SAVING THE NEXT BILLION FROM OLD AGE POVERTY

global lessons for local action

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IT AND DIGITAL SOLUTIONS FOR PENSION INCLUSION: **SOME CASE STUDIES**

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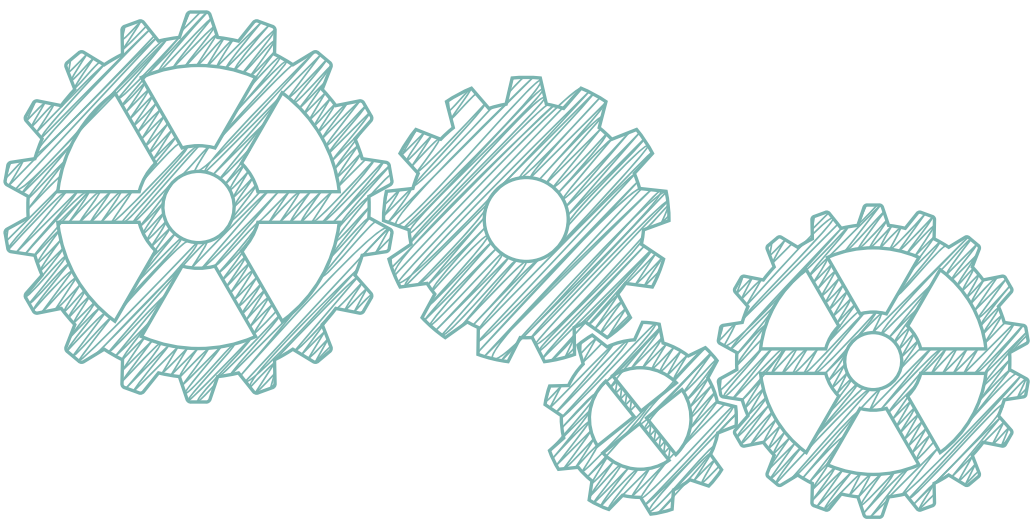


BACKGROUND

In 2006-07, and as India waited for its Parliament to approve a legislation that would establish a new regulator for the National Pension System (NPS), pinBox promoters commissioned a national-level primary data survey[1] on the incomes, savings, financial behaviour and retirement outlook of working age Indians.

The survey indicated that as many as eighty million working age Indians with incomes at that point were willing to participate in a contributions based pension scheme. If this latent demand for pensions from these groups were fully harnessed, they could contribute an estimated INR570 billion (USD13 billion in 2006) to the NPS in its first full year of operation and produce cumulative long-term retirement savings of over USD300 billion within a decade. Lying beyond this pension-ready informal sector population were 37 million government and private sector salaried workers who were already covered by mandated pension schemes. Interestingly, a significant number of them believed that their mandated pension entitlements would be inadequate and were therefore interested in voluntarily contributing to a DC pension program to supplement their work-based pension benefits.

Table 16.1
Income Distribution*

Annual incomes (INR)	Percent share of those who would be making retirement savings for the first time	Percent share of those who are already making reitrement savings
Less than 50,000	47	4
50,000 -100,000	31	37
100,001 - 200,000	11	43
200,001- 500,000	6	11
Over 500,000	5	5

Age Distribution*

Age in years	Percent share of those who would be making retirement savings for the first time	Percent share of those who are already making reitrement savings
Below or at 25	8	2
26-35	32	20
36-45	33	40
46-55	27	38

[1] The Invest India Incomes and Savings Survey 2007 was based on a listing sample of 1.1 million households. From this, a stratified random sample of some 107,000 respondents was selected for detailed interviews. Nielsen was contracted for the fieldwork and data collection.

Occupation Distribution*

Occupation	Percent share of those who would be making retirement savings for the first time
Agriculture producers	34
Wage labourers	16
Salaried workers	13
Government contractual workers	3
Businessmen with employees	12
Shopkeepers	10
Self employed - non professionals	5
Street vendors	3
Self employed professionals	3
Others	1

*Percent rounded to the nearest whole percent
Source: The Sleeping Giant: Private Pension Markets in India, 2007-08[2]

The income, demographic and labour market characteristics of the excluded workforce, as well as their financial behaviour, savings capacities, locational distribution and knowledge of formal finance strongly suggested that delivering a DC pension scheme, even to the pension-ready market, could be hugely challenging. And yet, this was a problem that was clearly worth solving.

In 2007 therefore, pinBox promoters collaborated with a large public sector asset management company (AMC) and an all women's cooperative bank to jointly establish Invest India Micro Pension Services (IIMPS) -- the first global "micro-pension" social enterprise focussed exclusively on encouraging and assisting low income, non-salaried informal sector citizens to accumulate micro-savings for their old age.

Over the next few years, IIMPS enrolled nearly 2 million low income individuals for a government notified pension scheme. Subscribers included street vendors, head loaders, home-based workers, subsistence farmers, daily wage earners, construction workers, blue-collar workers in garment export factories, small shopkeepers, micro-entrepreneurs and other non-salaried informal sector individuals based in both urban and remote rural locations across nearly 100 districts of 14 Indian States.

During this period, several things changed. Our original micro-pension operating model evolved from a somewhat clumsy and expensive process involving cash collections and

[2] Kindly contact info@pinboxsolutions.com for a free electronic copy of this Report

physical, paper application forms, to an entirely digital (cashless and paperless) product and process architecture. The federal and several state governments stepped forward with significant fiscal commitments to both financial and pension inclusion. India launched an ambitious national ID program that has already issued over one billion IDs. The Parliament approved the PFRDA legislation and thus established the new pension regulator. And fund managers stopped viewing voluntary pensions as a social cause and began seeing even the "micro" market as a potentially significant mainstream business vertical.

Over the years, IIMPS remained focussed on keeping transaction costs to the bare minimum so as to ensure that micro-pension charges did not erode the tiny contributions or modest account balances of our clients. A large part of our time and resources were devoted to developing systemic, process and technology driven solutions to lower operating costs, mitigate operational risks and overcome important challenges around behavioural finance, client protection and regulatory compliance.

Many countries, including several nations represented in this volume, are already contemplating or attempting the expansion of pension coverage to non-salaried citizens. In this context, this chapter presents a view from the trenches on specific, real-life obstacles and risks that were faced in growing voluntary micro-pension coverage in India. It also discusses specific examples of how the non-profit microPension Foundation, leveraged technology and digital finance infrastructure to (a) overcome important challenges and mitigate risks, and (b) build new, non-linear distribution and access platforms capable of exponential voluntary coverage.

DIGITAL MICRO-PENSIONS
THE EARLY YEARS

The first few years of the new micro-pension enterprise were spent largely on achieving a better understanding of the target demographic and in imagining and building a robust and low cost product and process architecture. Many months were spent on developing, rejecting, redesigning and refining new sales and distribution channels and approaches. Wholesale fees and charges were negotiated with retail finance product providers. New and innovative training materials, retirement literacy toolkits and promotional strategies were created, translated into 14 national languages and field-tested.

To keep outreach and service delivery costs down, a non-linear business-to-business-to-customer (B2B2C) sales and distribution model was developed. This involved commercial contracts with a range of outreach partners – large micro-finance institutions, cooperatives, rural banks and NGOs, who were already delivering thrift, credit and livelihoods related services to our target demographic. This also helped harness the incredible goodwill and credibility of these field partners – an essential raw material when

introducing alien concepts like pensions and retirement, or motivating adoption and sustained behavioural change by low income informal sector individuals.

In parallel, we began developing a proprietary, central micro-pension administration IT platform from scratch (subsidised by a rather generous grant from a large global donor). This technology platform was capable of issuing and managing hundreds of thousands of unique, individual micro-pension accounts, tracking and recording individual pension contributions, digitally interfacing with product providers to unitize savings and update individual account balances in line with daily NAV changes, etc. The platform's capabilities naturally evolved over the years – in line with implementation experience, field-level stakeholder feedback, evolving client needs, changes in the financial inclusion and regulatory environment as well as necessary improvements in the core product and process architecture.

Thus, a small but committed team, a robust IT platform and strong partnerships with some exceptional entities that already had a large retail footprint helped us reach thousands of low income informal sector individuals through hundreds of branches across multiple districts in India at a near zero capital cost.

The customer-facing field staff of outreach partners were subjected to intensive class-room and on-field training on concepts, product features and processes. These trained and certified micro-pension counsellors were expected to first enrol as micro-pension customers before they were permitted to discuss the program with their own clients or members. Partner field-staff conducted group meetings on pensions using standard retirement literacy tools, including films, calculators and FAQs, to educate and on-board their clients or members for the micro-pension program.

A national-level, multi-lingual, micro-pension helpline was established.[3] The helpline served as a simple, direct, two-way link between IIMPS and individual subscribers. It helped verify subscriber knowledge, field process compliance and service quality through call-backs to new clients. It also served as a simple and direct channel for addressing subscriber queries, recording and resolving complaints and delivering reminders to subscribers with infrequent contributions or dormant accounts.

Over the next few years, as we went into the trenches supported with a consortium of highly credible partners, and armed with the sincere commitment of succeeding at scale, we came across a number of challenges, risks and obstacles and many new ideas – each of which we had failed to imagine while we were still on the micro-pension drawing board. Some of these are encapsulated in the following 4 case-studies.

We hope that these case-studies will deliver an important advantage that our team did not have when we embarked on the micro-pension inclusion journey a decade or so ago – that of learning from someone else's mistakes.

[3] This was outsourced to a unique, Bangalore-based BPO named Vindhya E-Infomedia that employs 1400 differently abled persons for its data processing and call centre services. See http://vindhyainfo.com

CASE STUDY 1

CASHLESS PENSION CONTRIBUTIONS BY UNBANKED CITIZENS

INITIAL CONDITIONS

Within a few months of going live in 2009, thousands of individual micro-credit clients and members of thrift and credit cooperatives and SHGs began to willingly step forward and voluntarily open micro-pension accounts. Clearly, the demand for retirement saving products among low income individuals was not a major challenge.

However, most of our clients did not have a bank account. And none of them were using mobile wallets or any other payment instrument. We were therefore constrained to collect micro-pension contributions in cash. This was done by partner field staff – on a designated date and simultaneously with the collection of micro-loan repayments. Collecting tiny, intermittent contributions in cash from thousands of individuals spread across scores of urban and rural districts, and then correctly reconciling and recording each individual contribution became our number-one bottleneck to expanding voluntary micro-pension coverage.

Although we worked only with highly credible field partners, and had painstakingly designed and implemented a process to prevent cash fraud, we could never be really sure that the risk had been fully mitigated. Hence, while linking the collection of voluntary pension contributions with cash loan repayments did help lower transaction costs, the increased risk (and costs) of cash fraud and an equally high cost of preventing cash misappropriation probably wiped away any such benefits. The cash-based process for unbanked clients imposed similar risks when insurance claims or pension benefit pay-outs become due.

The risk of reconciliation errors as also errors in correctly recording each contribution in each subscriber's account was equally problematic as field officers simultaneously collected both loan repayments and pension contributions in cash from many individuals.

Cash collections imposed two other important challenges for our clients. First, all micro-pension clients faced uncertain, intermittent and very different income flows. Often, many of them missed making a pension contribution simply because they did not have enough cash in hand on the date on which their loan repayment was due. As pension contributions were voluntary (while loan repayments were mandatory), this had an important adverse impact on persistency. Many clients ended up missing pension contributions even though they had the money to save — albeit on a different date in the month, simply because no one was able to collect their savings on that day.

A second and equally important challenge for our clients was the mismatch between the tenure of their relationship with our field partner (MFI for example) and the tenure

of their relationship with their pension account. When a micro-pension client enrolled by an MFI had repaid her loan, the MFI was unable to collect future micro-pension contributions without the subsidy generated by the collection of loan repayments. This often led to dormant accounts and a demand for premature withdrawals.

Clearly, a national level micro-pension operation could not be scaled on the back of cash transactions. We needed a payment solution for unbanked micro-pension clients that was simple, convenient, portable, transparent, secure and affordable.

The R&D lab set up within the non-profit microPension Foundation spent the next few months working with a team from Visa on fixing the problem. This team developed a closed-loop prepaid card based payment solution with an auto-debit or standing instruction facility for automating pension contributions. This micro-pension prepaid card was launched as a pilot among tribal communities in the Nilgiri mountains in Southern India in 2012. Not only was this digital payment solution accepted with astonishing ease, the prepaid cards and the auto-debit facility caused savings persistency to nearly double over the next six months.

MICRO-PENSION PREPAID CARDS OPERATIONS

As we see from Figure 16.1, the prepaid cards process was simple and easy for an individual to comprehend and use. An unbanked micro-pension client would be provided a bank-issued magnetic swipe prepaid card. The client's micro-pension account number would be mapped to her 16-digit prepaid card number.

Thereafter, the client could periodically "load" small sums of cash onto her prepaid card as per her own income and cash-flow. These cash-in transactions was facilitated by an authorised field officer of an outreach partner by swiping the client's prepaid card on a micro-POS device attached to an ordinary mobile phone.

With this transaction, a mandatory "float" in the field-officer's account would be debited in real-time and the client's account (in escrow) would be simultaneously credited with the amount of cash received by the field officer. The client would receive an instant, system-generated SMS from the bank confirming the credit.

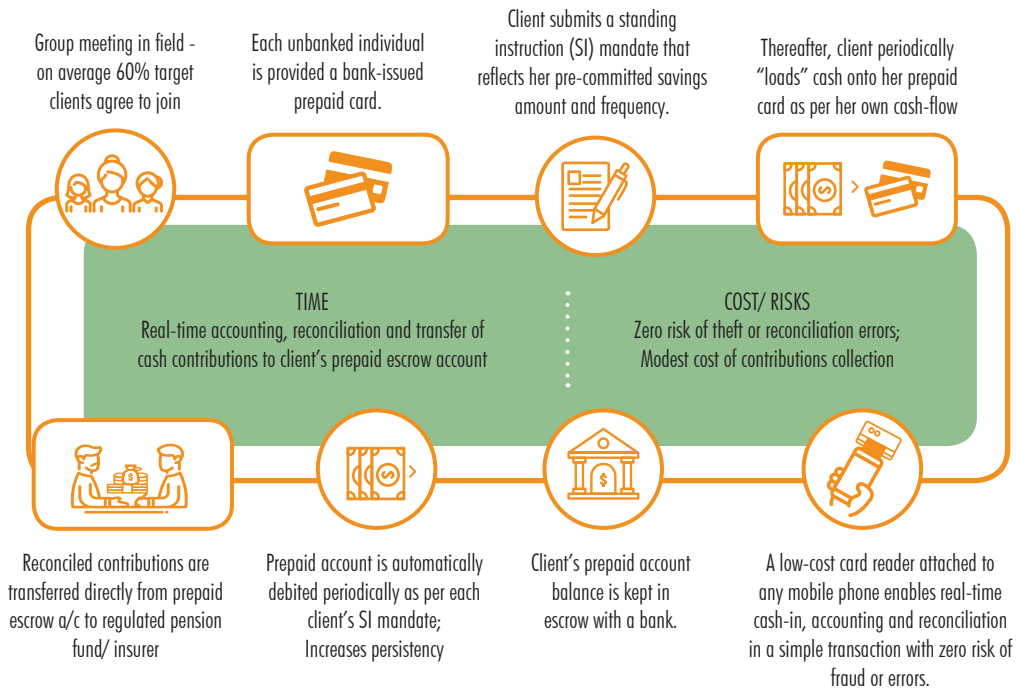
In this way, a client's contribution was accounted for, reconciled and digitized in real-time and instantly credited into her prepaid card escrow account in her name with zero risk of theft or reconciliation errors.

If the client moved to a new city, she could use a designated BC outlet in her neighbourhood to periodically load cash onto her prepaid card.

The accumulated balance in the client's prepaid account was periodically debited as per her own standing instruction or auto-debit mandate, and transferred directly to the regulated product provider on her behalf. This auto-debit feature was managed by a customised prepaid card program management platform developed with VISA's support. This platform also kept track of prepaid card balances in escrow.

This digital micro-payment process was simple, scalable, secure, portable, convenient, transparent and affordable. Importantly, it was feasible to convert these closed-loop prepaid cards into an open loop card and use them for secure and direct delivery of insurance claims and pension benefits to micro-pension clients.

Figure 16.1
Using prepaid cards to collect micro-pension contributions from unbanked Clients



The time to market, capital cost and operating expenses of this solution, both in relation to the high cost of cash transactions and the cost of fraud prevention, were extremely modest. Field officers already had mobile phones. The mPOS dongle cost around USD 30 per device. The capital cost of this device per client (assuming a field officer serviced even 150 micro-pension clients) was near zero. The cost of each payment transaction, involving around 2 kbps of data used for connecting with the bank server and for the bank to send an SMS to the client was also modest.

WHY DID THIS WORK?

- This prepaid cards based micro-pension contribution collection process was simple and easy to use. It was identical to loading talk-time on a prepaid mobile – a process that all micro-pension clients already understood well.
- It enabled real-time, automated reconciliation and cash digitisation and therefore effectively mitigated the risk of fraud and reconciliation errors.

- The process was based on a sound governance framework – the prepaid cards were issued by a commercial bank regulated by the Reserve Bank if India. Periodic contributions by each micro-pension client were kept securely in escrow pending transfer to the fund manager on her behalf and could not be used by any other entity for any reason.
- It provided full portability and convenience to a client. Persons with prepaid cards could walk up to any of thousands of third-party outlets for loading cash onto their prepaid cards. If a client lost her card, she would never lose the money in her account and would simply be issued another card attached again to her unique pension account number.
- The prepaid cards based system was flexible and allowed each subscriber to save any amount that she could afford and in line with her own cash-flow.
- The standing instruction or auto-debit mandate feature enabled automated and therefore regular micro-pension contributions even by subscribers with irregular incomes. Savings were automatically deducted from each micro-pension client's escrow account and transferred on her behalf to the pension fund manager without requiring any interventions by the client. This helped increase persistency.
- The prepaid mechanism was affordable – the cash-in fee was a small percentage of the contribution value and hence dis not penalize the poor (as flat transaction charges would).
- This prepaid cards based payment solution could also be used by outreach partners for other purposes – for example, for cashless loan disbursement and collection of loan repayments from clients; and
- Open-loop prepaid cards could be used also for secure and direct delivery of insurance claims and pension benefits to micro-pension clients without any risk of fraud or misappropriation. A beneficiary could then use an ATM or bank agent to withdraw the benefits or claim payment transferred directly into their prepaid card.

CASE STUDY 2
NID AND DIGITAL (PAPERLESS) ENROLMENTS

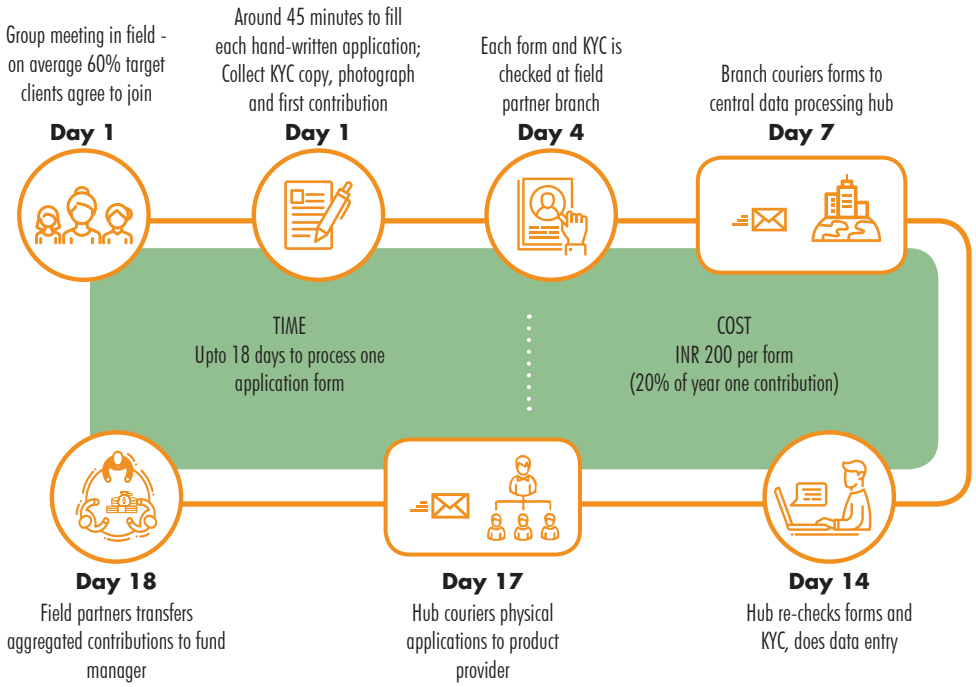
INITIAL CONDITIONS

A typical micro-pension client faced significant challenges in providing valid Know Your Customer (KYC) documents to prove identity, age and address, often due to frequent migration across jobs and locations. Also, different financial regulators prescribed different KYC for financial products regulated by them. As a result, a number of low income informal sector workers are unable to easily enrol for an integrated micro pension program that combined a pension, payment and insurance solution.

KYC requirements also led to a very cumbersome and expensive application and documentation verification process involving the collection of multiple photographs along

with multiple copies of physical KYC documents and handwritten application forms for an integrated product solution.

Figure 16.2
The micro-pension enrolment process with physical forms and KYC



As we see in Figure 16.2, the enrolment process for a typical micro-pension client could take up to 18 days to complete and cost us roughly 20 percent of the year-one pension savings by the average contributor.

Each set of application forms would also impose additional costs and time overheads for our clients as they would need to submit multiple copies of colour photographs along with multiple photocopies of multiple KYC documents – as any one document was usually unable to provide proof of address, age and identity.

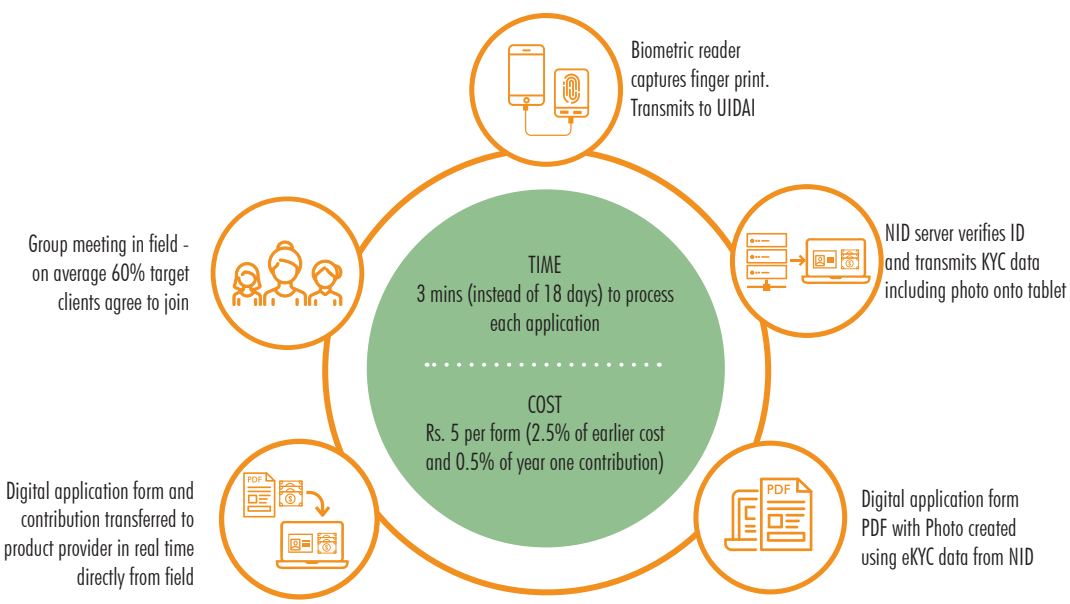
The field staff of a partner institution would then need to fill in, by hand, individual application forms for each product (although each product application required nearly identical information). This very often caused overwriting, errors and oversight. In the normal course, it could take around 45 minutes to complete one set of application documents for a micro-pension client. If a field group meeting resulted in (say) 12-15 enrolments, the documentation process could consume a major part of the day for both clients and the field staff concerned. And field staff obviously expected to be adequately compensated for their time and significant effort.

These documents were then deposited in the link branch office for local inspection — where someone in the branch would verify that the data in each application form exactly matched the information in the supporting KYC documents in each product application of each client.

The branch would then courier (or post) all verified applications collected for the day to a central data processing hub where each set of application forms and KYC went through another round of scrutiny before the forms were digitised.[4] The data in application forms that were correct in all aspects was entered into the system — which led to occasional data entry errors and the forms being rejected by the product partners at the last stage.

The R&D team at the microPension Foundation developed an innovative technology-led solution to this problem. As we see in Figure 16.3, this new digital solution helped cut back the processing time for each set of multiple product application forms from 18 days to under 3 minutes. And helped in achieving an equally dramatic reduction in cost by 97.5 % (to INR 5 or 10 cents per application from the earlier INR 200 or USD 4 per application).

Figure 16.3
The new eKYC - based digital (paperless) micro-pension enrolment process



[4] Forms that contained errors were couriered back to the branch where the field officer would need to track the client and correct the application documentation set before restarting the process.

HOW DID THIS WORK?

- Aadhaar was uniformly recognised as a valid KYC for all financial products by all financial regulators. This national ID-based KYC was also accepted as a valid document under PML (Prevention of Money Laundering) regulations. In 2013, the Unique Identity Authority of India (UIDAI) launched an eKYC service that allowed financial institutions to electronically access the national ID data of a potential client provided the transaction was duly authorised by the client using a biometric authentication process. UIDAI would provide an API based secure access to client data for this purpose.
- IIMPS, through the microPension Foundation, was among the first batch of institutions in India to be licensed by the UIDAI as an eKYC authentication and user agency (AUA and KUA). We modified our micro-pension IT platform for eKYC.
- In the new process, represented in Figure 16.3, a person who wished to open an integrated micro-pension, insurance and payment account would no longer need to carry any documents or photographs to a field meeting. She would simply place her thumb on a tiny biometric reader attached to a web-enabled tablet or laptop. The biometric information and Aadhaar number would be transmitted to UIDAI and her identity would be verified in real time.
- Basis a biometrically verified request by the client, UIDAI would deliver her full eKYC data, including her photograph, to the micro-pension enrolment application on our IT platform. The raw eKYC data and the photograph was instantly poured into the relevant fields in the multiple product application forms.
- The system would instantly convert each application form into a high resolution PDF file, complete with photograph and a digital signature (which was a unique eKYC transaction ID issued by UIDAI for each eKYC transaction). The client would place her thumb once more onto the biometric reader to "sign" her application and permit transfer of her forms to the relevant finance product providers.
- In this way, the full set of product application forms could be electronically filled and transferred to a product provider, along with the client's first electronic contribution (collected using the prepaid cards based process described earlier) in under 3 minutes from any field location.
- Importantly, the data in each digital application form was filled using the national ID data received from UIDAI. As a result, there was no longer a need to attach any KYC documents with the application forms. No courtiers needed to be sent and digital applications were completed and transferred in full compliance with KYC and PML guidelines to multiple product providers.

By integrating this process of on-the-spot, digital micro-pension enrolments with the prepaid card solution described earlier, we were able to achieve instant, cashless and paperless enrolments for an integrated micro-pension program involving multiple regulated products from any field location in India in under 3 minutes at a fraction of the earlier cost faced by us.

CASE STUDY 3

DIGITAL OUTREACH: GIFT-A-PENSION

INITIAL CONDITIONS

Roughly 40 million individuals are employed as cooks, maids, drivers, security guards, gardeners and errand staff, mainly by middle and upper-middle income households across super-metros and other large cities in India. In addition to being one of the oldest occupations, paid domestic work is also a rapidly growing profession in India. Traditionally regarded as an invisible-working class, domestic workers are often undervalued and lack access to basic forms of worker protection including minimum wages and social security.

Although the majority of India's domestic help have reasonable, regular incomes capable of supporting regular pension contributions during their years in the workforce, the majority of this population continues to be excluded from banking and formal financial services. Most of them direct a majority of their incomes to fund the consumption needs of their families back home – often leaving them with very little with which to secure their own future. Without a meaningful financial and pension inclusion intervention, this cohort will remain starkly exposed and highly vulnerable to a range of insurable lifecycle risks including the risk of old age poverty.

Not surprisingly, surveys by government agencies and focussed group discussions (FGDs) with domestic help conducted by the microPension Foundation found clear evidence of a high latent demand for both pension and insurance solutions among this population. Interestingly, parallel interviews with employers of domestic help across multiple cities revealed an almost universally high level of commitment among them to support pension and financial inclusion of their home help.

Conversations with our financial sector partners (pension funds and large insurers) indicated a very strong interest in the clearly significant aggregate demand for retirement and insurance products that this cohort represented. But domestic workers are difficult for formal finance firms to locate, access, educate and enrol through their traditional sales and distribution models at an affordable transaction cost. Neither can they be targeted through the traditional micro-pension "group" model as these individuals are scattered across millions of urban households across the country. The high incidence of both inter- and intra-city migration among this cohort imposed significant additional challenges in providing uninterrupted access to information, payment services and benefits over long-term savings horizons, especially in the context of insignificant banking access among this group.

Against this background, the microPension Foundation R&D team developed a simple, web-based platform that enabled middle and upper-middle income households anywhere in India to enrol their own domestic help for an integrated micro-pension and micro-insurance solution. This first global P2P micro-pension inclusion platform is named "Gift-a-Pension".

Gift-a-Pension was soft-launched as a pilot in 2015 and resulted in enrolment of a few hundred maids and drivers for an integrated pension and insurance product within a few months. The platform provided simple online financial literacy tools including animated films, videos and calculators that could be used by employers to inform and educate their domestic help regarding complex financial concepts, product features and processes and to encourage them to join the pension and insurance program.

Figure 16.4
How the Gift-a-Pension P2P Platform Worked

The gift-a-pension process is encapsulated in Figure 16.4. Employers used a standard, secure and simple online payment gateway for making the first contribution on behalf of their home help. Domestic help used a standing instruction on their bank accounts or prepaid cards for periodic contributions. Employers were encouraged and able to co-contribute towards the pension and insurance solution for their domestic help and many employers did so. Some used this to implement a philanthropic motive while some did this as a retention or reward strategy for an individual who clearly played a profoundly important role in the household.

Savings of home help and co-contributions (if any) by an employer would flow directly from the domestic help's bank or prepaid account to the regulated financial product provider chosen by her at the time of enrolment as per her own standing instruction mandate. The national, multilingual micro-pension helpline provided ongoing information and assistance to both employers and domestic help.

Coverage expansion under Gift-a-Pension was driven entirely by satisfied and happy users of the platform and relied heavily on social media. This naturally also imposed a stringent and healthy level of quality control on services as unhappy employers were likely to be very visible and vocal.

WHY DID THIS WORK?

The Gift-a-Pension concept and platform was based on the following strong foundations:

- Non-linear outreach and distribution model. Capable of instantly reaching millions of individual home help across the country through their employers without incurring the traditional finance sales and distribution costs;
- Financial literacy and knowledge delivery by well educated employers using standard, web-based tools. Employers had zero incentives to miss-sell. The process for financial literacy and knowledge transfer was neither time-bound nor "transaction" related;
- Digital application forms for an integrated social security solution imposed near zero overhead on the employer. Digital application forms, and data entry and verification by employers mitigated the risk of data errors in the forms received by product partners;
- Near zero non-linear sales and distribution costs through a web-based outreach. Costs could collapse further with product bundling, negotiated fees from product partners, risk pooling through demand aggregation and scale;
- Unique, portable, client-centric individual pension and insurance accounts issued and administered using a central IT platform. This platform integrated and managed the full ecosystem (products, payments, helpline, services, complaints), produced persistency MIS and stored individual client-level static, transactional and financial data over time across all products.

CASE STUDY 4
HARNESSING G2P INFRASTRUCTURE FOR DIGITAL PENSION INCLUSION

INITIAL CONDITIONS

Since its launch in late 2014, the Indian Prime Minister's Jan Dhan Yojana (PMJDY) has already provided banking access to nearly 250 million excluded Indians while a parallel insurance program has delivered accident and life insurance cover to some 120 million low income citizens. In comparison, by early 2017, India's National Pension Scheme (NPS) had managed to attract barely 12 million voluntary, informal sector subscribers (or roughly 3% of the target workforce). Of course, voluntary pension coverage is certainly more challenging to achieve than access to bank accounts or a low-cost one-off insurance cover. Even so, market research and evidence from recent pension coverage expansion pilots

conducted in three Indian States and co-sponsored by the World Bank FIRST Project and PFRDA, clearly show that pension coverage in India hugely lags both latent demand and policy intent.

This case-study encapsulates the effort and outcomes from one of these three pilots. This pilot was conducted in collaboration with the District Collector's office at Krishna — a rural district in Andhra Pradesh in southern India. The pilot helped assess and address important process, access, incentives and knowledge related barriers to expanding pension coverage in remote rural locations. More generally, this FIRST funded project was expected to assist the PFRDA and the Indian Government in designing scalable and replicable field-tested strategies for expanding voluntary NPS coverage, especially among the more vulnerable and lower income sections of the workforce. This involved, among other things, recommendations related to the product, processes architecture, sales and distribution strategies, commercial incentives for distributors, field promotions and retirement literacy interventions.

In the many months preceding the pilot, the Government of Andhra Pradesh (GoAP) had already established a transparent, NID (Aadhaar) enabled and technology-led public infrastructure and digital process for direct delivery of a range of government-to-citizen (G2C) benefits including fertiliser subsidies, old age pensions, employment guarantee payments (MGNREGA) and subsidised food grain. This included 26,200 evenly spread and easily accessible Aadhaar-enabled public distribution (fair-price or PDS) shops that deliver subsidised food-grain to some 13 million low income beneficiaries across the 13 districts of Andhra Pradesh.

Starting with the Krishna District, the State had also launched an Aadhaar-enabled Payment System (AePS) in collaboration with the UIDAI, the National Payments Corporation of India (NPCI) and the National Informatics Centre (NIC). This AePS infrastructure enabled digital payments by PDS beneficiaries for goods and services procured through PDS outlets and also enabled direct, secure delivery of G2P transfers to identified beneficiaries without any of the traditional risks of reconciliation errors, fraud or leakages. In mid-2016, the state government decided that all PDS outlets shall also serve as bank correspondents (BCs) — a step that was intended to significantly increase retail banking and digital payments access and utilisation and simultaneously increase the transaction fee-based income for PDS shop-keepers.

This Aadhaar-linked digital public distribution and payments infrastructure could readily serve as a credible and low-cost channel for delivering a range of financial services including pensions to low income excluded households. Against this background, and under a FIRST funded Project, The World Bank, supported by a team from pinBox, launched a pilot to assess, for the first time in India, the ability of village-level Fair Price Shops to provide access to the National Pension System. This pilot was expected to test the demand for voluntary pensions (and specifically for the new, defined benefit Atal Pension Yojana or APY) among PDS beneficiaries, as well as the interest and capacity of

PDS shopkeepers to deliver knowledge, enrolment assistance and ongoing support for collecting pension contributions from PDS beneficiaries enrolled for the APY.

REASONS FOR LOW HISTORICAL APY COVERAGE IN KRISHNA DISTRICT

The World Bank and pinBox project team worked in mission mode, in close collaboration with Babu Ahmed, then Collector of the Krishna District, on this digital pension inclusion pilot. The stakeholder consortium included PFRDA, Department of Financial Services, UIDAI, NPCI, NIC and Andhra Bank. Four fair-price (PDS) shops, recently appointed by Andhra Bank as bank correspondents (BCs), were chosen to participate in the pilot.

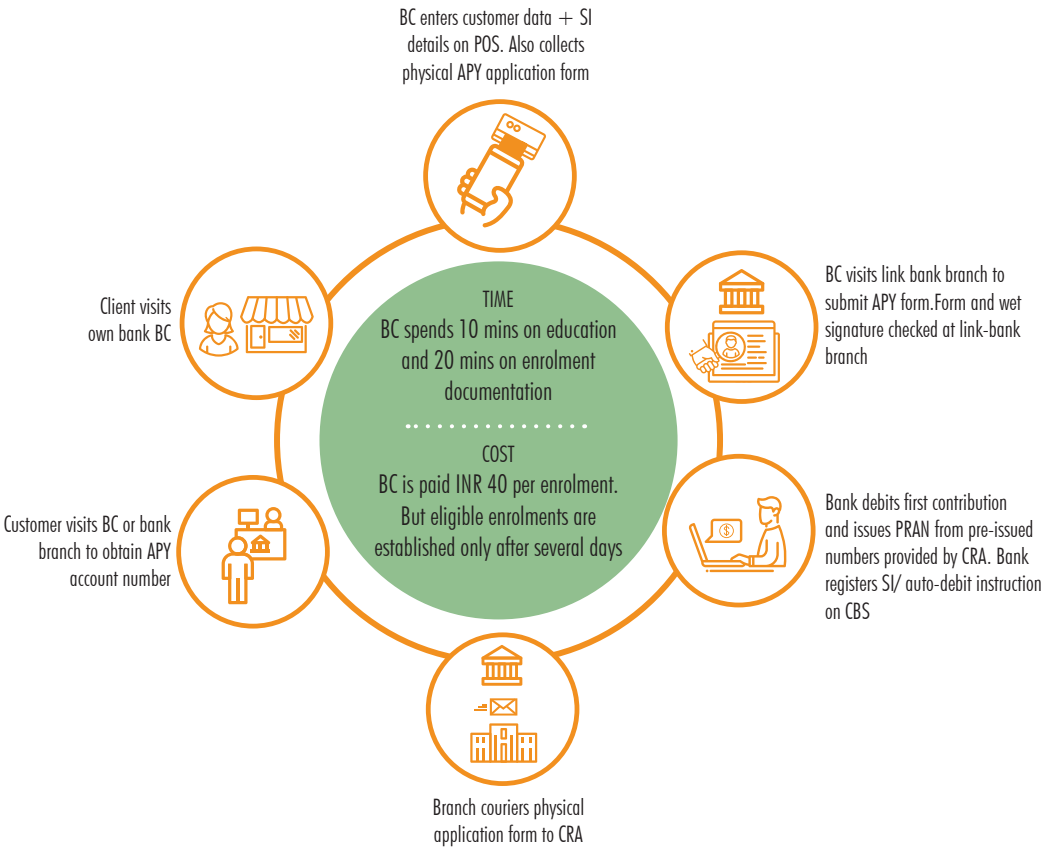
The project team conducted a baseline sample survey among PDS beneficiaries attached to the pilot PDS outlets to assess their incomes, demography, financial literacy, financial capability, outlook towards retirement savings and their level of trust in PDS shop owners. Detailed consultations were held also with a number of PDS shop owners including the 4 outlets selected for the pilot to assess their interest and capacity to deliver retirement literacy, their expectations on commercial incentives, and opportunities for delivering knowledge, enrolment assistance, reminders and ongoing information and services to APY clients enroled by them. The team also met with other existing BCs of Andhra Bank who were already authorised to enrol bank clients for APY and NPS in order to understand why so few bank clients had opened APY accounts.

Preliminary findings from the survey and interviews with key stakeholders were followed by a detailed evaluation of the process adopted by Andhra Bank for pension enrolments. This process is outlined in Figure 16.5.

From the survey on PDS beneficiaries and BC clients, it was obvious that the demand for pensions was not the primary challenge. It was equally obvious that enrolments for APY were low mainly due to low public awareness and due to the inefficient, cumbersome and expensive enrolment process.

As per the prevailing process, a BC would normally need to spend around 20 minutes in completing the enrolment documentation formalities for an APY client. This involved keying in the person's contact information and other required data onto a digital application form using a tiny hand-held POS device. In addition to this electronic data entry, the BC was expected to fill up a physical APY application form and submit the same at the nearest branch of Andhra Bank. The BC would typically be paid around INR 40 (~70 Cents) for each valid enrolment and the payment would normally be received 3 to 4 months after an enrolment was completed.

Figure 16.5
The pre-pilot process for APY enrolments by bank BCs in Krishna District

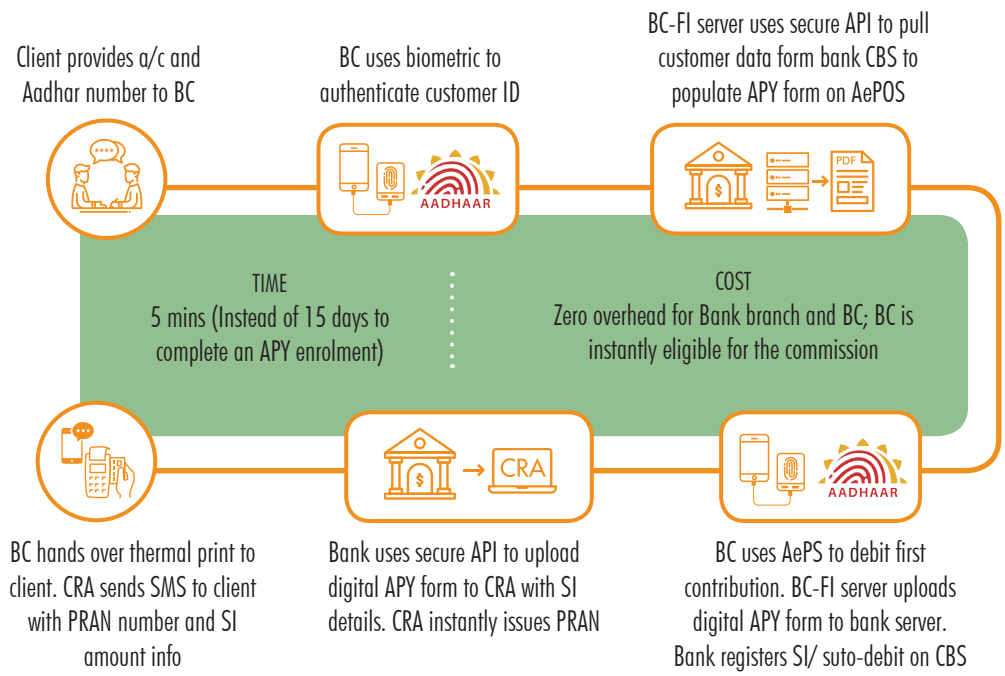


The Andhra Bank branch would usually take a few days to review the application form, confirm that the data in the form was identical to the client's data residing already on the Bank's core banking system (CBS), allot a new pension account number (from a basket of pre-generated pension account numbers) and register a standing instruction or auto-debit mandate for automated deduction and transfer of periodic APY contributions from the client's bank account on the CBS. Much of this process was expensive, cumbersome and avoidable. For example, each client that walked into an Andhra Bank BC outlet to open an NPS account was, by definition, already an Andhra Bank client. In which case, all data of the client that was required to complete an APY application form was already residing on the Bank's CBS.

In consultation with the District Collector, Andhra Bank's financial inclusion department, UIDAI and NIC, the Project team designed a new, digital, straight-through-process for APY enrolments by fair-price shops serving as Andhra Bank BCs. This new process

leveraged the existing Aadhaar-enabled IT infrastructure at PDS outlets. A small APY application software patch was developed and downloaded onto the Aadhaar-enabled PDS POS device already in use by PDS shops. With this new digital process, and as we see in Figure 16.6, a PDS beneficiary with an Andhra Bank account could open an instant APY account at any PDS BC outlet.

Figure 16.6
The new digital APY process for AePDS Outlets in Krishna District



HOW AND WHY THIS WORKED?

The PDS BC would first scan the client's iris or fingerprint using the Aadhaar-enabled PDS POS device to verify her identity. The BC would then key in the client's bank account number onto the POS device.

The POS device would instantly pull the client's full static data from the Bank's CBS to automatically populate a blank digital APY application form on the POS. Then the BC would simply key in the nominee's name, and the amount and frequency of future APY contributions by the client.

This digitally completed application form was uploaded onto the bank's server and triggered three automatic, simultaneous and immediate actions: (a) the client's first NPS contribution was debited from her bank account, (b) she was allotted her permanent retirement account number (PRAN), and (c) her auto-debit mandate for future contributions was flagged on her bank account and registered on the bank's CBS.

The client's first pension contribution value, her PRAN number and the date and amount for periodic auto-debits was displayed on the POS screen at the BC location. The BC would simply provide the client a thermal print of a receipt that contained this information. This full process took less than 5 minutes to complete, did not require any physical application form or the BC to visit the bank branch.

There were positive indications also that using village-level access boosted the gender balance – from 65:35 in the general population of APY accounts to 50:50 in Krishna district. The 4 PDS shops opened around 130 new APY accounts over a 3-month period — which was roughly 20% of the total PDS beneficiaries with Andhra Bank accounts attached to these 4 outlets.

If all 26,200 Fair Price Shops in Andhra Pradesh enrolled just 10 PDS beneficiaries for APY per month (well below the coverage levels achieved per outlet during the pilot) this would translate into 3 million accounts a year – a 75% increase on the national total that had then been achieved for APY by early 2017.

Importantly, fair-price/ PDS shop owners had a clear opportunity to deliver regular reminders for persistency when clients visited them for their monthly rations. And as BCs, they had the ability to help load savings into the bank accounts and thus ensure successful auto-debits for pensions.

The World Bank Digital Pension Inclusion Pilot in collaboration with the Krishna District Administration clearly demonstrated a significant latent demand for APY among PDS beneficiaries. Equally, the pilot clearly demonstrated that Aadhaar-enabled PDS outlets are a secure and trusted channel for targeted delivery of the APY and NPS to vulnerable, low income informal sector citizens excluded by formal pension programs. The most striking aspect of this pilot however, was the path-breaking work that has already been done by Krishna District's highly proactive and visionary District Collector and his equally committed and energetic team who laid a powerful foundation for pension and financial inclusion through the digital, Aadhaar-linked public infrastructure for government services to citizens.

Overall, the Krishna pilot provided invaluable evidence of what works, and what can work going forward. The potential is unprecedented.

CONCLUSION

The important interlinkages between pension inclusion, ID, IT and digital payments were not clearly visible when we were in the trenches, looking out at an unchartered horizon. Connecting the dots is obviously easier with the benefit of hindsight. Therefore, and as we apply past learnings to the design of future pension arrangements in South Asia and East Africa, we would do well to be guided by the following fundamentals.

First, most of the key supply-side pieces of a solution needed to achieve comprehensive pension inclusion already exist in most countries — strong political will and policy commitment, a dedicated regulator, digital national ID infrastructure, third-party sales and service outreach, well regulated financial institutions including fund managers and insurers and broad-based access to banking and/ or digital payments. However, in most countries and for most citizens, this supply rarely comes together as a single-window solution for excluded citizens. In this situation, technology can play a powerful role as the glue that can bind the supply and deliver it through a simple, convenient and affordable single-window to excluded citizens.

Second, a clear, fundamental understanding of the risks or challenges that our clients are facing or could face, and just being able to imagine a radically different and better outcome is an important part of the solution. As we saw with Gift-a-Pension, or even when faced with the challenges of cash or KYC, it was easy to build a solution once it had been imagined. In fact, it may actually be difficult thereafter, to continue to accept suboptimal outcomes and to not implement the better idea.

In this context, we must perhaps never cease to imagine a simpler, cheaper, easier and more secure way to do everything that we can to improve lives and deliver better outcomes to the citizens whom we have chosen and committed to serve.