

# The Potential of Digital Data: How Far Can It Advance Financial Inclusion?

The amount of electronic data generated by computerization—digital data—is growing at unprecedented rates. In a 30-minute span, the internet combined with devices such as phones, personal computers, and sensors will generate digital data equal to all written works in human history (Inc. Magazine 2012). This trend is accelerating, with digital data storage requirements projected to rise 10-fold by 2020 (Economist 2012). Financial services are an information business—can this growing wealth of data be harnessed to advance financial inclusion?

Robert Kirkpatrick, the director of the United Nations (UN) Global Pulse, an initiative of the Secretary General's office formed to explore the use of new sources of digital data, calls this a "new natural resource" that can be cultivated for society's benefit. A growing number of applications in development demonstrate this view. The UN Global Pulse has researched correlations between mobile phone airtime purchases and food consumption to track food security in East Africa ([www.http://unglobalpulse.org/mobile-CDRs-food-security](http://unglobalpulse.org/mobile-CDRs-food-security)). Researchers from the University of California, San Francisco, use weather records to predict concentrations of malaria to help prevention and treatment efforts (Guardian 2014). And following the Ebola outbreak in 2014 some have called for more use of mobile phone data to combat the spread of disease (Economist 2014b and de Montjoye, Kendall, and Kerry 2014).

The use of digital data is playing a growing role in the area of financial services in low-income countries. CGAP signaled this development in "Can Digital Footprints Lead to Greater Financial Inclusion?" (Kumar and Muhota 2012). Since then M-Shwari in Kenya, a savings-and-loan product launched by the Commercial Bank of Africa together with mobile operator Safaricom, has expanded rapidly. M-Shwari relies on mobile phone records to set initial credit limits and their subsequent savings and borrowing to adjust credit limits. M-Shwari reached 7 million Kenyans in its first 22 months. Another high-profile case is Alibaba—the Chinese commerce website that

links buyers and sellers and uses commerce data to extend credit to small businesses (Shrader 2013).

M-Shwari and Alibaba are rather high-profile cases, but there are many other efforts underway. A global scan by CGAP found at least 36 new start-up companies or products focused on harnessing digital data for financial services (CGAP 2015). While many of these models are in trial phases, they signal opportunities to advance financial inclusion. One opportunity is exploring the possibility of assessing credit risk of people for whom no information or formal records exist, allowing many to establish a formal credit history and to eventually engage more broadly with formal financial service providers (FSPs). Another is exploring the potential to improve providers' insights about customers' needs leading to products that better suit poor people's needs.

The opportunities are too big to ignore, but the use cases are still new. This Focus Note asks how far emerging new sources of digital data can improve business model economics, reach more people, and enable greater customization. What can this trend contribute to advancing financial inclusion? Emerging evidence and analysis indicate the following.

- Digital data can benefit providers through applications in three broad areas:
  1. Finding new customers
  2. Deepening customer relationships
  3. Managing risks
- The headline-grabbing examples typically involve a new class of short-term credit products (sometimes combined with savings) that use digital data to extend instant credit remotely. The target use case is short-term liquidity, and scale can be impressive in markets where there is also a far-reaching digital payments infrastructure. M-Shwari in Kenya is an example, but several other similar services are being tested in other countries.
- Other areas of impact span a broad range of existing products and business models, where digital data supplement decisions or help automate processes.

Multiple steps in the provision of financial services could be improved incrementally, leading to large gains (Economist 2014a). For instance, analysis in Tanzania finds the marginal costs of delivery of a \$200 microloan could be reduced 30 percent.<sup>1</sup>

- Initial provider focus is on credit and insurance products where the gains from revenue and risk management can materialize more quickly.
- Seizing the opportunity for financial inclusion will require patience, as more data become available and providers build their ability to use data and change business processes to take advantage of it.

Potential benefits for providers could be substantial: lowering costs and reaching many new clients. For clients, digital data use can reduce time and documentation burdens, making services more accessible to a larger number of clients otherwise excluded.

This Focus Note highlights where and how potential benefits can be realized, recognizing there are challenges and risks. Some hold that digital data are not a full substitute for the richness of an in-person interaction to gather data on clients. Uses of digital data also raise challenging questions around data privacy and protection. Moreover, it is difficult to predict how use of a client's digital data may change client behavior or sense of privacy. This Focus Note does not attempt to comprehensively address all questions or risks. Instead, the aim is to sharpen assessments of potential benefits and contribute one piece to a wider assessment of digital data.

This Focus Note draws from three sources. One is case examples of emerging applications. This is combined with interviews with industry experts of varying perspectives.<sup>2</sup> The third source is a deep look at the impact of digital data on costs of delivery from a joint exercise by CGAP with McKinsey & Company in 2014.<sup>3</sup>

## Digital Data: What's So New?

The use of data is not new; it has always been a critical element of financial service delivery. Consider how much information FSPs rely on to reach individuals and small businesses. Setting strategy relies on internally collected market research and publicly available data, such as surveys, the census, and maps. FSPs use data to look for new clients, often through marketing campaigns targeted to specific client segments. As new clients join, FSPs collect deeper information, often through sophisticated customer relationship management (CRM) systems. This may include transactional histories, such as purchases or automated teller machine (ATM) withdrawals, but can also go further to collect detailed income and business information.

Data are so important that some FSPs have a chief information officer position among their senior management team. Large banks use their data to inform strategy and implementation. Citi, the global banking group, has more than 250 people in Asia working on data analytics, including an innovation lab in Singapore (Economist 2012).

### New and rising sources of digital data

There are three main categories where the pace and volume of data generation are accelerating and will, in combination, affect how financial services are delivered.

1. **Individual's financial services use.** FSPs are heavily computerized and are collecting increasing amounts of data on each client transaction. Banks, microfinance institutions, and payment companies are collecting ever more information. For example, mobile payment transactions, such as M-PESA in Kenya, are generating a large new digital data trail on large portions of the population.

1 <http://www.slideshare.net/CGAP/projecting-impact-of-nontraditional-data-and-advanced-analytics-on-delivery-costs>

2 The experts interviewed are noted in the acknowledgments.

3 <http://www.slideshare.net/CGAP/projecting-impact-of-nontraditional-data-and-advanced-analytics-on-delivery-costs>

### Examples

- Sales or purchases histories; e.g., Alibaba e-commerce
- Use of financial services (savings, insurance, trail of payments transactions)
- Credit information bureaus

2. Individual's digital interactions. The second stream of digital data is the trail of social and digital interactions individuals leave. The most widely available is mobile phone use. A 2013 review of nine low-income Asian and sub-Saharan countries showed adult ownership of a mobile phone ranged from 47 percent to 67 percent. Each call, airtime top-up, text message, or purchase leaves a digital record (Cartesian and Bill & Melinda Gates Foundation 2014). Internet use is also rising. China reports one-half its population is online, and there are 100 million Facebook users in sub-Saharan Africa alone (Techcrunch.com 2014).

### Examples

- Mobile call records on phone calls and text messages
- Mobile phone use, airtime purchases, handset type, location
- Social media (Twitter, Facebook, Google, Yahoo, and various forms of instant messaging)

3. **Marketwide data (nonindividualized).** The third category is data about the economy or geography. Most often this is not about an individual, but about a region or country. Governments are moving to digitize agricultural information, census data, maps, weather information, satellite imagery, and other sources. More than 40 countries have launched open data initiatives to ensure that data are machine readable, offered at low (or no) cost, and easy to share (Mckinsey Global Institute 2013).

### Examples

- Weather records
- Agricultural yields, irrigation coverage, prices
- Satellite imagery
- Surveys

## Advanced analytics make digital data even more useable

Not only are the sources and volumes of data rising, but the ability to use data is also advancing. A key enabler of this is the ease of accessing large amounts of information over the internet. Data are increasingly stored in formats that are easier to read by computers (machine readable) and stored where they can be easily accessed by multiple users (in the "cloud"). Data no longer need to come neatly in rows and columns. New database management software makes it possible to derive insights from datasets that would earlier have been too large or too varied to compare.<sup>4</sup>

Governments are improving national identification, which is critical to more powerful uses of digital data. India's Unique Identification Authority (UIDAI), for instance, has built a database of 680 million residents of India since 2009. The unique identifier for each individual is a crucial way to cross-reference databases and link data on the same individual. The power to combine and cross-reference data from otherwise unconnected sources yields more powerful insights. Markets that lack strong identification systems are likely to lag in capturing the opportunity of digital data.

Imagine using satellite imagery that can ascertain the size of a farmer's plot or roof type and the ability to cross-reference this to that household's receipt of remittances. Another example is linking historical insurance claims with regional information on health, which could help drive health insurance pricing and geographic targeting. There is great potential to gain insights that can lead to highly customized service.

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<sup>4</sup> For example, Hadoop and MapReduce are often cited as new analytics software for large data sets.

## Early Evidence: Focus on Credit

The earliest evidence comes from experiments with credit.<sup>5</sup> Several firms (e.g., Cignifi, First Access, and Tiixa) specialize in credit analytics using new digital data sources, especially mobile operator call data records (CDRs).<sup>6</sup>

When mining data, some of the focus is on making faster decisions to, for example, find and process first-time borrowers. Cignifi reports that in Brazil mobile CDRs provided insight that was used to double the response rate to a credit card offer.<sup>7</sup> In another example, First Access found that on average more than one-third of Tanzanian borrowers could be fast tracked for loan approval based on an initial score from their recent mobile phone use.<sup>8</sup>

Credit scoring—a numerical rating that indicates a borrower’s likelihood of default—is where many see wide applications for digital data. Nicole Stubbs of First Access explains that “a person’s behavior on the phone are a proxy for their financial stability and social network strength. For instance, a person who adds airtime in a similar amount every week is usually more reliable than someone who buys airtime erratically.”<sup>9</sup>

Some of the fastest emerging evidence relates to the performance of new loan products driven by new digital data. A widely used credit product is for prepaid mobile phone users who run out of airtime and who receive an advance of airtime instantly, often airtime advances are for small amounts less than \$1. A number of companies analyze clients’ airtime use to determine whether the user should be eligible for these short-term airtime credits. Tiixa is one such company; it makes 50 million small airtime credits a month for various mobile operators. Tiixa is confident enough in this offering

that it is building a team to expand its analytics services to support lenders’ decisions for larger loans (Herrera 2014).

Other products go even further with credit. The M-Shwari product in Kenya is offered as a joint service of the mobile operator Safaricom and the Commercial Bank of Africa. Those who seek credit can have their mobile phone use analyzed to set an initial credit limit. Once a client begins using M-Shwari, his or her subsequent savings and credit behavior drives the credit limit.<sup>10</sup> In July 2014 Commercial Bank of Africa reported, “The bank’s M-Shwari unit has a loan-loss ratio below the industry average of five percent” (Business Daily 2014). Eric Muriuki of the Commercial Bank of Africa confirms this figure for year end 2014, adding that \$289 million had been disbursed in 2013 and 2014.

Small businesses that make sales with digital payments are also using digital data. Digital sales records can be tracked and credit extended accordingly. Kopo Kopo, a company servicing a network of small businesses in Kenya, is beginning to offer a credit advance based on small businesses’ sales records. Similar approaches are being applied in other companies such as Zoona, which operates in multiple countries in southern Africa (Deluca, Meehan, and Lloyd 2014).

There is clear evidence that digital data are enabling new kinds of services (see Box 1). Only more experimentation will tell how far these innovations can push loan sizes and tenors. “The mobile operators call records are critical for *finding* new customers and setting a first time credit limit. Once a client has saved and borrowed for a short span it is that savings and borrowing behavior that can set future credit limits,” according to Jamal Rahal, a leading expert in digital finance and risk management, who has been involved in analytics development for M-Shwari.

5 An initial scoping by Dahlberg for CGAP found that more than half of new data-focused start-up businesses are for credit.

6 CDRs are records of each call or text that notes the time, length, phone numbers involved, and other data. These records are kept primarily for billing the customer for usage. Mobile operators also can collect location data, purchases of airtime, and in some instances also mobile payments usage.

7 Interview with Lauren Betz of Cignifi.

8 Interview with Nicole Stubbs of First Access.

9 The statistical measure First Access reports using is Area under the Curve, which measures the discriminating ability of a binary model (good/bad borrower).

10 Interviews with Eric Muriuki of Commercial Bank of Africa and Tamara Cook of Financial Sector Deepening Kenya.

### Box 1. Global Scan of New Deployments Using Digital Data

In fall 2014, CGAP conducted a global scan of new financial service deployments that use digital data. This scan, carried out by the consulting firm Dalberg, found 36 deployments that use digital data as a critical part of their business model. This includes firms that specialize in digital data analytics as a service, but also newly launched products that leverage digital data as a key part of credit or insurance delivery. Of the 36 noted in the global scan most focus on new credit products or improving credit decisions. However, three of those picked up in the scan use new sources of digital data to improve insurance services. A list of the companies profiled in this global scan is available in the annex.

Johan Bosini of AFB, which powers the short-term credit product Timiza in Tanzania with Airtel, sees the use of digital data similarly, “The mobile operator data gives us access to a large number of potential Airtel clients to target, offering a small loan amount to the right customers, while the subsequent repayment and borrowing behavior becomes the long term basis for adjusting the credit limit, price and term of the credit facility over time.”

The loan sizes are initially quite small, often \$30 or less and often for a short period of one month. Elisabeth Rhyne of the Center for Financial Inclusion reminds that “unsecured lending performs when

lenders establish strong motivations to repay not only based on good client data.” Another key aspect is to build a person’s borrowing history and have this determine future access to credit. In emerging markets, formal credit bureaus often do not work well, but the rise of digital data may provide an impetus that allows for creative new ways for credit histories to be established (CGAP and IFC 2011).

### Beyond Credit—Wider Use Cases for Digital Data

Early experimentation with digital data predominantly involves credit products. But there are wider use cases. We would expect future uses to fall into one of three broad uses across the customer engagement cycle.

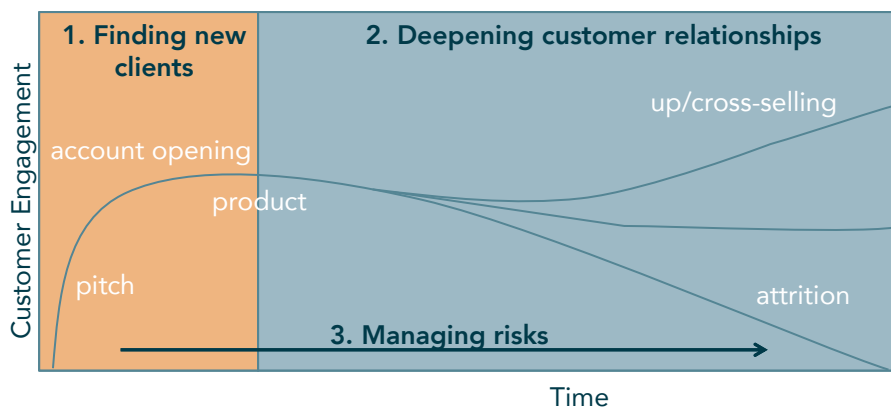
1. Finding new customers
2. Deepening customer relationships
3. Managing risks

In time, the applications should go beyond support to a single product and begin to affect how financial institutions broadly manage a longer customer engagement across a range of services (see Figure 1).

#### Finding new clients

Finding new clients is especially important for financial inclusion, which requires scale. Real

Figure 1. Applications across a Customer Engagement Cycle



Graphic derived from work by Jacobo Menajovsky.

Impact Analytics analyzed seven months of CDRs across three African countries. This analysis, which included more than 7 billion records, found a strong correlation between a user's social network and his or her mobile money uptake. The analysis provides clues about who to target early on to achieve faster uptake (CGAP 2013).

Gathering the basic data necessary to begin a customer relationship is burdensome for customers, is expensive for providers, and sometimes leads to imprecise credit assessments. Digital data can help refine this process. For example, DemystData uses specialized search functions to verify identification information of new borrowers of a U.S.-based microlender. DemystData reports that 15 percent of customers who would have been rejected due to incomplete information actually can be accepted for a loan (Breloff and Hookey 2014). Similarly, Agora Partners is testing a system to gather basic farming data that loan officers of Indian banks can use as part of their loan assessment. This system would allow staff to gather and analyze quantitative information more efficiently and to spend more time on the qualitative aspects of credit assessment.

### **Deepening customer relationships**

Once a customer is engaged in a basic service, digital data may provide clues about how to enhance the relationship. Tools can be developed to lower attrition or to quickly identify opportunities to up-sell or cross-sell to expand the relationship beyond the use of one product.

M-Shwari in Kenya and M-Pawa in Tanzania are both credit and savings services that are offered to existing mobile money users. Mobile phone use and mobile money transactions are used as filters to decide who to target and what early credit limits to set.

A free insurance program for mobile phone users who qualify by using a minimum amount of airtime

per month is expanding fast (Tellez-Merchan and Zetterli 2014). Peter Gross of MicroEnsure, a company that added 12 million new customers using this model in 2014, believes the next stage will involve converting customers of free insurance to products that offer more benefits in exchange for a small premium, paid through airtime or mobile money. "Freemium models have proven that the low-income market wants insurance and will reward a telecom that provides it," he says, "but the future will belong to companies that offer durable value for money and can keep this new customer base engaged for the long term." To up-sell, MicroEnsure uses data from mobile CDR and insurance histories to better target customers and price new insurance policies.

### **Managing risk**

Risk management—keeping loan losses or insurance claims within expected ranges—involves more advanced statistical predictions of outcomes. A lot of attention is paid to how new digital data sources can help improve credit decisions. The applications can be at several levels. For example, it may permit access to borrowers who could not be underwritten before or to help set loan size limits.

Insurance pricing and coverage is driven by risk and actuarial accuracy and the efficiency of verifying and settling insurance claims. India is a prime example of where weather stations have collected historical rainfall and temperatures allowing insurers to offer weather-indexed insurance. Verifying the accuracy of insurance claims is also a significant part of delivering insurance. Niraj Verma of the World Bank notes that in India, "Satellite imagery can be used to estimate areas where crop failures are concentrated, which can help insurers optimize their claims assessment efforts and farmers to get more timely settlement."

## Assessing the Potential: Changing the Economics of Delivery

What could be the benefits of full use of digital data for financial inclusion? To develop a more quantitative analysis, CGAP contracted McKinsey and Company to examine more deeply one market—Tanzania.<sup>11</sup> The analysis estimates how digital data can be used to help deliver formal financial products. The analysis focuses on several distinct credit and insurance products to offer specific details around estimates.

### New class of instant access services

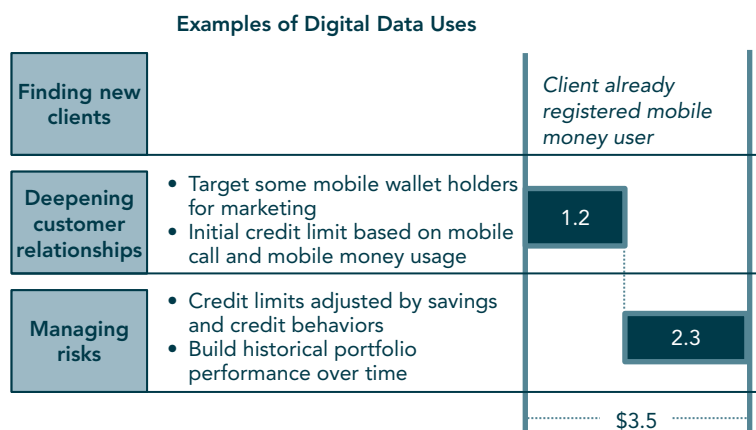
Several early experiments involve instant-access small credit. M-Shwari in Kenya is the largest such case, but in Tanzania several such products have launched in 2014. This includes M-Pawa, a service offered by mobile operator Vodacom and partner Commercial Bank of Africa. Other examples include Timiza,

a credit service of the mobile operator Airtel and partner financial institutions AFB.

These short-term liquidity products analyze a person's mobile airtime and mobile money use as part of a decision process to set a credit limit. The credit facility is sometimes linked to a savings account as well. Credit limits change based on the use of credit and savings over time. While there are up-front costs of setting up these new products, the incremental cost of each new client is extremely low—calculated to be around \$3.50 per year (see Figure 2).

These instant access services have the potential to succeed in many markets. However, the speed of scaling up can be faster in countries such as Tanzania, where digital payments already reach 44 percent of adults (Intermedia 2014). It is not unreasonable to estimate such services reaching one-quarter of the adult population. M-Shwari reached 15 percent of adults in Kenya within its first two years of operation. However, CGAP research indicates that early challenges, including a lack of a national identification

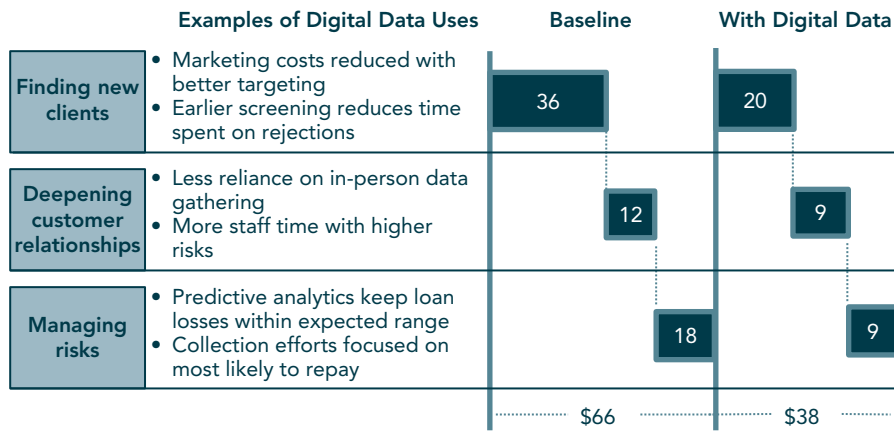
Figure 2. Marginal Costs for a One-Year Mobile Liquidity Facility—Tanzania



Note: The costs assume the client is already a mobile money user and the relationship deepened by having the client register for additional products over the phone. The cost estimates are marginal costs not including up-front investment for product development of infrastructure. Costs assume client borrows on average three times a year. The credit limits are set at \$25, but each credit draw is assumed to be \$12.50. The cost estimates include text communications with customers, a call center, and loan loss expenses. These estimates are based on multiple conversations across telecommunication providers and financial institutions in Tanzania. Some comparisons were done with providers in Kenya to cross-validate the numbers.

<sup>11</sup> <http://www.slideshare.net/CGAP/projecting-impact-of-nontraditional-data-and-advanced-analytics-on-delivery-costs>

**Figure 3. Marginal Costs Delivering a \$200 Microloan—Tanzania**



Source: <http://www.slideshare.net/CGAP/projecting-impact-of-nontraditional-data-and-advanced-analytics-on-delivery-costs>

system, in Tanzania are slowing some of the early uptake of credit.

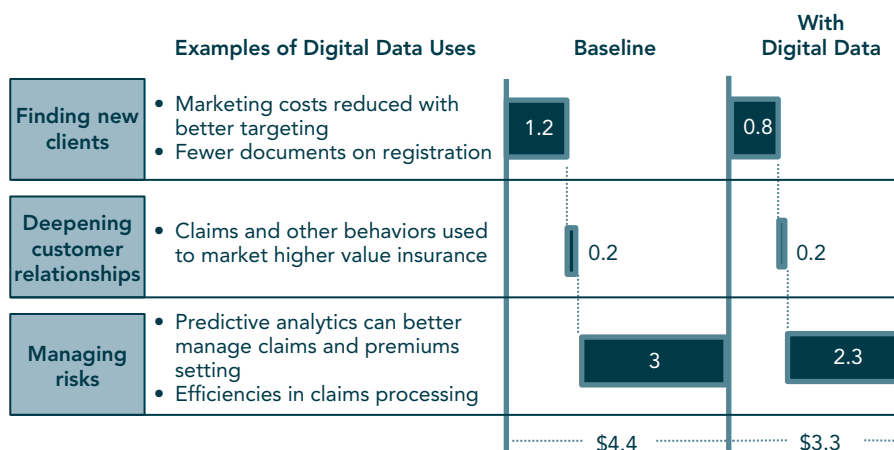
**Reducing costs and extending reach of existing products**

The applications of digital data can also accelerate the uptake of existing products. Reducing costs can lead to significant market expansion. Lenders may find it more profitable to extend their services to new areas or new clients, while clients may find it less expensive and easier to access credit (see Figure 3). The applications of digital data go beyond credit to

payments, savings, and insurance. Consider the costs of providing life insurance (see Figure 4).

The estimates from Tanzania suggest that better screening and predictive analytics could improve targeting of insurance products and thereby reduce risks to insurers. The benefits could enable insurers to expand reach to those who are uninsured and possibly reduce premiums charged to clients. For example, in Tanzania there is very low insurance coverage today, but a basic life insurance product has a very large potential market of 7 million or more who could be served.

**Figure 4. Marginal Costs Delivering One-Month Life Insurance—Tanzania**



Source: <http://www.slideshare.net/CGAP/projecting-impact-of-nontraditional-data-and-advanced-analytics-on-delivery-costs>



## Unlocking the Potential of Digital Data

So far this paper has highlighted the upside potential of digital data. Not only are the sources of new digital data expanding, but the ability to make use of these data is improving. There is already early evidence of remarkable advances, most prominently digitally enabled instant small-scale credit services. M-Shwari in Kenya is a prominent example of this. There are other applications, however, that could contribute to considerable cost reductions on delivery as well as expanded reach to new clients.

However, to unleash the full potential of digital data, key barriers will need to be addressed. While the amount of digital data is growing globally, the reality in emerging markets is that many digital data sources will still take time to become available. The amount of data from mobile operators is increasing; however, the range and quality of data collected vary considerably (Cartesian and Bill & Melinda Gates Foundation 2014). Building a data-gathering process and a useable repository will require patience and creativity and in some cases careful advance planning. Similarly, the trends with public data indicate a growing amount of data is available but there is a lot left to be done. One measure by the Open Data Index shows that, globally, government-provided public data are not always accessible, easy to use, machine readable, up-to-date, or free of cost.<sup>12</sup>

The modes for sharing data also need to be improved. Not only do regulatory restrictions need to be understood, but the business case for how partners share data involves significant analysis and processes that take time to mature. Analytics firms such as Real Impact Analytics and First Access report a need for patience with negotiating with partners to find suitable sharing arrangements.

Another consideration is building the requisite staff knowledge and technology to use data more systematically. Collecting and working with data is not a one-off quick easy win, but rather it is a long-

term investment and strategic commitment. For example, McKinsey and Company estimates that the upfront investment for a bank in Tanzania might be on the order of up to \$1 million to establish strong in-house data analytics capacity.

## Ultimately, Will Poor Clients Benefit?

For the use of digital data to achieve its potential it must do more than transform provider business models and contribute to major advancements to bring valued services to those excluded from formal financial services. The most basic measure of some success will be including those who were previously excluded. Poor clients may also benefit by having to present less documentation and to incur less time to access services.

There will be unexpected challenges and more complex questions to address over time. Importantly, data privacy and protection rules are not well-established in most emerging markets and developing countries.

Traditional approaches to these risks, such as consumers giving their informed consent to use their data, may not be meaningful or practical. In a limited sample of interviews with borrowers in Tanzania, CGAP found that users were often willing to sacrifice their confidentiality to access a loan, suggesting that there are issues that need to be better understood (Mazer, Carta, and Kaffenberger 2014). Another consideration is whether data-driven models unintentionally lead to more exclusion than inclusion. For instance, using data to discriminate systematically against certain groups (e.g., women, minorities) exacerbates existing gaps in access rather than promoting inclusion.

Another consideration is whether digital data should, or can, in time substitute for in-person interactions between providers and their clients. Bindu Ananth of IFMR Trust and an advocate for the Keshetriya Gramin Financial Services high-touch rural delivery model in India points out that “there [are] attributes of clients that must be observed, such as a person’s

<sup>12</sup> The Open Data Index is a global country survey with an indexed measure of Open Data available at <http://global.census.okfn.org/>

behaviors, family dynamics, or their health. It would be difficult to substitute these rich observations with more abstract forms of digital data.” It is also not clear how clients’ perceptions or behaviors may be affected when clients know that their data are so much a part of how services are delivered.

Addressing questions around client benefits, adequate protections for data privacy, and how to manage these

over time are all critical parts of the wider discussion. There have already been real gains made with digital data creating opportunities to improve access, and these will likely rise over time. More data will become available, and providers will learn better how to rise to the opportunity. The challenge ahead is recognizing opportunities and creating an environment that allows for progress to create a new world where digital data will be used to enrich and protect the end user.

## Annex: Digital Data Deployments Global Scan, December 2014

	Deployments	Countries of Operation
1	Advanced Merchant Payments	Hong Kong, Singapore, Philippines
2	AFB-Airtel	Kenya, Ghana, Tanzania
3	Aire	UK
4	Alibaba	China
5	Capital Float	India
6	Cignifi	Mexico, Chile, Brazil, Ghana
7	DemystData	USA
8	EcoCash Loans	Zimbabwe
9	Experian	USA
10	Experian Microanalytics	Philippines
11	First Access	Tanzania
12	Go Finance	Tanzania
13	inVenture	Kenya
14	Kabbage	USA, UK
15	Kopo Kopo	Kenya
16	Kreditech	Poland, Spain, Czech Republic, Mexico, Russia
17	LendUp	USA
18	Lenndo	Colombia, Mexico, Philippines
19	Leyebao Alifinance	China
20	Linda Jamii – Changamka	Kenya
21	Loan Now	USA
22	M-Cash	Norway
23	M-Pawa	Tanzania
24	M-Shwari	Kenya
25	MiMoni	Mexico
26	Mjara-MFS Africa	Ghana, Cameroon
27	Mode	Kenya, Chad
28	NeoGrowth	India
29	Nirvoy Life Insurance	Bangladesh
30	Platiza	Russia
31	Progreso Financiero	USA
32	Scanntech	Uruguay, Argentina, Brazil, Chile, Peru
33	Tiixa	Brazil, Argentina, Mexico, Colombia, Chile, Ecuador, Hong Kong, China, Philippines, Bangladesh
34	Tigo Paraguay	Paraguay
35	Wonga	UK
36	ZestFinance	USA

Source: CGAP (2015).

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