Shifting measurement away from a one-dimensional view of financial inclusion
About the Making Access Possible Programme

Making Access Possible (MAP) is a multi-country initiative to support financial inclusion through a process of evidence-based analysis feeding into a financial inclusion roadmap jointly implemented by a range of local stakeholders.

MAP was initiated by the United Nations Capital Development Fund (UNCDF) and is implemented in partnership with FinMark Trust and the Centre for Financial Regulation and Inclusion (Cenfri). In each country, MAP brings together a broad range of stakeholders from within government, the private sector and the donor community to create a set of practical actions aimed at extending financial inclusion tailored to that country.

UNCDF is the UN's capital investment agency for the world's 48 least developed countries (LDCs).

With its capital mandate and instruments, UNCDF offers “last mile” finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. This last mile is where available resources for development are scarcest; where market failures are most pronounced; and where benefits from national growth tend to leave people excluded.

UNCDF’s financing models work through two channels: savings-led financial inclusion that expands the opportunities for individuals, households, and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and by showing how localized investments -- through fiscal decentralization, innovative municipal finance, and structured project finance -- can drive public and private funding that underpins local economic expansion and sustainable development. UNCDF financing models are applied in thematic areas where addressing barriers to finance at the local level can have a transformational effect for poor and excluded people and communities.

By strengthening how finance works for poor people at the household, small enterprise, and local infrastructure levels, UNCDF contributes to SDG 1 on eradicating poverty with a focus on reaching the last mile and addressing exclusion and inequalities of access. At the same time, UNCDF deploys its capital finance mandate in line with SDG 17 on the means of implementation, to unlock public and private finance for the poor at the local level. By identifying those market segments where innovative financing models can have transformational impact in helping to reach the last mile, UNCDF contributes to a number of different SDGs and currently to 28 of 169 targets.

About the cover

The design on the cover is based on the shift from old formats of access measurement (trying to understand the path to formal finance) to the new understanding that the poor, in particular, have much more vibrant, complex and diversified financial strategies than might previously have been assumed. The cover juxtaposes the old – below the line – with the new, colourful and more complex reality above the line.
The MAP Global Insights series

The MAP Global Insights series attempts to consolidate and synthesise the learnings from MAP across the MAP pilot countries. The first of the MAP Global Insights products comprises five thematic cross-country notes, based on the initial round of findings from the country diagnostic studies, which have been conducted in Thailand, Myanmar, Swaziland, Mozambique, Lesotho and Malawi.

**NOTE 2** explores the shift in financial inclusion measurement away from focusing solely on access to more closely match the realities of how adults live their financial lives. It introduces a new measurement framework, which includes gauging depth of usage in financial inclusion, and explores the policy implications of moving away from a linear, one-dimensional view of financial inclusion.

The other notes in the MAP Global Insights series are as follows:

**NOTE 1** unpacks the target market segmentation approach that is core to the MAP methodology of putting the client at the core of the analysis. Note 1 provides a window into the emerging cross-country segments, and the implications for donors, policymakers and providers in this regard.

**NOTE 3** considers the cross-country evidence on the gap between access and usage of transactional bank accounts, and why the majority are not used. It concludes with arguing the need for a paradigm shift in the focus of financial inclusion, away from cost and scale to value.

**NOTE 4** looks at the role of locally delivered financial services compared to remote financial services, why the majority of adult consumers still rely on financial services that are locally delivered, and the implications for providers and policymakers in terms of learning from, replicating or leveraging the value offered by these existing services.

**NOTE 5** describes the different experiences of mobile money across the six MAP pilot countries, and discusses some of the key drivers of these differences, specifically in terms of the relationship between mobile money and cash infrastructure. It concludes with a discussion of the possible implications for policymakers and regulators with regard to the changing financial services environment.

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Introduction

The traditional focus in the measurement of financial inclusion is on access to a single financial service from a formal financial institution. However, the evidence from the first six MAP pilot countries is highlighting that this approach to measurement does not accurately reflect how adults, including the poor, live their financial lives. This note introduces a new measurement framework, which moves away from a linear, one-dimensional view of financial inclusion to bridge the gap between how people conduct their financial affairs and how we measure this.

Increasingly, global research is indicating that poor consumers are often extremely adept at managing their finances, relying on what sometimes seem to be counter-intuitive financial practices to commonly held assumptions around money management. With poor households facing high levels of volatility and uncertainty in their spending levels and ability to generate income, money management becomes a complex array of transactions across the household using various mechanisms over time (Stuart et al. 2015).

The evidence from the first six MAP pilot countries is confirming the use of a portfolio of financial services by the majority of individuals and households to live their lives. For instance, MAP Malawi (Thom et al. 2015) revealed that a typical household receives remittances physically delivered by family members or friends to pay for school fees, saves ‘under the mattress’ to meet monthly living expenses, and is a member of a village savings and loan association (VSLA) to access credit in the event of an emergency.

The need for a portfolio of financial services is strongly supported by the findings from financial diaries research. The financial diaries track, penny by penny, how individual households manage their money. The studies, which have been implemented across a number of countries, most recently in Myanmar (Stuart et al. 2015), have consistently found that households rely on a large portfolio of financial products to meet their needs. For example, Collins (2005) found that, on average, such households used 17 different financial services over the course of a year. This includes a range of services and products across and within product types: 4 savings products, 2 insurance products and 11 credit products.

While the evidence in financial inclusion research is highlighting that people use a portfolio of financial services, however, measurement has not caught up. The two largest demand-side surveys on financial inclusion, MAP’s FinScope Consumer Survey and the World Bank’s Findex, still use headline indicators that measure the number of adults in a particular country that report accessing one type of formal financial service. The Alliance for Financial Inclusion (AFI) Financial Inclusion core indicators measure the percentage of adults that report using a financial service from a formal financial institution.

The result is that policy targets and achievements are set and celebrated around these singular metrics, and this often distorts the reality of financial inclusion in a given country.

Note 2 introduces a new approach to measuring financial inclusion. To the traditional emphasis on measuring ‘breadth’ – that is, the number of people using any type of formal financial service – the measurement framework adds a new indicator, ‘depth’: the number of different financial product classes used per person that reports accessing formal financial services. Note 2 also suggests the need to begin paying more attention in financial inclusion research to the depth of usage within product classes.

Furthermore, this note expands on why such an approach is necessary in financial inclusion and applies it to the first six MAP pilot countries, highlighting the new insights it provides into the state of financial inclusion in a given market.
Depth and breadth in financial inclusion measurement

The introduction of national or global demand-side surveys in financial inclusion, such as Findex and the FinScope Consumer Survey – a nationally representative survey of how individual adults (18 years of age or older) source their income and manage their financial lives – has shifted the focus in financial inclusion measurement away from access alone to a focus on access and usage. (While ‘access’ refers to the availability to a given person of affordable and appropriate financial services, by contrast ‘usage’ refers to the act of employing or making use of a financial product or product class.)

Traditional indicators such as the number of access points per 100,000 adults or per 1,000 km² have been enhanced by the addition of indicators on the percentage of adults using a regulated financial service. The need for this shift in emphasis was highlighted by the AFI Financial Inclusion Data Working Group, which in 2011 developed a set of core financial inclusion indicators that includes access and usage.

The new measurement framework presented in this note builds on these existing frameworks in financial inclusion and offers the new indicator ‘depth’ to reflect the portfolio usage of financial services highlighted in MAP.

The indicators breadth and depth are defined thus in the MAP measurement framework:

- **Breadth of usage** refers to the number of adults in a country who use at least one financial product class – i.e. at least one of the four types of financial products (savings, payments, credit and insurance) – expressed as a percentage of the total adult population. (By contrast, ‘financial products’ refers to the individual products – such as two different savings accounts.) In this note, breadth is expressed firstly in relation to formal products. It is then shown how informal product usage extends breadth.

- **Depth of usage** refers to the number of different product classes used by those adults using at least one financial product class. As with breadth, depth is initially expressed in relation to formal products. The note then shows how informal product usage affects depth.

Depth and breadth of usage are measured in Note 2 by leveraging the data collected in the FinScope Consumer Survey in each country, including: data on formal and informal providers alike, how the different product classes are used, why they are used (or why not), and perceptions of these services on the part of users/non-users.

Why measure depth as well as breadth?

This section seeks to provide the basis for why an indicator that measures the depth of financial services usage is needed in financial inclusion.
Focus solely on breadth skews the picture of how many financial services are actually used. Figure 1 shows the proportion of the population in the six MAP pilot countries that use multiple formal financial product classes. Across all six of the countries, just 6% of formally included adults use all four product classes on average, with an additional 16% using three.

Let us consider the example of Mozambique: Finscope revealed that the percentage of the adult population with access to at least one formal financial service grew from 12% in 2009 to 24% in 2014. This would seem to indicate a healthy increase in financial inclusion in that country. However, only 12% of adults reported using more than one type of product: just over 7% use two product types, just over 3% use three product types and just over 1% are served across the full portfolio. The remaining financially included use only one type of product, mostly transactional bank accounts, to meet only two needs – sending or receiving remittances within the country and/or receiving a salary. Thus, while Mozambique has made strides in the number of adults considered financially included (breadth of usage), most people remain thinly served by formal financial services (i.e. there is low depth of usage).

Focus on depth gets closer to the true picture of financial services usage. This note argues two related points: that for individuals and households to address their needs effectively and manage their financial lives, they require access to a portfolio of financial services; and that to accurately measure financial inclusion, we must measure depth of usage.

Measuring depth of usage, including of informal products and including within product classes, can reveal what might seem disappointingly low levels of financial inclusion – especially where a focus solely on breadth might have suggested that financial inclusion levels were in better shape. A focus on depth adds granularity to our understanding of financial inclusion, especially perhaps for policymakers.

Rutherford (2000) notes that enabling people to accumulate ‘useful lump sums’ is a key function of financial services and crucial to enabling people to make the big financial outlays in life: business, family and social investments, asset purchases and mitigating emergencies under severely constrained circumstances is key. For example:

- Insurance may be the most appropriate service to mitigate high-impact, low-frequency risk events such as death; but savings may be more appropriate for low-impact, high-frequency risk events such as illness. Similarly, credit may be appropriate for productive uses but not for risk mitigation. So, for individuals to be able to properly mitigate the range of risks they face, they may well require insurance, savings and credit.

- A person who owns a small or medium-sized business in Myanmar may need credit to invest in new inventory to grow the business; convenient and affordable payment platforms to pay suppliers and receive payments from customers; savings to manage disruptions in cash flow; and insurance to protect the business or business owner against risk.

Measuring depth of usage is therefore important if we are to understand whether policies are proving effective in expanding access to financial services, and whether the market is effectively serving the financial needs of the poor so that they do not resort to sub-optimal products to do so.
Depth of usage required within as well as across product classes. The need for a portfolio of products extends beyond simply having access to all four of the product classes. Households and individuals require multiple products within the product classes of savings, payments, credit and insurance. For example:

- Long-term savings products that earn higher returns are necessary for retirement, whereas short-term store-of-value products are required for consumption smoothing.

- Asset financing is appropriate for funding large capital investments where the asset secures the loan, but owners of small or medium-sized businesses may also require short-term working capital loans to manage their day-to-day cash flow.

Measuring depth is thus crucial in attempting to get a clear picture of financial inclusion – and going forward, the MAP programme will incorporate interrogating depth of usage within product classes too.

‘Shallow’ usage leaves individuals vulnerable. A portfolio of financial services allows individuals to use financial products for specific needs, while a limited product offering leads to incorrect use of products, leaving people vulnerable. For example:

- In Myanmar, 30% of adults report using at least one financial service from a regulated financial services provider, but only 6% make use of more than one regulated financial product class (some combination of credit, savings, insurance and payments). Few individuals in Myanmar use an insurance product, whether regulated or unregulated. As a result, a substantial proportion of consumers resort to using credit or savings for risk mitigation. For example, 48% of farmers experienced crop losses without the safety net of insurance. In the absence of an appropriate portfolio, in the event of a risk, 10% of adults relied on savings, 42% relied on credit and 22% needed to sell assets or reduce expenditure – which would have a direct negative impact on their welfare and leave them more vulnerable when another risk event occurred.

Figure 2 shows that this type of response to risk events is common across all risks in the MAP pilot countries where this question was asked in the FinScope Consumer Survey.

In summary, while not all consumers may need to use all four of the product classes at any given time, the examples presented above illustrate the importance of having the option of accessing multiple financial products across all four product classes, according to needs. The examples start to support the assertion of Note 2: that breadth alone is not a sufficient measure of financial inclusion, and that including the depth of usage of financial services is critical to measuring the extent of financial inclusion.
What are we finding?

This section applies the breadth and depth measurement framework to the six MAP pilot countries, as well as the different target markets introduced in Note 1, to highlight the additional level of insights the framework provides into the state of financial inclusion in a country.

**Depth of financial services usage offers new insights into financial inclusion.** Figure 3 plots the depth of financial services usage against breadth for the six MAP pilot countries. Mauritius, Namibia, South Africa, Tanzania and Zambia have been added for comparative purposes.4

Including depth as an indicator in this new financial inclusion measurement framework yields the following additional insights:

- **Countries tend to form three loose clusters** based on breadth, depth and level of development. Figure 3 shows that:
  - Breadth of usage in Malawi, Mozambique, Myanmar and Zambia is so low that the priority must be to extend breadth (i.e. to move horizontally to the right of the diagram) irrespective of the product class. These are also the countries with the lowest HDI.
  - Lesotho, Namibia, Swaziland and Tanzania form a second cluster, with greater breadth and depth of usage, and a higher HDI. The implication is that these countries have extended usage beyond simply the easiest-to-reach target markets but have not yet achieved deep usage for those that are already served. Neither is usage yet optimally broad. For such countries, the priority may be to build depth for defined groups of people in order to serve specific public policy objectives, while continuing to broaden usage in general.
  - Finally, in the countries in the third cluster, namely Mauritius, South Africa and Thailand, a high proportion of the population already uses at least one financial product class. The focus may therefore switch to increasing the depth of that usage. That means focusing on providers able to deliver the type of products that will expand individuals’ and households' portfolio of financial products. These are also the countries with the highest levels of HDI. For a country like Thailand, for example, it is clear that there are not many more gains to be made from further broadening financial inclusion. However, vertical progress can still be made.

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**Box 1: Figure 3 explained**

The depth of financial usage, indicated on the y-axis, is stated as the average number of product classes used by each financially included adult. This is given a value on a scale of 1 to 4. This is then mapped against the breadth of financial usage on the x-axis. Breadth is measured as the percentage of the population using at least one financial product class.

The figure shows the reach of the formal market as well as the combined total of the formal and informal markets. The reach of the formal market only is represented by the light-coloured bubbles. The reach of the combined formal and informal markets is represented by the dark-coloured bubbles.

The size of the bubble represents each country’s Human Development Index (HDI), acting as a proxy for welfare development.
Figure 3: Mapping countries by financial inclusion depth and breadth

For the most part, informal usage tends to extend breadth not depth. Adding informal financial products to the picture makes a big difference in terms of understanding the number of people using at least one financial product class (i.e. in Mozambique, Malawi and Myanmar) because it enhances breadth. However, for the most part it does not really seem to increase the number of product classes used by each user (i.e. it has a limited impact on depth). An exception, though, is a country such as Lesotho; the number of people using at least one financial product class rises 20 percentage points when one adds informal products to the mix, plus the average number of product classes used per user increases to close to 2.5. More than half of adults in Lesotho who use an informal product use more than one informal product class. There is also a large overlap between usage of formal and informal products, with 40% of adults using both. This means that the informal sector in Lesotho extends both the breadth and depth of usage, and that even people using formal financial products continue to use informal products in parallel, by choice.

Breadth may be a precondition for depth. Figure 3 indicates a possible break point at 50% breadth. Countries with breadth of usage of less than 50% tend to have depth of 1.5 product classes per user or less; while countries with breadth greater than 50% tend to have depth of 2 product classes per user or more. This suggests that in most cases countries will first build up to a critical mass of breadth before most adults begin using multiple financial product classes, and it may indicate that a certain level of breadth is a precondition for an increase in depth.

Comparing depth and breadth across target markets gives more granular understanding. The same breadth and depth analysis applied above across countries can be applied across individual target market segments within a given country. Considering the depth versus the breadth of usage for individual target markets provides a more granular understanding of financial inclusion dynamics.

Figure 4 plots the depth against breadth of financial product usage across the five target markets in Lesotho in the same way as Figure 3 did across countries. Lesotho is used here as an illustrative example of the differences in financial inclusion for both formal product classes (represented by light-coloured circles) and formal and informal product classes combined (represented by dark-coloured circles) across the different target markets. The size of the bubble represents the average income of the target market.

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Breadth: Percentage of adults using at least one financial product class

Depth: Average number of product classes used by adults using at least one product class

Size of bubble = average monthly income

周转  | Self-employed
Dependents  | Formal workers
Farmers  | Irregular earners

Figure 4: Relative financial inclusion breadth and depth of usage of target markets in Lesotho

Considerable differences in usage evident across target markets. Figure 4 shows that salaried workers have the greatest breadth of usage, as well as using a substantially higher number of product classes on average than the other target markets. Salaried workers on average use 2.8 product classes, compared to 1.9 used by the rest of the population. Salaried workers as the best-served target market is a finding consistent across countries and relates to their being the target market easiest to reach for formal providers for a number of reasons: relative proximity to providers, higher income levels and high regularity of income. Conversely, irregular earners, as the case of Lesotho illustrates, are typically among the target markets with the lowest levels of breadth and depth, as they predominantly reside in rural areas, have low income levels and have very irregular incomes.

Informal products respond to the actual needs for each specific target market. The impact of informal financial product classes on the level of financial inclusion of the different target markets is also evident in Figure 4. While informal product classes extend salaried workers’ financial inclusion levels only marginally, the breadth of usage for the other target markets is substantially increased. Depth of usage remains relatively similar between formal and informal usage, often overlapping (as the FinScope data indicates). The implication is that rather than being substitute goods, informal products are complementary, as they respond to the actual needs of each specific target market and are not replaced by their formal counterparts.

Absence of a portfolio of financial services can undermine policy interventions targeting specific segments. The differences in depth and breadth of usage across target markets adds another layer of granularity to that shown in Figure 3 and reiterates a central message of Note 1: that policymakers need to implement interventions targeted at the needs and realities of specific segments. For example:

- In Myanmar, state-subsidised credit is offered to farmers through the Myanmar Agricultural Development Bank (MADB) to support their agricultural activities. While this drives considerable breadth of financial inclusion (30% of farmers report access to at least one financial service from a regulated institution), only 8% of farmers make use of more than one regulated financial product class. Almost a third of farmers reached by that programme do not use credit at all for farming expenses. Rather, they use it to meet other financial needs such as to mitigate risk, pay for school fees or meet living expenses. This leakage away from agricultural production expenses towards alternative expenses partially undermines the achievement of the original public policy objective of increasing agricultural productivity.
The evidence from MAP highlights that consumers need to be able to select from multiple product classes if they are to meet their full range of financial needs.

The implication for providers is that they need to develop financial products and services that more accurately target and meet the needs of the market:

• If there is still opportunity to be gained in expanding breadth – such as in Malawi, Mozambique and Myanmar, where the financial sector remains underdeveloped – providers should focus on reaching consumers through improving the distribution of existing financial services, such as payments.

• In more developed financial sector markets where depth is required – such as Lesotho and Swaziland – providers should focus on targeting existing clients with a more comprehensive and nuanced portfolio of financial services, such as credit, savings or insurance, that meet their specific needs.

In order for consumers to most effectively mitigate their risks, reduce vulnerabilities and facilitate wealth accumulation, they require a portfolio of financial products suited to their particular circumstances, income patterns, demographic realities and priorities. It is vital that policymakers recognise this. Applying the measurement framework discussed here in order to understand the depth of usage across target markets within and across countries is therefore critical for policymakers; it will help to ensure better design of financial inclusion interventions, with appropriate focus, for achieving economic growth and welfare gains. In the absence of such an approach, interventions can be undermined, as in the example cited earlier of agriculture credit in Myanmar.

For the future, measurement of need and demand must go beyond access and usage to reflect the value that consumers derive from financial products and services. The AFI Financial Inclusion Data Working Group is already pushing this space with the adoption of quality indicators in financial inclusion. MAP has built into the programme a measurement framework that includes usage and quality indicators, customised for each country. Thus, the market measurement framework uses the country roadmaps as the most basic guide to the market interventions and links the financial inclusion goals to the relevant target markets and their needs in each country. It is important to continue to build on these indicators, using the right metrics from the customer data, to ensure that how we measure financial inclusion reflects how individuals and households actually derive value from it and where gaps in financial services provision might remain.

What does this all mean for providers and policymakers?

For the future, measurement of need and demand must go beyond access and usage to reflect the value that consumers derive from financial products and services.
Bibliography


Endnotes

1. The AFI Financial Inclusion Data Working Group is a group of regulators and policymakers from developing and emerging countries dedicated to promoting and sharing information on the topic of financial inclusion measurement.

2. Note 3 focuses on the low usage of bank accounts across the six MAP pilot countries.

3. Note 5 explores mobile money usage in the six MAP pilot countries.

4. These countries can be included because FinScope surveys were conducted in all of them, although no MAP analysis has yet been conducted. The financial usage data is therefore comparable to that for the MAP pilot countries.

5. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable, and having a decent standard of living. The HDI is the geometric mean of normalised indices for each of the three dimensions (UNDP 2014).
Unlocking Public and Private Finance for the Poor

UNCDF is the UN’s capital investment agency for the world’s 48 least developed countries (LDCs). With its capital mandate and instruments, UNCDF offers “last mile” finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. This last mile is where available resources for development are scarcest; where market failures are most pronounced; and where benefits from national growth tend to leave people excluded.

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