CGAP

FOCUS NOTE

Consumer Protection in Digital Credit

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Digitally delivered credit is quickly expanding in emerging markets. "Digital credit" refers to credit products—including digital payments products such as mobile money—that are delivered fully via digital channels, such as mobile phones and the internet.[1] CGAP research in Africa, Asia, and Latin America counts 22 deployments with an estimated total of 24 million subscribers, and six deployments with a total of more than 1 million users. Commercial Bank of Africa's M-Shwari in Kenya and M-Pawa in Tanzania lead the way with 13.5 million and 4.8 million users, respectively (Vidal and Hwang 2017 and GSMA 2017). To date most loans are low in value (generally $10–50 to start) and very short in tenor (typically 2–4 weeks). Interest rates in digital credit commonly range between 6 percent to 10 percent monthly for a one-month loan, which is relatively expensive compared to traditional formal loans in similar sectors such as microfinance,[2] although possibly less expensive than informal moneylenders who may charge an interest fee equal to the amount borrowed (Ochieng 2016).

These business models are driven by strong customer demand, lower operating costs, and the greater reach of the instant, automated, and remote lending methodology. Because of these factors, they can scale more quickly than traditional small-loan models (Chen and Mazer 2016). The convenience and speed of digital credit are well matched to urgent and unanticipated needs, such as a late-night emergency visit to the hospital or working capital for the quick-turnover, high-margin economic activities common for microenterprises. For example, in Kenya the leading lender's loan volume surges between 3 and 5 in the morning because that is when small-scale traders purchase their stock for the day (Omondi 2017).

Digital credit is also promising from a financial inclusion perspective, given the low access to formal credit by low-income consumers in most developing countries and the limitations of informal and semi-formal options. Yet the very attributes of digital credit—instant, automated, and remote—create consumer protection risks that are distinct from those of more traditional consumer and microenterprise credit models. These consumer protection risks include low-income consumers' poor understanding of loan costs and the consequences of default, which can be exacerbated by interface limitations, such as small screens and short menus; their lack of "intentionality" when making borrowing decisions on the spot;[3] and the opportunity to easily renew a series of high-cost loans. These risks can result in consumers taking on expensive loans, borrowing when they do not have a real need, facing challenges in on-time repayment, and suffering the consequences of a negative listing in the credit bureau. Also, they may not benefit as much as they could from the "digital data trails" and positive credit history they create when the way in which these data are used is not made clear, or when consumers have limited control over who has access to these data and for what purpose. (For a more extensive look at potential behavioral shifts of borrowers in digital environments, see Annex.)

Risks to lenders are also important because they may have negative impacts on consumers and on the development of sustainable and competitive credit markets. These risks include the poor disclosure of prices, terms, and conditions; weak client communications once the loan is executed; limited efforts to assess affordability and ensure suitability of their product offerings for specific consumers or segments; and incentives to engage

1 In this publication, "digital credit" refers to unsecured cash loans in emerging markets that are obtained via digital channels without the involvement of a salesperson, that use digital channels for loan disbursement and collection, and that leverage digital data to make lending decisions via automated processes.

2 A CGAP review of interest rates in microfinance found average annual interest rates near 30 percent (Rosenberg et al. 2013).

3 "Intentionality" refers to the level of prior consideration of need, costs, and benefits consumers take when choosing to borrow as well as the extent to which they have thought of the purpose of the loan they take on.

in behavior that limits consumers' ability to use their borrower history and other data sources to seek multiple digital credit offers and foster competition among providers.[4] The results for lenders can include underperforming loan portfolios, subpar profitability, and loss of trust from customers, regulators, and the general public.

At the same time, there are ways in which new digital credit models can reduce the risks and problems common in conventional lending to low-income consumers. For example, the risk of pressure sales or aggressive collections is lower because people can obtain loans without the participation of a loan officer. Consumers could benefit from the ability of lenders to better standardize the marketing, sales, and post-loan servicing processes. Furthermore, the lender has far greater opportunity to tailor communication to the borrower by using SMS or a smartphone app that could include additional educational content on the product, tips on good borrowing habits, reminders on when and how to pay and the importance of timely repayment, and explanation of the consequences of failure to repay in full.

This paper explores new approaches to address risks and problems in five areas:

- Disclosure of loan terms and conditions
- Marketing approaches to promote responsible borrowing
- Appropriate and tailored products to meet the needs of specific consumer segments
- Repayment and collections
- Credit reporting and information sharing

It draws from recent demonstrations by diverse East African lenders on how to identify potential solutions to common problems. The demonstrations used a range of methods, including lab testing with typical consumers that simulates the live borrowing experience, live testing by lenders to modify digital credit products and communications and then measure the resulting changes in consumer behavior, qualitative research, consumer surveys, and analysis of account-level data of digital borrowers. The demonstrations identified cost-effective, win-win practices that can influence product design and delivery to better protect borrowers while improving providers' business viability (see Box 1).

Well-designed and enforced consumer protection rules based on emerging provider good practices will likely be a necessary complement to the efforts of individual lenders or industry initiatives. Specifically, rules of the road are needed to do the following:

- Create a level playing field across the market through common standards for suitable product design and responsible business conduct for all digital lenders, whether regulated or unregulated.
- Enable consumers to understand and leverage their data and borrowing history, which in turn can help drive consumer choice and provider competition.

Digital credit and consumer protection experiments

Since 2014, CGAP has partnered with diverse providers to identify key consumer protection issues raised by digital delivery of small loans and to test potential solutions. This exploratory research was conducted at relatively low cost—approximately $50,000 or less in research costs for each of the projects presented in Table 1. Findings from these digital credit experiments inform this publication.

Responsible digital credit throughout the customer journey

For digital credit, each stage of the product lifecycle is clearly demarcated, standardized, and unaffected by financial services provider (FSP) staff behavior or biases because the process is automated and remote. This enables analysis of risks specific to each stage.

4 See, e.g., the recent discussions and concerns raised regarding digital credit and consumer protection from a range of actors and markets: Pande and Memon (2017), Robinson and Wright (2016), AFI (2015), and Owens (2017).

Box 1. Top 10 tips for digital lenders to build strong business models and customer relationships

Disclosure of loan terms and conditions

- Provide consumers the all-in price before they sign a loan agreement. Consumer understanding of costs can improve intentionality and repayment performance.
- Test and adopt measures so borrowers read and understand the terms and conditions (T&Cs) and their obligations. This includes using cost-effective tweaks to the menu design, "opt-out" framing, and screens that summarize "Key Facts" in a clear and simple manner.

Marketing

- Consider whether push marketing (addressed later in this paper) and unsolicited offers are effective strategies in the long term because they exacerbate the risk of encouraging borrowing without a purpose.
- Design effectively framed loan offers to reduce the likelihood that consumers will take the largest amount available without thinking through their needs and repayment capacity.

Suitability and product design

- Introduce measures to improve intentionality and increase the "friction" in the borrowing process to make sure consumers are making active and well-considered credit decisions.
- Structure the loan process to collect—with clear data privacy protections in place—more customer data upfront to better assess needs and avoid the observed tendency toward "mono-product," one-size-fits-all digital loans.

Repayment and collections

- Optimize effectiveness of payment reminder messages through framing content, timing, and tailoring to different borrower segments and preferences.
- Reward strong repayment performance by using incentives such as risk-based pricing, lower lending costs, or longer terms to create incentives for your "prime" customers.
- Consider whether your system allows for flexibility in repayment options, such as semi-automated loan restructuring.

Credit reporting and information sharing

- Increase borrower awareness of their data trails and credit histories—including their credit reports—and their ability to ensure accuracy, which in turn incentivizes strong performance and strengthens loyalty.

For example, the lender sends out preprogrammed identical sales and marketing SMS invitations to new borrowers; standard disclosure screens appear at the same time and sequence for all consumers; loan assessment criteria are formulaic; and borrowers with the same repayment status get the same repayment reminders and are treated the same for collections purposes. In contrast, with in-person lending it may be hard to demarcate where marketing ends and a sale begins, ensure that a pre-agreement form was

Table 1. CGAP exploratory research

Partners (Year Research Was Conducted)	Product	Research Methods	Topics
FirstAccess (2014)	Alternative data scoring service	Qualitative consumer research	Disclosure; credit reporting and information sharing
Jumo, Busara Center for Behavioral Economics (2015)	KopaCash	Lab testing; field testing	Disclosure; suitability; repayment
Commercial Bank of Africa, Vodacom, TechnoServe, Arifu, Busara Center (2015)	M-Pawa	Interactive SMS; data analytics	Marketing; suitability; repayment
Kopo Kopo, Busara Center (2016)	Grow	Consumer interviews; data analytics	Disclosure; suitability
Pesa Zetu, Busara Center (2016–2017)	Peer-to-peer loans	Consumer interviews; lab testing; data analytics	Disclosure; repayment
M-Kopa, Credit Information Sharing Kenya, TransUnion, Flag42 (2017)	Solar energy devices	Interactive SMS; data analytics	Credit reporting and information sharing

truly presented before a loan agreement was signed, or ensure that collections practices of individual employees are consistent with FSP policies.

This process standardization means that we can assess consumers' purchase experience as a series of engagements with digital interfaces (typically the screen on their phone), and therefore measure the quality of this experience with considerable certainty across the entire customer base of a lender or a product. We analyze consumer protection challenges in the five key areas of the lending and borrowing process: disclosure of loan terms and conditions, marketing, suitability and product design, repayment and collections, and credit reporting and information sharing. Where relevant, we suggest possible good practices for digital lenders at each stage, based on our experiments and others' research.

Disclosure of loan terms and conditions

Most digital lenders' disclosure practices fall short on sufficiency, consistency, or timeliness of information provided to consumers. Our review of products on offer in Kenya and Tanzania reveals common gaps in disclosure and client communications:

- **Inaccurate presentation of costs of the product.** This includes (*i*) failure to clearly state the actual sum of finance charges the consumer will pay; (*ii*) use of monthly or weekly interest rate figures instead of a standardized calculation such as annual percentage rate (APR); (*iii*) inconsistent disclosure of finance charges across lenders[5]; and (*iv*) nondisclosure of costs (and benefits) of other products that are bundled with the digital loan.[6]
- **Inaccessible terms and conditions.** Many digital lenders offer access to the product T&Cs via only a weblink, which cannot be viewed directly through the channel the consumer uses to borrow (i.e., on the handset, unless the borrower has a smartphone and data plan).
- **Complex "key facts" information.** T&C documents tend to be long and complex. Most borrowers do not take the time to review a multipage standard form contract or T&Cs presentation, and most lenders do not provide a summary of the most important T&Cs.
- **Unclear disclosure of data handling practices.** Providers do not clearly communicate the types of personal information or data they are collecting from consumers, how they or their partners are using these data to make digital credit offers, and whether consumers are able to access, correct, and restrict the sharing of their data.
- **Lack of timely disclosure.** For consumers to factor price and other key T&Cs into their decision-making, they must receive the information *before* they click "I accept" and enter into the loan agreement. Some digital lenders disclose the price only after the loan is executed (Mazer and Rowan 2016).

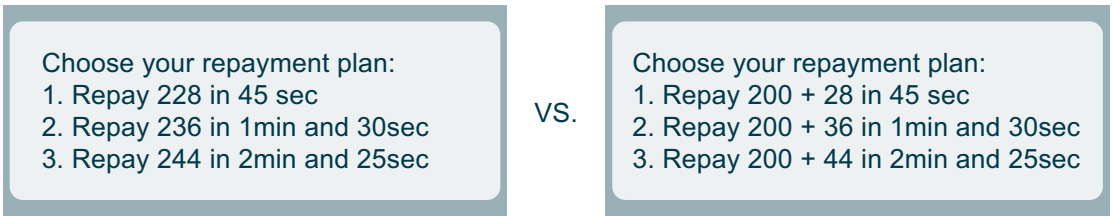
Since disclosure is digital, it is particularly useful and feasible to test different approaches. Providers can quickly and precisely measure the impact of a specific approach on borrower behavior, for example, and with sufficient sample size, they can be highly certain of causality when aggregate borrower behavior shifts in response to one type of message, disclosure, or menu format versus another. This also strongly suggests that lenders should take an iterative approach to disclosure and consumer understanding, by frequently testing and refining their interfaces to positively affect consumer choice of loan size, repayment rates, and other behaviors that will be a win-win for both lenders and consumers.

How to increase understanding of costs and transparency in digital credit

In Kenya, digital credit provider Jumo used a series of lab and field experiments to test different ways to help consumers understand terms for its KopaCash product, and to observe borrower decision-making during the loan application process (Mazer, Vancel,

5 See, e.g., the wide range in digital lenders' APRs when charges are fully accounted for and standardized (Chege and Kaffenberger 2016).
6 E.g., some providers offer credit life insurance on digital credit, which raises the question of whether insurance is good value-for-money when loans are so small and short term.

Figure 1. Testing of formats for disclosure of loan cost



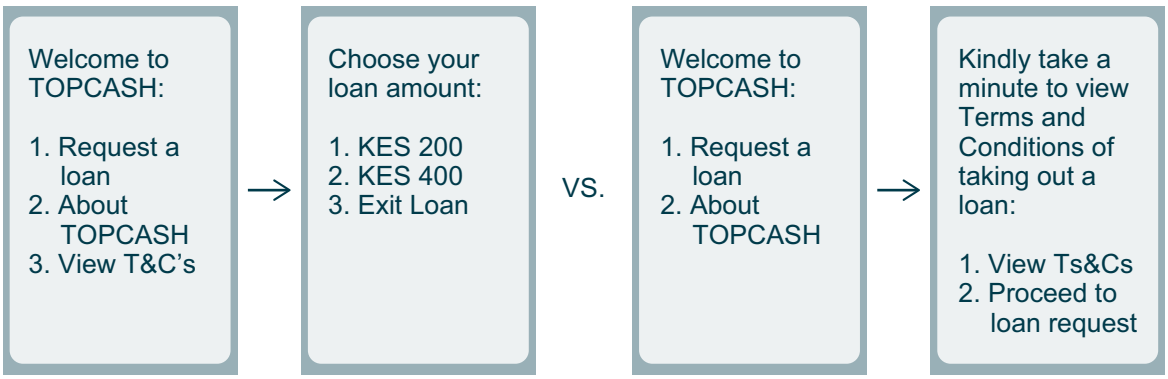
and Keyman 2016). This included a lab-based experiment in Nairobi, where participants borrowed money to participate in income-earning activities and had to choose among various time periods and costs when making their borrowing decision.[7] Three of the most promising findings from the lab experiment were the following:

1. **Borrowers make better loan decisions when costs are made salient**. In this simulation, separating loan principal payments from finance charges reduced defaults in income-earning activities from 29.1 percent to 20 percent. (See Figure 1.)
2. **Good design of the purchase process increases consumer attention to T&Cs.** "View T&Cs" is often the last option on a loan product main menu. By simply moving it to the next screen, followed by a short summary of the key facts from the T&Cs, viewing of T&Cs increased from 9.5 percent to 23.8 percent of consumers. Significantly, those who viewed the content had a 7 percent lower absolute delinquency rate. (See Figure 2.)
3. **Summary T&Cs is possible on USSD or SMS channels.** An improved, short summary of selected key T&Cs that would fit on the USSD channel Jumo uses for its KopaCash loan was developed.

Since this 2015 experiment, Jumo has updated and expanded its disclosure of terms before loan approval. It integrated several elements of the lab experiment and other pro-consumer approaches, as seen in Table 2.

Other digital credit providers have tested innovations in the loan enrollment process for different customer segments. For example, Kopo Kopo offers its Grow business loan product to merchants who use its digital payments services: each merchant can set its loan repayments as a percentage of the value of payments received from its customers via the Kopo Kopo payment

Figure 2. Use of active choice to increase viewing of summary terms and conditions



7 The experiment was conducted with lower-to-middle-income consumers in Nairobi at Busara Center's lab testing facilities using computer screens that replicated the USSD menus used by Jumo. Participants went through several rounds of borrowing decisions and income-earning activities each, with their decisions and earnings tracked for each round. Because this was a lab test, the time periods were only a few minutes, versus a period of days and weeks as in actual digital credit deployments. The impact findings are therefore most useful for digital credit product design when considered on a comparative basis, not on an absolute basis (e.g., which approaches to messaging have more positive effect on borrower behavior).

Table 2. Updates to Jumo disclosure screens, October 2016

Screen 1: Separation of finance charges and principal	**Choose your repayment plan:** **1. Repay 1000 + 135 in 7 days** **2. Repay 1000 + 170 in 14 days** **3. Repay 1000 + 205 in 21 days** ***Back**
Screen 2: Separate line detailing loan fees and loan repayment details	**Loan: 1000** **Loan Fees: 135 (13.5%)** **Loan term: 7 days** **Repayment: 1135 to be deducted from Airtel Money Wallet on <date>** **1. Confirm** ***Back**
Screen 3: Late payment penalty details	**Failure to repay your loan by the due date will result in a late payment fee of <percentage> being added. You may also lose access to KopaCash.** **1. Next** ***Back**
Screen 4: Active choice approach to view T&Cs	**Agree to the T&Cs below in order to proceed with your loan application. tc.jumo.world/akec** **1. Agree** **2. View T&Cs** ***Back**

till (i.e., payments made in digital form rather than cash). As a result, the merchant's repayment period for the Grow advance will vary, depending on how much the merchant borrows, the number of customers who pay digitally, and the share of digital revenue the merchant chooses to allocate for loan repayment. To help make this decision point and the finance charges clearer to the borrower, Kopo Kopo uses "sliders" on its website tool so the borrower can test out different combinations of loan size, loan term, and the share of transactions allocated for repayment, and immediately see the fee and estimated time to pay off the loan changes.

Since Kopo Kopo's borrower interface is a web page, there are more options for the design and user experience than with mobile screens and USSD menus. CGAP's review of loan application screens in Kenya found this to be the case with lenders that were using USSD or SIM Toolkit channels. These channels offer lenders fewer options to improve disclosure than app-based channels do. They limit lenders' ability to customize the interface and the menus' character limitations. For example, Figure 3 shows the enrollment screen for an app-based lender compared to that of a lender that uses USSD. The app version has several nice design elements to increase consumer understanding, but these features are hard to implement when using USSD. The elements include loan terms in large, bold fonts and fields consumers must complete themselves (making it more likely that they understand their repayment obligations).

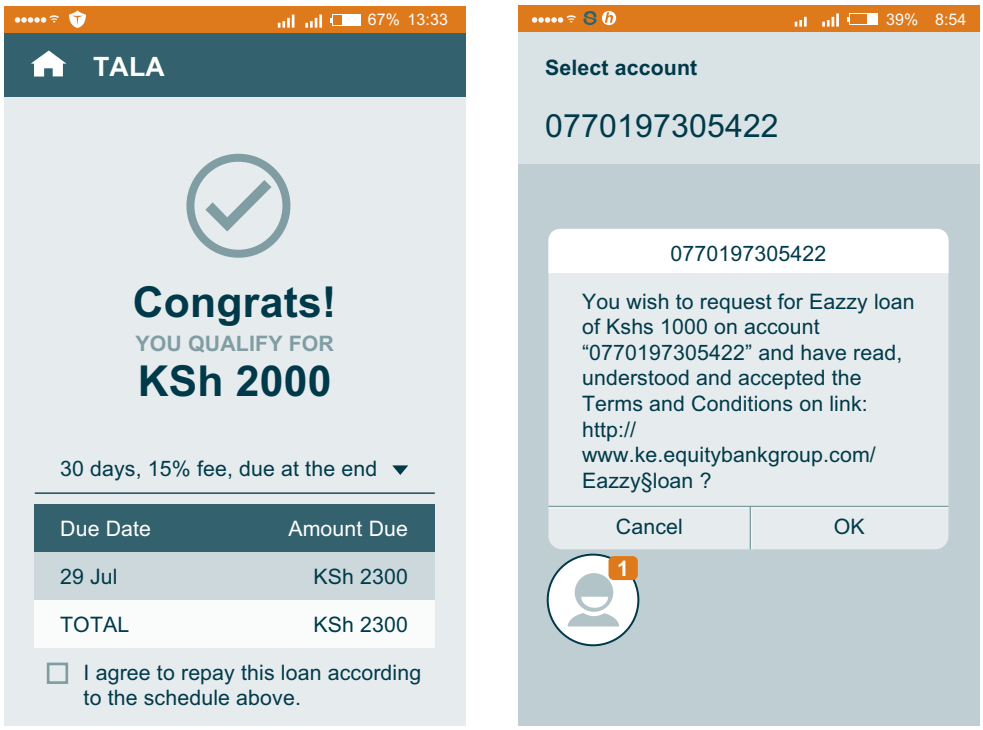
Nonetheless, providers that use USSD, SMS, or SIM Toolkit are not exempt from disclosing costs and key terms properly and transparently to consumers. Some lenders, such as Jumo, that use USSD or other more basic communication channels for loan enrollment disclose costs clearly via USSD, thus proving that doing so is technically feasible, although not yet common.[8] In fact, in 2016 the Competition Authority of Kenya issued a notice that all digital lenders must disclose costs of loans on the mobile handset before loan origination, thus establishing a minimum standard that all digital credit markets should strive for (Mazer 2016a).

Disclosure of data handling practices and consumer consent to data collection and use

Some of the more successful digital credit deployments are partnerships between mobile network operators (MNOs) and lenders, where the lender leverages the MNO's distribution channels and customer data to

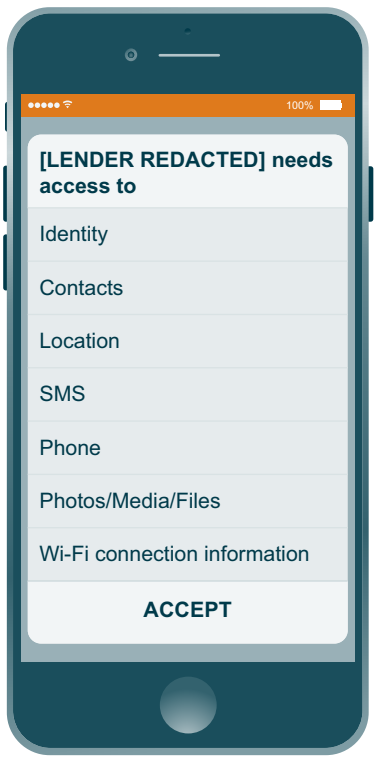
8 See also Martin and Mauree (2016).

Figure 3. App-based versus USSD-based loan enrollment screens (illustration)



score and provide loan offers to large numbers of potential borrowers. While consumers have generally consented to collection, use, and sharing of their personal information and transaction data in some fashion, it is important to note that in many cases this "consent" process consisted solely of the customer's acceptance of standard form contracts or services agreements for mobile phone or mobile money accounts. Furthermore, as noted, T&Cs are typically accessible only via the web. Thus, it is unlikely that the consumer has read and understood provisions related to which of their data were to be collected or shared, when, with whom, for which purpose, and with which associated risks. There are some lenders, however, who are upfront about their data practices in preloan disclosures, despite collecting extensive data and personal information. (See Figure 4 for an example of the text used by one Kenyan lender to disclose its data-use practices. The message is clear and well-timed and does not require the consumer to open a link to view data policies or data provisions in lengthy T&Cs.) Strengthening this aspect of disclosure is increasingly important, given the strong likelihood that more customer-related data will be used in more ways to underwrite digital credit and for other purposes going forward.

Figure 4. Consent for data use screen (illustration)



Box 2. Developing informed consent approaches for digital data trails

FirstAccess offers alternative data analytics and credit scoring for FSPs in emerging markets. Its model leverages data such as mobile phone call and mobile money transactions records to score loans, including for lenders such as microfinance institutions that serve borrowers with lower levels of income, literacy, and familiarity with formal credit. When FirstAccess launched in Tanzania, it conducted qualitative research to understand how to help consumers with limited understanding of digital data trails meaningfully inform themselves of how FirstAccess would use their data, and to uncover any concerns they might have about data use. FirstAccess used the insights to design and test a series of SMSs with information beyond that already included in the SMS in which consumers were asked to authorize use of their data for FirstAccess to generate a credit score and provide it to a lender. The original consent SMS read as follows:

> **This is a message from FirstAccess: If you just applied for a loan at Microfinance Bank and authorize your mobile phone records to be included in your loan application, Reply 1 for Yes. Reply 2 for More Information. Reply 3 to Deny.**

Since research showed that consumers wanted to understand what mobile phone records are and how FirstAccess used and shared this information, two supplemental messages covered these points:

> **This is a message from FirstAccess: Mobile phone records are information captured when you use your phone, including phone calls, SMS, airtime top-ups, or a mobile money account. Questions? Call First Access 12345678**

> **This is a message from FirstAccess: FirstAccess ONLY uses your mobile phone records to make a loan recommendation to lenders. We NEVER share your personal information with anyone. Questions? Call FirstAccess 12345678**

FirstAccess has used these messages as a template to develop consent messages for its partnerships with telecommunications firms that are seeking authorization to share its customers' digital data, as well as verbal explanations by their customer care staff should consumers need further information. Beyond making consumers' consent to data handling practices more meaningful, FirstAccess' model also integrates important "privacy by design" principles to reduce the risk of unauthorized or improper data sharing. For example, FirstAccess does not share the mobile phone records with the lender. This keeps digital data separate from lending data and prevents aggregation and sharing without consent. FirstAccess also solicits a new authorization for each access of a consumer's mobile phone records. Together these practices give the consumer more control over when and how their data are used.[a]

Source: Mazer, Carta, and Kaffenberger (2014).

Toward better standards on disclosure in digital credit

The research findings suggest that there are certain minimum transparency and disclosure standards that digital credit providers can and should follow, regardless of whether they use USSD, SIM Toolkit, apps, or other media for their operations:

- **Present a full accounting of all regular costs of the loan** both in monetary amount and APR, as well as costs of any other products or services that are bundled with the loan (e.g., companion deposit product, mandatory insurance policy).[9]
- **Provide a clear presentation of repayment due dates, amounts, and penalty fees** and when they will be assessed. Where relevant, note other consequences of nonrepayment.
- **Present a summary of the key terms of the product**, as a complement to the common practice of listing a weblink to T&Cs.
- **Provide price and other key information to the consumer before the loan is accepted.**
- **Develop simple and transparent rules for using and handling consumer data, and develop effective ways to convey the provider's data use and handling practices to the consumer before loan origination.**

Marketing approaches to promote responsible borrowing

Traditionally, loans have been marketed face-to-face in emerging markets. In contrast, marketing of most digital credit is remote, with no in-person interaction during product enrollment and

9 Ideally these products should be optional, with a separate opt-in step taken by the consumer.

Figure 5. Unsolicited credit offer via mobile phone (illustration)

reliance on SMS, advertisements on the internet, or app stores for marketing communications (see Figure 5).

This section addresses key issues in marketing digital credit products to low-income mass-market consumers and explores solutions to produce better borrower and lender outcomes. A central challenge is increasing borrower intentionality—that is, making sure that the borrower has thought through "do I need this loan and how will I repay it?"—especially when loan marketing is "push" (unsolicited by the consumer) rather than "pull" (the consumer takes the initiative to seek out loan products).[10] Also important is how best to introduce some "friction" into the consumer's decision-making process, including for borrowers who tend to borrow and renew loans whenever they have the option to do so.

The risks of push marketing

The clever sales messaging of push SMS and other unsolicited marketing approaches, coupled with an easy and automatic enrollment process, encourage some borrowers to take on loans without thinking through whether they need the loan and how they will repay it.[11] Although the lender carries most of the risk of poor repayment rates, borrowers face consequences as well, including loss of airtime benefits in MNO-linked models (e.g., bonus airtime credits or airtime advances), inability to borrow from this lender if they have a future specific borrowing need, or inability to borrow from other providers because of the black mark on their credit history (Ngigi 2016). Common characteristics of unsolicited offers of digital credit raise four consumer protection concerns.

First, when the person is solicited simply because he or she is an MNO customer, the offer is unrelated to the original purpose for which he or she opened the account with the MNO (telecommunications, mobile money, or value-added service). Either the customer did not consent or consent was obtained from earlier agreements, such as a standard form contract for a mobile phone or mobile money account. For example, one Tanzanian MNO's service has very broad terms of service that state "You accept that we may disclose or receive personal information or documents about you. . . for reasonable commercial purposes connected to your use of the mobile service or the M-PESA Services, such as marketing and research related purposes."[12]

Unsolicited credit offers may be framed to exploit certain behavioral biases, which may entice consumers to borrow even when they do not have a specific use in mind for the loan. Behavioral research has described "present bias," where a person overvalues short-term outcomes and undervalues long-term outcomes, as well as "loss

10 Sometimes—as with prequalification offers for credit card marketing—this entails a specific credit offer, such as "You are qualified to borrow up to $XXX," especially in partnerships where a lender teams with an MNO to reach out to potential borrowers from the MNO's customer base.

11 This may help explain why some digital lenders have noted default rates as high as 40 percent or 50 percent in their first round of loan offers, where they send out invitations to a wide swath of prospective borrowers (CGAP interviews).

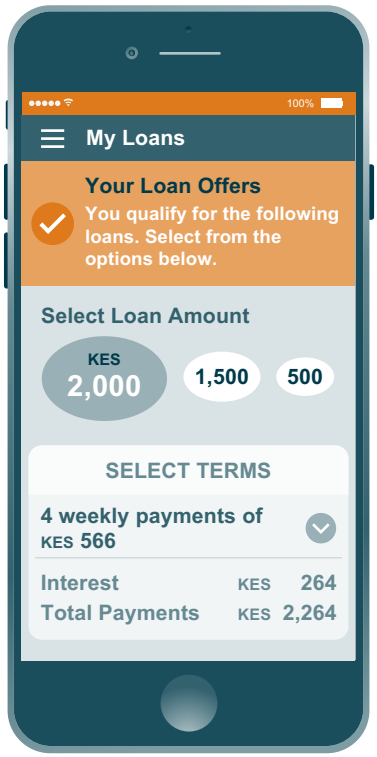
12 See also Ombija (2017).

aversion," where a person overvalues the worth of something he or she possesses (such as a loan offer) and shows a strong aversion to giving up that item, irrespective of its actual value (Kahneman, Knetsch, and Thaler 1991).[13] Consumer research suggests that push marketing may also lead some consumers to borrow without a clear use for the loan (McCaffrey, Obiero, and Mugweru 2013). When questioned, some consumers say they do not want to miss out on a chance to borrow when they have not been able to easily access loans in the past. Others report that they may want to test the product, even to the point of taking on a high-cost loan they do not need just to "see what it's about." This risk is exacerbated when combined with poor disclosure of costs by many digital lenders.

Consumers' choices can be influenced by how offers are framed when they are considering several options (*The Economist* 2009 and Nofsinger 2008). This is especially germane in digital credit because the lender often suggests directly or indirectly the size of the loan amount—for example, the "limit" or maximum sum that can be borrowed—rather than the consumer initiating the request. Interviews with consumers and lenders confirmed that many customers borrow at the suggested loan limit rather than propose a lower sum that would be sufficient to meet their immediate needs. Thus, a borrower's loan size and term decision can be heavily influenced by the lender's offer and even how the choices are presented on the digital interface. (See, e.g., Figure 6.)

Finally, marketing messages may encourage repeat borrowing by emphasizing higher loan limits. Some borrowers engage in multiple high-cost borrowing cycles in mere days, with the sole aim of increasing their loan limit. Among the factors contributing to this behavior are the instant feature of digital credit requests or credit limit checks and marketing messages that encourage consumers to borrow more to grow their loan limits, which are linked to the fact that digital lenders typically start consumers off with very low loan limits as a risk management strategy (Mazer and Fiorillo 2015).

Figure 6. Example of framing of loan sizes available (illustration)



These and other efforts to build up loan limits quickly can be costly for borrowers, because typical loans are relatively expensive.

Opt-in versus opt-out marketing

There is a simple alternative to unsolicited credit offers: making consumers actively request—or "opt-in" to—a credit offer or product information, by sending the request to the lender or accessing the lender's app or menu on their phone. Instead of consumers having to "opt-out" by asking the lender to stop sending them marketing messages, "opt-in" marketing relies on consumers to self-register via channels such as short codes. Lenders could attract consumers via advertisements in media, on the internet, in app stores, or even in-person promotion by sales staff, agents, or others.[14] In fact, most app-based digital credit providers use this approach because they do not have access to customers' mobile phone accounts and contact information through partnerships with MNOs.

13 For a description of how these behavioral biases are applied in marketing materials for credit card solicitations see Birken (2014).
14 Deceptive advertising and in-person pressure sales are beyond the scope of this Focus Note.

An opt-in approach may reduce the overall volume of applications and uptake of the credit offer. It also could have a positive outcome for both responsible borrowing and lending, because repayment, portfolio quality, and credit history suffer when push marketing results in borrowers taking on loans without due consideration for the loan use and repayment source. There is no conclusive evidence across lenders as to the impact of push marketing on uptake and repayment behavior. This is an area where lenders would be well-served to conduct further testing.

Appropriate and tailored products to meet the needs of specific consumer segments

Many of the early digital credit models offered simple "monoproducts"—very small, short-term, unsecured consumer credit with a fixed price for all customers. Many still do, even in markets with several years of lending experience. This standard product approach can make sense during the process of building an adequate scoring model and testing the proof of concept. However, as markets mature, consumers and the retail credit sector would benefit from diverse product offerings that reflect the varying needs and risk profiles of different customer segments. For example, one of the earliest providers of digital credit in East Africa still offers all customers the same loan terms and pricing several years after launch of the product despite high loan volume, profitability, and strong repayment performance. Instead, the lender could have used its data to segment consumers as the basis for risk-based—and generally lower cost—pricing and more diverse product offerings. Simply put, why should borrowers who have successfully repaid 10 loans on time or early pay the same interest rate on their 11th loan that they paid for on their first loan, despite having demonstrated strong repayment behavior over and over? This is one example of the need to shift toward better needs assessments and to apply "suitability" principles in digital credit, to encourage better choice, pricing, and tailoring of offerings to customer circumstances.

Suitability principles applied to digital credit

A growing number of jurisdictions such as India, Ghana, and South Africa have identified suitability as a principle that could apply to lenders, including an obligation that lenders accurately assess individual consumers' needs and capacities and sell only those products that are appropriate to and meet the needs of that consumer (or that segment).[15] IFMR Trust has conducted financial diaries research in India to construct a detailed suitability assessment approach for microfinance providers (Prathap and Khaitan 2016). For credit, the heart of the suitability principle is that lenders should target and sell only those products that have features and in-built incentives that fit the circumstances of the defined customer segments or individual customers to which they are being marketed. To meet this standard, digital lenders would need to better segment potential and current customers, more carefully assess their repayment capacity, and target appropriate use cases—such as high-turnover microenterprises or households that are experiencing health shocks.

Lenders' post-sale servicing costs are relatively low, because payments are collected remotely and loan monitoring is automated, which should facilitate tailoring, innovations in product design, and flexibility. This is beginning to happen in East Africa as some newer entrants diversify and customize their product types, tenor (amount of time to repay a loan), and pricing models. This includes charging daily interest (creating a form of "pay for what you use" approach to interest and fees), risk-based pricing both on initial and recurring loans, and not charging penalties for late repayment—all of which are innovations that could benefit from further testing and documentation of impact (Ananth 2017). See Box 3 for insights from the Grow product offered by Kopo Kopo.

Access to more and better data and information about consumers, such as consumer characteristics and needs and the purposes for the loan, can help lenders

15 For a discussion of suitability and its application to base-of-the-pyramid consumers, see Mazer, McKee, and Fiorillo (2014).

Box 3. Insights from Kopo Kopo's merchants on loan use and borrowing patterns

Some consumers may be borrowing on a recurring basis out of habit or because they do not want to miss out on a credit opportunity, rather than for a specific purpose. For example, CGAP research with Kopo Kopo customers found that many believed "a smart businessperson should take credit whenever it is available, as a need will always arise" (Kaffenberger 2017). Nearly all had multiple loan sources beyond Kopo Kopo's Grow. Customers reported that they viewed Grow loans as being for use "in cases of emergency, when you need a loan quickly and are willing to pay the higher cost." However, a vast majority actually repaid loans faster than expected, and most took out new loans quickly, waiting a median of just three days between paying one off and taking another.

This seems to be more consistent with a pattern of repeat borrowing than aligning with their stated preference for "emergency only" use. Consumer lenders that use digital channels report similar behavior: borrowers tend to repay early and borrow again quickly. These examples indicate that for lenders to properly administer suitability principles, they may need to not only address upfront assessment of consumer needs, but also monitor borrower behavior over multiple loan cycles to ensure product features align with evolving consumer needs.

determine customer suitability. Data could be self-reported as well as verified data, which is already the foundation of most digital credit scorecards. The type of data used often depends on data available to the lender (e.g., voice, SMS, and mobile money transaction information provided to a lender by an MNO partner). Ideally, such data collection should be done only on an opt-in basis, with meaningful consumer consent. While these approaches raise privacy and data security concerns (to be discussed later), if proper precautions are taken, they also could allow for more granular understanding of consumer segments, occupations, and other activities, which in turn could help improve lenders' assessments of borrower needs, repayment capacity, and the suitability of the loan offer.

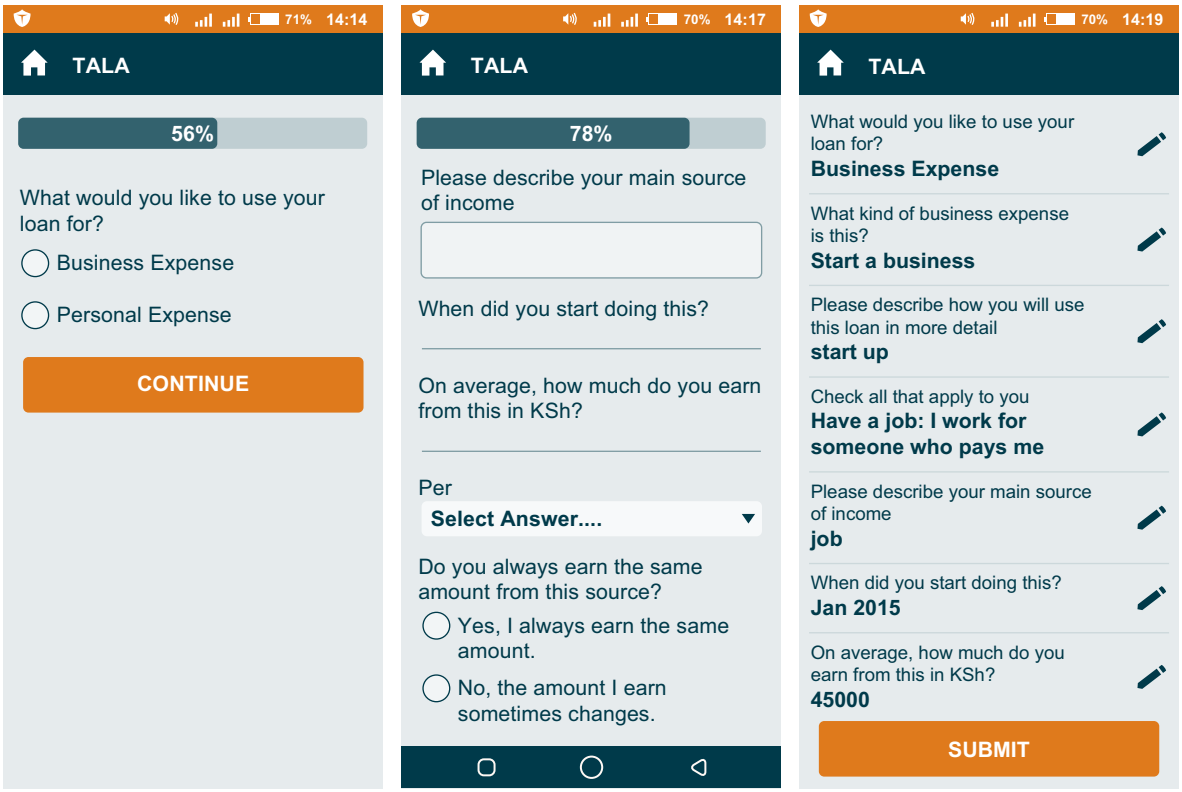
While not fully verifiable, self-reported data willingly shared by thousands of consumers might start to reveal behavioral trends and segments relevant for enabling suitable product design and sale. As Figure 7 shows, some lenders are gathering self-reported data by integrating questions such as the purpose for the loan (e.g., business versus personal expense) or income estimates into processes for customer onboarding and loan origination. More interesting still from a suitability perspective, tools such as interactive SMS are making it possible for lenders to have robust conversations with customers before, during, and after borrowing cycles, which can improve customer understanding and use of the product and enable better segmentation and product diversification (see Box 4).

Repayment and collections

Remote collection of digital loans can enable flexibility in repayment frequency and amount. Borrowers can easily make small installment payments via phone or the internet as they are able. When borrowers pay late, however, digital lenders have more limited collections options than their "in-person" peers who can send loan officers to the door or, in the case of group lending methodologies, rely on the microfinance group to enforce repayment. Digital lenders face another distinct collections challenge: Their primary communication channel—SMS and other mobile-based messaging—is also the channel of choice for many different marketing messages from MNOs and other firms. Borrowers who are inundated with SMSs are less likely to pay attention to repayment reminders in their crowded SMS inbox. For example, for a 2016 CGAP survey on DFS pricing transparency, a respondent described downloading a lender's app to borrow, then immediately removing the app to avoid receiving reminder messages, only to reload the app when he was ready to pay off the loan.[16] At the same time, well-designed messaging may make the benefits of repayment and the consequences of nonrepayment more salient for the borrower. Our research with lenders shows that there are several ways digital lenders can leverage the digital communication channel to increase probability of repayment.

16 CGAP pricing transparency awareness survey, Kenya.

Figure 7. Example of customer self-reported data in app-based digital credit offer



Box 4. Using interactive SMS to support digital savings and borrowing in Tanzania

In 2015, M-Pawa, a digital credit and savings product in Tanzania offered through a partnership between Commercial Bank of Africa and Vodacom, used the digital learning platform Arifu to deliver learning content to Tanzanian farmers via interactive SMSs. The farmers opted in to receive the free content on how to use M-Pawa and its savings and credit components. Arifu used educational strategies like narrative-based content, social norms, and interactive tools to help farmers register for M-Pawa, borrow, save, set savings goals, and calculate loan cost. Analysis of two years of pre- and post-treatment transaction data showed that the farmers who opted in and interacted with the learning content used both the savings and credit facilities more and to better effect than before and in a complementary way. They also used M-Pawa more and to better effect than those who did not opt in (Mazer Ravichandar, and Dyer 2017).

The learners demonstrated the following financial behaviors:

- More than doubled their savings account balances, from Tsh 2,673 to Tsh 7,120 after interaction with the learning content (99 percent confidence interval).
- Took Tsh 1,017 larger loans than they had before interaction with the learning content, repaid their loans 5.46 days sooner (both 95 percent confidence interval), and had Tsh 1,730 larger first payments on their loans (99 percent confidence interval).
- Took Tsh 1,666 larger loans (99 percent confidence interval), had Tsh 2,654 lower amounts outstanding (90 percent confidence interval) at 90 days, and made payments 3.42 days sooner (90 percent confidence interval) than non-Arifu users.

This case demonstrates how farmers' ability to save more on M-Pawa led them to obtain larger loan amounts and repay at higher rates when they increased their M-Pawa savings. It shows how digital credit products linked to a savings account can encourage not just borrowing, but also the use of savings to accumulate capital to use for household or business needs. Similarly, since M-Pawa savings behavior is part of the credit scoring model, increased savings activity helped these farmers get larger loans when needed and in turn demonstrate improved repayment behavior.

Optimizing the effect of repayment messages

As the research with Jumo in Kenya demonstrated for disclosure, increasing saliency of costs and consequences can positively impact borrowing behavior, including repayment. Similarly, lenders are experimenting with new approaches to encourage repayment of digital credit that include content, timing, and frequency of repayment reminders; presentation of the reporting of borrowers' on-time payments to credit bureaus in a positive light; use of behavioral design concepts, such as social norms, in SMS reminders; and the restructuring of delinquent loans to be flexible in response to borrowers' circumstances.

Field research suggests that each lender should design its reminder messages with a clear concept of intended impact that balances carrots and sticks, and then do iterative A/B testing to see which content, timing, and frequency is most effective.[17] For example, Jumo's Kenya field experiment on timing of repayment reminders found repayment responses were 8 percent higher for reminders sent in the evening than for those sent in the morning (Mazer, Vancel, and Keyman 2016).

Another common tactic to drive repayment in digital credit is SMS-based threats of negative listing in a credit bureau. Some lenders send regular, even daily, messages to late borrowers, threatening the borrower with being listed as a defaulter. Others have discontinued negative listing messages because of consumer complaints and the lack of clear results. The generic threat of blacklisting may not work well both because it is negatively framed—encouraging tunneling[18]—and because the description of the credit listing is not specific enough to conjure up the actual consequences in the borrower's mind.

This is not to say credit history cannot be framed as an effective incentive for repayment. For example, off-grid energy provider M-Kopa in Kenya partnered with TransUnion and Credit Information Sharing Kenya to test an interactive SMS platform where consumers could opt in to content that allowed them to learn about what "credit history" is, check theirs in real time, and correct any inaccurate information in their record. The content itself employed positive framing of credit history as something that is linked to positive repayment and helps consumers access future loans. This approach aims to show borrowers their actual credit history—which is overwhelmingly positive for most borrowers—and link it to future credit access more concretely.

Initial evidence from the six-week (February to March 2017) prepilot with M-Kopa customers showed strong engagement—384 of the 1,632 invited customers opted in to receive learning content; each consumed 5.7 messages on average. Customers requested their credit history 225 times, with 53 requests for follow-up from TransUnion regarding the data shared in their credit history. There were also 601 uninvited people who accessed the learning content, primarily due to a radio host learning of the technology and promoting it, showing a very strong word-of-mouth effect and interest in this service.

When analyzing the impact of the credit history content on repayment, we saw that M-Kopa customers who opted into the SMS invites took up more credit, were less likely to be blocked (by failing to make a payment in 90 days), and were more likely to have paid off in full (see Table 3.) A larger pilot is now underway to determine if the initial findings hold across a larger sample and to address questions such as potential selection bias in consumers who chose to opt into the learning content. See Box 5 for more on repayment behavior.

Flexible payments and debt restructuring in an automated environment

Many digital lenders apply a fixed penalty—sometimes equivalent to the original interest

17 A/B testing refers to the randomized assignment and testing of different designs or approaches—in this case, different versions of USSD screens—to measure comparative impact and to determine the more effective approach. See, e.g., Dibner-Dunlap and Rathore (2016).

18 When people are faced with high stress or negative information, they tend to "tunnel" and ignore the stressful information points.

Table 3. Repayment of M-Kopa customers during credit history pre-pilot (February-March 2017)

	Average Credit Days	Blocked Customers (%)	Finished Loan Payment (%)
Opted in: SMS invitation only	45	6.07	22.67
Opted in: Phone invitation then SMS	48	6.57	17.52
Did not opt in	35	25	11
Control	36	32.10	5.05

charge—and then allow a period of time (e.g., 90 or 180 days) within which the borrower can make payment before the loan is written off (and in some cases reported to the credit bureau). Since the marginal cost to digital lenders of payments processing is tiny in the absence of loan officers or physical infrastructure, could providers instead build in more flexibility for late-paying customers? For example, doing so by offering (for an additional fee) the option of extending their loan

Box 5. Testing the "peer effect" in peer-to-peer lending with Pesa Zetu

Pesa Zetu, a peer-to-peer digital lender, tested the impact on repayment of content variations that were designed to trigger behaviors by the borrower. The business model is based on individuals providing funds that are then on-lent to other individuals, all via mobile money channels. One test varied the messages received by borrowers to see if different types of framing of the "peer" element could improve borrowers' on-time payment by creating a greater sense of social obligation to the persons lending them the money.

Phase one of the research tested four different types of repayment reminders plus a control message (see Figure B5-1). The different types of reminders included use of the name of a person lending money via the platform, reference to multiple lenders having contributed to the borrower's loan, characterization of the lenders as being similar to the borrower, and language that focuses on the lending platform rather than the individual peer lenders.

The field testing showed borrowers had higher repayment rates when receiving messages that included either the name of an individual lender or the name of the lending platform. Based on these indicative results, the peer-to-peer lending platform is now being tested to measure actual effects of the different treatments on repayment behavior.

Figure B5-1. Treatments tested for framing of repayment obligation of peer-to-peer lending platform

1. Lender Name | 2. Multiple Lenders | 3. Lender Similarity | 4. Institutional Lender

term (provided the rollover is not too expensive or permitted multiple times, which is a common problem cited in payday lending models) (Burke et al. 2014). This shift in approach could reframe the late payment in the borrower's mind from being a penalty to being an opportunity to work his or her way out of debt or to buy more time to repay. This in turn may reduce write-offs, increase loyalty, and improve the borrower's feeling of reciprocity with the lender.

CGAP is partnering with a lender that offers borrowers who miss a payment the ability to choose a new loan tenor from several options—each of which includes a penalty charge so as not to encourage strategic delinquency. While the lender's call center is currently managing this, as the portfolio scales, the lender may need to use automated SMS-based options, which are being tested now. The potential consumer welfare gains from debt restructuring options, combined with the lender's ability to automate this process and use low-cost collections channels, makes this an exciting frontier in consumer protection that digital lenders should explore and test.

Credit reporting and information sharing

Digital data trails drive the scoring models of digital credit deployments and enable lenders to assess and manage the risk of lending to people with whom they have had no prior interaction or credit relationship. Yet mobile money or telecommunications services providers often treat consumers' mobile money transactions records as proprietary—lenders could otherwise use these records to estimate borrower cash flow and to build credit scores. The lack of control of their own data prevents customers from maximizing the utility of the data trail they generate, for example, to receive competing credit offers. Lack of consumer control also helps dominant telecommunications companies or FSPs leverage their market-leader status in telecommunications, banking, or mobile financial services to suppress competition by restricting new entrants and disadvantaging other lenders that could otherwise benefit digital borrowers by offering them better prices or options (Mazer and Rowan 2016).

This may explain—but does not excuse—the less than full compliance with credit reporting rules, which has been observed in several active digital credit markets that are in the early stages of developing their credit information systems. For example, the largest digital lender in Kenya reported only negative repayment data on its customers to the credit bureau until May 2016, despite the Kenya Credit Reference Bureau Regulations (2013) requiring full-file reporting. At the same time, TransUnion Kenya in 2016 noted more than 400,000 consumers were listed as defaulters for loans of Ksh 200 (approximately US$2) in its credit bureau—these are nearly certain to be digital loan borrowers (Ngigi 2016). This raises concerns about whether credit reporting practices are proportionate and fair for consumers, as delinquency and default on very small loans could have significant consequences, whereas consumers' positive repayment history may not always be reported by lenders. (Box 6 addresses the accuracy of digital credit histories.)

Unlike large, incumbent telecommunications and FSPs, digital lenders that do not have access to information on applicants' bank or mobile money transactions often must rely on more intrusive alternative data to build their scoring models. App-based FinTechs, for example, often ask consumers to authorize access to a wide range of data stored on the handset, including from social media, mobile wallets, or e-mails (which they scan for references to past due loans, mobile money transaction receipts, and other potentially relevant indicators of creditworthiness).

Should consumers have to give up their privacy to this extent? Some consumers must authorize access to more sensitive and extensive personal information and data because their preferred lender cannot obtain arguably more relevant credit and financial digital history if MNOs and other data holders do not provide it access. Is there a scenario where consumers could control and use their digital data trail to receive competing lending offers safely and securely? If so, perhaps lenders

Box 6. How accurate is digital credit history? Evidence from a consumer survey in Kenya

It is important to enable borrowers to actively review and check their information. For many, this may be their first ever loan reported to the credit bureau. This becomes even more important given concerns that have been raised regarding accuracy of credit history, particularly digital credit records. A pilot survey of digital credit users in Nairobi found that 92 out of 420 (22 percent) of consumers who checked their credit history reported that it contained incorrect information in their report (see Table B6-1). A deeper look into the inaccurate information these consumers reported (by the lender involved) revealed a need to improve the accuracy of digital credit histories in credit bureaus, because many of the errors came from digital lenders (see Table B6-2).

Table B6-1. Types of incorrect information consumers reported in their credit history

Discrepancy reported	% of Responses
Incorrect loan balance	32.6
Loan already paid listed as unpaid	22.8
No credit history available	10.9
Not all loans are included	31.5
The respondent details do not match	2.2

Table B6-2. Lenders consumers reported having incorrect information in their credit history

Lender or loan type	% of Responses
KCB Mpesa	20.7
Mshwari	17.4
Multiple mobile loans	7.6
Tala	4.3
M-Coop	2.2
Equitel	1.1
All nondigital loans	14.1
Credit history is entirely missing	32.6

would not need to capture so much personal, social, and handset data.

Toward a consumer-led data sharing environment

To address data-related concerns, providers and policy makers should work together to develop new data use standards for digital credit that are pro-consumer and pro-competition. They should take into account three principles (Mazer and McKee 2016):

- **Consent and use restrictions.** For example, restricting use of data to a per-transaction basis, having clear user consent, and prohibiting sharing or sale of consumer transactional data by those who collect it without express and restricted consumer consent.
- **Easy, secure processes for consumers to share their own data.** In some markets, there are private-sector scorecard providers that gather and structure alternative consumer data. A constructive next step could be to encourage or mandate a neutral channel through which consumers could export data from their transactional accounts in a standardized format,[19] such as an open applied program interface (Hanouch and Moracyzinski 2016).
- **Standards on what types of data can be shared versus what should be kept private.** While consumers should be able to control and share

19 Similar efforts are underway in the United Kingdom (Jones 2016 and EC 2016).

their financial transaction data, digital lenders might reasonably argue that there is other information that they collect or generate that should be considered proprietary (e.g., data on the pages consumers visit on the lender's website). Lenders could work with policy makers and consumer organizations to define this line between consumer-controlled and proprietary information and the associated sharing rules.

In addition to using collective action to apply these principles for gathering and reporting data, individual providers should continue to test new ways to increase consumers' understanding and sense of ownership of their digital history. Most borrowers are building a strong positive repayment history that they can leverage in many ways.

Implications of the findings for digital credit policy and regulation

Much of CGAP's digital credit research has focused on individual providers, and specifically on modifying their communications and product design. The emerging good practices reported in this paper should provide the foundation for standards of responsible lending that could begin ensuring minimum consumer protections for the entire digital credit sector. It is encouraging that so many of these practices are both a win-win—they bring benefits to lenders as well as their customers—and relatively low-cost to implement. This could encourage other lenders to voluntarily adopt these practices and be inspired to further explore their own solutions that increase value for their customers and their business.

Lenders should document and promote good practices that help to balance provider and consumer interests and healthy competition in the market. Progress in these areas also requires collective action, including industry-regulator consultation, formal industry standards, and policy or regulatory measures. Given the diverse range of providers and products and the channels they use to disclose costs and T&Cs to consumers, regulators and lenders should work together to explore further good practices in each of these areas. These good practices could then be adopted by providers through collective action, such as industry codes of conduct or regulation. Authorities can also adopt an encouraging stance toward ongoing consumer research and testing by firms to further strengthen responsible lending and borrowing.

Specific regulatory implications from findings in each area

Disclosure. Transparency is essential to developing healthy and competitive retail credit markets. Our demonstrations with lenders point to better disclosure practices that can be adopted at low cost. At the same time, regulation is likely to be required to ensure that all providers implement adequate and consistent disclosure practices across the market.

Marketing. Lenders' use of push marketing practices to provide consumers with individual digital credit offers on their mobile handsets raise privacy and consumer protection concerns. In addition, the way loan offers are framed may encourage borrowing with no clear purpose or intentionality. Regulators should consult with MNOs, FSPs, and alternative data credit scoring firms to better understand their policies for using consumer data and contact information when marketing digital credit products. Rules limiting or prohibiting push marketing should be considered to address any issues.

Suitability and product design. Where suitability principles are deemed appropriate for a jurisdiction, regulators may need to develop further guidance as to how they may be applied by different types of lenders, and for different customer segments and types of products, including digital credit. To achieve this, regulators can encourage digital lenders to strengthen their customer segmentation and product diversification efforts as the basis for suitability-based lending, and then periodically review the lenders' portfolios and policies and gather information through consumer surveys (Mazer 2016a).

Repayment and collections. Supervisors should monitor how digital lenders determine penalty

charges, the cost of these charges to consumers, how these charges are communicated to consumers, and lenders' policy for writing off delinquent payments. Supervisors may want to go beyond monitoring, for example, by reviewing the standardized messaging scripts and call center protocols digital lenders use to communicate with delinquent borrowers to ensure clear and responsible communication of penalty charges and collections practices.

Credit reporting and information sharing. Policy makers should, at a minimum, address gaps in coverage of and compliance with credit reporting regimes across the various types of digital lenders in the market. They may also want to work with credit registers and lenders to explore the inclusion of new and valuable customer data (e.g., mobile money and payments data) in credit reporting systems. Finally, policy makers may want to consider whether the consequences of delinquency and default are disproportionate for very small loans, especially when so many consumers are new to the product and to the formal financial system. Policy makers could consider a range of options, such as ensuring that existing rules for sharing both negative and positive credit information are enforced, enacting new rules on reporting requirements for a specific subset of credit products, using moral suasion for noncompliant lenders, disclosing consequences of nonpayment more clearly to consumers, and undertaking financial capability and consumer awareness efforts.

The tempest, the teapot, or both?

The "instant-automated-remote" model of digital credit offers significant potential to advance financial inclusion by making possible much smaller loan sizes, larger scale, and innovative business models than would otherwise be possible. At the same time, most digital credit today is relatively high-cost consumer lending, and we should not forget the credit bubbles and repayment crises of the past. The scalability of digital credit models, the generally high cost of credit, and the typical target populations—lower-middle class and working class consumers in emerging markets—argue strongly for standards on appropriate product design and consumer protection measures.

In the case of credit, the digital delivery—from marketing to onboarding to repayment and data sharing—shapes consumer behavior and alters how certain consumer protection risks that are common to all consumer lending play out for both the borrower and the lender. Digital credit markets are still nascent in developing countries and emerging markets. It is not yet clear which market-level issues will arise regarding consumer protection and sustainable development of the sector. Will these risks translate into serious problems or will their impacts be fairly small and commensurate with loan sizes? Even if the absolute value of problem loans is small, or if the harms and risks are limited to certain segments, there may be a case for proactive standards and rules if relatively large numbers of low-income consumers could suffer the consequences of problems such as irresponsible lending, erroneous listing, or data breaches. The "wait and see" approach might carry more consumer and market-level risks for this product type than for other types.

Providers and policy makers are already testing and developing solutions to these risks, as shown by the examples in this paper of improved disclosure, marketing, suitability, repayment and collections procedures, and credit reporting. Demonstrations with diverse digital credit models have shown cost-effective ways to offer market-ready products that better balance lender and borrower interests and embed consumer protection principles in product design and delivery. We hope the evidence and examples will be an impetus for key stakeholders—lenders and other industry actors, regulators, and consumer advocates—to take action. Practical and enforceable good-practice standards will be needed to optimize the potential and manage the inherent risks of this important innovation.

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Annex. Behavioral biases in digital delivery of credit products

Several insights from the field of behavioral economics may be particularly relevant when considering consumer behavior in the "instant-automated-remote" world of digital credit.

Hyperbolic discounting. Consumers often overvalue and prioritize short-term gains over longer-term benefits. Similarly, consumers may focus on the immediate appeal of money in their mobile wallet that digital credit offers, while ignoring the expensive nature of this debt.

Anchoring. Consumers' choices are often based on reference points in the information that is available to them as they make decisions. Digital credit marketing messages that highlight the maximum loan amount available to a consumer may cause them to borrow more than they otherwise would.

Loss aversion. People often overvalue something they have (or have been offered). For example, credit offers that include "you are already qualified for . . ." or "don't miss out . . ." may drive more consumers to take loans, for fear of missing out on the opportunity.

Saliency. The mobile user interface may make it more difficult than in conventional credit processes for low-income consumers to identify costs and key T&Cs that should affect their borrowing decision. Also, the digital nature of the borrowing experience may feel less "real" for the borrower. In turn, the borrower may be unclear on how to pay, forget to pay on time because the payment is so small and is digital, or prioritize paying other nondigital debts because the sum is larger or the consequences of default seem more severe.

Default settings. Consumers often accept default conditions of products irrespective of what their true preferences may be. For example, the T&Cs to which the borrower concurs by clicking "I Agree" may not give the borrower any choice on how their data are collected, used, stored, shared, or reported to the credit bureau. Borrowers may accept conditions they may not feel comfortable with simply because the default setting is to accept data sharing.

Status quo. The borrower may take frequent repeat loans—borrowing more out of habit or to hedge their bets and to make sure they have the funds on hand, rather than taking the next loan only to meet a specific need when it arises. This could also impact the probability that borrowers will shop around and compare new credit offers or remain with their existing digital lender, even if it is more expensive.

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