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Credit Information Sharing and Credit Access in Kenya: Impact, Perspectives and Challenges

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Abstract

Credit bears great significance to people's financial lives. However, access to affordable, unsecured and formally provided credit remains constrained, particularly in the developing world, due to multiple factors. Sharing of borrowers' credit history, otherwise called information sharing, emerged as a remedy to this challenge and is an integral feature of credit markets with undeniably significant implications for both lenders and borrowers. This study explored the impact of information sharing on credit access in Kenya. The study drew on interviews with industry insiders and borrowers who offered their perspectives on how the information-sharing mechanism operates and how it impacts credit access. Findings indicated that information sharing has broadened and deepened the credit market and made it more competitive. While the mechanism is useful to lenders as a screening and soft collection mechanism, it has not yielded remarkable benefits for borrowers besides expanding access to digital credit. Particularly, information sharing has had a minimal effect in diminishing the role of collateral, promoting risk-based loan pricing and enhancing transparency in credit appraisal. Further, inaccurate and incomplete information, prohibitive participation and limited understanding of

the mechanism hamper its effectiveness and constrain credit access. The study pinpointed regulations that require relaxing and others that need tightening to address these drawbacks and deliver greater benefits to users.

Keywords: *Credit, Credit scoring, Financial Inclusion, Information sharing, Kenya.*

1. Introduction

The significance of credit to the financial welfare of individuals, particularly in the global south has been extensively documented. Many studies suggest numerous welfare benefits from providing credit to low-income borrowers. Despite an insatiable demand for formally-provided credit among Kenyan borrowers, the requirement for physical collateral and arduous procedural necessities have rendered access to formal credit elusive. The 2019 Kenya FinAccess Household Survey reveals that only 13.2% accessed loans from formal financial institutions (CBK, 2019). Similarly, Zins and Weill (2016) find that only 6.7% of Africans are reported to have borrowed formally. This constrained access to formal credit is partly attributable to ubiquitous information asymmetry that has long characterised the Kenyan credit market, leading to significant non-performing loans in the 1980s and 1990s (Kwambai & Wandera, 2013). The emergence of credit information sharing or simply information sharing in 2010 held the promise of reduced borrowing costs, low loan delinquency rates and, most importantly, wider credit access. Information sharing in Kenya was set in motion after the Credit Bureau Regulations were issued following an amendment to the Kenyan Banking Act 2006 that made it mandatory for commercial banks to share information on non-performing loans through Credit Reference Bureaus (CRBs). Subsequently in 2010, the first CRB was licensed by the Central Bank of Kenya (CBK) followed by two others shortly after. However, the development of information sharing in Kenya, its impact over the last decade and its challenges remain obscure. This study aims to address this knowledge gap.

In the context of information sharing, credit information encompasses all historical information on borrowings, loan repayments and credit transactions of individuals held by CRBs. A CRB also holds information on an individual's identity and recent inquiries of their credit record. CRBs use this information to compute credit scores which lenders use to underwrite loans. In Kenya, credit information is collated from formal financial institutions, which include prudentially regulated

institutions mandated to share credit information and various non-regulated entities that share information voluntarily. In other jurisdictions where information sharing is more developed, credit information may also include credit transactions with utility companies, letting agents and retail stores among others. Kusi, Agbloyor, Ansah-Adu, and Gyeke-Dako (2017) suggest that, to be effective, CRBs ought to gather information on all borrowers from as many of all available credit sources.

The basic form of information sharing between lenders involves sharing negative information only, such as loan defaults and late repayments. Negative credit information essentially creates a “black list” that acts as a screening tool for lenders when appraising a borrower and increases the incentive to repay their loans (De Janvry, McIntosh, & Sadoulet, 2010). However, having only one-half of the picture (negative credit information) runs the risk of having a blacklist becoming the only deciding factor with the potential of impeding credit access. More sophisticated forms of information sharing entail sharing both negative and positive credit information. Sharing of positive credit information allows the borrower to build “reputation collateral” which can signal a borrower's creditworthiness.

At the outset, commercial banks were the primary users of credit information, but as the years wore on, there has been an increase in the number of users of credit information including microfinance institutions (MFIs), digital lenders, credit-only institutions and, most recently, deposit-taking Savings and Credit Co-operative Organisations (SACCOs). At the inception of CRBs, the CBK mandated banks to share negative credit information with CRBs because the objective of information sharing at the time was to curb rampant loan defaults which had weighed down the banking sector. However, this was viewed as a narrow conception of credit information sharing. From 2014, following the CRB Regulations 2013, commercial and microfinance banks began sharing both negative and positive otherwise termed ‘full file’ credit information. The move to share both positive and negative data was aimed at recording information on good borrowers to expand credit access. These trends underscore the growing importance of credit information sharing.

It is critical to underscore that credit access is tethered to credit appraisal techniques employed by lenders. Credit appraisal techniques are typically informed by the nature of the lender, the credit facility in question or the borrower's attributes. This study gives due attention to the impact that information sharing has had on credit appraisal

procedures employed by different types of lenders. This study, however, restricts itself to credit from formal sources given that credit information from CRBs is only used by formal lenders in Kenya.

Information sharing has received some attention in the literature, mostly in the context of developed credit markets. Several studies have documented the contribution of information sharing in better prediction of credit risk (De Janvry et al., 2010; Dierkes, Erner, Langer, & Norden, 2013), reduction of borrowing costs and informational rents (Gaitho, 2013; Martinez Peria & Singh, 2014) and instilling financial discipline among borrowers (Büyükkarabacak & Valev, 2012) among other effects. Credit information sharing minimises information asymmetry (Moyo & Sibindi, 2020) and mitigates both adverse selection and moral hazard problems in a competitive credit market which in turn leads to better allocation of credit (Büyükkarabacak & Valev, 2012).

While many accounts agree that historical credit information is a relatively credible predictor of a borrower's future repayment behaviour, several studies raise concerns about the completeness and accuracy of CRB information. Further, the blind use of CRB information and alternative data to power credit scoring algorithms is fast becoming a highly contested area and has piqued debate about the usefulness of information sharing in meeting its intended objectives. The empirical question that arises from this theoretical debate is whether information sharing affects credit access. This study aims to aid the theoretical debate by offering empirical evidence regarding information sharing in Kenya and how it tightens or loosens constraints on credit access.

This study hypothesises that the operation and consumer outcomes of information sharing in the developed world and Kenya, where the practice is only 10 years old, are hardly linear. Kenya presents an interesting case study given the globally acclaimed financial innovations namely mobile money and digital credit which all took place alongside the growth of information sharing over the last decade. These developments not only increased the channels of extending credit but also increased the volume and variety of credit information available on borrowers. These advancements are also credited for improving financial inclusion to 83.7% in 2021 from 26.7% just before the advent of mobile money (CBK, 2021).

This study aims to make three key contributions. First, this study explores the relationship between information sharing and credit access in Kenya given the patent relationship between the two. Although some studies have explored this subject using mostly quantitative methods and

in the context of the developed credit markets, the perspectives and practical experiences of borrowers and industry insiders are often taken for granted. The second aim of this study, therefore, is to explore how borrowers and various practitioners interact with the information-sharing mechanism, and what they perceive to be the benefits and challenges of information sharing. Thirdly, this study aims to address a contextual gap by complementing previous studies on credit information sharing in developing countries, an area that has not received significant attention in the literature.

The paper proceeds as follows; sections two and three will situate the study in extant literature by first discussing information sharing and its effects and thereafter exploring determinants of credit access and credit appraisal practices. Section four will describe the methods employed for this study. Section five will present the findings from interviews. A discussion of the findings and policy implications will follow and a brief conclusion given.

2. Effects of Credit Information Sharing

A relatively large body of work examines the role and effect of information sharing; however, a vast majority of this literature is based on developed credit markets. The most prominent effect of information sharing, which has been widely argued in literature, is the reduction of asymmetry between lenders and borrowers. Credit registries can minimise information asymmetry and thereby enhance credit access (Moyo & Sibindi, 2020) and mitigate both adverse selection and moral hazard problems in the credit market (Büyükkarabacak & Valev, 2012).

A key outcome of information sharing is that it produces screening and incentive effects which leads to a more accurate prediction of a borrower's repayment probabilities and deters loan defaults respectively (De Janvry et al., 2010). Credit information sharing also influences the financial behaviour of borrowers by providing incentives for borrowers to service their debts so as to access credit in the future (Büyükkarabacak & Valev, 2012; De Janvry et al., 2010). This significantly increases the likelihood for borrowers to become over-indebted as a result of taking out small digital loans from multiple sources also referred to as loan-stacking.

Notably, the presence of information-sharing mechanisms is associated with broader credit markets and lower credit risk (Kusi et al., 2017) thereby aiding the stability of the banking sector (Iakimenko,

Semenova, & Zimin, 2022). Credit information sharing could also lower the cost of credit in competitive markets (Martinez Peria & Singh, 2014) and minimise informational rents that would be extracted from borrowers due to efficiencies realised from robust credit risk management (Odhiambo & Ndede, 2019). Jappelli and Pagano (2006) posit that information sharing may cause banks to abandon the requirement for collateral for information-based lending policies.

Only a handful of studies have explored information sharing in Kenya, although with different analytical ends. These studies have focused on the effect of information sharing on the financial performance of commercial banks (Gaitho, 2013; Kwambai & Wandera, 2013; Mugwe & Oliweny, 2015), MFIs (Moti, Masinde, Mugenda, & Sindani, 2012) and SACCOs (Lagat, Mugo, & Otuya, 2013; Ndungo, Tobias, & Florence, 2017). This study concerns itself with the impact of information sharing on credit access in Kenya which has not been explored in the literature.

3. Aspects of Credit Access

Significant scholarly attention has been given to the question of determinants of credit access. Duncombe (2012, p.372) describes access as “a multi-dimensional construct incorporating supply-side elements covering geographical availability, access costs (including opportunity costs), and the characteristics of the service in question”. Historically, formal credit has been unavailable to the poor even though the demand has been high among them (Costa, Deb, & Kubzansky, 2015). Numerous studies put forward a host of factors that determine access to formal credit. These include, but are not limited to, the level of income (Mwangi & Sichei, 2011), gender (De Janvry et al., 2010), household size (Mwangi & Sichei, 2011), competition in the banking sector (Moyo & Sibindi, 2020), level of education (Mwangi & Sichei, 2011), distance to the service provider (Mwangi & Sichei, 2011) and the absence of credit registries (De Janvry et al., 2010).

In considering credit access, the question of credit appraisal techniques is inescapable because the decision to lend is based on the lender’s assessment of credit risk exposure and the characteristics of the borrower (Moti et al., 2012). Robust credit appraisals enable lenders to proactively manage their loan portfolios, thereby minimising losses and generating an acceptable level of return (Lagat et al., 2013). Conversely, poor credit appraisals breed a myriad of challenges in the credit market,

the most significant being high loan delinquency rates which inevitably lead to high interest rates to compensate for loan defaults (Kwambai & Wandera, 2013).

As highlighted earlier, the most popular source of credit in Kenya as indeed in the rest of Africa is informal sources such as store credit, family and friends, local savings groups and other sources of mutual aid. Informal credit is dependent upon one's reputation and relationship with the lenders, otherwise described as 'social capital'. Formal lenders use a variety of credit appraisal techniques depending on the credit facility in question, the borrower's characteristics and the nature of the lender. Commercial banks are known to require collateral in the form of physical assets to secure borrowings (Bazarbash & Beaton, 2020). Lending decisions by MFIs are typically based on the 5Cs model¹, an assessment of cash flows, subjective feelings about the risk posed by the borrower (Moti et al., 2012) and lately the use of CRB information. Co-operative societies extend loans to their members guaranteed by the savings of their co-members.

In the last decade, formal lenders in Kenya began to shift from credit appraisal methods that involve some form of human judgement to those that are technology-based such as credit scores and sophisticated algorithms because the latter are often perceived to be more impartial. De Janvry et al. (2010), however, suggest that many developing countries either do not have credit bureaus or do not have very effective ones. Further, Björkegren and Grissen (2018) argue that the foremost barrier to credit access, especially with digital credit, is being scored. Lack of documentation and credit history, particularly where credit bureaus are non-existent, constrains credit for small borrowers; in such circumstances, lenders often rely on collateral to reduce their credit risk exposure (Bazarbash & Beaton, 2020).

There has been a global surge in the use of alternative data by lenders to complement traditional CRB data. This data ranges from call and SMS volume data to mobile money data, merchant transactions and even social network data. In the developed world, alternative data is used to add to the precision of credit scores while in the developing world, alternative data is used complementarily with CRB data due both to the underdevelopment of CRBs and the fact that many people do not have a history of financial transactions which can be verified by a lender

¹ The 5Cs model manually assigns weighted values for various characteristics of a credit applicant (character, capacity, capital, collateral and conditions) and the total weighted score of the applicant is used to estimate his creditworthiness.

(Björkegren & Grissen, 2018; Costa, Deb, & Kubzansky, 2015). A small but growing number of studies have explored the incorporation of alternative data in credit scoring. For example, Óskarsdóttir et al. (2019) investigate call and call network data for credit applications in a Belgian bank and conclude that these elements enhance conventional credit information in predicting loan default. Likewise, (Bennouna & Tkiouat, 2019) study the age, sex, marital status and education level of borrowers from microfinance institutions in Morocco and conclude that these variables in credit scoring can better predict the default of loans. (Costa et al., 2015) posit that whereas the use of alternative data in predicting loan default is still experimental, it holds significant potential for expanding credit access, especially to “thin file” or “no file” borrowers.

4. Methods

A combination of secondary and primary data was used in this study. A vast range of secondary sources were reviewed including the CRB regulations and related laws, survey data for various studies, academic literature and a variety of institutional reports. Primary data for this study were collected through in-depth semi-structured interviews with 42 informants as part of a larger related study. The informants were broadly categorised into two – 18 industry insiders and 24 borrowers. Industry insiders refer to professionals working in various organisations in the Kenyan financial services industry including SACCOs, digital lenders, commercial banks, CRBs, a regulator and a debt collection agency. Borrowers in this case refers to people who have taken credit from one or more formal sources including banks, SACCOs and digital lending platforms.

This study employed purposive, snowball, random and, to a minimal degree, convenience sampling. Fifteen of the 18 practitioners were purposively sampled owing to their experience and knowledge of the subject while three were sampled through a snowball process, that is, through the referral by other informants. These informants were middle to senior-level managers and chief executives who have deep and practical knowledge of the credit industry including information sharing in Kenya. Five of the 24 borrowers interviewed were well known to this researcher and were selected by convenience because of researcher’s knowledge of them as members of various SACCOs. The remainder of the sampled borrowers were selected either randomly or through snowballing. In both cases, the snowball samples were useful in getting

an adequate number of knowledgeable informants to achieve data saturation. The snowball sample also helped in achieving a more representative sample that took account of several characteristics of the population such as age and gender, geographical location, and employment and socio-economic status. Particular attention was paid to the employment status and age of the borrowers. This was because employed people in Kenya are typically likely to access some level of formal credit while people who are aged 36 and over are more likely to be collateralised than younger ages according to the Kenya Household FinAccess survey (CBK, 2021). These categories of informants were useful in drawing implications of information sharing from a broad range of informants.

The interviews were conducted between August 2020 and March 2021. Aside from two interviews with borrowers, all others were conducted within Nairobi City. This was done deliberately for two main reasons. The first was to enable easy access to informants; Nairobi is the financial hub of the country where professionals consulted are based. The second reason was that Nairobi was ideal for reaching a wider range of borrowers who occupy different socio-economic classes. This ranged from people who are formally employed and enjoy a considerable degree of financial security and predictability to casual labourers and low-income earners who are financially vulnerable.

The interviews were semi-structured and utilised an interview guide comprising open-ended questions which were useful in eliciting detailed responses which emerged naturally from the informants' experiences. Other interview questions arose from the interviewer's own reflection on the responses and for purposes of clarification. The interviews also presented an opportunity to read the informants' endorsement of, or reservations about, information sharing through their choice of words, body language or the tone they adopted in giving their responses.

The study utilised informed consent forms which, among other ethical considerations, indicated the voluntary involvement of key informants and the guaranteed anonymity of the informants and the organisations that employed them. For informants who were not comfortable signing the physical informed consent letter, verbal consent was ethically considered sufficient. Two pilot interviews were conducted for the two main categories of key informants which assisted in structuring the interview questions and getting initial thoughts on the subject. Interview recordings and field notes were organised into themes and sub-themes which informed the findings of this study.

The grounded theory and constant comparative analysis were employed in analysing the data collected for this study. This approach required that interviews be scheduled in a way that would allow the author to move between the two main categories and subcategories of informants. Conducting interviews in this ‘back and forth’ fashion served to fill data gaps and refine connections in the data collected. Constant comparative analysis entailed comparing primary and secondary data as well as field notes for similarities and differences which helped in taking into account the full complexity and diversity of the data. The objective was to link and integrate emerging themes and arrive at the dominant themes (codes) which informed the findings.

5. Findings

Several issues stand out for industry insiders and borrowers concerning credit access in the era of information sharing. First is the significance of information sharing to the growth of digital lending in Kenya over the last decade. One of the hallmarks of digital credit is the ease and speed of delivery of digital loans which is appealing to borrowers (Di Maggio & Yao, 2018) as it allows them to act on time-sensitive opportunities and needs to a much greater degree than in the past (Burlando, Kuhn, & Prina, 2020). Speedy loan appraisals are made possible through real-time integration between the digital lending platform and CRBs. This integration enables lenders to query a borrower’s credit information and approve or reject a loan application instantaneously.

Presently, digital lenders are the second most common source of credit in Kenya after informal lenders (CBK, 2019; Costa et al., 2015). This demonstrates the popularity of digital credit among borrowers. Indeed, (Costa et al., 2015) point out that there has always been clear consumer demand for unsecured, formally provided, inexpensive credit for short-term purposes. Notably, digital lending has also transcended institutional barriers and has seen numerous non-financial institutions offer in-kind digital loans across different value chains. For example, Twiga Foods, a food distributor, gives credit christened ‘Soko Loan’ to their food retailers in the form of product (fresh vegetables) capped at a determined credit limit (order size) which the retailers repay using digital means. Such is also the case with Buy-Now-Pay-Later (BNPL) platforms which are becoming more prominent. A popular example is M-Kopa Solar offering solar equipment on credit which is repaid digitally.

Lenders in Kenya indicated using CRBs primarily as a soft collection mechanism where they easily coerce repayment of loans from borrowers who would not want to stain their credit records through an adverse CRB listing. Invariably, borrowers indicated that information sharing incentivises them to honour their loan obligations to keep their credit record clean and possibly qualify for a higher loan limit in the future. Lenders indicated that information sharing has also helped reduce loan stacking and over-indebtedness among borrowers since lenders now have a full view of a borrower's loan obligations as part of the credit appraisal process. However, loan-stacking remains relatively common among digital borrowers in Kenya owing to the speed of delivery and short tenure of digital loans.

Although this study did not investigate the effect of information sharing on the cost of borrowing, it paid attention to specific credit appraisal techniques employed by different types of lenders. Findings indicate that formal lenders apply standard pricing for the same type of credit facility for individual borrowers regardless of their credit score provided their loan application goes beyond the screening stage. This, they argue, is in a bid to maintain a balanced loan portfolio given the deficiencies of the information mechanism. Standard pricing for loans forestalls credit access given that it increases the borrowing costs and reduces the borrowing capacity of borrowers who pose a lower credit risk.

Practitioners and borrowers point out several fundamental deficiencies of the information-sharing mechanism in Kenya which constrains credit access. To begin with, the accuracy and completeness of CRB information constitute a growing concern among market actors. Practitioners suggest four main reasons CRB information may be incomplete. First, not all lenders share data with CRBs. The CBK mandates only prudentially regulated financial institutions (commercial and microfinance banks and recently deposit-taking SACCOs) are required to share credit information. All other lenders including over 3,000 non-deposit-taking SACCOs, over 100 digital lenders and credit-only institutions do not share credit information or do it voluntarily. Practitioners from relatively smaller financial institutions cited the lack of administrative and technical capacity and high costs as the main reasons their institutions are ill-prepared to participate in the information-sharing mechanism.

The second reason has to do with how information is shared. Until recently, lenders shared credit information with each of the three CRBs

separately such that at any point in time, one CRB would hold more information about a borrower than another. Consequently, most commercial banks utilise credit reports from at least two CRBs before approving or rejecting a loan application. Similarly, most digital lenders query a borrower's credit record from more than one CRB when appraising a borrower. Thirdly, some lenders only share negative data with CRBs, meaning only loan defaults and late repayments reflect on a borrower's record. Positive information which encompasses all cleared loans and timely repayments is not shared, and this gives a skewed picture of a borrower's credit record.

Practitioners suggest that another reason information held by a CRB may be inaccurate is timing differences in the submission of data. While some lenders submit information to CRBs monthly, a number submit weekly while some submit rather irregularly. This indicates that a borrower's credit record may not reflect the accurate position at a point in time. Other reasons highlighted by practitioners are the wrong use of the credit information submission template and situations where nondescript lenders dump information in CRBs and become unresponsive to requests to correct inaccurate information submitted.

These gaps in the information held by CRBs have led a growing number of formal lenders in Kenya to use alternative data to power algorithms that predict the creditworthiness of prospective borrowers. According to industry insiders, this data has some predictive value and is usually scrapped from multiple sources such as the borrower's smart devices and third-party data vendors. It was clear from the discussions with borrowers that they were typically unaware of what information is taken into account to assign them a credit score or credit limit. Those who had a faint idea of the type of data lenders collect did not know the weightings that lenders assign to the data during credit scoring. Notably, algorithms used in credit appraisals are not only well-guarded intellectual property but are also dynamic which makes the credit appraisal process obscure. Various lenders consulted explained that there are limits to the extent that CRB information can be used to predict default because it is primarily historical and the fact that there are often significant gaps in the data, hence the need to use alternative data.

Creditors such as utility companies, retailers and others who hold supplemental information that could improve the quality of credit information find the resources and bureaucracy required to participate in the information-sharing mechanism too prohibitive. In developed credit markets, sharing of an individual's credit transactions (unpaid bills) by

such creditors is common practice. In Kenya, however, participation in the information-sharing mechanism is subject to strict approval by the CBK. Presently, only prudentially regulated lenders are mandated to share credit information. Industry insiders note that this restriction is informed by concerns around the privacy of information, irregular participation by third parties and limited capacity of the CRB dispute resolution mechanism better known as Tatu Centre, which may further undermine the effectiveness of the information-sharing mechanism.

Lastly, there is a clear and significant knowledge gap about CRBs among borrowers in Kenya regarding how one gets listed with a CRB, what information is shared with CRBs, the mandate and responsibility of CRBs, and consumer rights concerning information sharing. For example, a majority of borrowers understand CRBs to be a 'blacklist' they do not want to be on. Many borrowers fail to recognise that one never gets delisted from a CRB, that once one gets listed (through a positive or negative listing), they start creating a credit record of their borrowings and repayments which will be held by the CRB for at least five years.

6. Discussion and Policy Implications

The information-sharing mechanism has significantly reduced information asymmetry in the credit market. Before the inception of CRBs in 2010, financial institutions did not have information about a borrower's existing loans from other lenders which made it difficult for lenders to gauge the capacity to borrow and the likelihood of repayment. Credit information sharing has enabled lenders to have a full view of an individual's credit history and helped them in estimating a borrower's creditworthiness and identifying over-indebted borrowers. Low-income borrowers have traditionally been excluded from the formal credit market due to the lack of collateral and their limited capacity to make loan repayments. However, with information sharing, lenders are more comfortable in extending the right amount of credit to more good borrowers. This is consistent with (De Janvry et al., 2010; Gaitho, 2013) who observe that the presence of credit registries reduces information asymmetry between lenders and borrowers and leads to expanded credit access.

Information sharing is particularly responsible for the growth of digital lending in Kenya given that it enables swift loan appraisals, the primary value proposition of digital credit. Digital lending has expanded

access to low-value, short-term and unsecured credit by individuals who were previously excluded from the credit market – individuals without physical assets or formal employment – on the strength of their credit information. Taking this view, information sharing has broadened and deepened the Kenyan credit industry and made it more competitive which has been positive for credit access. This is consistent with (Moyo & Sibindi, 2020) who suggest that more competition in the credit market reduces borrowing costs and increases the availability of credit. This is evident through the proliferation of digital lenders and the roll-out of new credit products by incumbent financial institutions – commercial and microfinance banks and SACCOs – who sought to fight off competition from the new entrants who are more agile and not subject to prudential regulation. Digital lending has also permeated non-financial institutions which now offer in-kind digital loans.

However, it is critical to point out that the short repayment time and small value of digital loans, relative to conventional bank credit, only make them useful for immediate consumption needs and emergencies. Put differently, digital loans can hardly be used for what industry insiders describe as ‘productive uses’ such as spurring people into entrepreneurship careers or purchasing productive assets. This is consistent with (Bharadwaj, Jack, & Suri, 2019) who, while doing a study of digital loans in Kenya, find that they are “not transformative” given that they yield no welfare benefits related to procuring assets or building wealth.

Information sharing plays a significant role in driving responsible financial behaviour among borrowers by way of timely loan repayments given that borrowers tend to view CRBs as a ‘blacklist’ for loan defaulters. This is in consonance with (De Janvry et al., 2010) and (Büyükkarabacak & Valev, 2012) who suggest that sharing of credit information reduces loan defaults because borrowers seek to protect their “reputation collateral” by meeting their obligations timeously. Notably, the perception of CRBs as blacklists is demonstrative of the general lack of knowledge of their purpose and functioning. This lack of awareness makes borrowers vulnerable to predatory practices by rogue lenders. A ‘black’ credit market would reverse gains realised by information sharing given that black-market lenders typically target high-risk borrowers and lend at usury rates, which often entraps borrowers in debt cycles (Arnold & Booker, 2013; James, 2014).

Against expectations, the opaqueness in credit appraisals by formal lenders in Kenya persists, if not worsened, in the wake of credit

information sharing. This is due to the use of alternative data and the deployment of sophisticated and propriety credit scoring algorithms. It is useful to recall that before 2010, credit appraisals by most lenders were not only subjective but lacked transparency given it was somewhat dependent on the personal impression the borrower makes on the lender. In this view, information sharing has helped lenders transition to less subjective credit appraisal techniques than the ones previously used. While some studies argue that the use of a credit appraisal algorithm could catalyse credit access in the developing world (Costa et al., 2015; Kshetri, 2021), the inscrutable nature and discriminatory power of algorithms have equally been criticised in literature, most prominently by (O'neil, 2016).

Contrary to common belief, information sharing has not been effective in facilitating risk-based pricing for credit products among formal lenders in Kenya outside the realm of digital lending. Ideally, risk-based pricing dictates that interest terms of a loan are based on a credit assessment of an individual borrower such that a borrower with a high credit score gets a lower interest rate on a loan and can access a larger loan compared to one with a lower credit score. While this practice is common in the developed world, it is not apparent in Kenya. The practice of standard loan pricing is substantively at odds with the reduction of borrowing costs, a prime objective of information sharing.

Inaccurate and/or incomplete credit information in Kenya is a drawback to credit access because it results in poor credit scoring by CRBs and poor credit appraisal by lenders. In this regard, this study proposes three recommendations to policymakers. Firstly, The CBK should, with necessity, strengthen the CRB regulations concerning how, when and what information lenders should share credit information so as to remedy the present situation where some lenders share information voluntarily and often irregularly, leading to incomplete and inaccurate credit information. Secondly, the regulator should also consider relaxing, to a reasonable degree, regulations around who can share and use credit information. This will potentially see unregulated (semi-formal) financial institutions and other creditors share useful information on an individual's credit history in an inexpensive and frictionless manner. This agrees with Kusi et al. (2017), Kusi and Opoku-Mensah (2018) and (Moyo & Sibindi, 2020) who posit that deepening the scope, depth and quality of credit information shared could increase the usefulness of the mechanism for both formal and informal lenders.

Inevitably, reviewing the CRB regulations in this way will entail strengthening their capacity to provide oversight over the operation of the CRBs, institute stronger measures for potential misuse of the mechanism and facilitate the speedy resolution of disputes. It is critical to appreciate that whereas CRBs are responsible for their credit scoring methodology, they are merely custodians of credit information and, as such, the accuracy of credit information depends on the originator of the information.

Third and last, it is incumbent upon credit market stakeholders led by regulators to promote education on the functioning and benefits of information sharing along the credit value chain, with a stronger emphasis on borrowers. (De Janvry et al., 2010) find that when borrowers are educated on CRBs, they alter the process by which they screen new members in joint liability groups and reduce moral hazard through improvement in repayments. Better educated borrowers are likely to derive greater benefits from the information-sharing mechanism.

7. Conclusion

This study has unpacked the development of credit information sharing in Kenya and how this development has impacted credit access through the perspectives of borrowers and practitioners. A decade after the commencement of information sharing in Kenya, the credit market has witnessed significant developments ostensibly geared at expanding access to formal credit. Information sharing came about as a way to promote risk-based lending by reducing information asymmetry in the credit market, lowering borrowing costs and reducing the reliance placed on physical collateral by lenders in favour of reputational collateral.

The information-sharing mechanism in Kenya has significantly reduced the information asymmetry between lenders and borrowers and thereby deepened credit access, especially to low-income borrowers. Particularly, the information-sharing mechanism has been pivotal in the growth of digital lending in Kenya given that it facilitates instantaneous credit checks and has thus reduced the cost and time required to acquire new customers. Digital lending has been deeply impactful in broadening and deepening the Kenyan credit market. While the nimbler digital lenders have managed to eliminate the need for physical collateral, this cannot be said of a vast majority of formal lenders who merely use credit information as a screening and credit-rationing tool. Further, credit appraisal by formal lenders in Kenya remains opaque, and standard loan

pricing is inconsistent with risk-based lending which in turn hampers credit access.

Inaccurate and incomplete credit information held by CRB is a significant drawback to credit access and one that requires the attention of stakeholders if the objectives of information sharing are to be realised. Allowing more creditors to participate in the information-sharing mechanism could enhance the predictive accuracy of CRB information. As a matter of necessity, stakeholders in the credit market should promote awareness of the role and operation of the information-sharing mechanism to root out irresponsible lending practices and expand credit access.

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Appendix: List of interviewees**i) Industry insiders**

Institution	Description	No. of Interviewees
Commercial banks	Tier I	1
	Tier II	2
	Tier III	1
Savings and Credit Cooperative Organisations (SACCOs)	Open bond SACCOs	4
	Closed bond SACCOs	2
Non-bank (Fintech) digital lenders	International-based	3
	Local-based	3
Debt recovery agency		1
Regulator		1
Total		18

ii) Borrowers

Income level		18-35 years	36 years and above	Total
High-income borrowers	Employed	2	5	7
	Self-employed	-	3	3
Moderate-income borrowers	Employed	2	1	3
	Self-employed	1	3	4
Low-income borrowers	Employed/casual workers	2	1	3
	Unemployed	3	1	4
Total				24

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