

White Paper

# Advancing Financial Inclusion Metrics: Shifting from access to economic empowerment

Prepared in collaboration with Tata Consultancy Services

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# Foreword

Financial inclusion is at a turning point. Due to advances in technology, the unprecedented advent of transactional and behavioural big data and greater multistakeholder collaboration, there is a realistic opportunity to reach the financially excluded – estimated to be 2 billion – and the many more who are underserved. A key ingredient to achieving this ambitious goal will be an improved system for measuring the progress of financial inclusion, and the benefits that accompany this progress.

Over the past year, the World Economic Forum and a group of industry partners have collaborated to better understand how data can be further employed to measure access and usage of financial services for the underserved. Complementing this work, the group has also examined methods for measuring the impact of financial inclusion on people's livelihoods, alongside exploring opportunities for private- and public-sector actors to apply the findings.

We wish to thank the contributors for their efforts in creating this report. It is our hope that the insights it holds encourage the financial inclusion community at large to shift financial inclusion measurement from an access perspective to a focus on usage and financial health. Improved measurement frameworks will undoubtedly encourage advancements in product design and delivery, policy-making and development programmes.

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# Introduction

## The progression of financial inclusion

Stimulating financial inclusion has the potential to bolster economic growth while alleviating poverty. It provides access to payments and savings, protects against crises and mobilizes resources essential for investment and consumption. Additionally, financial inclusion can further boost economic progress by identifying new viable markets for financial services providers, which in turn increases fiscal revenues for governments and provides employment opportunities for local communities.

Consequently, financial inclusion today is a stated goal for both public- and private-sector actors. Among international organizations, financial inclusion is mentioned in seven of the Sustainable Development Goals. At the national level, among bank regulators in 143 jurisdictions, two-thirds have a mandate to promote financial inclusion, and more than 50 countries have set formal targets and financial inclusion national strategies.<sup>1</sup>

Increased attention to financial inclusion has recently been driven by one core factor: the rise of technology-enabled innovation. Digital financial products and services – especially those delivered through mobile phones – have made it cost-effective to reach low-income consumers who conduct transactions for small amounts. These technological advances have enabled scalable and profitable business models and significant commercial prospects in the base of the pyramid (BOP) segment.

This greater focus has laid the foundation for numerous public-private partnerships looking to generate an enabling environment for financial inclusion. For example, specific collaborations have led to the liberalization of financial flows, investment in physical and market infrastructure, the introduction of low-fee bank accounts and digital ID, correspondent bank arrangements, digitalization of invoices and the use of commercial banking channels for government disbursements.

To measure the results of this progress, a recurrent demand from the public and private sectors for innovation in global measurement databases has emerged. Recent examples include the World Bank-Gallup Global Findex survey, IMF Financial Access Survey, GSMA Mobile Money Programme and the InterMedia Financial Inclusion Insights survey, among others. Together, these metrics provide demand-side and supply-side statistical data on financial inclusion levels in more than 140 countries worldwide.

## A data-driven transformation for inclusive finance

The emergence of global data sources since the early 2010s offered, for the first time, reliable statistical data on the progress of financial inclusion, and provided a framework to begin to examine the impact of advancing financial inclusion. However, today there are still 2 billion people worldwide who are financially excluded, resulting in lost economic opportunities and dependence on riskier, more expensive methods to pay, save, borrow and acquire assets. This represents a threat to overall financial well-being and social cohesion.

Significant scope exists for the public and private sectors to increase their cooperation to endorse a more nuanced understanding of how financial services are consumed and their impact on living standards. Existing measurement approaches are typically used to understand the general financial inclusion landscape.<sup>2</sup> There are, nonetheless, two core areas to build on to continue a coherent evolution in measurement:

- *Demand-side insights and a higher emphasis on usage:* For instance, most current financial inclusion metrics have derived straightforward supply-side insights – with a primary focus on access. As financial innovation increasingly transforms the provisioning of financial services into a more customer-centric platform, demand-side insights and an emphasis on usage take greater relevance.
- *More datasets that provide greater granularity:* Currently, a banker can find the number of loans in a given geography; nonetheless, disaggregation by type (size, maturity, client gender) is seldom present. Existing data sources also lack visibility into more mature financial behaviour as individuals advance in their “customer journey”. Further, there is little quantification on how end consumers are better off from being financially included.

## Expanding beyond access

Correctly measuring financial inclusion demands regular modernization in methodology as we delve deeper into the economics and psychology of financial inclusion. Given the opportunity to build on the existing collection efforts, plus the rapidly changing regulatory and market expectations – with customers demanding greater convenience, improved service and higher transparency – it is crucial to identify concrete outcomes that financial inclusion brings about for both suppliers and consumers.

After an early 2017 mandate from the steering committee of the World Economic Forum’s *Promoting Global Financial Inclusion* project for thought leadership on improved financial inclusion metrics, the Forum committed to facilitating the development of a new measurement framework, to complement the existing literature. To accomplish this, the Forum created a working group to champion the new framework, consisting of global experts from multiple industries (e.g. payments, banking and consumer-goods companies), regulators and civil society.

This report is divided into two major sections. The first outlines a framework including access and usage “stretch” indicators, which would allow for more insight generation (Figure 1) that extends beyond typical volume-based measurements. As access and usage of financial services have been extensively explored before, this section is generally targeted, quantitative-oriented and specific, presenting detailed key metrics within the framework.

The second section aims to distil the relationship between accessing and using financial services and the resulting financial health. Given the emerging nature of this relationship, this section takes a less structured approach and considers financial inclusion as an enabler of improved living standards. Relevant case studies of early schemes quantifying this correlation are highlighted.

Lastly, a call to action is made for the financial inclusion community to integrate the framework presented into future collection surveys and shift measurements to focus on financial health. The set of indicators outlined in the subsequent sections remain indicative and high level. The ambition is to deliver relevant areas identified by the Forum and its partners that can stimulate the next collection of financial inclusion metrics. It aims to be positioned as a working framework, which over time can be tailored to achieve a more uniform approach to data collection.

**Figure 1: Insights and outcomes derived from investing in financial inclusion data**



Source: World Economic Forum

# Conceptual framework

## Building financial health

The previous section mentioned the linkage between accessing and using financial services and the resulting financial well-being of the customer. To better comprehend this relationship, it is essential to clarify that financial inclusion is not an end in itself but a means to an end. Figure 2 lays out this connection, both conceptually and practically.

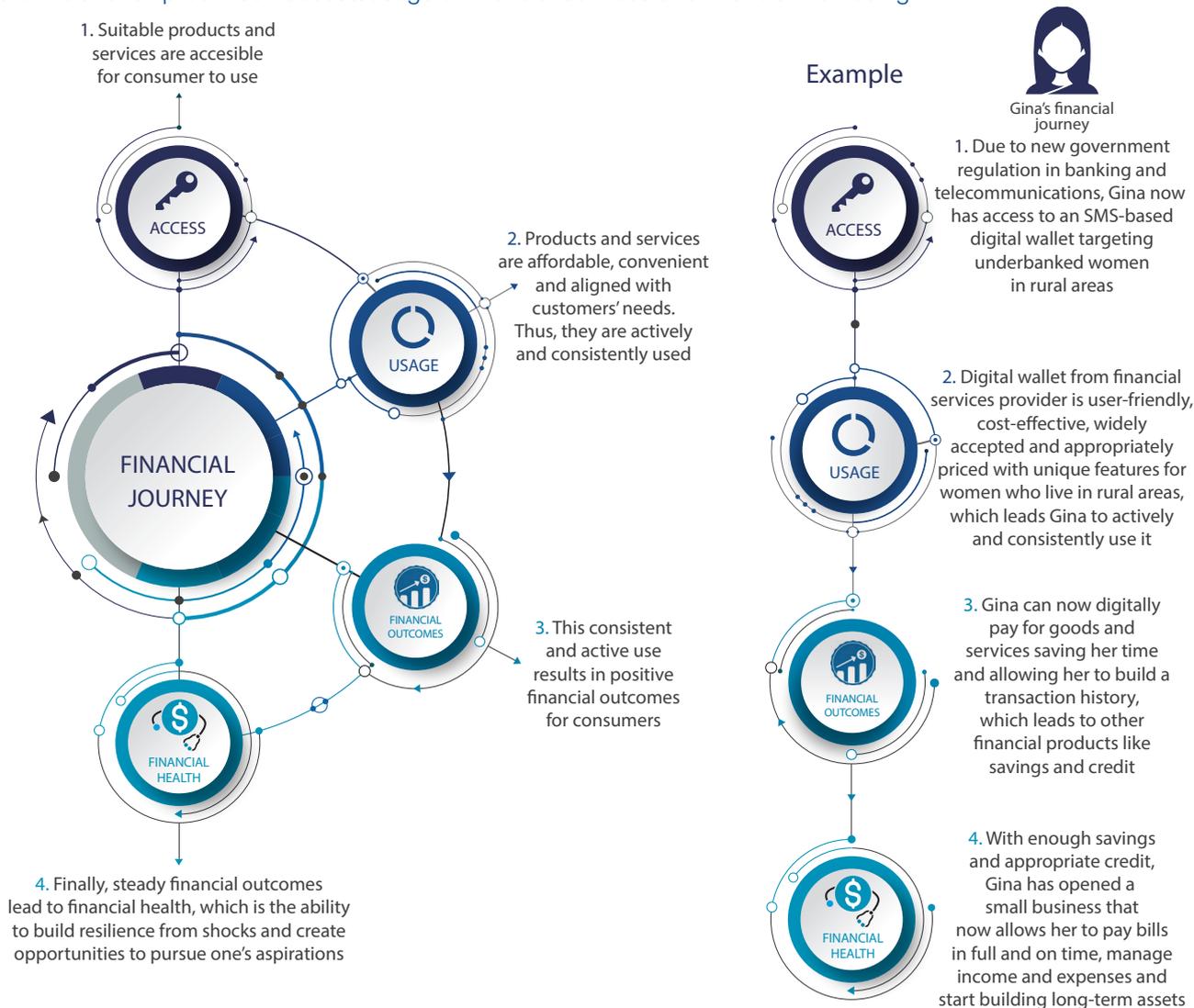
Prosperity is not directly derived from the standalone ownership of bank accounts, but from their appropriate and consistent use. As people around the world face more financial opportunities and threats, access to financial services – driven by an enabling environment – needs to be accompanied by proper and steadfast acceptance that leads to positive financial outcomes. In the medium and long term, these outcomes bring financial health for consumers and providers.

make payments or a safe place to save money and access credit, they are better able to manage risks. This adoption is especially significant for people living in the most deprived households. Their income often barely allows them to get by and any income shock may have severe consequences.

In turn, the private sector has learned that investing in financial health will contribute to serving customers better, creating long-term loyalty. By aligning the success of their business with the success of their customers, financial providers have seen that the future of financial services is one in which the industry will thrive when their customers prosper.<sup>3</sup>

The sections below break down this high-level conceptual framework into appropriate and granular metrics, starting by explaining the methodology used and moving to analyse each segment of the measurement framework in detail (in the first part) and exploring case studies in financial health (in the second part) to understand the value of financial inclusion more clearly.

**Figure 2: Relationship between access/usage of financial services and financial well-being**



Source: World Economic Forum, CFSI, i2i and InterMedia

# Part 1: Measuring financial inclusion

## A brief note on methodology

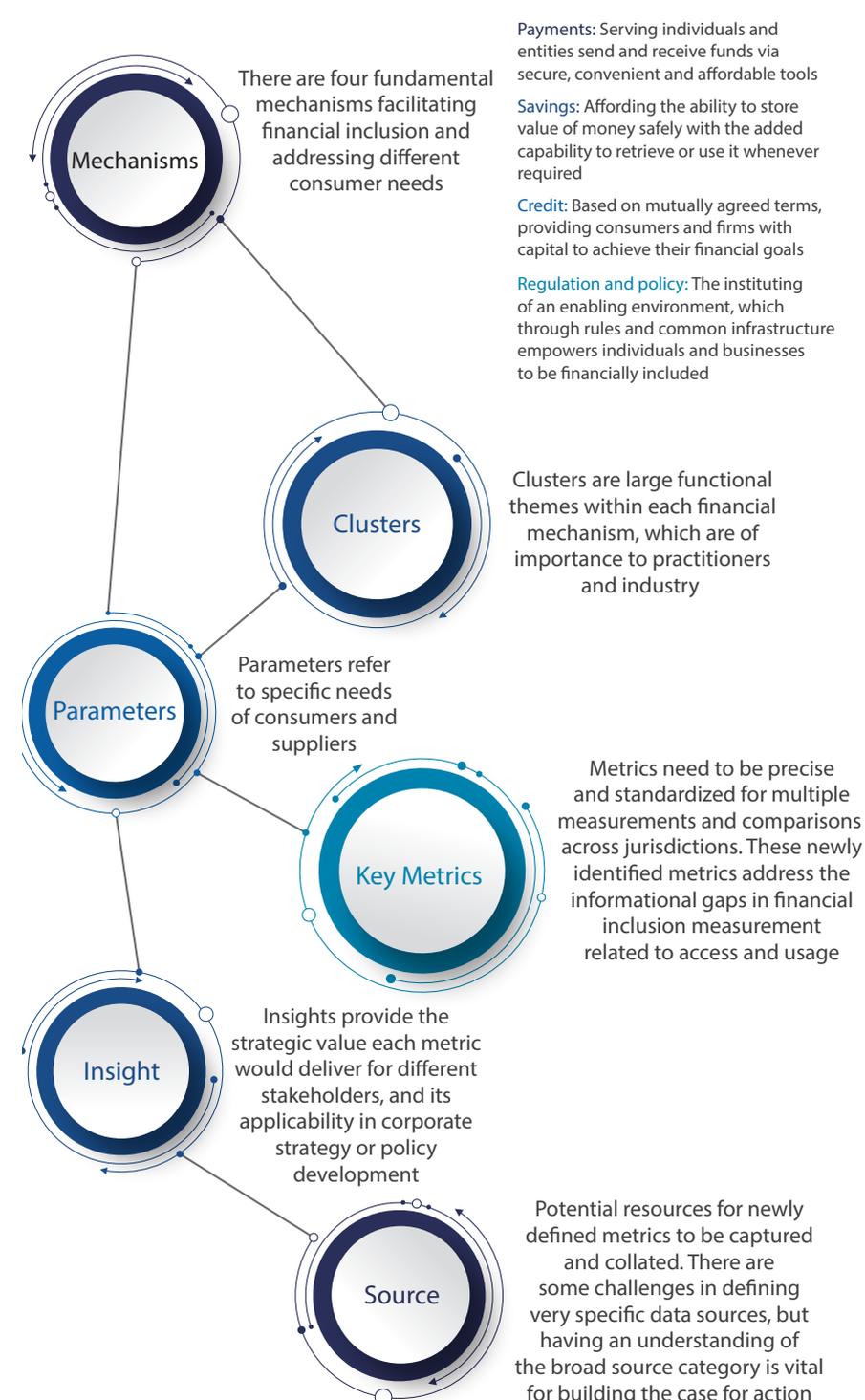
**Stakeholder interviews:** The Forum conducted a series of interviews and discussions in early and mid-2017 on the expansion of metrics measuring financial inclusion, reaching out to more than 40 stakeholders from the public and private sectors. The working group examined the gaps of existing indicators for various financial inclusion enabling mechanisms, and proposed a framework to advance financial inclusion data measurement.

**Scope of benchmark data:** The working group used a collection of 255 existing financial inclusion metrics from various leading collection efforts developed between 2011 and 2017 – including the World Bank’s Findex, GSMA Mobile Money Programme, and the IMF Financial Access Survey, among others – as the reference set to identify gaps in financial inclusion data.<sup>4</sup> A variety of selected indicators capturing different dimensions were identified for development. The working group analysed several indicators and organized them around major financial mechanisms (Figure 3).

Subsequent interviews were conducted with senior executives from the working group to provide greater detail and granularity. The focus of the stocktaking exercise was to identify key areas for the expansion and strengthening of financial inclusion data for the following financial mechanisms: payments, savings and credit, as well as the overarching regulatory and policy environment. Further, the framework examined the value these new metrics will provide for industry, policy-makers and practitioners, and suggested potential data-collection sources.

The following section of the white paper provides a summary of findings and specific metrics. While particular segments have been explored more extensively, this should not be interpreted as a signal of higher relevance over others.

Figure 3: Explanation and definition of components



Source: World Economic Forum, CFSI, i2i and InterMedia

## Analysis and findings

### Payments: Driving digital liquidity



In the context of financial inclusion, payments are broadly defined as incorporating all methods of sending or receiving value. Given the importance of payments to financial inclusion, both in enabling access as well as supporting usage through merchant acceptance, our measurement framework for payments (Exhibit 1) focuses on several critical payment flows and their barriers, specifically: outflows from consumers to merchants; inflows to consumers; and barriers to supply and demand. Supply enablers include: economics, such as reduced network costs due to scale, interoperable networks; risk, including network risk; distribution, presence of distributors serving the financial inclusion population; and friction, such as the absence of dependable infrastructure. Demand-side enablers, as well, are addressed below for key flows:

- **Merchant payment flows (person-to-merchant/ P2M):** The value of payments is integrally dependent on the ability of consumers to transact seamlessly with merchants. Accordingly, to scale up, the number of merchant outlets that allow digital transactions should be aligned with the purchasing behaviour of target populations. Aligning digital acceptance with customer access supports the creation of digital equity and increases business usage.
- **Cash-in cash-out (CICO) channels and corresponding flows:** Technology-led innovation is advancing the digitization of payments and diminishing the need for cash. While momentum is growing, an entirely cashless global economy is still far away. Critical to this progression is ensuring seamless cash-to-digital (and vice versa) convertibility. Robust CICO footprints are a critical component of a solid acceptance network. Usage metrics, coupled with a more complete view of payments behaviour, offers a fuller picture of individual behaviour in the context of different market structures with their corresponding barriers.
- **Other payment flows (person-to-business/P2B, person-to-government/P2G):** Beyond merchant purchases, consumers make payments to businesses (bill payments) and governments (taxes and fees). Understanding these flows, as well as their barriers, will help to guide their expansion.
- **Digitization of payments at source (business-to-person/ B2P, government-to-person/G2P):** Increasingly, significant sources are supplying digital liquidity to financially excluded populations. These include government benefit transfers, digitization of wages or salaries and credit disbursements. The digitization of flows at the source (by the payer) contributes to digital adoption, and reduces corruption – assisting consumers to adopt digital financial services to receive funds and send payments.



In Focus

*“Inclusive growth will come through tangible actions that give people a pathway to prosperity.”*

### – Ajay Banga, Chief Executive Officer, Mastercard

Just two years ago, the Sustainable Development Goals helped put a greater focus on and inspire action to deliver more access to financial services.

In that time, the tremendous partnership between the public and private sectors has brought a large number of the unbanked into the formal economy. Yet, there are still 2 billion people who cannot do things we take for granted – pay a bill, save money for a rainy day or borrow on reasonable terms, to name a few.

As the calendar turns to a new year, we need to recognize that we have only just begun. Even more so, we need to agree that the goal is not financial inclusion.

Financial inclusion is simply the point of entry. The real goal is prosperity. The real target is inclusive growth. This will come through tangible actions that give people a pathway to prosperity. This will be a pathway to build a stronger, healthier middle class.

We must now turn our attention to providing people with the opportunities to use these new tools.

Small and microbusinesses are the drivers of growth for any economy. The expanded access to electronic payments can truly make a difference and drive usage. Increased usage provides greater purchasing power to the individual. It means more money stays in the economy and provides greater tax revenues for governments.

Recent Mastercard research<sup>5</sup> has identified three approaches for overcoming the barriers some small and microbusinesses face when considering accepting payments:

- Making electronic payments attractive and relevant to the everyday activities of these businesses
- Designing new programmes and new technologies to drive cost efficiencies for smaller merchants
- Developing new partnerships and new opportunities for collaboration that can solve multiple merchant pain points, not just cash flow.

If we can do this, we will have made a contribution greater than any single company, government or developmental agency could have done on its own. This will light the pathway to prosperity.

## Exhibit 1: Identified payments-related financial inclusion metrics based on gap analysis of existing literature

Clusters	Parameters	Key Metrics	Insight/ Value Derived from Metrics	Source
Merchant payment flows (person-to-merchant, P2M)	Merchant payments usage and penetration	– <b>Merchant payments</b> (number of, value of) By industry vertical, demographics, payment type, digital payment technology	– Insights into payment usage at individual level	– Demand-side surveys – Payments industry associations and payment service providers
		– <b>Percentage of merchants accepting digital payments</b> By formalization, industry vertical, merchant classification, demographics, digital payment technology	– Visibility into market penetration and addressable market from a merchant perspective	– Shared anonymized and non-competitive data by private-sector consortium
	P2M availability	– <b>Top barriers to usage of point of interface (POI)</b> By demographics	– Understanding of current barriers to POI usage and insights into development of acceptance propositions	– Demand-side surveys – Payments industry associations
		– <b>Top barriers to the supply of point of interface</b> By merchant classification	– Guidance on top barriers to merchant adoption of electronic payments	– Shared anonymized and non-competitive data by private-sector consortium
Cash-in, cash-out (CICO) flows	CICO usage	– <b>Transactions made at CICO interfaces</b> (number of, value of) By location type, demographics	– Insight on individual usage of CICO services by channel	– Demand-side surveys – Shared anonymized and non-competitive data by private-sector consortium
	CICO interface	– <b>Locations offering cash back</b> (number of) By location type, transaction type	– Multichannel view of CICO footprint	– Shared anonymized and non-competitive data by private-sector consortium
	CICO availability	– <b>Top barriers to usage of CICO services</b> By transaction type	– Understanding of current barriers to usage and insight into development of more effective CICO services	– Demand-side and supply-side surveys
Other payment flows (P2B, P2G)	Digital payments usage and penetration by billers/ government	– <b>Percentage of utility bills paid digitally</b> By industry verticals, access instruments, demographics	– Uptake in payment of bills by individuals and visibility on extent of digitalization by billers	– Demand-side surveys – Payments industry associations and payment service providers
		– <b>Top barriers to digital payments acceptance</b> By demographics	– Understanding of current barriers to these flows and insights into development of acceptance propositions	– Shared anonymized and non-competitive data by private-sector consortium
Digitization of payment flows (B2P, G2P)	Digitization of wages	– <b>Extent of digitization of wages</b> (value of, % of) By frequency, demographics	– Insights on digitization of value and on the magnitude of acceptance of digital payment methods for wages by employers	– Demand-side surveys – Payments industry associations and payment service providers
		– <b>Salaries paid digitally to employees</b> (number of, value of) By employer profile, payment type	– Visibility into sources paying wages digitally and into the progress in formalization	– Shared anonymized and non-competitive data by private- and public-sector employers
	Digitization of welfare benefits	– <b>Extent of digitization of welfare benefits</b> (value of, % of) By frequency, demographics	– Insights on digitization of value and visibility on magnitude of digital payment methods for benefits delivered by government and aid agencies	– Demand-side surveys – Government agencies handling welfare payments
		– <b>Government benefits paid digitally to citizens</b> (number of, value of) By payment type, programme type	– Visibility into digital transactions and impact of government payments on usage behavior	

- **Industry vertical:** Consumer, utilities, healthcare, transportation, education, other
- **Demographics:** Men/women, urban/ rural, age, income level, religion, occupation, family size, education level
- **Payment type:** Account direct transfer, card top-up, digital wallet top-up, other
- **Digital payment technology:** Payment card network, APP (Android, iOS), USSD, NFC, QR, other
- **Formalization:** Registered, unregistered
- **Merchant classification:** Micro, small, medium, large
- **Location type:** ATM (branches/standalone), POS, mobile agents/mPOS, bank agents, other
- **Transaction type:** Only cash-in, only cash-out, both cash-in and cash-out
- **Employer profile:** Public, private, mixed
- **Programme type:** Conditional cash transfer, non-conditional cash transfer
- **Access instrument:** Kiosk, online
- **Frequency:** Weekly, biweekly, monthly

Source: World Economic Forum and Tata Consultancy Services

## Savings and investing: Targeting inclusive growth



Savings include all financial mechanisms that allow users to safely and conveniently store and use value. Investments are financial mechanisms that help store value with a potential to generate a return in the future. By managing consumption and increasing savings, the underserved can build financial resilience and manage to pay for goods and services that they would otherwise be unable to afford. The savings and investment section of our measurement framework – with additional detail in Exhibit 2 – focuses on the following clusters to identify ways in which greater financial inclusion can be encouraged:

- **Usage of formal and informal savings:** Convenient access to the formal financial system is a prerequisite for the uptake of savings. However, providing access is not enough for a customer to consistently use services. Additional insights into the use of financial services, including understanding the main reasons behind low uptake, would prove valuable. This would make it easier to recognize the nuances of different regions and the particular demographic variations within each country, which are fundamental in developing market-entry strategies, and in providing customer-centric products and services.

- **Savings and investments by product:** The degree of heterogeneity of the formal financial system is also a relevant feature to assess its inclusiveness. A more extensive range of saving and investment products, including alternative investments, is more likely to meet customer needs. It is a good proxy for the degree of financial development. To date, there is no consolidated data on this subject. As low-income populations experience some degree of financial maturity, certain investment vehicles such as retirement accounts can be appropriate, while still being aware that more high-end investment products might not be suitable for these markets. Related metrics help assess the degree of exposure to financial shocks and risk diversification.
- **Alternative savings products outside the formal financial system:** Due to supply-side limitations, low-income individuals often rely on informal saving products or alternative investment products. As a result of technology and regulatory innovation, the formal financial sector has started to provide solutions that meet the needs of the underserved. However, other demand-side roadblocks such as poor financial education or a lack of trust in the formal financial system remain significant. Relevant metrics in this regard, such as the number of adults saving or investing money in non-financial product, will provide a better understanding about the degree of reliance consumers place on non-financial products. This in turn will help the redesign of formal financial services.

**Exhibit 2: Identified savings-related financial inclusion metrics based on gap analysis of existing literature**

Clusters	Parameters	Key Metrics	Insight/Value Derived from Metrics	Source
Usage of formal and informal savings	Informal savings adoption	– Percentage of savings invested outside the formal financial system By demographics	– Understanding of the extent of participation in the formal financial system, its degree of inclusiveness and reliance on non-financial products by consumers	– Demand-side surveys from financial institutions – Industry/academic studies to define volume of non-formal savings
	Proportion of digital payments in formal accounts	– Percentage of accounts that send/receive a digital payment By demographics, payment type	– Visibility on the proportionate amount of usage of various digital channels for payments	– Supply-side surveys from financial institutions
Savings and investment by product	Financial heterogeneity	– Savings-related financial products used by adults (number of) By product category, demographics	– Visibility on the maturity of the financial system	– Supply-side and demand-side surveys from financial institutions
	Long-term savings	– Adults with savings for retirement in a formal financial institution (number of) By demographics	– Insight into consumer awareness about the products available, and their trust in the formal financial services	– Supply-side and demand-side surveys from financial institutions
Alternative savings outside the formal financial system	Alternative investing	– Adults saving or investing money in non-financial products (number of) By demographics	– Understanding the degree of reliance on non-financial products by consumers	– Supply-side and demand-side surveys from financial institutions
	Risk exposure and vulnerability	– Percentage of the total savings held in non-financial goods desegregated by product By demographics	– Support for regulators in assessing any potential risky schemes being run by informal providers	– Academic studies

- **Demographics:** Men/women, urban/ rural, age, income level, religion, occupation, family size, education level
- **Payment type:** Account direct transfer, card top-up, digital wallet top-up, other
- **Product category:** Savings account, CDs, fixed deposits, blended products, other

Source: World Economic Forum and Tata Consultancy Services



Credit refers to any mechanism by which a consumer receives a sum of money with an agreement to repay this in the future, with or without interest. It is possible to access credit through various sources, including formal financial institutions, personal acquaintances and informal private lenders. The role of credit in driving financial well-being and economic growth, however, has been somewhat mixed due to the risk of overindebtedness. The early enthusiasm for microcredit in the 1990s and early 2000s was fuelled by mostly anecdotal evidence and descriptive statistics about dramatic economic and social benefits.<sup>6</sup>

More data on credit access and usage will allow for a better understanding of consumer preferences and how to provide appropriate credit for the underserved, generating a favourable benefit–cost ratio for the consumer. The collection of credit metrics outlined below (Exhibit 3) will help in understanding how people use formal and informal borrowing:

- *Access to credit:* To understand credit from the perspective of financial inclusion, it is necessary to measure how people borrow money. Demand-side indicators offer such measures at the level of the individual. The proposed indicators provide insights on the quality of credit and the characteristics and the potential demand for credit that is satisfied by the formal and informal financial system.

Promoting financial consumer protection frameworks and financial literacy programmes can ensure that borrowers have a proper understanding of loan terms and can compare the net cost of borrowing. The lack of consumer financial data by a formal credit bureau acts as a barrier to accessing affordable credit in the formal financial system. It is therefore imperative to improve credit scoring assessments. This can be done by encouraging the use of formal financial services to create transactional/credit history or by gathering alternative financial information.

- *Use of formal and informal borrowing:* Information on the number of adults who borrow from informal lenders, or from family and friends, offers a rough idea of how many people need credit but cannot borrow from formal financial institutions. However, credit demand depends on several factors including loan sizes, repayment schedule and collateral requirements, all of which affect borrowing costs. The operational efficiency of credit processing also dictates the use of credit by consumers. A loan that is not available when needed is of no use to the consumer. Measuring operational efficiency and credit deterrents helps explain why consumers use non-formal credit and what changes need to be introduced to reverse this behaviour. Understanding why consumers were denied loans can help unearth issues in the existing lending process.

### Exhibit 3: Identified credit-related financial inclusion metrics based on gap analysis of existing literature

Clusters	Parameters	Key Metrics	Insight/Value Derived from Metrics	Source
		<ul style="list-style-type: none"> <li>– Percentage of customers who understand the credit options available to them and the terms and conditions therein</li> </ul> By demographics, borrower type	<ul style="list-style-type: none"> <li>– Identification of knowledge gaps in customers and helps the development of targeted campaigns to educate customers</li> </ul>	
	Credit product landscape	<ul style="list-style-type: none"> <li>– Top barriers to access of credit</li> </ul> By borrower type	<ul style="list-style-type: none"> <li>– Mapping of the appropriateness of credit products being offered to customers</li> </ul>	<ul style="list-style-type: none"> <li>– Supply-side (loan officers) surveys</li> <li>– Demand-side surveys</li> <li>– Shared anonymized and non-competitive data by private-sector consortium</li> </ul>
		<ul style="list-style-type: none"> <li>– Credit applications that are digital vs in-person (number of, value of)</li> </ul> By demographics, credit type, borrower type	<ul style="list-style-type: none"> <li>– Visibility into consumer’s channel preferences</li> </ul>	
		<ul style="list-style-type: none"> <li>– Top reasons for choosing digital channel</li> </ul> By borrower type	<ul style="list-style-type: none"> <li>– Insight into consumer preferences and maturity of digital channels</li> </ul>	
Access to credit	Credit infrastructure	<ul style="list-style-type: none"> <li>– Percentage of credit applications that are approved</li> </ul> By lender type, demographics, credit type, borrower type	<ul style="list-style-type: none"> <li>– Visibility into the credit approval rates across lender types and demographics to improve the application to acceptance ratio</li> </ul>	
		<ul style="list-style-type: none"> <li>– Percentage of customers included in the credit bureau</li> </ul> By demographics, borrower type	<ul style="list-style-type: none"> <li>– Understanding of the formal credit score coverage of the population, including details by demographic variables</li> </ul>	<ul style="list-style-type: none"> <li>– Central banks</li> <li>– Credit bureau surveys</li> </ul>
		<ul style="list-style-type: none"> <li>– Institutions reporting to credit bureau (number of, % of)</li> </ul>	<ul style="list-style-type: none"> <li>– Establishes the degree of completeness of information available on consumers</li> </ul>	
	<ul style="list-style-type: none"> <li>– Cross-sharing of data between credit bureaus (% of)</li> </ul>	<ul style="list-style-type: none"> <li>– Insight into the degree of data sharing between the various operators in the financial services industry</li> </ul>		
	Product profiling	<ul style="list-style-type: none"> <li>– Average loan size (value of)</li> </ul> By credit type, credit purpose, borrower type,	<ul style="list-style-type: none"> <li>– Granular understanding of demand-side needs and supply-side offering. Helps in mapping the gap between customer needs and provider offering</li> </ul>	
	Funds allocation and delivery	<ul style="list-style-type: none"> <li>– Top reasons for borrowing</li> </ul> By industry vertical, collateral type, credit type, credit purpose, distribution channel, borrower type	<ul style="list-style-type: none"> <li>– Visibility into the individuals’ credit needs and behavior. Provides information to private sector willing to lend to this consumer segment, but not having adequate historic information</li> </ul>	
	Use of formal and informal borrowing	Operational efficiency	<ul style="list-style-type: none"> <li>– Loan turnaround time (in hours)</li> </ul> By demographics, credit type, credit purpose, lender type, borrower type	<ul style="list-style-type: none"> <li>– Benchmarking of key operational measure. Provides a basis for process innovation</li> </ul>
<ul style="list-style-type: none"> <li>– Loan portfolio at risk (value of, number of)</li> </ul> By days outstanding, credit type, credit purpose			<ul style="list-style-type: none"> <li>– Inputs for indirect suppliers to assess the market size and help plan investments</li> </ul>	
	Credit deterrents	<ul style="list-style-type: none"> <li>– Top reasons for not using credit</li> </ul> By borrower type	<ul style="list-style-type: none"> <li>– Understanding of the barriers to credit and help in redesigning products to cater to the exact needs of the consumer</li> </ul>	
		<ul style="list-style-type: none"> <li>– Percentage of customers rejected due to lack of credit worthiness</li> </ul> By rejection reason, borrower type, collateral type	<ul style="list-style-type: none"> <li>– Establishment of the need for better collateral registries, credit bureaus, case for change in current legal and documentation requirements</li> </ul>	

- Demographics: Men/ women, urban/ rural, age, income level, religion, occupation, family size, education level
- Borrower type: Consumer, SME
- Credit type: Formal, informal
- Lender type: Formal (banks & NBFC), semi-formal (credit cooperative, fintech), informal (money lenders)
- Industry vertical: Consumer, utilities, healthcare, transportation, education, other
- Credit purpose: Working capital (short-term), lending term (long-term)
- Distribution channel: Digital loans, analogue loans (branch / agent)
- Collateral type: Secured, unsecured

Source: World Economic Forum and Tata Consultancy Services

## Savings and investing: Targeting inclusive growth



The regulatory environment includes rules and policies that affect the access and usage of financial services provided by banks and non-banks. An enabling policy and regulatory framework can accelerate financial inclusion and the uptake of financial services. The enabling regulations and policies in this section are focused on digital financial services, including: e-money regulations, mobile agent networks and tiered know-your-customer (KYC) policies. It also reviews issues concerning the adoption of national ID systems and biometric ID models for public and business purposes. The collection of metrics (Exhibit 4) outlined below are overarching in nature, and focus on data that would help us advance some of the policies mentioned:

- **Electronic money regulations:** These are a recent phenomenon. They emerged after mobile phone-based digital financial services were launched in sub-Saharan Africa with little oversight. In other regions where commercial banks or public banks dominate the financial markets, e-money regulations have been enacted following national debates. The metrics in this section try to assess the correlation between e-money regulations and the proliferation of financial inclusion in such jurisdictions.
- **Digital financial services development:** Mobile-based payment services have been increasing globally in the past decade. Successful models deployed in East Africa and Bangladesh have been emulated in other countries. Metrics in this segment help assess the coverage of mobile services, the customer experience at the outlets and the type of documentation required for an account in order to understand the degree of ease of transacting through this non-traditional channel.

- **Ease of access and usage through tiered KYC:** Tiered KYC, often proportionate to risk, increases access and eases usage of formal financial services. Light KYC policies for entry-level services with low thresholds remove access barriers and promote usage among the financially excluded. These metrics would help provide insight about how rigid or flexible the existing KYC requirements in a country are.
- **Increase financial access and usage through biometric-enabled e-KYC:** Financial inclusion has undoubtedly advanced thanks to new technology, and its future is very much dependent on digital technology to succeed. It is therefore vital to understand and exploit the technology available in this digital age. Evidence suggests that introducing biometric-enabled e-KYC processes can significantly increase uptake and usage of formal financial services and eliminate the issues related to corruption, trust, transparency and fraud.
- **Enabling regulatory framework for non-banks:** The participation of non-banks with wide consumer reach (e.g. mobile operators or digital financial services players) has been shown to have a positive impact on overall financial inclusion. There are countries where non-bank players are still not allowed to provide financial inclusion services or their role is unclear or limited due to an absence of regulation. These metrics described below aim to measure the degree of openness in a market to allow alternate providers to serve the unbanked and underserved.



*“Data, including gender disaggregated data, is important to realize the depth of the issues surrounding financial inclusion. It will help generate political will and shape policy. It will also help us map potential demand for services, track progress, and get global and local players going.”*

- **HM Queen Máxima of the Netherlands, United Nations Secretary-General’s Special Advocate for Inclusive Finance for Development**

**Exhibit 4: Identified policy and regulation-related financial inclusion metrics based on gap analysis of existing literature**

Clusters	Parameters	Key Metrics	Insight/Value Derived from Metrics	Source
Enabling regulatory framework for electronic money	E-money dissemination	<ul style="list-style-type: none"> <li>– Countries that have adopted e-money regulations, including e-money, mobile money, DFS for consumer protection (number of)</li> <li>By region</li> </ul>	<ul style="list-style-type: none"> <li>– Insight into the regulation of electronic money to assess a potential correlation between formally regulated e-money economies and the extent of financial inclusion in those economies</li> </ul>	<ul style="list-style-type: none"> <li>– Central banks</li> <li>– Government agencies</li> <li>– AFI Data Portal (policy changes database)</li> </ul>
		<ul style="list-style-type: none"> <li>– Countries with e-money regulations that have consumer protection related provisions (number of)</li> <li>By region</li> </ul> <hr/> <ul style="list-style-type: none"> <li>(In those countries where e-money law exists)</li> <li>– Active digital accounts (number of)</li> <li>By digital account type</li> </ul> <hr/> <ul style="list-style-type: none"> <li>– Increase in the number of traditional banking accounts (number of, % of)</li> <li>By demographics</li> </ul>		
Digital financial services development	KYC registration coverage	<ul style="list-style-type: none"> <li>– Mobile money outlets (number of)</li> </ul>	<ul style="list-style-type: none"> <li>– Understanding the barriers to customer registration and national ID access to KYC centers as a big driver in accelerating the uptake of DFS)</li> </ul>	<ul style="list-style-type: none"> <li>– Central banks</li> <li>– Government agencies</li> <li>– GSMA</li> <li>– Industry association</li> </ul>
		<ul style="list-style-type: none"> <li>– Adults covered per outlet (number of)</li> <li>By demographics</li> </ul> <hr/> <ul style="list-style-type: none"> <li>– Average time taken at each outlet (minutes)</li> </ul> <hr/> <ul style="list-style-type: none"> <li>– Documents required for account registration (number of)</li> <li>By document type, product complexity</li> </ul>		
KYC/customer identification	Ease of access and usage through tiered KYC	<ul style="list-style-type: none"> <li>– Countries that have a tiered KYC (number of)</li> <li>By product complexity</li> </ul>	<ul style="list-style-type: none"> <li>– Delivers insight about KYC as barrier to access and usage and the degree of progress each country has made in removing barriers to financial inclusion</li> </ul>	<ul style="list-style-type: none"> <li>– National KYC/ID agencies</li> <li>– GSMA</li> <li>– Central banks</li> </ul>
	Increasing financial access and usage by exploiting biometric KYC/e-KYC	<ul style="list-style-type: none"> <li>– Countries with e-KYC and biometric KYC rules in place (number of)</li> <li>By region</li> </ul>	<ul style="list-style-type: none"> <li>– Assesses countries on their biometric KYC readiness as a cost-effective solution in developing countries)</li> </ul>	<ul style="list-style-type: none"> <li>– National KYC/ID agencies</li> <li>– GSMA</li> <li>– Central banks</li> </ul>
Enabling regulatory framework for non-banks	Market openness to alternative providers and suppliers	<ul style="list-style-type: none"> <li>– Countries allowing participation by non-banks (fintech, mobile, others) in the financial services sector for FI (number of)</li> <li>By region, participant type</li> </ul>	<ul style="list-style-type: none"> <li>– Delivers comparative assessment of degree of financial inclusion when only banks are allowed to provide financial services, as opposed to when multiple players are allowed</li> </ul>	<ul style="list-style-type: none"> <li>– Central banks</li> <li>– Industry associations</li> <li>– AFI Data Portal (policy changes database)</li> </ul>
		<ul style="list-style-type: none"> <li>– Percentage of financially excluded adults in these countries</li> <li>By demographics, participant type</li> </ul>	<ul style="list-style-type: none"> <li>– Establishes a need for allowing more players in offering financial inclusion products</li> </ul>	

- **Digital account type:** E-wallets, mobile financial accounts
- **Demographics:** Men/women, urban/ rural, age, income level, religion, occupation, family size, education level
- **Location:** Municipality, city, state, region
- **Product complexity:** Basic, medium, advanced
- **Participant type:** Formal (banks, NBF), semi-formal (bank-led partners like mobile or credit cooperatives), informal (any provider including fintech, mobile, retail or other providers)

Source: World Economic Forum and Tata Consultancy Services

# Part 2: Moving beyond access and usage into financial health

## Overview

Financial inclusion has taken a more visible place on the global stage in recent years. Mobile credit has taken hold in East Africa, the Indian government has released a set of open application programming interfaces, or APIs, in the form of the India Stack, and fintech innovators are delivering novel digital financial tools to the financially underserved. Along with this impressive growth, there has been a corresponding data increase. These factors have led to a turning point where the financial inclusion community is further examining current metrics. This reassessment aims to better understand how these digital financial tools are truly affecting people's financial health.

Recently, new measurement structures have emerged that seek to address this very challenge:

- In 2014, the Center for Financial Services Innovation (CFSI) introduced its financial health framework.
- In 2015, the Consumer Finance Protection Bureau released its financial well-being framework.
- In 2016, CFSI, along with the Center for Financial Inclusion (CFI) at ACCION and Dalberg's Design Impact Group, expanded on their financial health framework by exploring how it could apply in a more global context.
- In 2017, Innovations for Poverty Action is in the process of exploring how to convert the CFSI/CFI global financial health framework into a set of metrics that DFS providers and policy-makers can use to measure an individual's or a population's financial health.

The previous section of this report focused on building on the further uptake and usage of financial services. This section goes one step further by focusing on financial health as it helps us to define what the real value of financial services is.

## New models and initiatives

This section outlines different approaches organizations have taken in exploring how to quantify financial inclusion outcomes. This is still very much in the exploratory stage and it is expected that these examples will spark as many questions as they answer. More innovation will be required before standard methodologies can be galvanized. The models below are important first steps in advancing the conversation, and they provide the financial inclusion community with an opportune moment to take a step back and assess whether and how we are delivering on the promise of financial inclusion – and, perhaps more germane to this paper, whether the right information is available to answer that question in the first place. Additionally, this is not

an exhaustive list and the authors recognize that there is not a unique theoretical framework to measure financial health or consumer welfare.

## Case in point: Insights2Impact (i2i)

### *A needs-based approach to financial inclusion measurement*

The i2i approach to measuring financial inclusion is based on the view that consumers take up financial services because of their underlying needs rather than the products themselves.



Needs therefore become a rationale for use. Consumers will use a financial service – or a mix of services – if it can help them to do what they need to do – for

example, meeting their children's educational needs. Four universal financial needs are identified in the i2i measurement framework context:

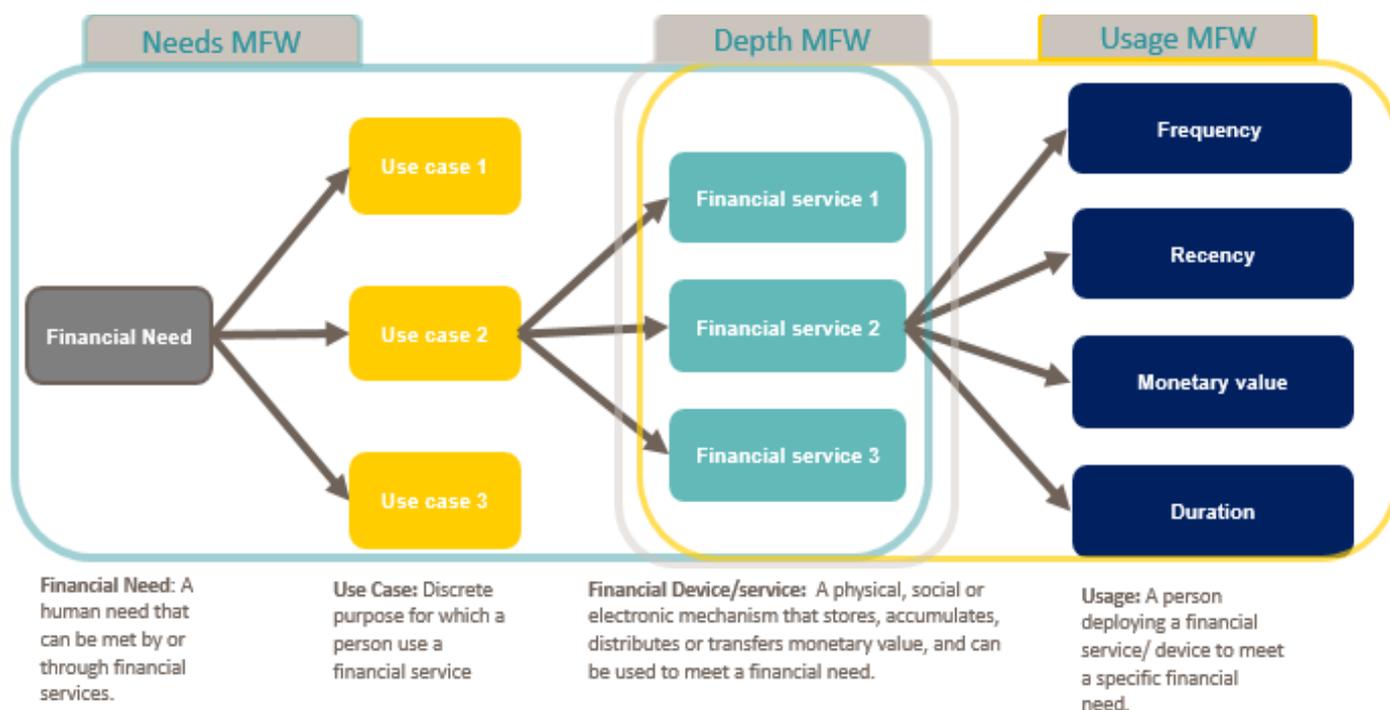
- The need to transfer value
- The need to maintain liquidity
- The need to stay resilient in the face of financial shocks
- The need to meet goals, whether they are consumptive, life cycle or productive.

Needs can be met only by using financial services. Each of the financial needs can be viewed as representing a market, as opposed to a market defined by product categories. Thus, the emphasis is on measuring usage towards each need and the relative contribution of different types of financial services by both formal and informal service providers in this “need market”, rather than simply measuring usage according to traditional product categories. Part of the measurement objectives is to gain an understanding of what drives usage, as well as to evaluate the *outcomes* of “usage-towards-needs”.

Use-cases are the specific purposes for which financial services are employed. Each financial need consists of a set of use-cases. For instance sending money to a relative in another part of the country would be one transfer of value use-case. The needs framework provides the basis for analysing the portfolio of formal and informal financial mechanisms used towards the specific use-cases.

To measure the use of financial products or services, i2i has developed a measurement framework to understand the scale and nature of the use of financial services. Usage is measured using four metrics: (1) *recency*, (2) *frequency*, (3) *duration*, (4) *monetary value*.

Figure 4: Needs-based measurement framework provided by i2i



Source: Insights2Impact

Figure 4 illustrates how the i2i approach measures needs and usage. The outcomes of using financial services will therefore be the extent to which the mix of different financial services helps them meet their needs. The needs-based approach enables:

- An assessment of consumers’ needs through the use-cases exhibited
- An assessment of the nature, extent and mix of financial services usage to deal with those use-cases
- An evaluation of the extent to which financial needs are met.

## Case in point: CFSI

*From financial inclusion to financial health: CFSI’s framework for measuring impact in the US*



In 2014, the Center for Financial Services Innovation (CFSI) introduced the framework of financial health, pushing the conversation beyond financial knowledge and behaviour towards improved and long-term consumer outcomes. Use of the financial health framework has enabled CFSI to build tangible measures of consumer financial success, outline specific behaviours associated with those outcomes and create pathways for the financial services industry to help encourage consumer financial health. In 2014, CFSI fielded a national representative consumer study to benchmark Americans’ financial health, finding that 57% of Americans were not financially healthy.<sup>7</sup> The CFSI team also discovered what they knew intuitively to be true: that this was not just a problem of access to bank accounts. The Federal Deposit

Insurance Corporation (FDIC) showed the unbanked and underbanked in the United States to number 68 million people. Nonetheless, the number of financially unhealthy Americans, at 138 million, demonstrates that this problem will not be solved by access alone.<sup>8</sup>

To make a high-level aspirational concept such as financial health more actionable for financial services providers, CFSI expanded the financial health measurement framework<sup>9</sup> so that providers could “measure what matters”. The framework consists of four components that correspond to the primary financial activities of a person’s life: spending, savings, borrowings and planning. Within each component are two indicators that can be measured using survey or customer-level account data (Figure 5).

CFSI is now working to build the business case around financial health to provide fodder for financial health champions to make the case internally at their companies.<sup>10</sup> This work has also uncovered specific challenges in measuring financial health outcomes. It is difficult for a provider to collect reliable account data in a way that yields tangible insights. A single provider may struggle to gather comprehensive data across the eight indicators. Yet survey data has its limitations, too. Some customers may not answer survey questions truthfully, and it can be challenging to field surveys on an ongoing basis due to low response rates and survey fatigue. There are also challenges with proving causation when looking at how providers’ actions affect the financial health of their customers.

**Figure 5:** CFSI financial health measurement framework



Source: CFI

## Case in point: Center for Financial Inclusion at ACCION

*Adapting financial health as a global framework*



The Center for Financial Inclusion at ACCION is adapting the insights on financial health that CFSI developed in the United

States so that they can be used in developing countries (Figure 6). Together with CFSI and Dalberg, CFI studied financial health in Kenya and India to find out whether and how the concept could be adapted in contexts where incomes were much lower and financial lives less formal than in the US. Kenyans and Indians responded immediately to the idea of financial health and spoke about it in terms of their own aims. CFSI's original definition of financial health around the three elements of daily money management, resilience and risk mitigation, and building for the future, held up well as globally applicable.

But the very different conditions in Kenya and India require different approaches to measurement and distinct expectations about what financial health looks like. In settings of high exclusion and informality, sources of data that are relatively available in the US, such as credit scores or pay stubs, do not exist. The lack of direct data about individuals will make it challenging for financial institutions to measure financial health, because special qualitative and quantitative surveys will be needed.

CFI is branching out in a somewhat different direction, one seen as a win-win for financial service providers and consumers: financial health diagnostics as a customer-facing tool. CFI will be creating an app to diagnose financial health, possibly using a traffic light approach to make it easy for consumers to visualize where they stand. Over the next three years, CFI will work on this app with the Microfinance Centre in Poland and its member financial institutions across Eastern Europe and Central Asia.

One key question is whether people of limited means have sufficient ability, given the realities they face, to improve their financial health. To that end, CFI is working on action modules to accompany the diagnostics. Customers would complete them once they identify their level of financial health. CFI envisions financial service providers using the financial health traffic light app and the follow-on action modules to engage with their customers in a joint effort to help them become more financially healthy.

**Figure 6:** CFI-CFSI financial health measurement framework applied globally



Source: CFI

Finally, Innovations for Poverty Action (IPA) will build upon the conceptual framework for financial health developed by CFSI/CFI by designing, testing and deploying a set of quantitative metrics, which can be used to collect standardized data on the Global Financial Health Indicators (GFHI) in the field. IPA is currently in the process of developing a methodology to evaluate and test questions and indicators that measure household-level financial and economic outcomes and map them to the GFHI.

## Early lessons from these emerging models

As these new measurement frameworks point out, new data and improved computation techniques provide the opportunity to go much deeper into the financial lives of the underserved and underbanked. Beyond finding out whether they have an account and how often they use it, we can now begin to look for other critical insights such as income/expense smoothing, savings behaviours/patterns, time spent managing/moving money, new opportunities to evaluate credit risk, satisfaction, etc. None of these is a silver bullet metric, but together they help build a fuller picture. Some key takeaways derived from our working group discussions are described below. These points aim to help ignite further conversation around the subject and generate awareness of the challenge ahead.

### 1. Encourage and establish new business models that support advancement in customer centricity

A customer-centric approach to the deployment of financial services can include “nudges” to improve customer behaviour and increase savings – two key components of financial health. Customer centricity is about getting close to the end consumer, keeping the focus on them to truly understand their attitudes, behaviours, aspirations and challenges. Only then can providers and regulators genuinely grasp the degree to which consumers are satisfied by financial products and services and identify opportunities to supplement these with new tools, resources and features that the consumers would value. In future, industry and regulators need to adopt a customer-centric mindset to genuinely advance financial inclusion.



In Focus

*“PayPal has a stated mission to democratize financial services, and empower people and businesses to join and thrive in the global economy.”*

**– Dan Schulman, President & CEO, PayPal**

Over the past few years, PayPal has embarked on a transformation process to put people at the centre of its product and business innovation efforts, and to understand more deeply the financial attitudes, behaviours and aspirations of current and potential PayPal customers:

#### Customer discovery

- PayPal is orienting its business around the commitment to learn from and listen to customers through all stages of product development. To that end, PayPal conducted immersion trips to neighbourhoods in 11 cities, across 7 countries, in 2017 alone. The teams visited people in their homes and the small businesses that serve them, conducting intensive interviews and distilling insights into several new “How Might We” statements – all of which serve as starting points for additional PayPal solutions that address the needs of financially underserved populations around the world.
- The PayPal teams listened to a diverse cross-section of participants, including men and women, across a range of ages, users and non-users of alternative financial services, and people representing various income levels in their countries. These site visits and the people-centered approach to design have enabled a broad range of cross-functional PayPal leaders to personally connect with the experiences of the financially underserved, and to translate what they heard into the solutions they are building.

#### Immersion workshops

- PayPal has also designed a self-guided solution for teams of employees to experience the realities of the financially underserved in the communities in which they live and work. So far, hundreds of employees across five countries have participated in these “Financial Exclusion Immersion Workshops”. To begin, they are assigned a certain persona and are sent out to complete a list of tasks, which includes cashing a cheque without a bank account, securing a payday loan or sending a remittance using funds left on a prepaid card or cash.
- Workshop participants are not allowed to use their own cash, cards or anything else in their wallets, so they can step into the shoes of the financially underserved. They are then asked to record and make notes on product options, requirements, fees and, most importantly, their feelings. This first-hand experience enables teams to connect to PayPal’s purpose and imagine new ways in which they can advance the financial health of their customers.

## 2. Identify and call out 'financial health' as a key product design consideration

As we collectively work to broaden the definition of success beyond access and usage to a broader framework of financial health and economic well-being, raising up and calling out these more expansive goals and views of success will be critical to designing the future we hope to realize. And doing so earlier on in any development cycle will create more room for collaboration, innovation and partnership towards this end. If we approach each new product, programme or policy as an opportunity to ask, "How might we measure how this intervention furthers our goal of improving the financial health/well-being of the people we're trying to serve?", for example, not only will we identify new approaches to measuring this kind of impact, we will also incorporate into the product design and delivery of the intervention itself the commitment to deliver it.



Unilever



In Focus

*"Financial inclusion, delivered effectively can massively increase value in our value chain and provide us with the opportunity to create economic opportunities for our farmers and retailers."*

### — Paul Polman, Chief Executive Officer, Unilever

Within its Sustainable Living Plan,<sup>11</sup> Unilever is working on positively changing the lives of 5.5 million people by 2020, including providing opportunities such as access to digital finance to increase the income of farmers, retailers and workers across the value chain. Through its suppliers, Unilever sources from more than 1.5 million smallholder farmers, and works with a similar number of small-scale retailers to sell their products. This is exactly the type of transformative change needed to meet the Sustainable Development Goals, and is why Unilever is positively engaging in partnerships and initiatives that enable financial inclusion.

According to the World Bank, there are somewhere between 365 million and 445 million micro, small and medium enterprises in the developing world, representing the economic backbone of many local communities. Some of the biggest barriers for further growth for these businesses include limited market information, poor access to money and a lack of financial management skills.

At the World Economic Forum's Annual Meeting in January 2017, Unilever and Mastercard committed to collaborate on a range of joint initiatives, aimed in particular at empowering small and microbusinesses in emerging markets. The partnership is now working to match Unilever's network of distributors in developing countries, with digital payment and acceptance solutions from Mastercard together with a finance and marketing learning package, thus exploiting technology to drive sustainable growth at greater scale.

Strategic and multisector partnerships such as this are critical in helping us improve our business and positively affect the lives of 5.5 million people by 2020. By working together, we can have a much greater impact in emerging markets, empowering small-scale enterprises and bringing about the transformative change necessary to meet the aims of the Sustainable Development Goals and our own and our partners' businesses.

### 3. Rethink overall financial inclusion in terms of the impact on people's livelihoods

Today, it is no longer enough to ask whether people have access to a particular financial product or whether they are using it to a certain degree. It is necessary to look beyond the horizon to see whether people's financial and real lives are being improved through these various digital financial tools. If 2 billion people are currently excluded from the formal financial sector, there might be many more millions who are not fully benefiting from the promise of being included in the formal financial sector. There is the opportunity to seize this moment and reframe efforts, from seeking to understand the degree to which people are using a certain financial tool, to taking a hard look at understanding how people's financial lives have been changed by using certain financial tools. The implications of this reframing are quite profound and should inspire reflection as well as action within the financial inclusion community, including non-traditional players who are critical of a multistakeholder community of practice.



*“At the Gates Foundation, we believe there is a growing body of evidence that products and policies that expand financial inclusion are having a positive impact on the lives of the poor.”*

— **Rodger Voorhies, Executive Director, Global Development, Bill & Melinda Gates Foundation**

Studies show that broader access to – and use of – financial products can boost business and job creation, increase investment in education and help people survive job loss, medical emergencies and other shocks. “Access” and “use” measures are relevant, but still limited in showcasing demand-side insights. These specific insights in turn can help providers and policy-makers optimize outcomes.

This paper explores what we must do to generate meaningful and actionable data. It urges a shift from supply-side data collected by providers to demand-side data that focuses on understanding user needs, preferences, experiences and how their lives have been affected by these products. This next stage calls for the development of more nuanced consumer profiles that go beyond the total number of users in a specific area to identify customers by gender, the size and maturity of their accounts, the types of services they use, the frequency with which they use them and the state of their financial security. And it calls for the standardization of data collection across platforms to enable better analysis and generate greater insight.

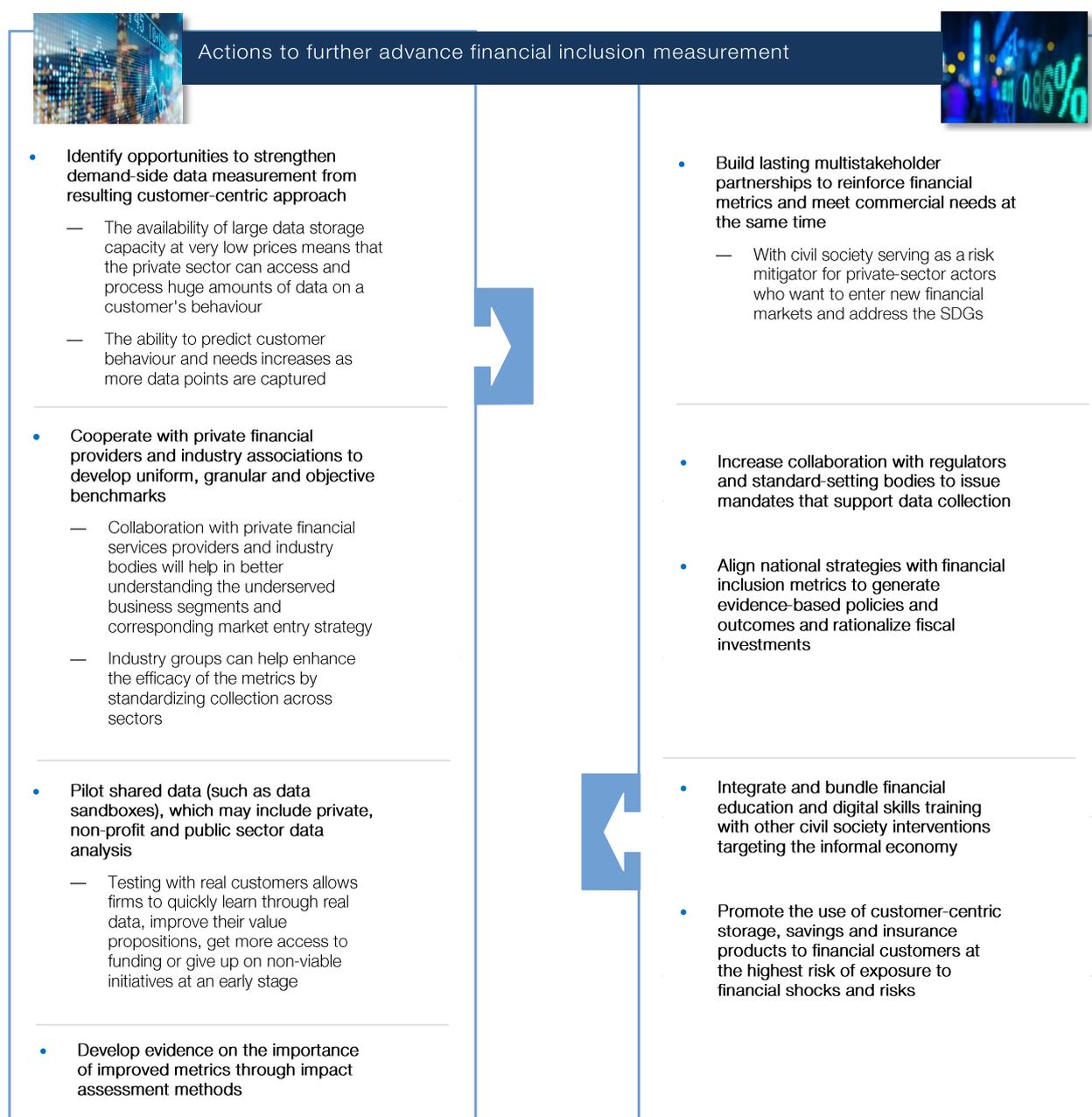
By moving beyond current metrics, we can get closer to delivering on the promise of financial inclusion as a key driver of personal welfare and broader economic improvement.

# Moving forward: Actions for consideration

The measurement frameworks presented in this report show advanced ways to measure financial inclusion. However, as noted earlier, it is important to remember that at the end of the day, measurement of financial inclusion itself is not the objective. It is instead a tool to ultimately understand customer needs, identify business opportunities and encourage economic empowerment.

Collective practitioner cooperation and action around the aforementioned frameworks (summarized in Figure 7) will help position financial inclusion as a true promoter of economic growth and social cohesion. Developing pertinent granularity around access and usage metrics and tracking financial health outcomes must become a consistent and ongoing practice. This powerful integration is what will shift the focus of financial inclusion towards the well-being of the consumer, bringing with it clear benefits for the individual, society, businesses and governments alike.

Figure 7: Actions for consideration



# Endnotes

- <sup>1</sup> Sahay, R., Cihak, M., N'Diaye, P., Barajas, A., Mitra, S., Kyobe, A., Mooi, Y., Yousefi, S.R., *Financial Inclusion: Can it Meet Multiple Macroeconomic Goals?*, IMF, 2015.
- <sup>2</sup> Cámara, N., Tuesta, D., *Measuring Financial Inclusion: A Multidimensional Index*, BBVA Research, 2017.
- <sup>3</sup> The concept of financial health assesses how well one's daily financial systems help build resilience from shocks and create opportunities to pursue one's aspirations. This concept was coined by the Center for Financial Services Innovation in its report *Beyond Financial Inclusion: Financial Health as a Global Framework* in 2017.
- <sup>4</sup> For the development of the measurement framework, this White Paper considered the most recent version (as of November 2017) of the World Bank's Findex, IMF Financial Access Survey, the World's Bank Global Payments Systems Survey, S&P's Global FinLit Survey, GSMA Mobile Money Programme and the MIX Market Database.
- <sup>5</sup> Mastercard, *Building Electronic Payment Acceptance at the Base of the Pyramid to Advance Financial Inclusion*, 2017.
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- <sup>8</sup> FDIC, *FDIC National Survey of Unbanked and Underbanked Households*, 2015.
- <sup>9</sup> Center for Financial Services Innovation, *Eight Ways to Measure Financial Health*, 2016.
- <sup>10</sup> MetLife Foundation is a major sponsor of CFSI's ongoing consumer financial health work.
- <sup>11</sup> The Unilever Sustainable Living Plan (USLP) is Unilever's blueprint for achieving its vision to grow its business, while decoupling its environmental footprint from its growth and increasing its positive social impact. The plan sets stretching targets, including how to source raw materials and how consumers use Unilever's brands.

# Acronyms

ATM	Automated teller machine
B2B	Business-to-business
B2P	Business-to-person
C2B	Consumer-to-business
CICO	Cash-in, cash-out
DFS	Digital financial services
G2B	Government-to-business
G2G	Government-to-government
G2P	Government-to-person
e-KYC	Electronic know-your-customer
MFI	Microfinance institution
mPOS	Mobile point of sale
NFC	Near field communications
P2B	Person-to-business
P2G	Person-to-government
P2M	Person-to-merchant
P2P	Person-to-person
POI	Point-of-interface
POS	Point of sale
PSP	Payment service provider
QR	Quick Response (Code)
SME	Small and medium enterprise
USSD	Unstructured Supplementary Service Data

# Acknowledgements

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