide insights on the potential regulatory problems that can emerge when fintech lending becomes a much bigger proportion of overall credit. This emerges because the relative lack of banking outreach has created a vacuum into which such lending is already emerging. These same features mean that fintech lending is poised to grow much more into the future.¹⁴⁶

Kenya's experience helps outline the wider benefits and costs with fintech lending enters fledgling credit markets. Access to appropriate, reliable credit can significantly enhance the economic opportunities available to low-income communities, particularly the unbanked.¹⁴⁷ But it comes with significant risks, including inaccurate pricing as firms determine how to process and use the vast range of information at their disposal, as well as potential behavioral problems leading to widespread default.¹⁴⁸ The service also appears to create regulatory gaps because existing intellectual silos continue to focus on consumer credit emerging from the banking sector, not fintechs.¹⁴⁹

Determining appropriate regulatory responses to fintech advancements is complicated and requires additional research. A useful starting point involves more empirical material on behavioral problems amongst Kenyans and other developing countries—particularly amongst lower-income communities who seem to default the most on new loans.

146. Gary Hwa, *Eight Ways Fintech Adoption Remains on the Rise*, EY (Jun. 3, 2019), https://www.ey.com/en_us/financial-services/eight-ways-fintech-adoption-remains-on-the-rise.

147. ARMOUR ET AL., *supra* note 145, § II.

148. *Id.* § III.

149. *Id.*