
Acknowledgments

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About insight2impact

Insight2impact | i2i is a resource centre that aims to catalyse the provision and use of data by private and public-sector actors to improve financial inclusion through evidence-based, data-driven policies and client-centric product design.

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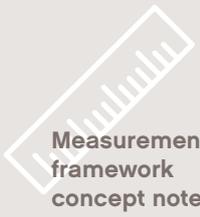
About the i2i measurement framework note series

This note is the second in a series of notes to explore the role of measurement in delivering on financial inclusion objectives and to develop a set of new measurement frameworks to assist stakeholders in achieving these objectives.

The first note, *Introduction to measurement frameworks*, introduces the concept of a measurement framework, its purpose and components. This, the second note, outlines a scan of existing measurement initiatives in the financial inclusion space to position our usage agenda in context.

The third note builds a conceptual model of financial device usage and the triggers and drivers thereof as a theoretical underpin to the work of i2i, on the premise that actual usage, rather than mere uptake, is important for financial inclusion impact.

The remaining notes present three measurement frameworks (MFWs) for policymakers, development organisations and financial service providers to practically measure, and therefore better understand, priority measurement areas for financial inclusion.

	Title	What does it cover
 <p>Umbrella notes</p>	1. Introduction to MFWs	Looks to other fields to explain what a measurement framework is.
	2. Determining our focus	Scan of existing measurement frameworks and indicators in financial inclusion to position our measurement agenda ('gap analysis').
	3. Usage conceptual model	Builds a conceptual model of financial service usage and the triggers and drivers thereof as a theoretical underpin to the work of i2i, on the hypothesis that actual usage, rather than mere uptake, is important for financial inclusion impact.
 <p>Measurement framework concept notes</p>	4. Needs measurement framework	Outlines a measurement framework for how financial service needs are revealed and met through financial service usage.
	5. Financial inclusion depth measurement framework	Outlines a measurement framework for financial inclusion that considers the portfolio of financial devices taken up or used per person (termed 'depth of financial inclusion'), in contrast to a one-dimensional focus on percentage of people reached.
	6. Usage measurement framework	Unpacks the definition of usage, clearly demarcating it from uptake; lays out a set of principles for determining usage indicators and provides examples of how these manifest.

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Executive summary

Financial inclusion has evolved from a grass-roots microfinance movement in the 1980s to a mainstream item on the development agenda. Its increasing prominence is attested, amongst others, by the formation of the G20 Global Partnership for Financial Inclusion, the recognition of financial inclusion in the Sustainable Development Goals and the fact that 80-plus countries have signed the Maya Declaration, thereby committing themselves to financial inclusion targets.

The i2i facility was established to support the measurement of financial inclusion. In so doing, it draws from, and builds on, an evolving history of measurement in financial inclusion. The first step in determining the i2i measurement focus is therefore to take stock of the work of others to date and to document the measurement needs expressed by those tasked with financial inclusion. This note outlines the findings of a global scan of financial inclusion measurement initiatives as well as extensive consultations with stakeholders in financial inclusion.

As the scope of financial inclusion and the corresponding policy focus have evolved, so have the data sources to draw on and the measurement focus. The scan shows that a few measurement frameworks **focus on the enabling environment**, notably whether a financial inclusion policy is in place and the comprehensiveness and quality of inclusion-related regulation. Most financial inclusion surveys and measurement frameworks considered cover access and uptake measures. **Access** measurement frameworks mostly consider financial inclusion density or spread, obtained from central bank data, and/or average distance to financial touchpoints for consumers as gauged from demand-side surveys. Some frameworks also track affordability measures and cost or prices of financial services. **Uptake**, notably the number or percentage of consumers with an account at a formal institution, is the main headline indicator of the state of financial inclusion found in the scan; and it forms the basis for many of the financial inclusion targets set at country level. Where actual **usage** of financial services is tracked, the focus is mostly on frequency of account usage and dormancy. Some **outcome** indicators are also starting to emerge, for example to measure financial health. It remains difficult to make generalised conclusions on the **direct impact** of financial inclusion on the welfare of consumers.

Consultations with key stakeholders in the financial inclusion field express a consistent need for more emphasis on actual usage of financial services, with a focus on three areas: the client **value** delivered by financial inclusion and how to measure the **quality** of financial inclusion, a systematic grasp on the use of and reasons for using **informal** financial services, and the **impact** of financial inclusion. Furthermore, the need was expressed for generally accepted **definitions** of basic financial inclusion concepts, such as uptake and usage, to enable comparison between different measurement frameworks.

With the benefit of hindsight comes the opportunity to evolve the focus and tools for the next wave of measurement in financial inclusion. In line with the i2i's mission, the initial focus will be on unpacking usage of financial services and the drivers thereof. In doing so, specific attention will be paid to the value proposition that financial services hold for poor customers. In particular, what are the needs that poor households have that can or must be met through financial services? Other drivers of usage that can be measured include costs, demographic factors, societal norms, behavioural factors and macroeconomic conditions.

The second key dimension of usage is its character, patterns and intensity. Given the concerns expressed by stakeholders, the focus will be not only on formal product usage, but indeed on all financial products or devices used by the poor to meet their needs.

Finally, people use financial services to achieve certain direct outcomes. Measuring these outcomes require different approaches from measuring the underlying needs or indeed the patterns of usage. These three areas – the measurement of the drivers, character and outcomes of the usage of financial services for the poor – form the core focus

of the i2i measurement agenda as set out in the rest of this measurement notes series.

Over time, by building an understanding of how financial services are used, i2i will also consider how financial services affect people's lives.

In pursuing this agenda, i2i will support and cooperate with other entities that have embarked on a similar measurement journey. It will draw on their insights to learn what is important to measure and what not, and will partner to test data collection methods and indicators.

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1. Introduction



The i2i measurement cause. The i2i programme was conceptualised and designed to catalyse the provision and use of data by private and public sector actors to improve financial inclusion through evidence-based, data-driven policies and client-centric product design.

Building on the work of others. i2i is not alone in this mission. i2i works with policymakers, regulators, financial service providers and development partners to optimise the impact of its work through the use of data. In doing so, i2i draws on, and builds on, a tradition of thinking about what financial inclusion is, why it matters and how best to measure it.

Back to the drawing board. Although the measurement of financial inclusion has come a long way over the past decade, policymakers, financial inclusion development partners and private providers are starting to ask questions that traditional financial inclusion measurement frameworks find difficult to answer. For example, one of the most popular indicators is the percentage of a country's adult population that have accounts with formal financial institutions. This is widely accepted as a standard measure of financial inclusion. Yet, account activity data indicate that many accountholders may not be using these accounts for savings or even transaction purposes, but simply as a post-box to receive a remittance or salary. In fact, the same individual may find more use in an informal savings mechanism, such as belonging to a saving club. Should this informal mechanism be counted as an adequate form of financial inclusion?

Doing our homework. To contribute to the evolving financial inclusion measurement field, it is critical to take stock of the work of others to date and to determine a complementary focus. This was the first task i2i set. We visited a number of institutions in the US, Europe, Africa and Asia who think and care deeply about financial inclusion so as to understand the current measurement focus,

and where they believe the gaps are. We learned about new technologies in the measurement space by talking first-hand to the innovators (see Appendix 1 for the consultation list). In between, we read, consulted and debated widely. Moreover, we explored core priorities, current ways of measuring financial inclusion, new thinking and new measurement frameworks, such as the work being done to measure financial health. We keenly followed policy decisions for digitisation of transactions and the debate about the possible pros and cons of such a move. In addition, we read up on the financial inclusion impact literature and performed a comprehensive scan of existing financial inclusion measurement frameworks, listed in Appendix 2¹.

Where to now? This initial stocktake was instrumental in shaping i2i's thinking and determining the focus in financial inclusion measurement as set out in the rest of the measurement framework notes series.

This note explains the process followed to determine the i2i focus. It summarises the understanding of the evolution of the financial inclusion measurement focus over the years (Section 2), outlines the framework used for plotting the financial inclusion measurement landscape and the main findings from the scan (Section 3), and articulates the key measurement priorities emerging from the stakeholder consultations (Section 4). Section 5 concludes on the i2i focus.

¹ Note that the list in the appendix reflects the financial inclusion measurement landscape as of August 2016 when the scan was conducted. The list is not meant to capture all existing measurement efforts in financial inclusion, but rather serves as a stocktake of the frameworks frequently used in financial inclusion. A comprehensive table containing the indicators of each measurement framework included in the scan is available upon request.

2. The evolution of financial inclusion measurement



This section outlines the evolution of financial inclusion measurement to date, noting the important advances along the way and showing what precipitated the shifts in emphasis over time.

It is not intended as a comprehensive historical account, but rather as a broad-brush narrative to set the scene for the snapshot review of current measurement initiatives to follow in Section 3.

Long-standing tradition of collecting supply-side data. Financial supervision provided an early impetus for measuring, amongst others, the reach of financial services. Financial regulators require licensed financial institutions to report on their account or client numbers, or the reach and availability of financial service touchpoints. But gathering account and client data is not just a compliance mechanism. Financial service providers also track penetration across major customer segments for marketing and strategy purposes. Supply-side data² is readily available and relatively low-cost to gather. Normally, such data is not tailored to show the number of unique customers across financial institutions. Rather, it tracks number of accounts, loans or policies and can be used to analyse summary statistics such as:

- » average number of transactions per account
- » average transaction size
- » average account balance
- » average number or percentage of accounts that are dormant according to various measures
- » percentage of non-performing loans or loans in arrears
- » average loan maturity, or, in the case of insurance, average sum assured, claims ratios or sums assured

The analytical uses of supply-side data are numerous. In fact, this is still where much of the emphasis on measurement of financial services reach is, independent of the drive for financial inclusion.

Starting to track the low-income market.

Consideration of penetration among the poor probably has its origins in the for-profit microfinance drive of the 1990s. Donors and governments alike emphasised the need for 'access to finance' as development tool, focusing on microfinance institutions as upliftment vehicles. Several countries adopted microfinance policies (Robinson, 2001). Initiatives like MIX Market were set up to track MFI key performance data, gross loan portfolios and borrower numbers. Gradually, the emphasis broadened from microcredit to a broader categorisation of microfinance as including payments, savings and insurance. From around the early 2000s, financial inclusion, rather than microfinance, became the accepted term (UN, 2003). As a result, the measurement focus also broadened.

The entry of financial inclusion demand-side surveys. Whilst national statistical bureaux have been conducting household surveys on demographics, labour force trends, income and expenditure for many years, such surveys generally did not include questions about financial services uptake and usage (Gasparini et al., 2005). With the rise of the policy emphasis on financial inclusion, however, came the need to learn about what types of financial services people use and what the barriers to access are. Supply-side data was no longer sufficient; the need arose for demand-side surveys on financial inclusion.

² Supply-side data is defined here as data collected by financial service providers, based on their client base and infrastructure.

The M4P approach leverages the market mechanism for impact. To understand the full picture, a more comprehensive assessment of the state of financial inclusion was called for, measured across the total adult population rather than just the existing client base of financial service providers.

This need was linked to the emergence of the 'making markets work for the poor' approach to development (M4P)³. The M4P approach led to the setting up of a chain of Financial Sector Deepening-orientated trusts in Africa and Asia, all employing this methodology. The M4P approach leverages the market mechanism for impact. To understand the full picture, a more comprehensive assessment of the state of financial inclusion was called for, measured across the total adult population rather than just the existing client base of financial service providers.

The first demand-side survey to measure the state of financial inclusion of the poor on a nationally representative basis was the FinScope survey. It was piloted in South Africa in 2002 by FinMark Trust and then rolled out in a growing number of countries in sub-Saharan Africa and Asia, with the Financial Sector Deepening trusts as exponents⁴. Other demand-side survey initiatives include Intermedia's Financial Inclusion Insights surveys. Importantly, demand-side survey instruments paved the way for tracking informal financial service usage as well, giving the first glimpse into the important role of the informal sector and community structures in serving financial needs.

Spotlight on remittances. At roughly the same time, development organisations started to emphasise cross-border remittances as a hitherto untracked form of channelling resources from developed to developing countries (as opposed to FDI and development aid) (ADB, 2006). Remittance flows per corridor were one of the earliest forms of financial inclusion to be measured on a quantum or usage basis. Much emphasis was also placed on measuring the cost of sending remittances: across different channels within a particular corridor, as well as between corridors.

³ The M4P approach aims to change the way markets work to realise improved outcomes of lower-income individuals. It was developed as a framework to support pro-poor economic growth based on well-known problems of state and market failure.

http://www.opml.co.uk/sites/default/files/%28Final_Markets_Framework_Paper_main_text__amended_16.11.04_0.pdf

⁴ As of the publication of this note, FinScope has been rolled out in 25 different countries: Botswana, Cambodia, Democratic Republic of the Congo, Ghana, India, Kenya, Lao, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Myanmar, Namibia, Nepal, Nigeria, Pakistan, Rwanda, South Africa, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

A profit motive. The measurement of financial inclusion was not purely donor-driven. Financial service providers gradually gained an interest in measuring financial services usage among the low-income market segment. This came on the back of the recognition that there is a potential “fortune at the bottom of the pyramid”, as per the seminal book published by CK Prahalad in 2004. This aligned with the M4P emphasis on the role of the market mechanism in combatting poverty and resonated with the rise of the impact investing movement, whereby shareholders strive not only for profit, but also for social or environmental gains (the so-called double or triple bottom line)⁵. With the focus on impact investment came a need for indicators as comparable measure of success in impact investment in the microfinance space (Social Impact Investment Taskforce, 2014).

Meeting targets. The increased interest in financial inclusion – from governments, financial service providers, bilateral donors, multilateral organisations and private foundations alike – meant more investment in financial inclusion initiatives. And with more investment comes the need to track progress and measure outcomes. Frameworks were developed to help contributors track the impact of their inputs⁶. The development of internationally comparative data-sets to measure high-level indicators of financial inclusion, most notably the World Bank’s global Findex survey⁷, has been an important source for such monitoring and evaluation frameworks.

The need for cross-country measurement was also fuelled by the global policy move to set targets for financial inclusion. The World Bank Group spearheads the ‘Universal Financial Access by 2020’ accord (UFA2020), whereby 30 partners have pledged commitment towards achieving universal financial access in 25 focus countries, together representing 73% of the world’s excluded population. The goal is to provide, by 2020, all excluded adults with access to a transaction account to store money, and to send and receive payments. This goal emphasises the role of a bank account as the basic building block for people to manage their financial lives⁸. The Alliance of Financial Inclusion, formed in 2008, plays an influential role in mobilising official policy commitment to financial inclusion. To date, more than 80 countries have signed the Maya Declaration, committing themselves to various quantitative and qualitative financial inclusion-related targets. The global policy commitment has made financial inclusion a mainstream national policy priority. This created an even bigger imperative for measuring progress in financial inclusion.

⁵ Impact investments are investments made into companies, organisations and funds, with the intention to generate social and environmental impact alongside a financial return. Source: <https://iris.thegiin.org/about-iris/>

⁶ Such as the Impact-Oriented Measurement for Financial Sector Deepening trusts, see: https://www.fsdafrica.org/wp-content/uploads/2016/01/16-01-07-MRM-for-M4P-Impact-Orientated-Measurement.sv_.pdf

⁷ Implemented by Gallup World Poll and covering 142 countries.

⁸ <http://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-access-by-2020>

Stamp of approval. Another important development has been at the level of the global standard-setters. The International Association of Insurance Supervisors (IAIS) has been a proponent of proportionality in insurance regulation and supervision since the publication of its microinsurance issues paper in 2007⁹. In 2011, the Financial Action Task Force published a guidance paper¹⁰ that acknowledges the complementarity between financial inclusion and financial integrity, which was updated in 2013. In 2011, the G20 formed the Global Partnership for Financial Inclusion (GPFI). The GPFI adopted the SSB topic¹¹ as a focus area, with AFI, CGAP, the IFC and the World Bank as implementing agents. The GPFI SSB agenda, as documented in the 2013 White Paper¹² on global SSBs and financial inclusion (updated in 2016), is centred on integrating financial inclusion as a global policy issue with the existing priorities of the SSBs.

The Sustainable Development Goals (SDGs) also acknowledge the place of financial inclusion in the development discourse. Although financial inclusion is not explicitly listed as a Development Goal, it functions as one of the cross-cutting themes. The proposed list of SDG indicators¹³ contains four indicators related to financial inclusion, across three different Development Goals.

Yet another important impetus for financial inclusion measurement has been the inclusion of a financial inclusion component in the Financial Sector Assessment Programme (FSAP), jointly implemented by the World Bank and the IMF, to evaluate issues regarding financial stability and financial sector development within a country. The influential nature of the FSAP provides a strong rationale for measuring financial inclusion progress.

Keeping a diary. The internationally comparative demand-side survey approach entails going broad, with less detail at the individual level. It has been complemented by a parallel stream in the financial inclusion field to dig deeper into the lives and circumstances of respondents, through qualitative demand-side research¹⁴. The research of Stuart Rutherford¹⁵ was influential in shaping the financial diaries research methodology¹⁶, whereby interviewers keep detailed track of all of a household's financial transactions, across all devices, formal and informal, for a year. The book, *Portfolios of the Poor*, published in 2009, synthesised findings from the first financial diaries studies and showed the resourcefulness of low-income individuals in using a portfolio of formal and informal financial devices to meet their financial needs.

⁹ <https://www.iaisweb.org/file/34275/issues-paper-in-regulation-and-supervision-of-microinsurance-june-2007>

¹⁰ <http://www.fatf-gafi.org/publications/financialinclusion/documents/reviseguidanceonamlcftandfinancialinclusion.html>

¹¹ <https://www.gpfi.org/subgroup-regulation-and-standard-setting-bodies/>

¹² <https://www.gpfi.org/publications/global-standard-setting-bodies-and-financial-inclusion-evolving-landscape>

¹³ <https://sustainabledevelopment.un.org/content/documents/11803Official-List-of-Proposed-SDG-Indicators.pdf>

¹⁴ The Making Access Possible (MAP) program, funded by the UNCDF, is an example of such a research initiative. It adds a qualitative demand-side research component to the financial inclusion diagnostic methodology to provide depth and nuance to the understanding of the retail financial sector across. Qualitative demand-side research has been rolled out in more than 10 MAP countries to date. <http://www.cenfri.org/map>

¹⁵ See Rutherford's *The Poor and Their Money: An essay about financial services for poor people* published in 1999.

Available at: <http://www.jointokyo.org/mfdl/readings/PoorMoney.pdf>

¹⁶ <http://bfaglobal.com/financial-diaries/>

A new direction. The trends as outlined above have built a strong momentum for financial inclusion. At the same time, these trends have prompted a critical assessment of the value delivered by financial inclusion. In 2008, shock waves rippled through the world on the back of the sub-prime mortgage crisis in the USA. In Andhra Pradesh, India, reports of over-indebtedness in 2010¹⁷ questioned the core of the microfinance movement. Most recently, high levels of dormancy of entry-level accounts have put the spotlight on the value proposition to clients of financial inclusion. In South Africa, reports of unscrupulous business practices around G2P accounts for social transfers raised headlines, going so far as to equate financial inclusion to ‘financial expropriation’¹⁸. Globally, regulatory authorities are tightening prudential and market conduct controls, and the responsible finance movement¹⁹ has gained prominence.

In financial inclusion measurement, these developments have led to introspection. Through the years, the measurement of financial inclusion evolved with the data available at the time. Over time, the discourse broadened to also look critically at the quality and impact of financial inclusion. Development organisations and governments increasingly acknowledge that only measuring headline indicators of financial inclusion, such as access and take-up, is no longer sufficient. To know when and how financial inclusion is working or not working, for whom, it is necessary to look at the full picture, including actual usage, the quality or value delivered by financial inclusion, and the outcomes we want to see. We, along with other organisations, have set out to refine our measurement toolkit to do so.

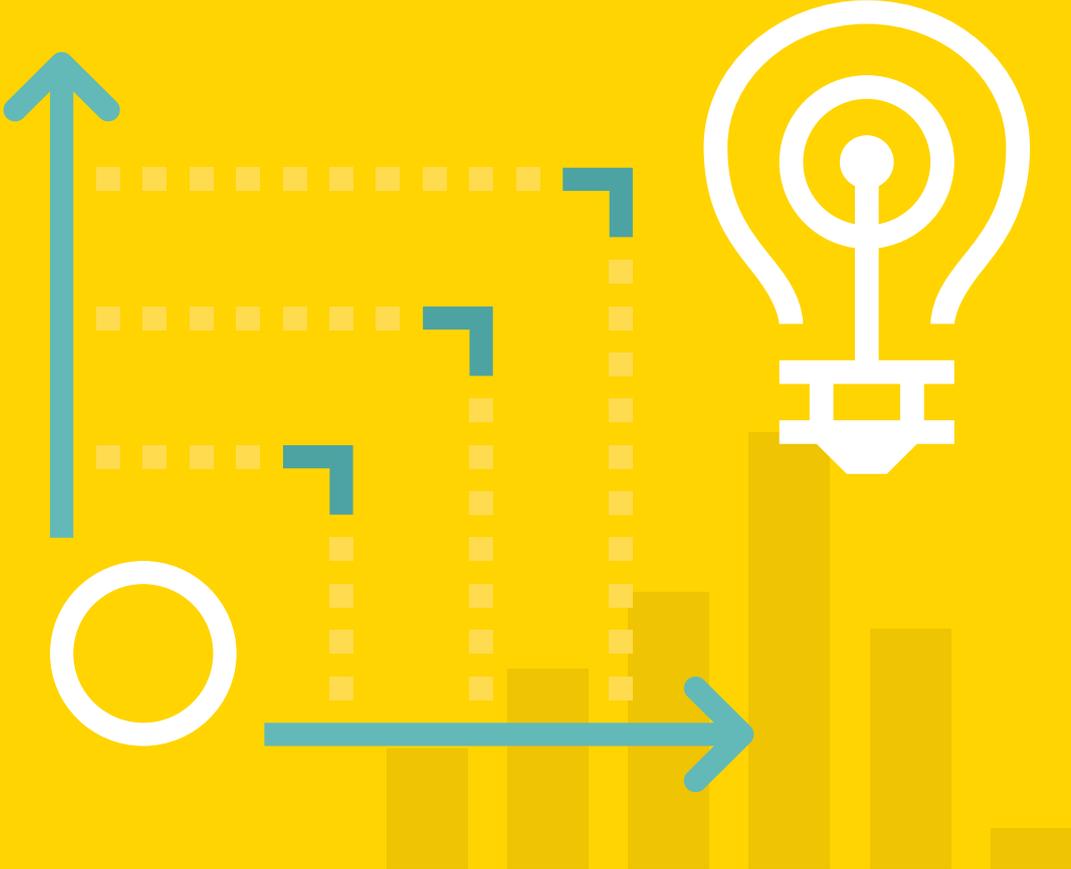
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¹⁷ <http://www.bbc.com/news/world-south-asia-11997571/>

¹⁸ <https://www.businesslive.co.za/bd/opinion/2017-03-23-when-does-financial-inclusion-become-financial-expropriation/>

¹⁹ <http://responsiblefinanceforum.org/publications/responsible-finance-putting-principles-work-3/>

3. The current measurement landscape



The evolution of the financial inclusion measurement space has produced a spectrum of measurement frameworks and indicators.

This section provides an overview of the measurement focus of some of the more influential measurement frameworks in the field. See in Appendix 1 for more detail on the scan of measurement frameworks undertaken as basis for this note.

Financial inclusion categorisation framework.

Figure 1 depicts the components of financial inclusion that we use to categorise the measurement frameworks identified in the scan. This chart is the organising principle for positioning the current focus of the various measurement initiatives that we considered:

The **enabling environment** can be defined as the policy and regulatory framework for financial services, as well as the physical, macroeconomic, socioeconomic and political economy context within which the financial sector operates, which together determine the business conditions for providers and the usage milieu for consumers.

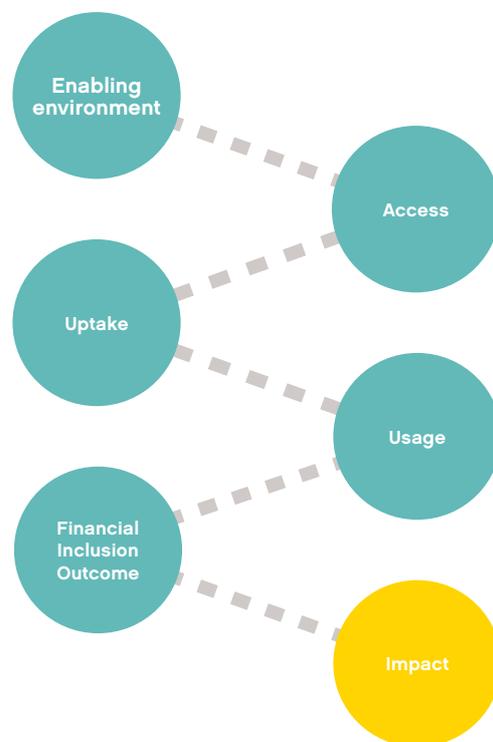
Access is defined as appropriate products available to consumers to use. Access barriers are the factors that preclude certain people from using financial services. Access barriers could derive from:

- » the absence of a business case to provide certain products to certain segments,
- » infrastructure and other distribution constraints faced by providers,
- » skills and data constraints in the industry, leading to inappropriately designed products,

- » regulatory constraints or compliance costs that undermine the business case for serving certain segments or providing certain types of products,
- » how nearby financial service providers are to consumers (the physical infrastructure that allows for the provision of financial services, such as the coverage of mobile networks), and/or
- » whether consumers have the necessary documentation to acquire a financial device.

The measurement of financial capability²⁰ is also considered in this category, as it speaks to the ability of consumers to interact efficiently with financial service providers.

Figure 1.
Financial inclusion categorisation framework
Source: Authors' own



²⁰ Consumer financial capability is technically a usage barrier and not an access barrier, because it relates to the ability of the consumer to take up and use financial services rather than access it. However, we included it under access for the purposes of categorising of measurement indicators.

Recap: What is a measurement framework?

A measurement framework combines theory and data to describe a condition necessary to achieve an objective. It consists of an indicator or set of indicators populated by data. The theory explains why the condition is important for the objective and why the indicators are valid proxies for the condition and any changes therein.

Uptake is defined as the act of meeting the requirements and/or completing the procedures that confer on a customer the right to use a financial device²¹. Once consumers have taken up a financial device, they can use it to meet their financial needs, but that does not necessarily mean that they have used it²². Uptake measures consider the number or percentage of adults (or a defined sub-set of consumers) that are reached by financial services or financially included. Such measures can be expressed across target market segments, financial devices or providers. For example, the percentage of rural inhabitants who save with a Rotating Savings and Loan Association (ROSCA), or the number of small business owners who have a bank account.

Usage refers to the deployment of a financial device to meet a financial need. For usage to take place, an action is needed that involves monetary value. Relevant usage indicators include recency, frequency and duration of financial device deployment.

Financial inclusion outcomes refer to the positive or negative value derived by consumers from using financial services. Measuring whether a financial service meets the underlying financial need is hence an outcome measure. Financial inclusion outcomes are directly attributable to usage, placing them one step removed from impact measures. Ultimately, the purpose of financial inclusion is to contribute to impact as articulated in a country's socioeconomic and macroeconomic public policy objectives. Such impact measures would consider how financial inclusion (and the outcomes thereof) would impact on welfare, social protection, growth or other public policy objectives²³.

²¹ We define a financial device as any physical, social or electronic mechanism that stores, accumulates, distributes or transfers value, and can be used to meet a financial need. See the note *Financial services usage: a conceptual model*.

²² For instance, an individual may have a bank account registered in their name, but does not use it. In this case, that individual has taken-up the bank account, but has not used it.

²³ The Alliance for Financial Inclusion (2010) identifies four possible lenses through which to measure financial inclusion: Access, Quality, Usage and Welfare. Our definition of impact as used in this note is in line with how AFI defines Welfare, namely the effect on the livelihoods of customers.

The Helicopter view

The bullets below provide a summary of the extent to which the different financial inclusion components are covered by current measurement initiatives as listed in Appendix 2:

- » **Enabling environment measurement frameworks focus on regulation.** A few MFWs pay particular attention to factors pertaining to the enabling environment, such as the quality of financial-inclusion-related regulation in a country, ranging from whether agent-banking is allowed to the quality of the risk management framework for microcredit portfolios. Another important aspect of the enabling environment is the government's commitment to financial inclusion. At least two measurement frameworks have indicators on whether a country has a financial inclusion policy. They also consider whether the country has specific financial inclusion data initiatives in place.
- » **Most measurement frameworks contain indicators on access and uptake.** Access and uptake have been amongst the most pertinent financial inclusion questions for policymakers and are the two dimensions that feature most prominently in country-level financial inclusion reports. Consequently, most financial inclusion surveys and measurement frameworks focus on these two dimensions.
- » **Access indicators are mostly obtained from supply-side data.** Financial sector supervisors represent the main source of financial access data. Most global financial inclusion measurement frameworks that contain access indicators use data obtained from supervisors. Supervisors in turn collect the access data from the financial industry. This data typically includes information on the number of financial touchpoints per geographic region, or per number of adults. Information, such as average distance to a financial touchpoint for consumers, is obtained from demand-side surveys.
- » **Proximity is the main measure of access, followed by affordability.** Across all the measurement frameworks that consider access, proximity to financial services touchpoints is the aspect most covered. Even though eligibility is an important access consideration (FATF, 2013), few measurement frameworks include indicators on it. Indicators on affordability are more widely used, such as the average monthly cost of an account at a financial service provider or the cost of sending cross-border remittances. Another important element related to access to financial services is the financial capability of consumers²⁴.

²⁴ For example, the OECD has done extensive work on this subject and has developed a comprehensive survey to measure financial literacy <http://www.oecd.org/finance/financial-education/measuringfinancialliteracy.htm>

- » **Limited indicators are available on the quality of financial infrastructure and human capital.** Almost no indicators are available on the quality, in terms of up-time and reliability, of digital financial infrastructure as a measure of access. There does, however, exist some indicators on the interoperability of networks. Similarly, there are few indicators on the levels of human capital in the financial sector, apart from general education statistics. None of the measurement frameworks included in the scan considered the level of human capital of supervisory bodies or financial service providers.
- » **Uptake is the main indicator of the state of financial inclusion.** Large representative demand-side data collection initiatives focus primarily on the uptake of financial services across the four financial product categories of payments, savings, credit and insurance. Various measurement frameworks use this data to calculate headline indicators for financial inclusion in a particular country or across countries. Indicators such as *the percentage of adults with an account at a formal institution* are often quoted.
- » **Usage indicators focus mostly on frequency of account usage.** Typically, only a few demand-side survey questions pertain to usage. The most frequently considered indicators are the frequency of usage of accounts at formal institutions and the level of activity on mobile money accounts. Most usage-related indicators picked up in the scan are bank-account focused, designed to capture dormancy and the balance held in accounts.
- » **'Financial inclusion outcomes' is a nascent measurement area.** As mentioned, most measurement frameworks in the scan concentrate on the level of financial inclusion, expressed in terms of uptake, and the ability of adults to access financial services. Very few have indicators on the outcome of financial inclusion. Some frameworks consider financial health indicators as outcome measure, while others have started to include indicators on resilience, as measured by the ability to access a lump sum of money in the case of emergencies. For the most part, however, existing financial inclusion measurement frameworks do not yet focus on outcome indicators.
- » **The ultimate impact is difficult to measure at this point.** Evidence on the welfare and growth impact of financial inclusion has been mixed so far. To determine cause and effect statistically, a number of experimental, quasi-experimental and other studies have been designed²⁵. These studies test the statistical impact of a defined element on a defined outcome by comparing users of specific financial products with non-users, or through statistical modelling on large datasets. The results have been mixed, and there are various methodological and contextual considerations that challenge generalised conclusions.

²⁵ See Appendix 3 for a list of one type of study considered, namely randomised control trials.

In summary: current measurement frameworks in financial inclusion, for the most part, measure the reach of and barriers to **formal financial inclusion**. The exceptions to this rule (such as the financial diaries with their in-depth look at usage across formal and informal financial devices) hold much power in explaining formal uptake and usage patterns considering consumers' **full financial lives**, but they are not scalable to the full adult population.

For the largest part, existing frameworks are **designed through a supply-side lens**, looking at uptake by institutional type or traditional product market, rather than from the perspective of customer needs. Market segmentation, where it is done, focuses on demographic and geographic parameters rather than underlying needs. Proxy indicators chosen are often driven by the need for cross-country comparability and, despite the stated intent to gauge usage, for the most part still focus on **uptake**.

For the largest part, existing frameworks are designed through a supply-side lens, looking at uptake by institutional type or traditional product market, rather than from the perspective of customer needs.



4. Identifying stakeholder priorities



In short, there seems to be a disconnect between the data gathered on financial inclusion and the decisions that policymakers are required to make.

The stakeholder consultations spanned a variety of players that are engaged in advancing the measurement of financial inclusion (see Appendix 1 for an overview).

Digital, usage and segmentation are front of mind for regulators.

Policymakers and regulators tended to focus on various dimensions of extending digital financial services, including the extension of digital infrastructure, understanding the drivers of adoption and coming to grips with how different market segments (especially women and agricultural communities) are using digital financial services.

They generally expressed the view that current indicators that focus on uptake or account ownership were limiting and did not provide them with enough insights to convince policymakers about the contribution that financial inclusion can and does make to larger national policy objectives. In short, there seems to be a disconnect between the data gathered on financial inclusion and the decisions that policymakers are required to make. Public stakeholders also expressed a need for more information on the differential usage of financial services by different market segments, as well as differentiated indicators for these market segments and regions within their countries that exhibited varying demographic and economic conditions.

Development partners emphasise value.

Financial inclusion development partners and think tanks involved in financial inclusion are engaged in the full spectrum of financial inclusion domains set out in Figure 1. They were also the most articulate about the specific challenges or gaps in financial inclusion measurement, namely:

- » What should be measured to better reflect the **value proposition** that formal financial services hold for the world's poor? Most discussions witnessed the primary concern that current measurement frameworks are unable to capture the value or quality dimension of financial services for the low-income market. The question was often asked in relation to specific services, such as digitally delivered services or credit, or specific target markets, notably women and smallholder farmers. Specifically, the inability to adequately gauge the extent of customer abuse or predict **negative outcomes** from using financial services (especially credit) was voiced several times.
- » Beyond the direct outcomes of financial inclusion initiatives, what is its **impact** on welfare and growth? There was general acceptance that multiple non-financial influences condition this impact and that it was thus difficult to measure attribution directly and credibly.

- » Concerns were expressed about the limitations of indicators based on the traditional financial **product segmentation** – savings, payments, credit and insurance – to deliver insights that can improve market and client outcomes.
- » There is a lack of generally accepted **definitions** for basic financial inclusion concepts such as uptake and usage, which makes comparison between different measurement frameworks difficult.
- » Supply-side data and demand-side surveys are currently the primary sources of data for financial inclusion measurement. Yet, very little work has been done on comparing supply and demand-side datasets that relate to the same customers to critically evaluate their **comparability** and relative usefulness for policy and provider purposes.

Impact and usage are the top priorities.

Stakeholders were asked to identify their priorities for improving the measurement of financial inclusion. The two top priorities were an improved understanding of the impact of financial inclusion and better measures for the usage of financial services. Both have various dimensions:

- » Impact can be measured at an individual, household or national level, and categorised into a welfare or growth impact.
- » An improved measurement of usage encompasses the drivers of usage, the intensity or patterns of usage, as well as the proximate outcomes of usage, i.e. outcomes that can be directly attributed to the usage of financial services. The drivers of usage include a viable measure of actual cost, as opposed to just the transaction fees, of using a financial service.

Further, specific mention was often made of two core underlying needs that should be met by financial services, namely (i) liquidity management and (ii) the ability to absorb unexpected shocks, i.e. resilience.

Access indicators focusing on digital identity and cash-digital nexus. Several measurement frameworks currently set out to measure various dimensions of access. However, there was a sense that a better understanding of the requisite digital identity to access specific digitally delivered services could change the access landscape. Similarly, the view was expressed that the drive for digitisation is continually running into the challenge of converting digital value into cash and vice versa. Indicators able to predict the cost of, and obstacles to, this process can substantially improve the likelihood of customers converting to digitally delivered services.

Making the most of the data at hand.

Overall, the consultations revealed a sense that much data was being collected but that substantial improvements can be made in the analysis of this data to improve understanding of how financial inclusion evolves and the contribution it makes to our societies.

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5. The i2i focus



The financial inclusion measurement scan and consultations alike emphasise the need for more nuanced measurement of usage of financial services, as well as of the impact of such usage.

i2i was established as a resource centre to assist the financial inclusion community in making better use of available and new data to improve the value delivered by financial services for low-income households and nations. Thus, its role is to harness existing research, knowledge and data to improve measurement. In doing so, the first i2i priority is to understand usage.

The concept of usage includes multiple dimensions. It starts with the drivers of usage. These are multiple, but specific attention will be paid to the value proposition that financial services hold for low-income customers. In particular, what are the specific needs that low-income households have that can or must be met through financial services? Other drivers that could be measured include the cost of usage, demographic factors, societal norms and macroeconomic conditions.

The second key dimension of usage is its character, patterns and intensity. Given the concerns expressed by stakeholders, it will be essential to consider not only formal product usage, but indeed all financial products or devices used by the poor to meet their needs. If the concerns that many formal products fail to deliver value are correct, the reality may be that informal products often present a stronger value proposition than formal products. Irrespective of the policy orientation towards the continued usage of unregistered or informal products, measuring their usage will be essential to understand the true competitive dynamics of financial markets. In short, formal providers need to know what they are up against if they are to persist in selling financial services to the low-income market. So should governments.

Finally, people use financial services to achieve certain direct outcomes. A remittance service must get the funds to the relative across the border in another country; otherwise it does not serve its purpose. Measuring usage therefore also extends to the direct or proximate outcomes of such usage. Measuring these outcomes require different approaches from measuring the underlying needs or indeed the patterns of usage.

These three areas – the measurement of the drivers, character and outcomes of the usage of financial services for the low-income market – form the core focus of the initial i2i measurement agenda as set out in the rest of this measurement notes series.

Over time, by building an understanding of how financial services are used, i2i will also consider how financial services impact people's lives. The intention is to allow the attributable causal relationship between usage and public policy objectives (such as poverty alleviation or growth) to be tested.

In pursuing this agenda, i2i will support and cooperate with other entities embarked on a similar measurement journey. It will draw on their insights to learn what is important to measure and what not, and it will partner to test data collection methods and indicators to see whether the results are useful for the decision-makers who need them.

Appendix 1: Consultation list

The list below provides an overview of the stakeholders that i2i engaged with to determine its measurement focus.

Governments:

- Agensi Inovasi Malaysia (AIM)
- Bank Indonesia
- Bank of International Settlements (Irving Fisher Committee)
- Bank Negara Malaysia
- Bangko Sentral ng Pilipinas (Central Bank of the Republic of the Philippines)
- Central Bank of Nigeria
- Global Partnership for Financial Inclusion (GPII)
- Ministry of Finance India
- Ministry of Financial South Africa
- Otoritas Jasa Keuangan (Financial Services Authority Indonesia)
- Reserve Bank of India

Private-sector institutions:

- BancABC
- First MicroFinance Bank (Pakistan)
- Juntos
- Khushali Bank
- Leap Frog
- MyCash Online
- Omidyar Network

Donor agencies:

- Agence Française de Développement (AFD)
- Commonwealth Secretariat
- Department for International Development (DfID)
- Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Inter-American Development Bank (IADB)
- United Nations Capital Development Fund (UNCDF)
- United States Agency for International Development (USAID)

International financial inclusion development organisations:

- African Enterprise Challenge Fund (AECF)
- Alliance for Financial Inclusion (AFI)
- Alliance for Green Revolution in Africa (AGRA)
- Better Than Cash Alliance (BTCA)
- Consultative Group to Assist the Poor (CGAP)
- FIRST Initiative
- Financial Sector Deepening Africa (FSDA)
- Financial Sector Deepening Kenya (FSDK)
- Groupe Speciale Mobile Association (GSMA)
- Helix Institute
- International Labour Organisation Impact Insurance Facility
- International Monetary Fund Financial Access Survey
- Karandaaz
- Pakistan Microinsurance Network (PMN)
- World Bank

Research institutions

- Bankable Frontiers Associates (BFA)
- Brookings Institute
- Centre for Advanced Financial Research and Learning (CAFRAL)
- Centre for Digital Financial Inclusion (CDFI)
- Centre for Effective Global Action (CEGA)
- Centre for Financial Inclusion (CFI)
- Centre for Financial Services Innovation (CFSI)
- Centre for Global Development (CGDev)
- Dalberg Global Development Advisors
- Evidence for Policy Design (EPoD)
- Financial Access Initiative
- Institute for the Future
- Innovations for Poverty Action (IPA)
- Jameel Poverty Action Lab (J-PAL)
- MicroSave
- Oxford Policy Management (OPM)
- Premese Africa Development Institute
- Pulse Lab Jakarta
- Results for Development Institute (R4D)
- Social Cops
- Tilburg University (Prof. Thorsten Beck)

Appendix 2: Global measurement framework scan

The list below contains the measurement frameworks considered in this note. The scan was conducted in August 2016 and therefore does not contain measurement frameworks developed after that date. A list of indicators tracked in these measurement frameworks is available upon request.

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Appendix 3: Randomised control trial (RCT) studies considered

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