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Household Finance in India: Approaches and Challenges

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Contents

Executive Summary	1
1. Introduction	3
1.1 Role of Finance for Households	3
1.2 Facets of low-income households in India	4
1.2.1 Low proportion of financial assets in household portfolio	4
1.2.2 Coping mechanisms devised by households faced with risks and uncertainties	5
1.2.3 Human capital as the principal asset	5
1.2.4 Difficulty in separating household and enterprise cash flows	5
1.2.5 Prevalence of persistent debt cycle	6
1.2.6 Persistence of informal lending relationship in the presence of formal providers	6
1.2.7 Access to high-return microenterprise opportunities	6
2. Themes of Household Finance Research	7
2.1 The ‘what’ and the ‘who’ of household finance research	9
2.1.1 A discussion on research methodologies and datasets	11
2.2 The ‘why’ of household finance research	12
2.2.1 A discussion on research methodologies and datasets	13
3. State of Household Finance in India	15
3.1 Overview	15
3.2 Participation and Allocation in Financial Products and Services	15
3.3 Factors Affecting Household Decision Making	16
3.3.1 Demographic Profile of Households	16
3.3.2 Behavioural Preferences and Biases of Households	18
3.3.3 Uneven penetration of formal financial services across Indian states	19
3.3.4 Market Limitations	19
3.3.5 Regulatory gaps	24
4. Priorities for Innovation in Financial Services for Low-Income Households	26

4.1 Overview	26
4.2 Product Innovation	27
4.2.1 Unique and Novel Products	28
4.2.2 Bundling of Products	29
4.2.3 Product Design based on Customer Profile	30
4.2.4 Flexibility in Product Design	31
4.3 Process Innovation	32
4.3.1 Technological Innovation in Delivering Financial Services	32
4.3.2 Innovation across Agent Network for Last Mile Service Delivery	34
4.4 Regulatory Innovation	35
4.4.1 Moving away from product specific prescriptions	36
4.4.2 Easing Priority Sector Lending Norms	37
4.4.3 Advocating for ‘Suitability’ in delivery of financial services	38
5. Conclusion	39
References	40

Executive Summary

“The possibility that household finance may be able to improve welfare is an inspiring one” - Campbell (2006)

Household Finance is the study of how institutions provide goods and services to satisfy the financial functions of the household, how consumers make financial decisions and how government action affects the provision of financial services (Tufano, 2009). This paper attempts to comprehensively review existing literature, flag key research questions and priorities for innovation that financial service providers, regulators and policymakers and researchers should focus on in order to move the needle on universal access to finance. This paper is divided into two parts. The first part summarises the key research themes and methodologies used in the field of household finance, while the second part synthesizes evidence on the current state of household finance in India and priorities for innovation in financial services of low- income households.

These topics are reviewed through the lens of low-income households, given their volatile cash flows, composition of household portfolios, susceptibility to shocks and over-reliance on human capital. The paper categorizes the literature in the field of household finance into two large research themes. The first theme talks about the ‘what’ and the ‘who’ to understand what kinds of financial decisions are being undertaken by low-income households and who are the decision-makers/participants/ beneficiaries/ network of various financial interventions. The second theme talks about the ‘why’ to understand the various factors that influence the financial decisions of low-income households, as households cannot be isolated from the contexts that they operate in.

This paper highlights significant gaps in access to financial services among low-income households. These arise from a high concentration in physical and illiquid assets, low exposure to financial assets, continued reliance on high-cost, non-institutional debt, and little to no access to risk mitigating products such as insurance and pensions. The paper recognizes that there are multiple factors affecting household decision-making. On the demand side, factors such as cognitive and behavioural biases, issues of trust in the financial system, heterogeneous needs based on education, wealth levels, and geographies they are located in have a bearing on households’ decision making, while institutional context, existing market limitations and regulatory gaps contribute to the supply-side barriers.

We highlight three types of innovations needed to address the identified gaps - product innovations, process innovations and regulatory innovations, and hope that this serves as a useful reference to entrepreneurs working in the field as well as for policymakers.

To the best of our knowledge, this paper is the first attempt in the field of household finance in India that presents the case for household finance research along with comprehensively describing its’ current state, challenges, and scope for innovation towards achieving universal financial inclusion. This paper attempts to provide a theoretical background to researchers looking to conduct research in the field of household finance, as it not only surveys the existing literature relevant to the field but also highlights areas

for further research. Some of the key research gaps that the paper identifies are: (i) a need to better understand the financial portfolio of Indian households and the underlying reasons for the financial decisions and strategies employed by them and (ii) a need to better understand the interactions between financial systems and the socio-economic and cultural dimensions of Indian households, thereby understanding the impact of finance on households. We hope that this paper will advance the field of household finance research in India and bring this pertinent field into focus.

1. Introduction

1.1 Role of Finance for Households

A household's financial life can be viewed as a combination of exposure to time and contingent states. The role of financial services in the lives of households is to help them manage and increase their consumption smoothly, and to fully utilize their human capital, financial capital, and other resources to improve its well-being. Two core functions that finance must fulfil for every household is (i) management of risk by movement of resources across contingent states and spaces (ii) inter-temporal consumption smoothing by movement of resources across time (Ananth & Shah, 2013).

In the context of Household Finance Research, the discipline makes an inquiry to find out "how households use various financial instruments to attain their objectives" (Campbell, 2006). Household Finance is an emerging academic discipline at the intersection of economics, finance, development and behavioural studies. One of the definitions that comprehensively describes Household Finance Research was coined by Tufano (2009) as "the study of how institutions provide goods and services to satisfy the financial functions of the household, how consumers make financial decisions and how government action affects the provision of financial services". A foundational tenet of household finance research is that it attempts to understand financial decisions of households meaningfully without isolating them from the context they operate in, and their interactions with various institutions ranging from formal and informal advisors, providers and regulators.²

The motivation to conduct household finance research in India arises from multiple factors:

- Large gaps exist in households' access to and use of formal financial services- According to the Global Findex Survey 2017³, 80 percentage of adults reported having an account at a financial institution, but 39 percentage of them did not use their account. Without a deeper understanding of the issues constraining usage, recent gains in financial access may not have the desired impacts.
- Households persist with portfolios that widely differ from normative theories. This "money left on the table" represents significant foregone wealth.
- Inadequate access to non-credit financial services is creating an over-reliance on short-term credit to manage all risks, including health risks. This is an "expensive" strategy for low-income households which needs to be addressed through better product mix at the household level.
- Households at lower-income quintiles face volatile and uncertain cash flows which challenge their participation in traditional financial products due to its standardized structure

²Dvara Research, Household Finance Strategy Note - https://www.dvara.com/research/wp-content/uploads/2019/02/DR_HHF_strategynote_2018.pdf

³The Global Findex 2017 - <https://globalfindex.worldbank.org/>

- Even among low-income households, there is wide heterogeneity based on household characteristics like location, caste, education, behavioural biases, etc. Differential supply-side strategies maybe needed to address this rather than the current “one-size-fits-all” approach being followed.

1.2 Facets of low-income households in India

It is essential to observe, identify and rigorously study the interactions between households and financial systems theoretically and empirically. As per literature, the financial decisions and portfolios of low and middle-income households in India are skewed and suboptimal. Some of the characteristics of these households are detailed below.⁴

1.2.1 Low proportion of financial assets in household portfolio

Most low-income households (LIHs) have a portfolio of high value illiquid physical assets (in rural areas uncultivable land could be a major physical asset) and low-value financial assets, but multiple informal and formal financial liabilities. On average, Indian households hold 84% of their wealth in real estate, 11% in gold, and the residual 5% in financial assets.⁵ Even over their lifetime, evidence shows that households do not increase their allocation to financial assets and continue investing in real estate and gold. Evidence on asset portfolios of rural households shows similar trends, wherein the portfolio is skewed towards highly illiquid, non-tradeable, and localized assets (such as land and housing), and varying degrees of ownership of gold (Prasad et al., 2014). This study uses customer data from a financial services institution that operates in remote rural districts of India and constructed stylised typologies of household asset portfolios based on primary and secondary sources of income. Despite a demonstrated demand for various financial services, the study finds that the asset portfolio of the average rural household in India is composed almost entirely of two physical assets—housing and jewellery. A comparison with a hypothetical portfolio of financial assets reveals that rural households could earn significantly higher levels of real returns, the increase ranging from 2.02% to 4.97%, at the extant levels of risk.⁶ Another unique characteristic of low-income households is the correlation between human capital and their ownership of physical assets. Households in rural areas tend to make investments in their local economy (such as the purchase of land within their village) which is highly correlated with their human capital. If they were, for instance, buying land outside their village, it would be superior to buying land in the same village where they supply their labour, as it would diversify their investment portfolio (Ananth & Shah, 2013). There is, therefore, a need to provide rural households with access to financial instruments that allow them to construct a more diversified, tradable, and liquid portfolio offering higher yields, that shelters them from local market fluctuations.

⁴This section borrows heavily from the book titled “Financial Engineering for Low- Income Households” authored by Bindu Ananth and Amit Shah, SAGE Publications 2013

⁵RBI Committee on Indian Household Finance-<https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/HFCRA28D0415E2144A009112DD314ECF5C07.PDF>

⁶Dvara blog on asset portfolio of rural households- <https://www.dvara.com/blog/2014/09/30/how-much-can-asset-portfolios-of-rural-households-benefit-from-formal-financial-services/>

1.2.2 Coping mechanisms devised by households faced with risks and uncertainties

Depending on the context, low-income households face different types of risk and shocks over their lifetime. These shocks include income volatility, livelihood risks, weather related shocks, occupational vulnerabilities, health shocks and other socio-economic events. Empirical evidence suggests that coping with many of these shocks, i.e. idiosyncratic or covariant shocks⁷, can be very costly and often suboptimal for low-income households (Dercon, 2002). Finance can be used to mitigate risk by moving resources across space, time and states of the world. However, very often, households undertake expensive coping mechanisms which have long-run adverse impacts on households. Coping mechanisms could include liquidating tangible assets, borrowing high cost credit, or disinvestment in human capital by cutting down on food consumption, pulling out children from school and being irregular with medical treatment.

1.2.3 Human capital as the principal asset

The largest asset that any household, particularly low-income households have is human capital, especially when they are young. Human capital is the net present value of net lifetime earnings, and it builds over different phases of life. Broadly speaking, Ibbotson et al. (2007) categorize a person's life into three financial stages - the first stage is getting educated and learning skills (i.e. building human capital), the second stage is using the human capital to earn, accumulate and protect one's financial wealth, and the third is to retire and reap benefits from the returns of the accumulated wealth as well as stay protected. On average, the human capital depletes over time, and the financial capital (wealth) is expected to increase with time. In the context of low-income households, there is a heightened need to look into all issues around protecting human capital and enabling households to build resilience in the face of illness/accident/death and other types of risks.

Human capital of low-income households is also highly correlated with returns from other forms of assets such as local businesses, local real estate and cattle (Ananth & Shah, 2013). Lastly, even within households, the human capital of a landless labourer is different from a schoolteacher in terms of economic values and risk profiles. From the context of financial services for the poor, it is important to recognize the value and risk characteristics of human capital in households and financial strategies to protect it sufficiently and suitably.

1.2.4 Difficulty in separating household and enterprise cash flows

Small enterprises managed by low-income households commingle their business cash flows with household cash flows. For example, households that run a grocery store may use goods from their shop for self-consumption. This usage does not get accounted for in household expenses or business stock outflows. Similarly, the labour for running such

⁷Idiosyncratic shocks affect individual or households like illness, injury, death, job loss, crop failures, loss of transfers. Covariant shocks affect groups of households, communities, regions or even entire countries like armed conflict, financial crisis, changes in food prices, drought, flood, social unrest (UNDP 2011)

a grocery store is provided by the household. These reasons make it particularly difficult to separate business expenses from household expenses as there is no tracking or documentation of these cash flows. These businesses typically do not maintain any financial statements, which make it difficult for formal financial institutions to lend to these enterprises.

1.2.5 Prevalence of persistent debt cycle

It is widely observed that in spite of the high cost of debt, many low-income households find themselves in perpetual debt cycles. Indian households continue to accumulate debt, and most of the debt is unsecured, reflecting an unusually high reliance on non-institutional sources such as moneylenders. The share of non-institutional debt in the liability portfolio varies widely among different states but is consistently higher for poorer households (RBI Household Finance Committee, 2017). Microentrepreneurs often substitute or complement short term and high frequency informal working capital with microfinance loans which is puzzling, as the cost of loans varies widely among the two providers (Bindu et al., 2007). The prevalence of persistent debt cycles among low-income households can lead to over-indebtedness and can lead to unsuitable consequences like distress sale of assets and low standard of living.

1.2.6 Persistence of informal lending relationship in the presence of formal providers

Despite the usurious cost of informal loans from moneylenders, low-income households continuously borrow from these sources even when cheaper institutional credit is available with better terms of the contract. Research shows that this could be due to multiple plausible reasons such as households borrowing to maintain a relationship with moneylenders necessary in times of emergency, households lacking access to cheap or safe savings devices, or households with imperfect intrahousehold bargaining arrangements resulting in sub-optimal household allocations (Bindu et al., 2007). However, these are suggestive rationales for the persistence of relationships with informal lenders and may not be “the” reason driving non-institutional credit.

1.2.7 Access to high-return microenterprise opportunities

Micro and small enterprises often find it challenging to scale their businesses because they face two production function technologies: one with low capital requirements and high returns that taper off fast, and a second that requires a minimum level of investment before any returns can be generated and then grows faster. Banerjee and Duflo (2008) explain that the poor are unable to grow their businesses because they can't borrow to cross the hump of a non-convex production function and saving up for it will take too long. However, an alternate theory also suggests that innovation can possibly create more production functions, i.e. micro enterprises can innovate by creating incremental steps by selling more of the same product or adding another leg of the business to diversify their business profile.

2. Themes of Household Finance Research

John Campbell's vision for the discipline of household finance was to explore households' financial behaviour along the lines of corporate finance, i.e. understanding how households use financial instruments to achieve their objectives. He theorized that households have certain characteristics that influence financial decision making such as a) having to plan over long but finite horizons b) having non-tradable assets (human capital), c) holding illiquid assets (housing), d) facing constraints on their ability to borrow, e) being subject to complex taxation. Though these are reasonable assumptions for most households in 'advanced economies', these may not carry similar weight in the financial decision making of households in a developing economy, particularly for low-income households. In fact, the deviation from a theoretical model of financial decision-making is stark in low-income households in emerging economies, that we discuss in the following section.

Within the field of Household Finance Research, there are two approaches to understanding or modelling the financial behaviour of households – the normative approach and the positive approach. The normative approach to household finance theorizes the principles, develops models, and establishes a benchmark that households should aspire to reach when managing their household's finances. It is like a prescriptive model of ideal financial behaviour for a household. The positive approach explores the actual financial strategies exhibited by households given their resources, environment and constraints. Campbell (2006) points out that for low-income households, the deviation between normative and positive is stark, but does not elaborate on why those deviations exist.

In 2016, a decade later, one of the well-recognized papers in the field of household finance research was published by Badarinza, Campbell and Ramadorai (2016b), with the main motivation to compare the household balance sheets of 13 advanced economies⁸ to record the similarities and deviations in household financial decision making. For instance, in 12 out of the 13 countries studied, households report holding financial assets in the form of bank deposits, transactional accounts and retirement assets (held in defined contribution pension plans). However, they found significant variation across countries in terms of the participation rate for directly held stocks and mutual funds. In 2019, a similar exercise was carried out to survey the household finance landscape from 6 emerging economies⁹, and to compare it with the results from advanced economies (Badarinza et al., 2019). The latter piece of research, conducted by using micro-datasets of emerging economies (including India), found significant deviations between the rational or ideal financial behaviour expected out of households and the actual financial strategies adopted by the households (discussed later in section 3).

An additional finding of Household Finance Research is that low-income households cannot be all placed in a single monolithic category, with similar financial habits and strategies observed across all low-income households. low-income households have access to a range of markets, people, providers and products, and even if they do not have access to these services, they frequently use a wide range of informal financial services to

⁸The 13 advanced countries studied in this paper are – Australia, Canada, Germany, Greece, Finland, France, Italy, Netherland, Slovenia, Slovakia, Spain, UK, USA

⁹The 6 emerging economies studied in this paper are - China, India, Bangladesh, the Philippines, Thailand, and South Africa

fulfil their requirements. Despite having access to financial instruments, it is difficult to find commonalities across the financial decisions undertaken by all households because there are differences among low income households within the same country, across emerging economies and even among low-income households in advanced versus emerging economies.

To quote Taylor and Lynch (2014) – “Anthropologists like to say that the one thing that all humans have in common is our diversity. In fact, diversity is the first item on our list of commonalities across consumer finance”. When dealing with household finance research, we should attempt to find answers to questions like:

- a) How do we segment the market?
- b) When we want to understand how households use financial products, do we just focus on one kind of product or try to gain a sense of how people incorporate all kinds of financial products into their lives?
- c) How does access to and use of financial products and services improve the welfare of households?
- d) When designing data collection efforts to examine the state of household finance, how do we choose which questions to include?

To answer these questions, we would need to combine disciplines (microeconomics, behavioural finance and consumer finance) and research methodologies [quantitative, qualitative (eg: ethnography), mixed methods and experimental methods (eg: RCTs)] in answering what the behaviour of households are with respect to financial systems, who are the participants in such a system, and why such behaviours have manifested given the circumstances.

Household Finance Research in India is in its nascency and is not as well recognized as a discipline among students, academicians and researchers. Nevertheless, in the last few years, there have been significant contributions towards this field, both through academic research and public policy reports published by regulatory bodies. Two sources of rigorous research¹⁰ in this discipline are a) Report of The Household Finance Committee by the RBI (RBI Household Finance Committee, 2017) b) the Financial Well-Being Evidence Gap Map by Dvara Research¹¹.

The abundance and depth of detailed household finance research available in advanced economies is perhaps unsurprising, given the levels of formalisation existent in these countries. Formalisation in this instance implies that the financial systems of advanced economies are well-developed, widely utilised, and therefore well-documented and analysed. For households in developing economies, research also involves recording information and behaviours, which may have already existed in a more formalised financial system. Although we know some of the financial strategies of low-income households, household finance research has a long way to go before it can holistically capture the participants, the financial decisions, and the reasoning behind those decisions. Two broad th-

¹⁰This paper borrows heavily from both the sources, in addition to other academic papers and reports

¹¹Financial Well-being Evidence Gap Map, Dvara Research - <https://www.dvara.com/research/evidencegapmap/>

emes of household finance research that would potentially capture the whole body of current and future literature for households in India are a) the ‘what’ and ‘who’ of household finance research; b) the ‘why’ of household finance research

- a) The ‘what’ and ‘who’ theme discusses what kind of financial decisions are undertaken by low-income households and who are the decision makers/agents/participants/beneficiaries of the various interventions
- b) The ‘why’ theme discusses the factors that influence the financial decisions of low-income households

Both the themes also discuss the various kinds of datasets and methodologies currently available and desired for comprehending low-income households financial decision-making process.

2.1 The ‘what’ and the ‘who’ of household finance research

The ‘what’ of household finance research concerns itself with understanding what it is that households do with respect to finance, and their interactions with financial systems. This activity of households will always depend on their contexts, and knowledge of how activities are influenced by context is essential both in understanding why economic theory governing households does not hold up, and indeed what it is that households actually do that does not fit the narrow theory¹². With this push to know the facts of the household first, research will always be dictated by the availability and depth of data available (Badarinza et al., 2019; Campbell, 2006; Guiso & Sodini, 2013).

Households in advanced economies are typically seen to have high levels of investment in financial assets as compared to those in emerging economies. It is useful to delve deeper into the categories of financial assets itself, as the financial assets that households of emerging economies invest in tend to be savings in bank accounts¹³. Instead of financial assets such as equity, these households prefer to invest in physical assets – durable goods and real estate (Sane, 2019)¹⁴. Given that in terms of physical asset investments, there is a skew towards real estate, it might be expected that households participate in the mortgage market. However, unlike in advanced economies, this is not observed in emerging economies¹⁵. Instead, emerging market households are seen to have largely unsecured or non-property secured debt (Badarinza et al., 2019). Outside of the formal financial system, there is also significant informal borrowing, from family and friends as well as moneylenders, more so among low-income households. There is also a difference in asset holdings and borrowing by age between advanced and emerging countries, with

¹²It is perhaps worth noting here that there is very little in the way of theoretical frameworks that explain households’ behaviours, and the reference here is to any economic theory that concerns itself with aspects of household finance (portfolio allocations is one such area, with the underlying theory on ‘optimality’ being largely unchanged since Merton’s work on the same in 1973) (Ananth & Shah, 2013; Merton, 1973).

¹³The Global Findex 2017 - <https://globalfindex.worldbank.org/>

¹⁴It is worth mentioning that this trend is noticed among most emerging economies. Notably, China displays household portfolio characteristics akin to advanced economies.

¹⁵There is also a supply side issue where mortgage markets do not make sense for providers due to the non-existence of long-term savings along the same timelines as mortgages.

households in emerging countries depending less on liquid assets and more on borrowing and intra-family income flows (RBI Household Finance Committee, 2017).

After setting up the foundations of the ‘what’, it is important to contextualise these recorded events. Households do not act in a vacuum; they are a part of an intricate network of supply and demand factors that likely play into decision-making. low-income households are of particular interest, due to their low levels of usage of formal financial systems¹⁶. They tend to leverage social networks to a greater extent for the purposes of financial support and growth. These social networks also mean that low-income households often have their financial activities more closely interlinked with their day-to-day activities than households who wholly interact with the formal financial systems of an economy (Gudrun, 2014). The 2017 Global Findex survey shows that there are high levels of access to financial services among low-income households but highlights the low usage of these services¹⁷. Badarinza et al. (2019) recommend that household finance researchers move away from the extensive margins and focus more on the intensive margins¹⁸. The extensive margin remains of great importance as a first step into formal finance for most low-income households, but the intensive allows us to better understand the interactions that low-income households have with financial institutions.

While research finds that there is a gap in trust between households and financial institutions (Guiso et al., 2008, 2009), financial institutions are also hard-pressed to ensure last mile connectivity in emerging economies, where rural regions are often completely untouched by formal finance (Demirguc-Kunt et al., 2017). In tackling the issues of present bias, where outcomes that are closer to the present are weighted more strongly by households, and mistrust that exist among low-income households, the use of more human-centric interactions, nudges, and goal-based financial planning¹⁹ has not been studied in enough depth to provide a feedback mechanism for such behaviour related interventions. There is additionally the question of what the ideal origination and delivery channels are in order to build a bridge of efficiency and trust between households and the financial system, as well as to what extent private and governmental implementations are effective in this regard.

Researchers in advanced economies focus on risky asset holdings as a metric by which to assess households’ participation in financial markets. These assets are highly technical in nature, which can mean that first-time participants, and those that lack an understanding in them, will be negatively affected by participating in such asset markets (Alan, 2006; Campbell et al., 2018). Further, research shows that the remedy to this knowledge issue – some form of financial literacy – may not lead to the intended outcomes for households engaging with it (Hastings et al., 2013). It may, therefore, make the most sense to study ways of bringing these complex products to low-income households, either through

¹⁶An instance of this is the “Virundhu” system seen in Tamil Nadu, as a form of informal finance from friends and family (Karuppaiyan, 1997).

¹⁷The Global Findex 2017 - <https://globalfindex.worldbank.org/>

¹⁸Extensive margins refer to the factors influence access and usage, as well as impact of financial services. Intensive margins refer to the amounts and extents of the financial services used by households.

¹⁹While the argument could be made that low income households that display present bias would not be able to envision financial goals for the future, there is no research that we have come across to support such a claim.

radically different means of education or through intermediaries whose mandate it is to offer advice and management assistance to newer entrants to risky asset markets.

An extension of looking at the design of markets is also looking at the design for products, especially with regards to retirement and insurance, two areas where low-income households are woefully underserved. Design for products has been shown to stagnate, with products not being updated frequently enough to allow customers to gain sufficiently from them (Sane & Thomas, 2014). Past evidence has shown that provisions that would allow for customers to be rewarded for perseverance led to higher take-up rates (Gaurav et al., 2011). Recommendations for these products have also not been to re-invent the wheel, but rather use existing frameworks to ensure that the customer is best incentivised to take up products that work to build resilience and grow capital, human or otherwise. There remains much work to be done with regards to these essential risk-management tools, both in terms of design and implementation.

2.1.1 A discussion on research methodologies and datasets

The pre-cursor to such research happening is the generation and analysis of data on low income households, that would allow for research to build strong profiles of households, and further study the effects of their access and usage of financial services. The Financial Diary is one such mixed method whose usage has increased over the past decade (Collins et al., 2009). They are designed to, in some ways, serve as an account of a household's behaviour, and inflows and outflows over a period, taken regularly (Czura, 2015). The ideal financial diary contains data collected at the shortest frequency possible. However, due to the large number of constraints surrounding panel data collection, diaries tend to be at the month level at the very least (Taylor & Lynch, 2016). They also rely on self-reporting, which can be a curse in that any research arising from it is limited by the possible existence of any Hawthorne effects²⁰, or can be a boon in terms of capturing the seasonality of cash flows that cannot be measured by other means (Prathap & Khaitan, 2016; Taylor & Lynch, 2016). There also exists a host of nationally conducted surveys that offer a rich set of metrics, that are often underused to a large extent. Surveys such as the National Sample Survey (NSS) series²¹ have been widely used in establishing the 'what' and sometimes the 'who' of household finance, but others such as the India Human Development Survey (IHDS) series²², as well as private datasets such as those released by the Centre for Monitoring Indian Economy (CMIE)²³ are largely unexplored. These datasets are often collected from a subset of households and are often collected at a greater frequency than government originated surveys. This allows for a more frequent and often in-depth analysis of household behaviours than is currently being conducted. Given the frequent allegations of inaccurate data being put out by the government, these private datasets also offer a source of impartial data. In order to improve the picture researchers are able to paint of the Indian household, it is imperative that these nationally conducted surveys are conducted more frequently, and more dynamically, allowing for

²⁰The Hawthorne effect refers to the tendency of participants to change their behaviour purely due to the attention they receive from researchers, as a result of their participating in an experiment.

²¹Data available from the Ministry of Statistics and Programme Implementation - <http://www.mospi.gov.in>

²²India Human Development Study - <https://www.ihds.umd.edu>

²³Datasets available from CMIE - <https://www.cmie.com>

changes in usage trends. The Household Finance Committee suggests the implementation of a biennial “State of Household Finance” survey as a part of the NSS, which would aim to achieve these goals (RBI Household Finance Committee, 2017).

In examining the financial system and the interactions households have with it, those datasets recording these interactions also have valuable data. Such data would be available through the administrative data of financial institutions, and the data reported to credit bureaus. This data is heavily used by practitioners in order to assess customers but is not as widely used for the purposes of household finance research. Administrative data is often seen to be used in selecting cohorts for field surveys and experiments, but beyond that, their usage in household finance research is limited. These administrative datasets often contain detailed household demographic information, so as to reduce customer information asymmetry to as great an extent as possible. Paired with data from credit bureaus, which contain customer borrowing histories across all institutions, they can provide a rounded picture of the Indian household, covering the ‘what’ as assessed by the ‘who’.

2.2 The ‘why’ of household finance research

At a broad level, the process of financial decision making, or money management, is the same for low-income households. As Mas points out, the financial attitudes and practices of LIHs, without reference to geography, culture, gender or socio-economic background, follow similar patterns. For instance, across the world, low-income households work for more hours to absorb short time shocks (referred to as income shaping), cultivate social ties to create a source for emergency funds (liquidity farming), engage in daily spending routines, animate money into loose categories reflecting the necessity (instead of budgeting) and constantly reimagine goals due to unpredictability of cashflows (Mas, 2015).

Another set of factors that influence financial decisions for low-income households are behavioural factors such as cognitive limitations, time-preference, self-control, incentive structures, psychological bias, the role of prospect theory, hedonic framing, behavioural life cycle theory, cognitive errors and multiple other behavioural factors. Empirical research finds that even among households in advanced economies, behavioural factors influence financial decisions that are inconsistent with standard classical economic models (Beshears et al., 2018). We discuss the behavioural factors affecting low-income households’ financial decisions in detail in section 3.

Other factors that can help in answering the ‘whys’ of household finance of LIH are social, cultural, economic and geographical. Social factors refer to the gender, health, age composition, education, caste profile of the households. For instance, Guerin et al. (2015) find that gender, caste and class relationships influence microcredit outcomes in Tamil Nadu and women from lower caste are excluded from self-help group schemes. In another paper, Badarinza et al. (2016a) found that cross-household variation has a significant correlation with household demographic characteristics. For example, using nationally representative data, the paper reports that household allocation to physical assets decrease significantly with the level of education but increase with wealth. However, borrowing from non-institutional sources also fall with a rise in education. The underlying

understanding is that higher level of education improves the household's financial decision making over their lifetime.

In an emerging economy context, cultural factors that could affect households' financial decisions would include the nature of the social network, value systems, social beliefs, ideologies, gender roles and agency²⁴, intra and interhousehold transfers and inheritance norms. For instance, Johny et al. (2017) find that income diversification undertaken by rural farm households in Kerala is enabled by intra-village social networks, that is heavily influenced by central households. Within Household Finance Research, the influence of cultural factors on financial decision-making is relatively less researched till date.

Some of the other factors that can affect financial decision making are economic aspects like the role of macroeconomic market prices, business cycles, wage levels, employment opportunities, as well as other factors like the role of frequency of payment on debt repayment and consumption expenses. For instance, Prathap & Khaitan (2016) find that among group loan borrowers from microfinance institutions, a segment of borrowers faced significant distress during loans tenure due to high level of informal debt and lack of resources to repay the debt as per schedule. It is difficult to ascertain under what circumstances would certain households churn new loans to repay the older loans and increase their financial burden, but the fault of selling unsuitable loans squarely falls on the lenders.

As pointed out previously, household finance research is in its nascency. There is a growing body of studies that records the financial decision the decisions of low-income households, but the research on 'why' they do it is still being explored. Some of the gaps in evidence that need further research have been identified in the Financial Well-being Evidence Gap Map. For instance, there is little rigorous and in-depth research on the lack of take-up of the voluntary pension scheme for old-age liquidity or the role of gender in the adoption of insurance products.

An important step towards completing the journey from recording to understanding the Indian low-income households' financial decision-making is to accept their strategies cannot be measured against the benchmark of classical economic models. They have their unique set of constraints, uncertainties, limited access to suitable markets, behavioural biases that influence their decision-making. Using a positive approach instead of a normative approach to understand their financial motivations will enable us to find better insights and aid better product design and process innovation. These points will be elaborated further in section 3 of this paper.

2.2.1 A discussion on research methodologies and datasets

To truly understand the 'why', there needs to be a much richer understanding of households, and to that end, there needs to be a better set of tools to contribute to such an understanding. While financial diaries and public and private surveys are helpful in

²⁴Gender is mentioned as an aspect of both social and cultural factors. Cultural aspect of gender concerns with how we make meaning of the term in a context, i.e., for instance what are the cultural norms regarding work choices, money management, decision-making, etc. broadly acceptable for men and women in India

establishing the context and interactions of the household, they cannot establish the motivations of and reasons for the decisions they make. This is largely due to the high degree of heterogeneity existent among LIHs. Randomised Control Trials (RCTs) attempt to deal with this heterogeneity through randomisation of the study population (Rural Financial Institutions Program 2015). Field-based experiments may use other experimental methods for comparison other than randomization, applying a variety of statistical techniques to control for differences, but these often involve making assumptions that are more difficult to test than if randomization is used in advance (Duflo, Banerjee, Glennerster & Kinnan, 2013). RCTs, however, are limited by the size of the trial, and it is often logistically difficult to conduct identical RCTs across several geographical and cultural contexts to ascertain whether the hypotheses hold. There is ongoing work in developing augmentations to traditional RCTs, in order to eliminate what are widely perceived to be the issues of the methodology, as well as recreating RCTs widely in order to cover a diverse set of geographical and cultural contexts that would eliminate the inability to extrapolate results. Ethnography is another such tool that is increasingly being used to study financial behaviour including household finance management, payday loans, mortgages, microfinance, mobile money, Islamic banking and remittances (Taylor & Lynch, 2016). Ethnography is a method of studying people in the places where they live or where the action is taking place (Guérin, 2014; Guérin, et al., 2015). The method can be typically combined with both qualitative and quantitative techniques and can be used in virtually any setting. It involves recording data using a variety of tools, one of which is ‘participant observation’, which involves learning about research participants’ experiences by doing activities with them (Vargha, 2011). Like RCTs, ethnography also falls short due to its coverage, being logistically unable to explain behaviour across a diverse set of contexts.

These tools of data collection and analysis are paving the way for an understanding of the motivations behind households’ decisions, which in turn can help in providing more specialised financial services and products, as well as allowing for a possibly realistic modelling exercise for low-income households.

3. State of Household Finance in India²⁵

3.1 Overview

This chapter reviews the current state of household finance in India by synthesizing evidence on market participation and portfolio allocation of Indian households across different types of assets and liabilities and uncovering evidence (even though limited), on factors that influence household decision making. Understanding the rationale behind households' financial decisions is important from a policy perspective as they provide evidence on the current state of their finance. This information facilitates the design and implementation of products and policies suitable for the financial well-being of Indian households.

As discussed in the previous section, there are significant differences between the observed patterns of behaviour for Indian households and those predicted by the theoretical models (RBI Household Finance Committee, 2017). This is because the theoretical models do not adequately capture the Indian institutional context, the diversity of preferences and the various constraints that households face in accessing formal financial markets. There is, therefore, a need to arrive at a holistic understanding of the factors that affect household decision making. We broadly categorise these factors as (i) demand-side factors such as demographic profiles of households and households' behavioural preferences and biases (ii) supply-side factors such as uneven penetration of formal financial services across Indian states, market limitations across financial products and services, and regulatory gaps. The following section discusses the current trends as well as elaborates on the factors described above, with a special focus on implications for low-income households.

3.2 Participation and Allocation in Financial Products and Services²⁶

The Household Finance Committee Report released by RBI in 2017 provides the most comprehensive overview of the state of household finance in India. According to the report, 65 percentage of households hold any financial assets²⁷ and 78 percentage of households hold physical assets²⁸, among the youngest cohort. Among more mature households, 77 percentage of households hold any financial assets and 95 percentage of households hold physical assets. On the liabilities side, less than 10 percentage of households hold mortgage loans²⁹ and other forms of secured loans³⁰, while approximately 20

²⁵This section borrows heavily from the Household Finance Committee Report that was released in July 2017. This report provides a comprehensive overview of the current state of household finance in India and the underlying rationale for the same.

²⁶Participation is the uptake of a product/service and allocation is the share of finances allocated towards the product/service.

²⁷Financial assets include bank deposits, publicly traded shares, government securities, mutual funds, managed accounts, and loans receivable by the household

²⁸Physical assets include land and housing

²⁹Mortgage loans include loans using land or real estate as collateral

³⁰Other secured loans include loans secured by a third party, and loans using crops, shares of companies, government securities, or insurance policies as collateral

percentage of households have loans outstanding from unsecured sources of debt³¹.

In terms of portfolio allocations across households' balance sheets, the average Indian household allocates 84 percentage of its wealth to real estate and other physical goods, 11 percentage to gold and the residual 5 percentage to financial assets. On the liabilities side, unsecured debt from non-institutional sources accounts for 56 percentage of total household debt, mortgage loans for 23 percentage, gold loans for 8 percentage and the remainder 13 percentage as secured debt from other sources. These statistics highlight a lack of formalisation of financial services among Indian households.

Given the diversity of Indian households, the report further points to significant variations in allocations along with households' life cycles and wealth distribution. The report finds that the largest share of assets of young households in India is in the form of durable goods and gold. However, this shifts to land and housing as households approach retirement. Additionally, financial assets and pensions account for only a mere 3.7 percentage of the total balance sheet among the rich, reflecting poor take up of these services even among the wealthiest households. On the liabilities side, the report finds that households have high mortgage debt even as they approach retirement age, potentially leading to inter-generational transfer of liabilities. Lastly, high cost- unsecured debt accounts for two-thirds of total liabilities for the very poor and one-third for the rich.

In terms of managing risks such as loss of crop or livestock, medical emergency, and damage to properties, farm equipment or other business capital due to natural disaster, Indian households are largely dependent on high cost loans from non-institutional sources. These loans are commonly borrowed from family, friends or moneylenders. Additionally, research using the AIDIS 2012 data indicates a strong negative correlation between take-up of insurance products and incidence of non-institutional debt, in that, participation in the insurance market is associated with a 20-percentage point decrease in the likelihood of taking up a loan from a non-institutional source (RBI Household Finance Committee, 2017).

Overall, these results indicate heavy reliance by Indian households on informal mechanisms to build assets, manage risks, and plan for their life-cycle goals.

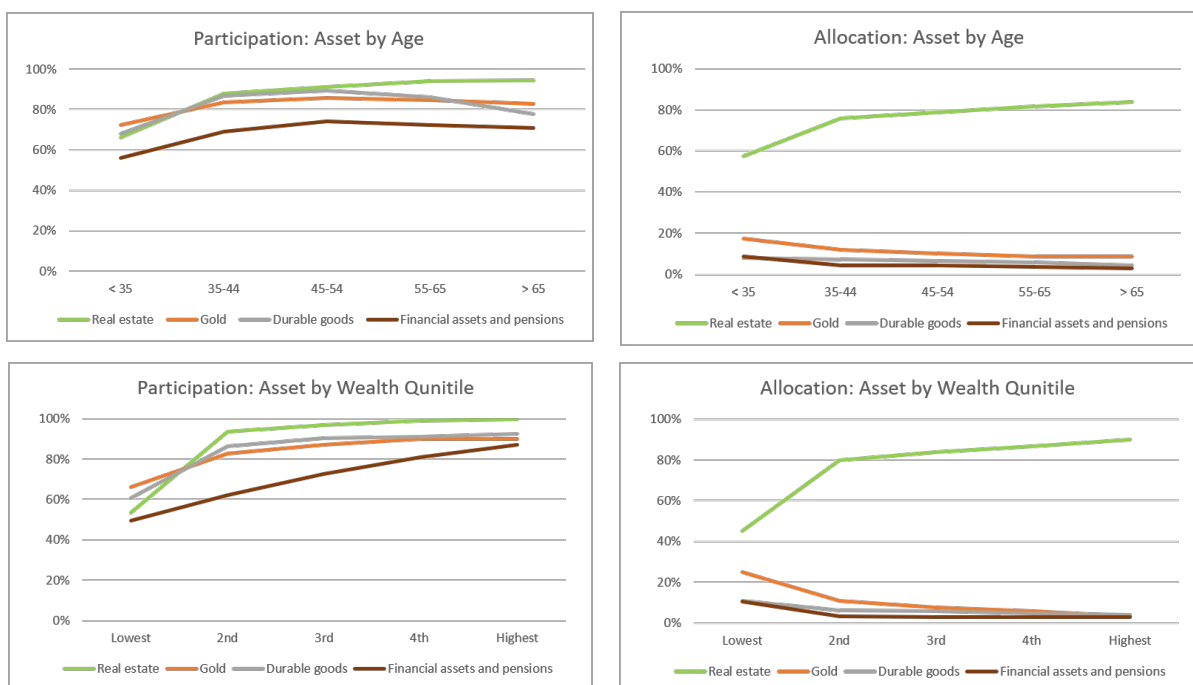
3.3 Factors Affecting Household Decision Making

3.3.1 Demographic Profile of Households

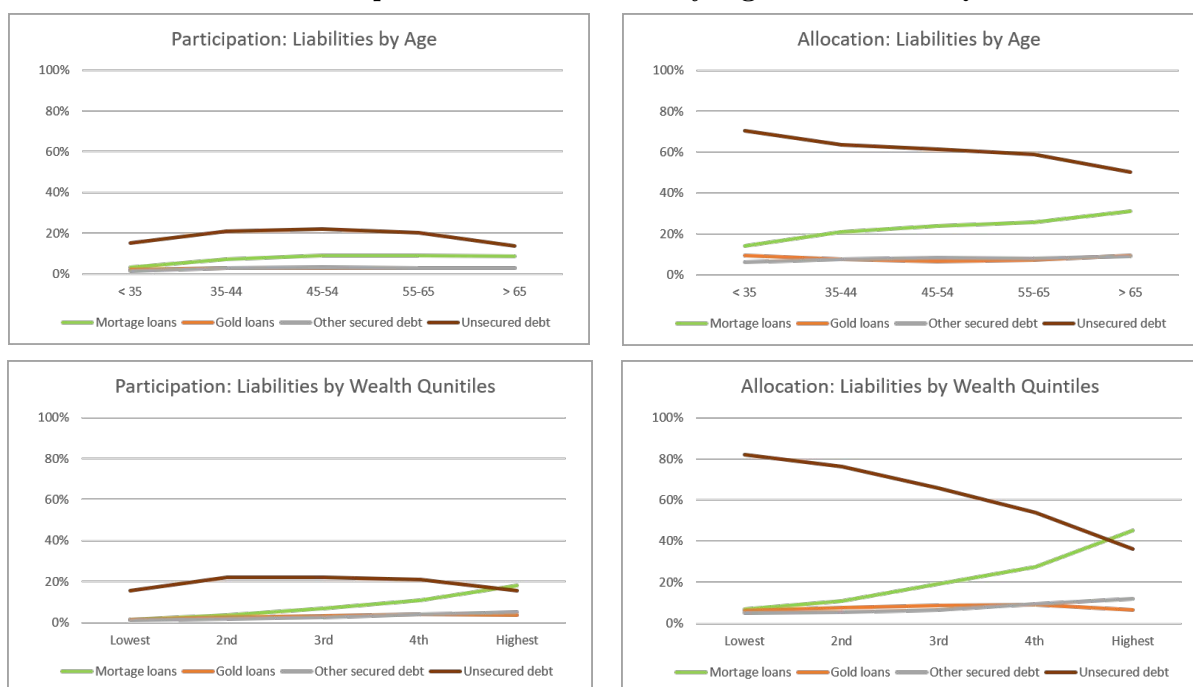
The HFC Report finds significant correlations between the share and type of assets and liabilities held by a household and their profile in terms of their education and wealth levels. On the assets side, the share of real estate increases and the share of gold decreases as the households' level of wealth increases, reflecting a potential trade-off between real estate and gold among wealthier households. Interestingly, the share of financial assets and pensions wealth remains constant for different levels of wealth. Additionally, education is positively correlated with the share of financial assets. Higher the education, higher the holdings of financial assets. On the liabilities side, unsecured debt and non-institutional debt is negatively correlated with households' wealth and education levels.

³¹Unsecured loans include loans from money lenders, family and friends, credit cards, and overdraft facilities

Asset: Participation and Allocation by Age and Wealth Quintile



Liabilities: Participation and Allocation by Age and Wealth Quintiles



Source: All India Debt and Investment Survey (AIDIS), NSSO (2012)

Similarly, there exist differences in the ownership of a financial account by gender (RBI Household Finance Committee, 2017). According to the Global Findex Survey 2017, women are six-percentage points less likely to own a financial account (Demirgüç-Kunt et al., 2017). Overall, these trends highlight the role that demographic factors play in influencing households' financial decision as they take into account the socio-economic, cultural and geographical context households operate in.

3.3.2 Behavioural Preferences and Biases of Households

Behavioural factors such as time preference, self-control and psychological bias are said to be some of the main factors explaining consumer choice inefficiencies (Agarwal et al., 2017). In the Indian context, while there is a paucity of data and research on the role of behavioural factors in determining household choices, the Household Finance Committee Report, comprehensively lays down some of the observed determinants of households' behaviour (RBI Household Finance Committee, 2017).

Indian households' skewed allocation in physical assets and use of informal mechanisms for debt and risk management can largely be explained by their risk preferences, lack of trust and general perception of formal financial institutions. According to the survey conducted by the Financial Planning Standards Board (FPSB) India³², risk tolerance features as a key consideration while making market investments. The survey finds that close to 20 percentage of respondents cite 'safety' of returns in investments and 15 percentage of respondents cite 'risk averseness' as factors contributing to their investment decisions. Additionally, households invest in 'perceived' safe assets such as real estate and gold compared to financial assets such as mutual funds which they perceive to be too risky with uncertain returns.

Similarly, take up for insurance products remain extremely low.³³ While this can be attributed to factors such as unaffordability of formal insurance and ease of access to informal sources of debt, behavioural factors such as lack of trust towards insurance products and lack of awareness and understanding of the product, its features and its benefits (Cole et al., 2013) also have an impact on the take-up of the product. The HFC Report (2017) also attributes time-inconsistency in the payoffs associated with holding insurance as a reason for low-uptake of the product. The report states that the welfare gains for a healthy household to adopt health insurance might not be easily understood. This, coupled with mistrust, leads to an aversion from investing in these products. Some of these behavioural patterns were also reported by the NABARD All India Rural Financial Inclusion Survey (NAFIS) (2017)³⁴ that finds over 30 percentage of households to agree with the statements "*I tend to live for today and let tomorrow take care of itself*", "*Money is there to be spent*" and "*I find it more satisfying to spend money than to save for the long-term*" reflecting a polarization towards spending money and having short term orientation towards financial planning. Personal attributes such as cognitive ability, psychological barriers and the level of self-confidence also play a role in participation across financial markets (Mowl & Boudot, 2014).

Overall, Indian households' financial demands are complex and involve multiple aspects including their cognitive and behavioural biases, issues of trust in the financial system, heterogeneous needs based on education and wealth levels, geographical location and their volatile income patterns.

³²Financial Planning Standards Board-<https://india.fpsb.org/>

³³Insurance penetration in India continues to be one of the lowest at 3.69 percentage as on March 2018.

³⁴NAFIS, 2016-17- https://www.nabard.org/auth/writereaddata/tender/1608180417NABARD-Repo-16_Web_P.pdf

3.3.3 Uneven penetration of formal financial services across Indian states

Substantial regional variation exists across Indian households' balance sheet. On the assets side, some of the northern states such as Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand and Haryana have more than 80 percentage of allocation in real estate. Interestingly, some of the southern states such as Tamil Nadu, Andhra Pradesh and Union Territories such as Goa, Daman & Diu, Pondicherry and Andaman & Nicobar have more than 20 percentage of allocation in gold. Allocation in financial assets is the lowest for all states; however, some of the southern and north-eastern states have comparatively higher allocation (approximately 10 percentage). On the liabilities side, gold loans constitute more than 40 percentage of allocation for states such as Tamil Nadu and Goa, given the high proportion of asset allocation in gold. Unsecured debt is highest for states such as Bihar, Rajasthan, Tripura, West Bengal and Assam and lowest for most of the North-Eastern States and Union Territories. Similarly, loans from non-institutional sources display the same trend, with the highest allocation for most of the northern states and lowest for North-Eastern states and Union Territories.

These results can be closely tied to the regional variation in the availability of formal financial services across a suite of products such as savings, credit and insurance. The CRISIL Inclusix 2018 Survey uses four key parameters, namely, branch penetration, credit penetration, deposit penetration and insurance penetration to measure the level of financial inclusion across Indian states. The survey results reveal southern states to be leading across each of these parameters by huge margins, followed by western, northern, eastern and north-eastern states. The uneven spread of formal financial services across regions can, therefore, lead to differential levels of uptake and use of formal financial services reflected in households' balance sheet across regions.

Similarly, in terms of financial depth, commonly measured as 'credit to GDP ratio', wide variation is observed across sectors and regions. While the overall credit to GDP ratio at the country level stands at 58.6 percentage, for sectors such as agriculture and service MSMEs it is even lower at 36 and 25 percentage respectively (Kumar & Baby, 2016). Across regions, north-eastern states such as Arunachal Pradesh and Nagaland have an overall credit to GDP ratio of less than 15 percentage, while cities such as Chandigarh and the National Capital Region have an overall credit of more than 150 percentage³⁵, highlighting uneven penetration of formal credit, causing market imperfections.

3.3.4 Market Limitations

Gaps between access and use of financial services

Over the last decade, India has made tremendous progress in accelerating access to formal financial services. The Global Findex Survey 2017 reports that 80 percentage of adults in India have an account at a financial institution compared to 35 percentage in 2011, thereby tackling the first-order problem of 'access' to formal financial services (Demirgüç-Kunt et al., 2017). However, despite the innovative efforts in creating newer channels, products and services, disintermediation of finance and tech-enabled public infrastructure,

³⁵BIS credit to GDP gap statistics- https://www.bis.org/statistics/c_gaps.htm

the usage of financial services remains extremely low. This is a huge challenge from the perspective of building an optimal financial portfolio as well as achieving financial well-being for Indian households. Studies have pointed towards the problem of zero balance, inoperative and dormant accounts highlighting the problem of lack of usage of savings accounts (Inclusive Finance India Report, 2018).³⁶

High transaction costs remain one of the key factors contributing to the low usage of financial services. The cost of accessing and using banking services in a low access environment is large, primarily due to lack of proximity to transaction points.³⁷ The total cost of opening a bank account amounts to nearly one full day of earnings by poor households (Mowl & Boudot, 2014). These costs disproportionately affect the poorest in society because income generation time is more valuable to low-income households. Non-monetary costs in the form of inadequate understanding of the terms and conditions of formal financial products and services and cumbersome procedures (paperwork, KYC process, etc.) can also act as a major deterrent for Indian households from using formal financial services.

Overindebtedness

The overall picture on access to credit among low-income households remains suboptimal due to the uneven spread of credit products across regions of India, leading to twin problems of over-indebtedness in some regions and poor access to credit in others.

Overindebtedness creates significant distress among households. Households with excess debt are observed juggling various sources of funds to maintain their creditworthiness and experience significant asset erosion or extreme dependence on their social networks (Grammling, 2009; Guérin, et al., 2013). Over-indebtedness can have severe implications for low-income households as it forces them to choose undesirable coping strategies to manage debt such as cutting down on essential expenses or pulling children out of school to meet repayments (Schicks, 2012).

In the Indian context, the rapid expansion of joint liability group lending since 2012, has led to a marked growth in the microfinance industry, with the average loan outstanding per client and branch nearly doubling between 2012 and 2015 compared to a stagnant growth in the average number of clients per branch. This points to a potential risk of borrower over-indebtedness and is counted among the biggest threats to customer protection in microfinance (Prathap & Khaitan, 2016).

Inadequate Risk Protection

The RBI Committee on Comprehensive Financial Services for Small Businesses and Low Income Households (henceforth referred to as RBI CCFS)³⁸ envisioned that each low-income household and small-business would have ‘convenient’ access to providers that have the ability to offer them ‘suitable’ insurance and risk management products, which at

³⁶Inclusive Finance India Report 2018 - <https://www.inclusivefinanceindia.org/uploads-inclusivefinance/publications/1065-1001-FILE.pdf>

³⁷Better financial inclusion: create an enabling environment for the underserved to save, borrow and invest-<https://www.moneycontrol.com/news/economy/policy/better-financial-inclusion-create-an-enabling-environment-for-the-underserved-to-save-borrow-and-invest-4119611.html>

³⁸RBI Committee on Comprehensive Financial Services for Small Businesses and Low Income Households-<https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/CFS070114RFL.pdf>

a minimum allow them to manage risks related to commodity price movements, longevity, disability and death of human beings, death of livestock, rainfall and damage to property and pay 'reasonable' charges for their services (RBI CCFS, 2013). The current status of insurance penetration and coverage remains far from this vision.

Apart from issues pertaining to the level of access and outreach described previously, households also suffer from inadequate coverage across various risk mitigating products such as insurance, pension and other retirement accounts. According to Dvara Research's analysis³⁹ of government data on insurance, at least 988 million Indians are not covered by any form of life insurance and those who are, are assured of only 8 percentage of what may be required to protect a family from risk. A similar analysis of the Atal Pension Yojana (APY) reveals penetration for only 3 percentage of the population employed in the unorganised sector and is estimated to cover only 51 percentage of monthly expenditure (in real terms), suggesting a gross deficiency in the coverage of the pension amount.⁴⁰

Additionally, the persistency rate, measured as policies with regular premium contributions, reflect a downward trend.⁴¹ Similarly, in the case of insurance products, low persistency levels remain a constant challenge. A study on micro-insurance penetration and entrenchment found that only 65 percentage of the study sample renewed their insurance policy at least once after their first policy expired (Sane & Thomas, 2015).

In the case of rainfall insurance, studies have found challenges pertaining to inadequate protection from rainfall and weather-related risks that limit the demand for these products. A study on formal rainfall insurance for an informally insured group of farmers found that basis risks⁴² significantly affected people's demand for formal rainfall insurance (Mobarak & Rosenzweig, 2014). Distance to the rainfall station negatively affected take-up. For every kilometre increase in the distance of the rainfall station for a farmer without informal insurance, demand for formal insurance decreased by 6.4 percentage. These findings suggest that basis risk, or the risk that insurance payouts will not occur when the household needs coverage, is a significant impediment to taking up index-based rainfall insurance. An extensive study on understanding barriers to household risk management estimated expected payouts for rainfall insurance policies in India based on historical rainfall data and found consistently lower payouts (as a fraction of actual losses) compared to countries such as the US, acting as a significant impediment for the take up of these products (Cole et al., 2013).

These findings highlight the limitations of various types of risk mitigating products available to low-income households in India and its inadequacy in protecting customers from risks they face during their lifetime.

³⁹State of insurance in India-<https://www.indiaspend.com/988-mn-indians-do-not-have-life-insurance-those-who-do-are-insured-for-7-8-of-whats-needed-to-cover-financial-shock/>

⁴⁰Dvara Research blog on Atal Pension Yojana-<https://www.dvara.com/blog/2015/03/09/an-initial-analysis-of-the-atal-pension-yojana/>

⁴¹For instance, the average persistency for APY as reported by banks is approximately 66 percentage for the second year of the APY accounts, suggesting the possibility of a further decline in the persistency levels for subsequent years.

⁴²Basis risk is the risk that insurance policy's standard payout may not fully cover a household's losses because the amount of rainfall measured at weather station and the farm could differ.

Lack of Customised Savings and Investment Products

Savings and Investment products fulfil the wealth creation goals of households. While traditional products such as basic savings account and fixed deposit offered by banks have found to provide a negative real rate of returns (RBI CCFS, 2013), the savings product is an important tool for individuals and households to manage their money in case of surplus or deficit, make and receive payments and use their savings account as a safe place to store their wealth. Households also need access to formal investment products that enable them to save systematically over a substantial period of time, protect them against inflation risk and earn sufficient returns through exposure to debt and equity capital markets, in order to plan for their long-term goal such as retirement or education of children (George et al., 2020).

Customisation of financial products and services based on households' balance sheets, goals, and risk preferences is a useful way of developing and offering financial propositions to low-income households (Ananth & Shah, 2013). However, features of savings and investment products currently available in the financial market are not well suited to the needs and savings capacities of low-income households.

On the savings front, there is a lack of customized savings product with non-equal instalment contribution that is better suited for low-income households. Products such as fixed deposits require the customer to invest a one-time lumpsum amount for a fixed, typically long-term period. While these savings products are ideal for a salaried individual earning a fixed amount of income on a monthly basis, these products do not meet the financial requirements of low-income households who generally deal with volatile cash flows (Collins et al., 2009). Additionally, these products offer a negative real rate of return and have very low liquidity as the amount gets locked in for a fixed tenure. This hinders low-income households from accessing their savings whenever needed, further disincentivizing them from saving in formal sources of finance. These factors contribute to the low rate of savings at formal financial institutions leading to issues such as dormancy and inactive bank accounts, as described previously. Low-income households instead prefer to rely on informal savings mechanisms such as savings through chit funds and Self-Help Groups⁴³ that have high risk, high cost, and limited functionality (Karlan et al., 2014).

Similarly, the use of investment products among low-income households remains extremely low. Research in this field points to inefficient household outcomes due to lack of availability of customised products. A study on the enrolment rates of National Pension Scheme shows that while the rate of enrolment has been growing consistently, there is a drop in the persistence of contributions under the scheme, resulting from liquidity constraints and income uncertainty. This highlights the need for more customised products that account for the timing of contributions, income uncertainty and suitability of contribution frequency for households engaged in the informal sector (Sane & Thomas, 2015).

Given the recent slowdown in the economy and its related repercussions in the form of falling interest rates on small savings and bank deposits and depressed returns from

⁴³Chit funds and SHGs operate via both formal and informal channels, although they largely started as an informal mechanism to save for low-income household

asset classes such as real estate and gold, there has been an increased interest in the capital markets among India households. According to the Inclusive Finance India Report 2018, the Asset Under Management (AUM) – an indicator of aggregate level of funds under various mutual fund schemes, both equity and debt - grew by 85 percentage in the last three years. However, the impact of this growth on economically weaker sections, measured by the participation in investments disaggregated by geography and size of individual holdings remains negligible.

While the potential of an investment product for low-income households is huge, given the gains of investing in financial assets, there are several challenges that need addressing such as (i) availability of suitable investment products for low-income households through channels that are easily accessible to them in rural and remote areas (ii) the challenges of making people aware of various types of investment products along with the associated risks of the products and providing suitable investment advice (iii) awareness of frontline staff in dealing with clients on the complexities of capital market in relation to customer's financial goals (iv) misalignment of consumer's and agent's incentives, wherein the incentive to sell one product significantly outweighs the others and the distributors are more likely to push products that are lucrative to them, than products that may be suitable for the consumers.

Inadequate financial advice

In retail finance, there are persistent imbalances of information, expertise, power and agency between the buyer and the seller of financial products. This phenomenon gets exacerbated for low-income households resulting in families undertaking suboptimal resource allocation and risk mitigation strategies. In India, the imbalance of information, expertise and agency is much more pronounced between low-income households as consumers and sellers of financial products. Indian households largely rely on informal networks such as friends, family, neighbours and themselves for financial advice rather than on formal sources- NAFIS, 2016-17 finds 51 percentage of households to rely on financial advice from friends and family.

However, financial advice from formal sources becomes necessary for two key reasons⁴⁴. Firstly, for low-income households, there's a heightened need to look into all issues around protecting human capital and enable them to build resilience in the face of illness/ accident/death. Currently, most advice tends to focus on investments, and very little attention has been paid to insurance as a risk mitigation strategy (Ibbotson, Milevsky, Chen, & Zhu, 2007). Low-income households and the contexts they operate in are not homogeneous and therefore require tailored financial advice regarding investment and insurance depending on the family profile, current financial portfolio, cashflows pattern and frequency, inheritance, capital gains, occupational profile, risk-appetite and most importantly life goals. Understanding that low-income households have limited resources, it is also important that they can access advice on which member should participate and what kind of product they should use to meet their life-cycle goals.

Secondly, the balance sheet of a low-income household has a combination of the physical and financial asset and multiple borrowing from formal and informal sources. Different

⁴⁴The Nature of Financial Advice for Low-Income Households - <https://www.dvara.com/blog/2017/09/19/the-nature-of-financial-advice-for-low-income-households/>

loans have different repayment schedules, maturities and other terms of contract, while on the assets side, the households may not know the current valuation or depreciation of their physical assets. In this context, financial advisor can help in answering pertinent questions regarding choice of formal loan to refinance other informal loans, liquidation process of assets to reduce debt burden, the right choice of loan tenure and structure to ameliorate stress and to create a comprehensive balance sheet view of their households.

However, financial advice in its current form and structure is inadequate and does not meet the requirements of Indian households. Firstly, households are often required to go to multiple distributors in order to obtain a suite of financial products that holistically address their lifecycle goals. This prevents them from getting an integrated view on their financial advice needs. Secondly, advice when available tends to be aligned to manufacturer sales objectives rather than HH financial well-being due to the lack of separation between distribution and advice. Current regulatory interventions around preventing mis-selling have focused on separating sale and advice into distinct offerings for the customer through separate licensing/registration requirements with advisors being allowed to receive volume-based incentives thereby reducing the effectiveness of such a separation. Additionally, the approach of separating advice from sale adds to the cost-burden of low-income households on account of seeking financial advice, which households are not willing to pay (George et al., 2020).

Overall, there is a lack of unbiased advice and sale practices that keep low-income households' best interest in mind. From a regulatory perspective, there is an impending need to collapse the distinction between sale and advice and embark on a regime that regulates the nature of the interaction between financial service providers and retail customers. In addition, the obligation to not make an unsuitable sale or advice must lie directly with financial service providers irrespective of whether they are legally licensed.

3.3.5 Regulatory gaps

Finally, regulatory gaps in the financial services industry can have adverse effects on the financial well-being of households. Some of the key gaps in the context of financial services for low-income households are: (i) lack of uniformed regulation for different types of financial service providers (cooperatives, SHG promoting organisations, banks, fintech, etc.) serving low income households (ii) lack of uniformity in the regulation of financial advice due to different classification of financial advisors falling under the purview of different regulatory authorities (iii) increasing modularisation and disintermediation with technology enabling separation of origin, distribution and service function leading to regulatory challenges as a single financial service provider could fall within the purview of more than one regulator and finally (iv) lack of adequate customer protection leading to mis-sale of products that are 'unsuitable' thereby leading to investment mistakes by consumers and inefficient grievance redressal process due to multiple touch-points that reduces the ability of the customer to identify a point to seek redressal.

Regulators also provide prescriptive product specific regulations. For example, IRDA provides prescriptions on amount coverage for micro-insurance products; similarly, RBI provides prescriptions on lending limits for microcredit products. While such regulations are aimed at protecting the customer's interest, over-regulation can stifle competition and take away the obligations on providers to ensure they are acting in the customer's interest.⁴⁵

⁴⁵Let's stop kicking the can down the road: Highlighting important and unaddressed gaps in microcredit regulations-<https://www.dvara.com/blog/2019/10/24/lets-stop-kicking-the-can-down-the-road-highlighting-important-and-unaddressed-gaps-in-microcredit-regulations/>

4. Priorities for Innovation in Financial Services for Low-Income Households

4.1 Overview

The Indian financial sector, in its current form, is unable to adequately meet the financial requirements of low-income households. Firstly, the sector for this segment is characterized by low penetration of savings, investment, retirement and insurance product. While credit products for low-income households have taken off in the last decade primarily through the success of the microfinance model, the availability of credit is skewed across regions, leading to issues of over-indebtedness. Secondly, ‘access’ to bank accounts, considered as the gateway to a suite of financial products and services, has not necessarily translated into ‘usage’, reflecting market inefficiencies that turn the benefits of participating in financial markets into costs (Campbell, 2006). Thirdly, substantial issues exist with the design and distribution channel of financial products and services that fail to service the last mile customer and meet the unique requirements of low-income households, further excluding them from the formal financial system. Finally, gaps exist in the regulation of the financial sector, stifling competition and innovation on one hand and consumer harm on the other, leading to inefficient household outcomes.

The Household Finance Committee argues that solutions in Indian household finance face the rare challenge of needing to be both customized and scalable, to maximize the chances that households efficiently use these products to achieve their objectives and identifies five principles (Relevance, Intuitiveness, Customisation, Scalability and Fair Pricing) to guide the framework of such innovation (RBI Household Finance Committee, 2017)

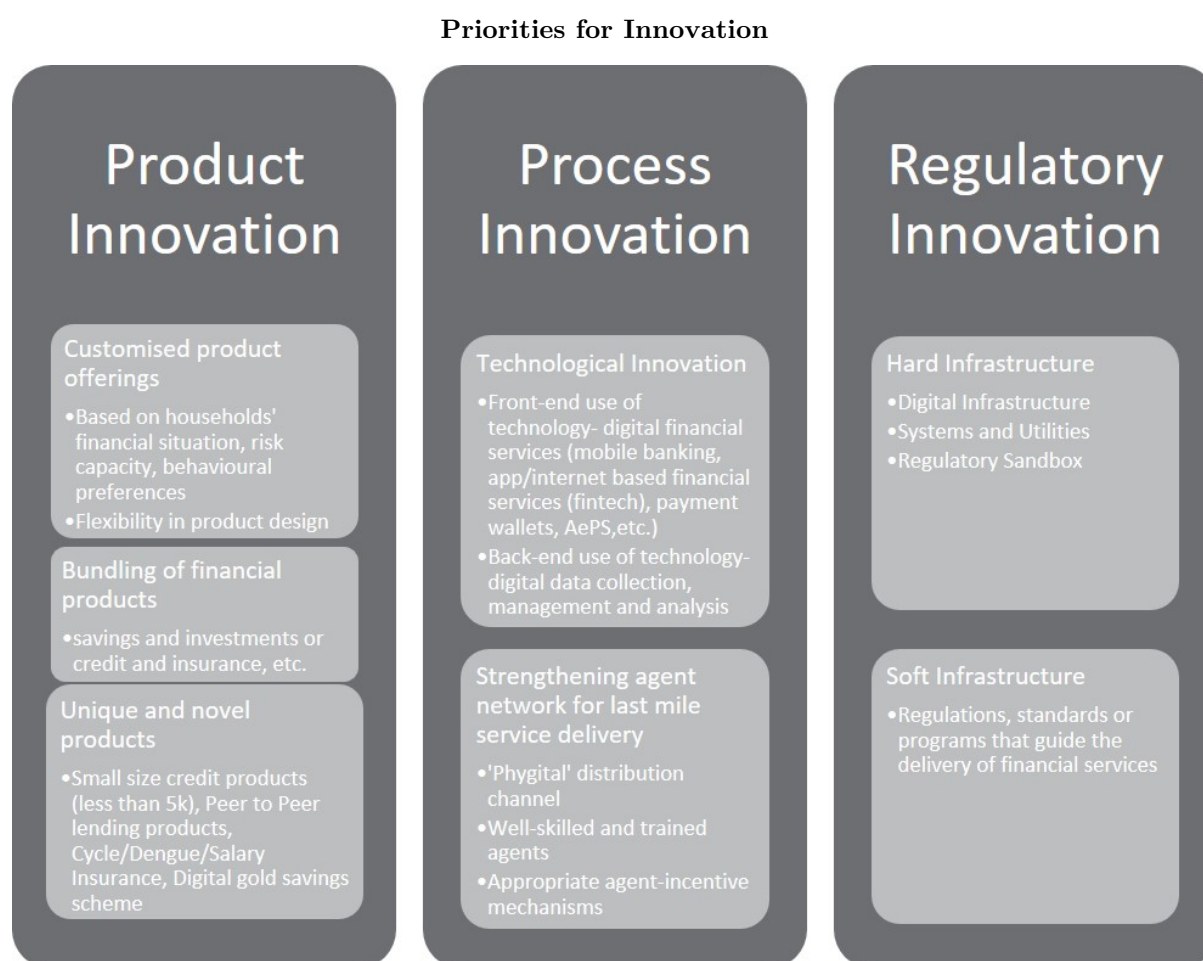
This chapter reviews the various priorities for innovation that financial service providers and regulators should adopt in order to expand and deepen access to formal financial services among low-income households. We identify three key areas of innovation for the financial services industry- product innovation, process innovation and regulatory innovation. Product innovation refers to improvements in the design/features of a financial product that matches the complex financial requirements and dynamic lifecycle issues of low-income households. Process innovation refers to innovation in the process of provision of financial services, i.e., innovation in distribution channels or mechanisms through which financial service is provided. Regulatory innovation, on the other hand, refers to innovation across regulatory guidelines and provision of infrastructure to build a more enabling and conducive environment for the expansion of financial services industry, especially for low-income households. Innovation across this spectrum can help address the classic challenges of financial inclusion in terms of (i) gaining access to new market segment (ii) creating new offerings for existing customers (iii) deepening customer engagement and product usage (iv) enabling better data collection, use and management.⁴⁶

Overall, for a well-functioning ‘complete’ financial market⁴⁷(Arrow & Debreu, 1954), financial service providers will have to offer customized solutions to meet the unique

⁴⁶The ‘Strange Bedfellows’ Myth: How Fintechs and Financial Institutions Can Partner for Mutual Benefit – And Greater Financial Inclusion-<https://nextbillion.net/the-strange-bedfellows-myth-how-fintechs-and-financial-institutions-can-partner-for-mutual-benefit-and-greater-financial-inclusion/>

⁴⁷Complete market is a market with two conditions: negligible transaction cost with perfect information; price for every asset in every possible state of the world

needs of individual households through a high quality distribution channel that is characterised by service that is convenient, flexible, reliable and continuous (Ananth & Shah, 2013).



4.2 Product Innovation

Low-income households require products that are customized to suit their financial situation, risk capacity and behavioural preferences. In this context, the design of financial products has a huge role to play in influencing consumer choice (Agarwal et al., 2017). Unfortunately, the financial services industry is characterized by a lack of strategic focus on serving low-income households resulting in products designed for the affluent mass customers getting sold to low-income households (George et al., 2020). Low-income households thus find financial products to be unresponsive to the flexibility their lives demand.⁴⁸

However, with the emergence of new players, including Small Finance Banks and fin-techs, there is a growing interest in better-designed products for this segment. The HFC Report recommends 'customisation' to be one of the key guiding principles in innovation for household finance policy by designing products that help achieve household specific objectives.

⁴⁸Designing for Low-Income Consumers, Dalberg 2019 - <https://dalberg.com/our-ideas/7-design-principles-create-financial-products-low-income-consumers/>

4.2.1 Unique and Novel Products

For a long time, financial services for low-income households have largely remained focused on credit products. While this has undoubtedly helped low-income households build resilience and seize investment opportunities, it has left substantial gaps in providing a comprehensive financial solution to this segment. Recognizing this opportunity and tapping into the huge market of emerging customers, financial service providers are innovating by designing and offering newer types of products for low-income customers. Firstly, a new wave of Fintechs using tech-based solutions is making customized, unique and novel product offerings to low-income households. For example, Kaleidofin, using a savings led approach is helping its customers meet their life-cycle goals through the provision of tailored investment advice and products. Kaleidofin uses artificial intelligence to generate financial plans for its customers which form the basis of financial advice using which customer make investments across a range of products. Kaleidofin also offers insurance products by bundling life, accident and disability insurance with investment products and charging a transparent fee to cover the cost of insurance. Similarly, Toffee Insurance, an Insuretech, provides insurance to cover risks associated with aspects of everyday lives. They provide novel insurance products for dengue, international travel, cycle, backpack and daily cash. Some of their products, such as the salary protection plan specifically target the low-income migrant population segment, thereby reaching out to some of the specific needs of this untapped segment. Other NBFCs such as Dvara KGFS are offering comprehensive financial packages in the form of insurance, savings and investment plan to encourage a savings culture among low-income households. These packages incorporate customers' financial profile, needs and goals to offer customized solutions.

These examples are however far and few. There are a range of products that are simply 'missing' from the market for low-income households, presenting a huge opportunity for financial service providers (FSPs). Products such as emergency loans, small ticket-size loans (less than Rs. 5000), affordable health insurance with adequate coverage, flexible saving and investment products are not available for low-income households at scale. FSPs could think of ways in which they could fill this gap. For example, providers could develop insurance products specifically targeted towards women from low-income households. Research shows that women view insurance as a way to protect themselves and their family from shocks compared to men who might perceive insurance as a saving/investment mechanism. Additionally, one-third of the world's entrepreneurs are women who want to grow their business and take reasonable risks. Insurance targeted towards women can, therefore, be centred around women's specific needs and attitudes⁴⁹ Other insurance products such as cattle insurance, rainfall insurance is not adequately developed to cater to the needs of low-income households while also posing substantial moral hazard challenges, thereby making the product expensive and inefficient. Similarly, it is well known that women save in gold. Formal financial products that tap into this habit could become successful business models. Several banks, NBFCs and financial institutions have already started offering digital gold savings product/gold Systematic Investment Plans (SIP)⁵⁰, but the model is yet to take off in popularity among the low-income segment.

⁴⁹She for Shield- <http://documents.shihang.org/curated/zh/228381492593824450/pdf/114402-WP-SheforShield-Final-Web2015-PUBLIC.pdf>

⁵⁰Examples of these are Digi Gold Savings Plans offered by banks, Gold based mutual fund products/Gold based SIPs. Dvara Smart Gold is also offering Gold based savings product.

There is also an urgent need to develop savings products that are flexible enough to meet the financial capacities and constraints of low-income households. Regular savings account and basic savings bank deposit accounts (BSBDAs) offered by Small Finance Banks such as Ujjivan are a step in the right direction. These savings products do not charge maintenance fees and do not have monthly balance criteria. Private players could also innovate across various type of investment products for low-income households. For example, low-income households could invest small amounts in safe money market products such as debt funds that provide a high and positive real rate of return in the long run.

Overall, there is a huge opportunity for financial service providers to meet the financial needs of households at the bottom of the pyramid and doing so would create a win-win situation for both FSPs and last mile consumers.

4.2.2 Bundling of Products

Bundling of products is another method of product design that allows the financial service provider to use its expertise to sell an ideal combination of products (compared to a disaggregated product delivery approach) such that it provides households with a comprehensive financial solution at low costs, thereby improving household outcomes (Ananth & Shah, 2013). However, whether bundling of product protects consumer's interest or that of the financial service provider is an important question to investigate.

For instance, one common way in which low-income households access insurance is through the bundling of credit and life insurance cover sold to them by lenders such as NBFC-MFI and other NBFCs. Here the insurance product can be relatively easily bundled with credit, and the premiums can be collected with loan repayments, thereby reducing the transaction costs. However, the structure of such a product requires the customer to pay the premium, even though the insurance coverage amount goes to the lender and not the nominee in the event of death of the borrower, thereby protecting the seller's interest compared to that of the consumer (George et al., 2020). A study on the impact of bundling health insurance with microfinance credit found that the requirement to purchase health insurance substantially reduced microcredit clients' loan renewal rates, meaning that people were willing to give up credit to avoid buying insurance (Banerjee, Duflo & Hornbeck, 2014).

Therefore, while newer kinds of bundling models are emerging, these do not always serve the customer's interest. There are instances where even though the second product in the bundle is not demanded by the customer, the customer still ends up incurring the cost for the product (George et al., 2020). There is, therefore, a need to innovate across bundling of products such that low-income households (who are already financially constrained) do not end up incurring additional costs for products that they don't demand or need. Parallely, there are other kinds of bundles that provide an ideal combination of products, thereby improving consumer welfare. However, it might be difficult for households to understand the underlying logic behind such a product design that bundles two or more products, therefore preventing them from entering appropriate financial contracts. *“This remains to be an important design issue for the financial sector as the effectiveness of access to a range of products would depend significantly on how the products are used*

by the households, which in turn depends on how the products are designed” (Ananth & Shah, 2013). Financial service providers can, therefore, use their expertise in helping the consumer understand the implications of a set of products in the specific context of the household and offer an integrated financial proposition to the client as a piece of advice. Innovation in the design of the product that bridges the information and expertise gap will enable more optimal decisions by households.

4.2.3 Product Design based on Customer Profile

The design of the product should ideally be customized to suit the consumer’s socio-economic profile, behavioural biases and preferences as they have a significant impact on households’ decision-making process. FSPs should “*design products and processes that respond to the behavioural biases in a manner that induces individuals to select the right products that suit their behavioural profile*” (Ananth & Shah, 2013). Currently, there is a dearth of financial service providers that incorporate consumers’ behavioural factors into their product sales strategy. Traditional financial institutions such as banks adopt a standardised, one-size-fits-all approach and hardly offer any customised solutions for low-income households. A few cases where behavioural factors such as self-control bias are taken into account are saving, and investment products with default options for regular contribution, but these products are neither relevant nor used by low-income households. On the other hand, a growing number of Fintechs are innovating across products based on the behavioural profile of customers. For example, Credit Vidya⁵¹ provides a comprehensive credit score of customers using a machine learning algorithm which is based on customer’s behavioural, social and biometric data to quantify the risk of first-time borrowers. Another set of emerging Fintechs are providing lending market-place solutions and solutions for better customer engagement. For example, AnyTimeLoan provides short term unsecured loans to needy people for amounts ranging from Rs. 1000 to 60000, thereby accommodating the credit need of low-income households.⁵² However, product innovation based on consumer profile may not always be geared to improve consumer welfare.⁵³

Products also need to be designed based on the financial constraints and capacities of low-income households, while at the same time keeping their interests and rights at the heart of any product development. For example, products such as pensions and insurance for low-income households, largely made available by the Government, suffer from low persistency rate, high lapsation rate and inadequate coverage. Potential product improvements in this context could include nudges and reminders for regular contribution towards these schemes so as to avoid lapsation of policies and flexibility in the time and amount of instalment contribution based on customer’s cash-flows. Research also points to product design interventions such as nudges and reminders in the context of increasing savings among low-income households (Karlan et al., 2010).

⁵¹ CreditVidya's official website-<https://creditvidya.com/>

⁵² Technology for Financial Inclusion- Repository of Technology Service Providers-<http://ifmrlead.org/wp-content/uploads/2018/05/Technology%20for%20Financial%20Inclusion.pdf>

⁵³ Case Study: Fintech and the Financial Exploitation of Customer Data-<https://privacyinternational.org/case-studies/757/case-study-fintech-and-financial-exploitation-customer-data>

To summarise, there is an urgent need to innovate across financial products that meet the unique requirements and preferences of low-income households, while at the same time protecting consumer's interest. The Dalberg study on Designing for Low-Income Consumers⁵⁴, recommends market segmentation of low-income customers based on demographic profile, behavioural preferences and psychometric factors. Using this methodology, they identify six segments of low-income customers, namely, *providers*, *survivors*, *followers*, *independents*, *seekers* and *influencers*. This segmentation can then be used to design segment-specific products that match the specific financial situation, preferences, and behavioural characteristics of the customer. They recommend seven design principles to create financial products for low-income consumers that take into account their aspirations, social networks, capabilities, lifestyle, biases and perception about formal financial services.⁵⁵ Ultimately, consumer choices across financial products are largely driven by cognitive limitations, time preferences, self-control and incentives, psychological bias and social networks (Agarwal et al., 2017). Therefore, financial service providers must consider these factors while designing a product, especially for low-income households, who might be even more susceptible to making choices that don't always maximise their welfare.

4.2.4 Flexibility in Product Design

Currently, financial service providers largely offer products across savings, investments, insurance and credit that have standardized product features offering little to no flexibility. We advocate for innovation that introduces flexibility in product design. Flexibility in products consider the volatility in the value and timing of cash flows in the household due to seasonal activities, business cycle stages, health shocks and other factors, thereby providing products that are more responsive to the lives of low-income households.

For example, there is a growing body of research that finds flexibility in microfinance loan contracts to improve households' outcomes. Introducing flexibility in repayment of debt can have positive implications on the suitability of the product itself.⁵⁶ Research on flexibility in repayment frequency has found significant positive effects on the financial well-being of the borrowers and has been found to reduce stress. Flexibility in microfinance loan contracts can be introduced in the form of flexible timing, flexible instalments, one-time moratorium, prepayment of loan and line of credit (Field & Pande 2008; Czura, 2015; Barboni & Agarwal, 2017). Fixed repayment schedule, on the other hand, can affect investment choices and aggravate the liquidity position of the household. There is, therefore, a growing need for providers to design efficient and effective loan contracts that are more suitable to clients' needs, preferences, behaviour and well-being.

Similarly, research on savings for poor finds that soft commitment savings devices that are flexible enough to accommodate the unsteady and varied preferences of the poor are

⁵⁴Aspiring Indians 1- Understanding their financial needs, attitudes and behaviour- https://dalberg.com/system/files/2019-04/AI%201%202_LR_combined%20cover.pdf

⁵⁵7 design principles to create financial products for low-income consumers-<https://dalberg.com/our-ideas/7-design-principles-create-financial-products-low-income-consumers>

⁵⁶Flexibility in microfinance loan contracts- <https://www.dvara.com/blog/wp-content/uploads/2018/12/Research-Brief-Flexibility-in-Microfinance-Loan-Contracts.pdf>

better suited for this segment⁵⁷, thereby deepening customer engagement and product use.

4.3 Process Innovation

Process innovation, i.e., innovation across distribution or delivery channel of financial services, should focus on providing services in a convenient, flexible, reliable and continuous manner. Distribution channel comprises of technology and people, both of which must be secure and efficient, in order to induce “state-of-mind effects” that allows one to feel truly included in the financial system (Ananth & Shah, 2013). Below we present recent innovation along technology and people and gaps across these two channels that need to be bridged.

4.3.1 Technological Innovation in Delivering Financial Services

India has been at the forefront of innovation in using technology driven solutions to accelerate access to and use of formal financial services. Use of technology in the provision of financial services has the potential to overcome the challenges of high transaction costs, geographic inaccessibility and product mismatch thereby deepening access to formal financial services among financially excluded and underserved households. Technologies such as artificial intelligence, machine learning and Internet of Things have a diverse range of potential use cases within financial services. India has always been an early adopter of technology, especially in the financial services industry. However, in the last one decade, the impact of technology on the industry has changed from an enabler to a positive disrupter.⁵⁸

Given the changing landscape, the last five years has seen unprecedented growth in the Fintech industry. The industry is also increasingly witnessing a shift from competition among traditional financial institutions and Fintechs to rising collaborations among the two. These collaborations are driven by the strengths of each type of institution, thereby creating a win-win situation for both the service providers and the service consumers. Traditional financial service providers are characterised by ‘high touch-low tech’ model. While human insights cannot be replaced, especially in the context of serving low-income households, technology service providers can offer technological solutions to provide customised products and use delivery mechanisms that lead to scale, thereby lowering the costs. Increasingly, financial service providers are adopting innovative technological solutions to address some of the prominent challenges in serving the low-income segment.

However, there are significant issues with India’s Fintech industry that need to be highlighted.⁵⁹ Firstly, most Fintechs remain restricted to serving the affluent, tech-literate

⁵⁷Helping the poor to save- <https://www.ideasforindia.in/topics/money-finance/helping-the-poor-to-save.html>

⁵⁸Next in tech: How technology is redefining financial services in 2018 and beyond- <https://www.pwc.in/consulting/financial-services/fintech/next-in-tech.html>

⁵⁹Microsave Report on Fintech Study to Model a Financial Inclusion lab- http://www.microsave.net/wp-content/uploads/2018/10/Fintech_Study_to_Model_a_Financial_Inclusion_Lab.pdf

TABLE 1: Examples of the use of innovative technology in the delivery of financial services

- MFIs and SFBs such as Annapurna and Ujjivan have partnered with Artoo to undertake doorstep digitisation of customer data, creating efficiency in backend operations, better management information system and data security solutions. These efficiencies in the backend are also improving customer experience by quicker processing of loan applications and in some instances, on-the-spot underwriting.
- Fintechs such as Aye Finance use data analytics tools such as algorithms and psychometric scoring tools to highlight patterns that enable quality lending, thereby providing risk profiling and credit scoring solutions for customers with little to no credit history.
- Fintechs such as Rupie have partnered with RBL bank and Digambar Microfinance to offer micro-credit products through mobile phone without any paperwork, making lending decisions based on machine learning, thereby providing new products and services to low-income customers.
- FinoPayTech is providing low cost payment solutions via biometric enabled Kiosk Banking and handheld device-based banking using biometric transactions to deepen customer engagement and product usage.

customers in tier-1 cities, leaving around 80 percentage of the low- and middle-income (LMI) segment outside the purview of the industry. Secondly, majority of Fintechs are focused on providing credit and payments solution, leaving a significant gap in the market for products like savings, insurance and investments, that are equally, if not more important in the financial lives of low-income households. Thirdly and most importantly, the widespread use of personal information by financial service providers raises the potential for users' personal data to be misused and their privacy to be compromised. Concerns also arise about relevance and extent of data collected about consumers for the provision of financial services⁶⁰ Therefore, the Fintech industry will have to address these challenges to be truly inclusive to the low-income segment.

At the same time, it is important to keep in mind the current context in which digital financial services are being offered. A typical Indian household can be characterised as a low-income household residing in rural area, earning below Rs. 10,000 a month, with low ownership of smartphones and low levels of digital literacy.⁶¹ Therefore, increasing the use of technology in the provision of financial services must be placed in the current context of consumer's capabilities, access to technology, demographic profile, and other infrastructural and institutional factors. Severe infrastructural challenges also exist in rural areas such as network downtime, power shortages and internet shutdown.⁶² These

⁶⁰Primer on Designing Optimal Regulation-<https://www.dvara.com/research/conference2019/wp-content/uploads/2019/04/Primer-on-Designing-Optimal-Regulation.pdf>

⁶¹Why more smartphones and bank accounts haven't brought financial digital inclusion in India-<https://theprint.in/opinion/why-more-smartphones-and-bank-accounts-havent-brought-financial-digital-inclusion-in-india/327919/>

⁶²ibid

factors present significant barriers to adoption of digital financial services by the masses, especially the low-income segment. Given these challenges, ‘phygital’ distribution channel that allows for human touch at the front-end to assist in conducting transactions and establishing trust and building technology for the backend to allow for efficient delivery of services at scale, will continue to remain a priority. While distribution channels will evolve as customers evolve, the trust will remain a key issue, and the customer will use those services that they trust the most. FSPs will thus have to think of ways in which they can build trust among customers.

4.3.2 Innovation across Agent Network for Last Mile Service Delivery

Last mile service delivery using agent network has proved to be pivotal in expanding access to finance in rural and remote areas. In India, the Business Correspondent (BC) model plays a dominant role in facilitating financial transactions (most commonly deposit, withdrawal and fund transfer) and is a key distribution channel for the delivery of financial products and services envisaged by the RBI for banks and NBFCs. Innovation across this channel can be broadly categorized as technological innovation and systemic innovation. In terms of technological innovation, the key focus has been on using biometric device (along with e-PoS machine and smartphone devices) for the verification and authentication of the last mile customer in order to process financial transactions or deliver direct benefit transfers under various social welfare schemes. Additionally, there has been an extensive focus on the digitization of records such as beneficiary list (in case of welfare delivery) in order to increase transparency in the system. In terms of systemic innovation, newer types of entities have been allowed to act as BCs such as SHGs and Common Service Centres (CSCs) in addition to NBFCs, and other individuals.⁶³ Most recently, Payment Banks, apart from offering savings and payment function, have been licensed by the RBI to offer simple term life insurance and retirement product such as APY through their agent networks, thereby facilitating a broader range of financial services to last mile consumers at convenient locations.

However, significant challenges exist in the BC model in the form of infrastructural, operational, financial and regulatory concerns that require policy attention and innovation to close these gaps.⁶⁴ In order to strengthen the agent network, measures need to be taken around making the BC model financially viable, increasing the accessibility to agents among rural customers by expanding access points as well as including more BCs in the network and finally identifying and managing risks posed by rural agents without stopping innovation. In addition to this, priority must also be given to training last mile agents in order to increase the skills and capabilities of front-end providers, as they have a significant influence on consumer’s decision of taking up and using a given financial product (Ananth & Shah, 2013). Research on the marketing of payment bank account highlights that lack of knowledge about the product and its features among agents selling these accounts led to a drastic drop of interest and take-up of this product among last mile consumers (Sharma & Chatterjee, 2017).

⁶³Individuals include retired bank employees, retired teachers, retired government employees and ex-servicemen and individual owners of kirana/medical/Fair Price shops, among others.

⁶⁴Reaching the Last Mile: Delivery of Social Protection in India - <https://www.dvara.com/blog/2020/01/21/reaching-the-last-mile-delivery-of-social-protection-in-india/>

Another significant challenge in the delivery of financial products and services through agent network is the misalignment of consumer's and agent's incentives, wherein the incentive to sell one product significantly outweighs the others and the distributors are more likely to push products that are lucrative to them, than products that may be suitable for the consumers. This challenge has been witnessed across almost all products sold through an agent. For example, the incentive structure for insurance products is such that agents receive the highest pay-out for the first year (15% to 35% of premium), but the incentive falls by 50 percentage for all subsequent years (7.5% of premium), leading to a low persistency ratio and high lapsation rates (George et al., 2020). There is, therefore, a need to innovate across incentive guidelines set by financial service providers such that both customer's and agent's interest are taken care of.

Overall, there is an urgent need to innovate around developing an agent focused strategy focusing on the following questions:

- What are the services that agents should provide? Should it be restricted to cash-in-cash-out services as compared to the current set of services they offer?
- How can agent's incentive structure be managed such that they work in consumer's best interest while at the same time earn substantial revenue from their services?
- What should the agent's role be in providing financial advice to a low-income household? In a low- access environment, where financial products and services are not available at one common point, could a centralized avenue for financial advice by agents be valuable?
- How can agents be trained in order to improve their skills and capabilities to ensure reliable and accurate delivery of services?

4.4 Regulatory Innovation

Household finance is the focus of regulatory attention as individuals have to make complex financial decisions with bigger consequences, consumer capabilities and literacy is often low in developing countries, technology is increasingly playing a key role in the development of sophisticated products and households might have behavioural preferences and biases that lead them to making sub-optimal decisions (Campbell, 2016).

A conducive regulatory environment is therefore important for protecting consumer's interest and promoting competition and innovation, at the same time. Regulators can play a vital role in developing the financial sector by innovating across both hard and soft infrastructure.⁶⁵ Hard infrastructure includes the development of digital infrastructure, systems and utilities such as payments and settlement systems and most recently regulatory sandbox. Such infrastructure reduces the transaction costs and levels the playing field for new entrants in the market. For example, Unified Payment Interface (UPI) has proved to be an extremely popular channel for making digital payments and has enabled a whole range of players to enter the market, thereby fostering competition and enhancing consumers' choice and experience.

⁶⁵Central Banking and Innovation: Partners in the Quest for Financial Inclusion - <https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=18949>

The regulatory sandbox is another example of hard infrastructure that was recommended first by the RBI Working Group in February 2018. A regulatory sandbox⁶⁶ (RS) refers to “live testing of new products or services in a controlled/test regulatory environment for which regulators may (or may not) permit certain regulatory relaxations for the limited purpose of the testing. The RS allows the regulator, the innovators, the financial service providers (as potential deployers of the technology) and the customers (as final users) to conduct field tests to collect evidence on the benefits and risks of new financial innovations, while carefully monitoring and containing their risks. It can provide a structured avenue for the regulator to engage with the ecosystem and to develop innovation-enabling or innovation-responsive regulations that facilitate the delivery of relevant, low-cost financial products”.

Soft infrastructure on the other hand, includes regulations, standards or programmes that guide the provision of financial services and mitigate potential risks posed due to mis-sale of products or risks from use of technological innovation in financial services—such as risks arising from the collection and use of consumer data, fraud and money laundering.⁶⁷ Below we list potential areas of innovation across the soft infrastructure. Supporting innovation across these parameters can help regulators meet their twin objective of promoting competition and protecting consumers interest.

4.4.1 Moving away from product specific prescriptions

The prescriptive approach to regulation requires financial service providers to ‘stick to the script’ leaving little room for creativity and innovation. Often, we observe that regulations pertaining to financial service providers catering to low-income households are prescribed a very strict set of rules and regulations. Regulatory guidelines issued to the microfinance sector is a classic example. Most recently, RBI increased the indebtedness limits of NBFC-MFI borrowers (with an annual income of Rs. 1.25 lakhs) to 1.25 lakhs or less.⁶⁸ This has raised questions around the risk of over-indebtedness with serious implications for customer protection. The prescriptive nature of these limits also raises serious concerns around ‘lending to limit’ behaviour, which suggests that as long as lenders adhere to these limits, there is no liability on lenders to protect borrowers from over-indebtedness.

Similarly, the prescriptions on margin caps⁶⁹ for the microfinance sector are said to be reducing the competitive edge of microfinance institutions in comparison to Small Finance Banks and other Commercial Banks who are able to raise funds at a lower cost, because of their ability to garner deposit from their customers. While interest rate caps on microfinance sector are placed to protect consumer’s interest, regulatory authorities need to be wary of the implications it could have on market competition, especially in the current environment with newer types of players and financial intermediaries emerging in the market.

⁶⁶Draft Enabling Framework for Regulatory Sandbox - <https://www.rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=920>

⁶⁷ibid

⁶⁸RBI increases lending limit of MFIs to Rs 1.25 lakh from Rs 1 lakh - https://www.business-standard.com/article/pti-stories/rbi-increases-lending-limit-of-mfis-to-rs-1-25-lakh-119100400585_1.html

⁶⁹Microlenders want 2010 crisis-era rate caps eased- <https://www.bloomberquint.com/business/microlenders-want-2010-crisis-era-rate-caps-eased>

Example on product specific regulation can also be found in the case of microinsurance with prescriptions on coverage amount-insurance policies of up to Rs.100,000 sum assured for personal accident insurance, asset insurance and individual health insurance contracts, and up to Rs.250,000 for family/group health insurance contracts. These products cannot have access to long term capital gains as they can take the form of an endowment product and not a ULIP product. “*These prescriptive product-specific regulations inadvertently restricts freedoms of insurers and distributors to innovate in deciding how they want to serve the under-served or low-income customers, even if these regulations were meant to limit exposure of customers to a specific product type in order to ‘protect’ them*” (George et al., 2020).

Given these examples, the regulator can reconsider/ease the prescriptive approach by leaving room for flexibility in guidelines across products. While the protection of low-income households should undoubtedly be at the heart of their mandate, the key question that begs answering is, how can the two objectives of customer protection and innovation work best. Can technology play a role in ensuring reliable data collection and monitoring for better assessment of customers’ needs and requirements? This is something that the regulators could explore and test.

4.4.2 Easing Priority Sector Lending Norms

RBI mandates commercial banks including foreign banks, to lend 40 percentage of their adjusted net bank credit to the priority sector including specific sectoral targets under different categories. Priority sector includes categories such as agriculture, micro small and medium enterprise, export credit, education, housing and advances to weaker sections.⁷⁰ While the intention behind this regulation is to spur inclusive growth and advance credit to underserved populations and sectors, sector experts and bankers have highlighted challenges pertaining to rigid specifications across sub-sectors, thereby, distorting allocative efficiencies.⁷¹ RBI’s Trend and Progress of Banking in India reveals that banks have been continuously under-performing on their priority sector lending (PSL) target. Latest data from RBI highlights that while public sector banks met the agricultural sector target of 18 percentage, private and foreign banks failed to do so. Bankers have highlighted lack of adequate knowledge and understanding of customers’ needs and profile in rural and remote areas, reluctance to lend to the agriculture sector due to weather related uncertainties and frequent loan waivers announced by the Government, prevalence of un-organised operations and lack of formal accounting in the MSME sector, as some of the challenges pertaining to priority sector lending. Rigid regulatory specifications such as PSL norms often turn these targets into a matter of compliance for the banks with little to no focus on the bank’s competitive advantage. In this context, RBI can consider making priority sector norms more flexible such that public, private and foreign banks can lend to sectors that they know and understand best and consider easing restrictions around sub-sectoral targets. The regulator could also design incentive structures for banks that meet the desired targets rather than mandate blanket norms across the banking sector.

⁷⁰Priority Sector Lending - Targets and Classification- <https://m.rbi.org.in/Scripts/FAQView.aspx?Id=87>

⁷¹Time to do away with priority lending norms- <https://www.livemint.com/Opinion/QwGGfDgozR6COUYFyW3PTP/Time-to-do-away-with-priority-lending-norms.html>

4.4.3 Advocating for ‘Suitability’ in delivery of financial services

Suitability guidelines issued by various regulators ensure that the onus of selling suitable products that match consumers’ needs, financial capacity, risk capacity and appetite, lies squarely on the financial service provider. Regulators such as PFRDA, IRDA and SEBI have integrated suitability guidelines across sales of financial products and services. PFRDA in its draft regulations in 2016, incorporated the principle of suitability for retirement advisors. Similarly, IRDA in its circular dated September 2019, has specified new rules on suitability for life insurers that is applicable to all intermediaries and for all products other than pure risk and pure health products.⁷² Despite these strides, the sector is yet to see a real change in the culture/manner in which financial service providers operate, leading to substantial instances of mis-selling, as customers are still expected to be aware of the risks and costs associated with the product.

Given these challenges, innovations around implementing suitability principles into the day to day functioning of financial service providers becomes imperative. It is recommended that *“universal conduct obligations applied uniformly across all regulated entities should be adopted. As part of their obligations, all providers must ensure that customers have access to good quality, non-obfuscatory disclosures of product features. Financial service providers must jointly agree upon a set of suitability principles that govern the relevant financial functions such as ‘investment’, ‘risk protection’ and ‘retirement income’ that the products under question must abide by and that regulators have to mandate the need for completing suitability assessments for all products and services sold. Finally, in order to prevent low-income households from entering into contracts of globally unsuitable products, the regulator could specify a set of globally unsuitable products that cannot be offered to households or businesses below a certain income threshold or net worth or individuals above a certain age”*(George et al., 2020).

⁷²IRDA moves to make sale of life covers transparent - <https://www.livemint.com/insurance/news/irdai-moves-to-make-sale-of-life-covers-transparent-11570356186050.html>

5. Conclusion

Household finance research is an emerging economic field. The phrase ‘Household Finance’ was brought to prominence by John Campbell in 2006, and the field he envisioned has been growing ever since. India offers a unique perspective to the field, offering a vastly different set of issues and circumstances than those seen in the advanced countries that formed the foundation of research in household finance. These households from advanced countries interacted with and were a part of highly formalised economies, allowing for them to be studied in greater detail, as well as to be much more similar in terms of the contexts they faced. Developing countries are heterogeneous with their contexts varying widely based on location, political situations, cultural factors, and depth of financial coverage. India ticks many of these boxes as a developing country, with a large number of low-income households. These low-income households prefer to invest in real estate and gold, regard human capital as their biggest strength, and employ social networks and informal sources of finance to a great extent. They also over-rely on credit to an extent where it comes to be treated almost like an additional income source.

These households, therefore, need to be studied from the perspective of the contexts they operate in. To study these households, it is imperative to understand the households, their behaviour and decisions taken towards financial systems, the characteristics of the financial systems, and what aspects of their circumstances drive household behaviour the most. This understanding will only come with more granular and frequent data of households. There are steps being taken towards ensuring that it is possible to paint a much clearer picture of the Indian LIH today than what was possible ten years ago. Given the current understanding of Indian households, financial providers and regulators are taking steps towards improving the financial plight of low-income households. At the highest level, regulators and policymakers are working towards ensuring the infrastructure is in place for a dynamic financial system to exist. Financial providers are using this infrastructure to innovate both in terms of the products they offer, as well as the way in which they are being offered. The move towards digitizing finance has pushed innovation on both fronts, with finance being more accessible than ever before, and the menu of products catering to customers with a greater level of customisation. However, there is still a sizeable gap in understanding the motivations of households – why they take certain financial decisions, and how they rationalise them, over what may or may not be theorised to be better for them. This will lead to another jump in the way finance is theorised and operationalised for nations with greater heterogeneity and will ultimately lead to greater financial suitability for low-income households in India.

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