

Evaluation of the National Pension System - Swavalamban Scheme

Dvara Research

With 85% of our workforce employed in the unorganised sector workforce who do not have access to any formal pensions, the Government of India (GoI) introduced the National Pension System-Swavalamban (NPS-S) in 2010. This scheme was implemented with the objective of encouraging citizens engaged in the unorganised sector to save towards retirement. Under the scheme, the government would contribute a total Rs. 1000 per year to every unorganised sector labourer (for the first five years) who saved a minimum of Rs. 1000 in that year. Using data from National Securities Depositories Limited (NSDL) and Pension Fund Regulatory and Development Authority of India (PFRDA), we analyse the impact of the NPS-S scheme. We propose recommendations on the design, delivery architecture, performance incentives for aggregators and customer protection for the NPS-S and other contributory pension schemes that the government may envisage in the future towards old-income security.

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Terms of Reference

The National Pension System (NPS) is a scheme that attempts to provide adequate retirement income to every citizen of India. NPS aims to ensure financial security during old age by encouraging citizens to contribute to retirement savings. In September 2010, the Government of India (GoI) introduced the NPS-Swavalamban (NPS-S) to encourage citizens engaged in the unorganised sector to save towards retirement. Under the scheme, GoI contributes Rs. 1000 per year (currently, for a period of five years ending 2016-17) to every eligible NPS account if the subscriber's contribution to NPS adds up to a minimum of Rs. 1000 per annum and a maximum Rs. 12,000 per annum. The NPS-Lite has grown rapidly with a 51% increase in registered subscribers between 2012-13 and 2013-14 alone. The scheme currently services 28.16 lac customers who contributed approximately Rs. 800 crore in the financial year 2013-14.

As the scheme enters its fourth year of implementation, IFMR Finance Foundation (IFF) will undertake a comprehensive evaluation of the scheme to assess its performance and impact based on secondary data collected by NSDL, the Central Recordkeeping Agency (CRA) for the scheme, and a primary survey of Aggregators deploying the scheme on the ground. Previous research regarding the scheme has focussed primarily on two aspects- the adequacy of public pension offered through NPS-S and the persistence levels of subscribers. For instance, Sane and Thomas (2013) analyse data of NPS-Lite 37,000 subscribers to find that only about half of the subscribers reach the minimum co-contribution amount. However, the paper also finds evidence that subscribers persist in contributing to the scheme even if they have not met the minimum contribution for a particular year. Interestingly, subscribers who persist are less likely to own land, have lower incomes and typically start the scheme with a low-value contribution.

Methodology and Research Objective:

Analysis of secondary data:

This analysis will focus on, but not be limited to, the following questions:

i. Analysis of subscriber level data:

Since each subscriber has a unique PRAN, it is possible to analyse data to understand the subscriber segments of the NPS-S scheme better. For instance, data analysis could be done for various subscriber segments, classified by age, gender, occupation, state and Aggregator. The unique PRAN also allows for an analysis of trends in subscriber transactions. For instance, analysis could provide answers to the following questions:

What is the average number of times a subscriber contributes to the scheme in a financial year? What is the average size of each contribution?

How does the nature of the transactions vary across subscriber segments, classified by age, gender, occupation, state and Aggregator?

ii. Analysis of Aggregator level data:

IFF will also evaluate the performance of the scheme at the level of the Aggregator. For example, the data could be used to understand subscriber persistence in the scheme at the level of each Aggregator. This analysis could help in identifying Aggregators that have been able to effectively implement the scheme and could motivate further research on best practices adopted by them.

Survey of Aggregators:

IFF will undertake a primary survey of Aggregators of the NPS scheme in order to understand the following aspects of the scheme:

- i. Importance of the Swavalamban matching contribution in the acquisition and persistence of subscribers in the scheme.
- ii. Design and suitability of the incentive structure for Aggregators.
- iii. Understanding of strategies used by high-performing Aggregators in incentivising subscribers to invest and persist in the scheme.

This analysis would help to answer critical questions around the overall effectiveness of the scheme and lay out potential directions for its future.

Overall, this research should provide recommendations on the following aspects of the NPS-S scheme:

- i. Improving the adequacy of public pension under NPS-S
- ii. Impact of the Swavalamban matching contribution and its continuation
- iii. Design of Aggregator incentives
- iv. Strategies for improving take-up of NPS-S
- v. Improving persistence rates of existing subscribers

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While it may not have been possible to use all the feedback from the many different stakeholders we had the opportunity to engage with, the extent of concern around the meaningful spread of pensions to cover every last individual reiterated across many conversations illustrates the tremendous significance of this issue for India's present and future.

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List of Acronyms and Abbreviations

CGMS	Central Grievance Management System
CPI	Consumer Price Index
CRA	Central Recordkeeping Agency
CRIISP	Committee to Review Implementation of Informal Sector Pension
FMCG	Fast Moving Consumer Goods
GoI	Government of India
GRC	Grievance Redressal Cell
IVR	Interactive Voice Response
KYC	Know Your Customer
MFI	Microfinance Institution
NCEUS	National Commission for Enterprises in the Unorganised Sector
NGO	Non-Governmental Organisation
NL-AO	NPS-Lite Account Office
NL-OO	NPS-Lite Oversight Office
NL-CC	NPS-Lite Collection Centre
NOAPS	National Old-Age Pension Scheme
NPCI	National Payments Corporation of India
NPS	National Pension System
NPS-S	National Pension System-Swavalamban
NSAP	National Social Assistance Program
NSDL	National Securities Depository Limited
PFM	Pension Fund Manager
PFRDA	Pension Fund Regulatory and Development Authority
PMJDY	Pradhan Mantri Jan-Dhan Yojana
PoP	Point of Presence
PRAN	Permanent Retirement Account Number
RBI	Reserve Bank of India
RSBY	Rashtriya Swasthya Bima Yojana
PV	Present Value
RFI	Rural Finance Institution
SMS	Short Message Service
T-PIN	Telephone Personal Identification Number
UIDAI	Unique Identification Authority of India
USSD	Unstructured Supplementary Service Data

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**Section I:
Executive Summary and List of Recommendations**

Chapter 1.1: Executive Summary

India's old age dependency ratio or the proportion of retired to working age population is projected to increase from 9.5% in 2015 to 28% in 2060². While most countries benefit from the organised nature of their workforce, which allows them to incentivise citizens to contribute to Pillar II (mandatory retirement savings at the employment level) and Pillar III (voluntary retirement savings) pension systems, what makes the Indian challenge unique is the largely unorganised or informal nature of our economy. Currently, 85% of our workforce, comprising the entire unorganised sector workforce, does not have access to formal pensions systems. With a rise in the old age dependency ratio, India could face what is termed a 'demographic echo' - the prospect of fewer working age individuals having to support a large old age population-which could have a debilitating impact on our economy and society.

Keeping this in mind, the Government of India (GoI) introduced the National Pension System-Swavalamban (NPS-S) in 2010 in order to encourage citizens engaged in the unorganised sector to save towards retirement. Under the scheme, GoI contributes Rs.1000 per year (currently, for a period of five years ending 2016-17) to every unorganised sector worker who saves a minimum of Rs.1000 per year towards retirement. The scheme has witnessed impressive growth since inception with a total subscriber base of 28.36 lakh and represents a laudable step in ensuring adequate retirement savings for each and every citizen of the country. However, the fact remains that the scheme currently covers only a modicum (0.8%) of its targeted beneficiaries. India needs to make substantial strides in the next few years towards ensuring that every citizen of the country starts accumulating a suitable corpus towards retirement. This report identifies three key challenges in achieving this outcome and provides recommendations on each of these critical elements.

Design of the NPS-S:

Challenges:

Pension cover must aim to secure a minimum post-retirement income for an individual. However, we find that under the current design of the NPS-S scheme, a 20 year old in the lowest income quintile saving Rs. 1000 per year and obtaining the matching Swavalamban contribution of Rs. 1000 for a period of 5 years (ending in 2016-17) can still secure only 20.78% of her requisite post-retirement corpus. The sufficiency of corpus declines further with an increase in the age of the beneficiary. Our analysis reveals that the primary driver of this insufficiency of corpus is the current investment mix of NPS-S which channels 90.2% of a subscriber's corpus to government securities and corporate bonds, and only 9.8% to equity market instruments.

The availability of the Swavalamban contribution only until 2016-17 truncates a central incentive of the scheme and exacerbates the inequity of pensions benefit between the organised and unorganised sector. There is considerable uncertainty on the extent and continuation of the Swavalamban benefit post 2016-17 and this is being touted as one of the reasons behind the inability to effectively market the product to subscribers both current and potential.

Recommendations:

1. Ensure parity with organised sector workforce by continuing the Swavalamban contribution, but in addition ensure inflation indexation: In order to ensure parity of informal sector workers, enhance scheme credibility, and effectiveness of design, we recommend the continuation of the Swavalamban matching contribution from the

² Source: United Nations, World Population Prospects (2012)

Government of India even post 2016-17, with the Government contributing up to Rs. 1,000 per subscriber per year. The matching contribution must be adjusted for inflation every year by linking it to the Consumer Price Index (CPI).

2. A long term direction for the design of the pensions system could leverage on the Aadhaar and PMJDY processes to ensure a minimum government contribution to all unorganised sector workers in an instant, equitable, and comprehensive manner: In the medium term, as universalisation of Aadhaar linked bank accounts becomes a reality and the NPS-S is linked with the Pradhan Mantri Jan Dhan Yojana (PMJDY), the Government of India and the PFRDA could consider an alternate design for the Government contribution to workers' pensions which could ensure instant, equitable, and complete coverage of all workers. In the new design, the Government could annually contribute Rs. 1000 (inflation adjusted) which is directly and automatically deposited into the Aadhaar linked retirement accounts of all workers, which can be created directly by PFRDA based on Aadhaar information on all working age individuals from the UIDAI.
3. Redesign the investment mix of NPS-S to mirror the NPS's life-cycle mix to ensure higher risk-adjusted returns for subscribers.

Improving Aggregator Reach and Performance:

Challenges:

The primary constraint to deeper penetration of NPS-S is the lack of an adequate number of Aggregators to enrol and service subscribers. For instance, there is, at present, an average of 0.4 collection centres per 10,000 unorganised sector workers in the country. The present network leaves an overwhelming majority of the unorganised sector workers out of its ambit and it is clear that the distribution network of Aggregators needs to be substantially and rapidly increased in order to ensure greater penetration of NPS-S.

Second, it is well understood that financial products in India are primarily "push-products" that need to be proactively sold in the absence of specific demand. However, the reality remains that the recognition and recall of NPS-S among its target population remains low and does not generate automatic demand for the product. While demand for the functionality of pensions products exists, customers need to be made aware of the existence and benefits of NPS-S in order to galvanise demand.

Third, there exist significant weaknesses in the current NPS-S architecture that compromise subscriber experience and increase the cost of participating in the scheme. For example, a subscriber cannot make her first contribution to the scheme at the time of enrolment but can do so only after obtaining her PRAN. While the time required for the generation of her PRAN card, as per NSDL, is a maximum of fifteen days, there appears to be significant delay in the time taken for the Aggregator to send the card to the respective NL-CC and finally the time taken for the NL-CC to get the card to the subscriber. Furthermore, even in the absence of regulatory hurdles, Aggregators have not been able to ensure inter-operability of the retirement account, primarily due to the lack of technological capability. Given the scale that the scheme aims to achieve, there needs to be a rapid reduction in transaction costs to the subscribers, both pecuniary costs in terms of costs of opening an account, and transaction fees as well as non-pecuniary costs like distance to Aggregators.

Fourth, the design of the Aggregator incentives needs to promote the critical scheme outcome of ensuring larger contribution amounts per subscriber. From a public policy standpoint, it is essential that subscribers contribute a minimum amount towards securing their post-retirement corpus. For instance, the current scheme will enable subscribers to secure only a fraction of their post-retirement corpus, partly due to the insufficiency of the

contribution amounts. Aggregators need to be incentivised to ensure that subscribers contribute, at minimum, Rs.1000 but also, substantially higher amounts.

Recommendations:

1. Widen the reach of Aggregators by allowing in entities with large distribution networks, but not by reducing capital adequacy norms: While it is evident that the present reach of the Aggregator network must be extended by empaneling a larger set of Aggregators, it is essential that PFRDA does not do this by diluting the requirement that Aggregators must hold capital against operations risk and customer protection risk, as this could end up creating a long-term weakness in the model. Instead, an alternate direction to go in would be to empanel entities with large distribution networks and business adjacencies like telecommunications companies and Fast Moving Consumer Good (FMCG) outlets as Aggregators. This would entail that PFRDA modify the existing eligibility requirements, which state that an Aggregator should have been in the business of financial services or commodity development for a period of at least 3 years. While retaining the 3 year vintage requirement, PFRDA should remove the business requirement, so as to leverage the potential of entities with large distribution networks in both widening and deepening the reach of NPS-S.
2. Improve the recognition and recall of NPS-S through outreach in print and electronic media: PFRDA must play a more pro-active role in the promotion and endorsement of the scheme in the print and electronic media so as to mobilise enrolments and contributions across the country. In order to ensure greater awareness of the scheme, PFRDA must lead a concerted promotion campaign on the lines of the National Pulse Polio Programme or the Swachh Bharat Abhiyaan.
3. In view of the critical importance of technology platform for Aggregators, PFRDA must require all Aggregators to use a technology platform that provides for real-time transactions with the NSDL server for all actions starting from e-KYC authentication, subscriber enrolment and PRAN generation; subscriber contributions and system-generated receipts; speedy settlement and reconciliation; inter-operability across Aggregators; and real-time access to subscriber accounts.
4. In order to ensure that all Aggregators adopt such technology systems in a reasonably quick timeframe, it would be desirable from a public policy perspective for PFRDA to develop, package, and distribute a basic “Technology Starter Pack” to all Aggregators. This can comprise of a technology platform that provides all the functionality described above, as well as training modules for operationalising the technology platform.
5. The Aggregator incentive structure should be redesigned to provide Rs.100 for every subscriber that contributes a minimum of Rs.1000 (and no incentive payments for subscriber contributions below Rs. 1000), and an ad-valorem rate of 5% of the contribution amount per subscriber for amounts above Rs.1000, subject to a maximum of Rs. 300 per subscriber per year. Such an ad-valorem rate will ensure larger contribution amounts per subscriber.

Customer Protection:

Challenges:

Old age pension is a complex product that involves, over the working life of a subscriber, regular investments for corpus building, illiquidity of the corpus, inflation protection, complex asset-allocation mix, as well as some commitment from the Government. Given

these complexities and the complexities of each individual subscriber's household, care must be taken to ensure that providers are ensuring that subscribers are contributing suitable amounts to the scheme at any given point in time. The requirement of Suitability from distributors of NPS-S should encompass both ensuring the ex-ante suitability of the product to a subscriber before sale, especially from the standpoint of preventing mis-sale and two, ensuring the ease of access to ex-post grievance redressal mechanisms, both internal (at the level of the Aggregator) and external (at the level of the regulator), and the timely resolution of grievances.

Recommendations:

1. In view of the importance of preventing mis-sale and to ensure more suitable pensions investments by all subscribers, we propose that PFRDA commission an intensive research study in order to arrive at a detailed set of Unsuitability guidelines for NPS-S, which will delineate the characteristics that make an individual unsuited to contributing into the program at any given point in time.
2. Require Aggregators to have a well-defined process for internal redress of grievances. This process must be clearly and prominently displayed at their own branches and at the branches of their partners. The Grievance Redressal Cell (GRC) of the PFRDA must function as a second port of call for the subscriber. The GRC should be accessible to subscribers and should ensure that complaints are resolved in a time-bound manner.
3. Urgently outline a clear process for annuitisation and cases of death: PFRDA must prescribe a clear set of rules and processes to be followed in the event of the untimely death of a subscriber and the annuitisation of pension corpus of subscribers above 60 years of age. With over 50,000 subscribers reaching the age of exit in the next three years, there is an urgent need to provide clarity regarding the exit policy.

Expenditure on NPS-S

We estimate that Government expenditure on NPS-S over the next 5 years (2015-16 to 2019-20) will total between Rs. 2,537 crore (covering 1.6% of the target population) and Rs. 11,276 crore (covering 10.5% of the target population, with full coverage expected in 2024-25). If Gol were to set aside the complete budgeted expenditure for 2015-16 to 2019-20 with PFRDA in year one, then PFRDA could invest this corpus in an instrument such as an inflation-indexed bond to pay out the projected expenditure (at inflation adjusted rates) over the next five years. Assuming 8% inflation, the amount set aside by Gol in year one would be between Rs. 1,960 crore and Rs. 8,354 crore, depending upon the scenario.

Chapter 1.2: List of Recommendations

Recommendations on Product Design:

- 3.1.1 The illiquidity offered by NPS-S is perhaps the defining feature of the scheme and is the central benefit that the scheme provides its subscribers, as compared to investments in Mutual Funds or bank account deposits. The PFRDA must not dilute this important feature of the scheme by allowing early and more flexible withdrawals.
- 3.2.1 In view of the arguments for ensuring parity of informal sector workers, enhancing scheme credibility, and effectiveness of design, we recommend the continuation of the Swavalamban matching contribution from the Government of India even post 2016-17, with the Government contributing up to Rs. 1,000 per subscriber per year. This remains a significant design feature for ensuring subscriber contributions into the creation of their pension corpus.
- 3.2.2 The PFRDA, in consultation with the Government of India, should announce the inflation-indexed adjustment of the Swavalamban contribution at regular intervals in time. We propose that the Government match be linked to the CPI and be revised every year. This will ensure that the benefits of pension are not eroded over time by inflation.
- 3.3.1 In the medium term, as universalisation of Aadhaar linked bank accounts becomes a reality and the NPS-S is linked with the PMJDY, the Government of India and the PFRDA could consider an alternate design to Recommendation 3.2.1 for the Government contribution to workers' pensions which could ensure instant, equitable, and complete coverage of all workers. In the new design, the Government could annually contribute Rs. 1000 (inflation adjusted) which is directly and automatically deposited into the Aadhaar linked retirement accounts of all workers (which can be created directly by PFRDA based on Aadhaar information on all working age individuals from the UIDAI). The Government contribution here is not designed as a matching amount to a subscriber's contribution, but as a direct and conditional minimum contribution to the retirement corpus of an individual. The conditionality that could be imposed on beneficiaries accessing this Government pension contribution is that it can be available only upon retirement and not prior to it. This will ensure that all workers have a basic minimum corpus that the Government is contributing to building; this is a corpus that individuals should ideally view as a supplement to their own periodic and more substantial pension contributions through Aggregators in order to secure their retirement income.
- 3.4.1 In view of a significant loss in return faced by the NPS-S subscriber on account of the conservative investment mix under NPS-S, we propose that the PFRDA should pursue a more aggressive age-linked equity allocation, like the life-cycle fund allocation mix used by the main NPS scheme, in order to ensure that subscribers accumulate a higher share of their requisite post-retirement corpus.
- 3.4.2 Capital guarantee and inflation protection are essential features that must be added to protect subscribers. Under the capital guarantee feature, investment should be permitted to be made only in approved fixed income instruments of specified maturities. PFMs should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA from time to time.

Recommendations on Aggregator Reach, Performance and Incentives:

- 4.1.1 In order to ensure the continued performance and sustainability of the scheme, the adequacy of current Aggregator capital requirements must not be diluted. Relaxing adequacy of capital norms for Aggregators in the attempt to widen the distribution network could end up creating long-term weaknesses in the distribution model itself. Requiring Aggregators to hold capital against operations risk and customer protection risk is a fundamental building block of the distribution model.
- 4.1.2 As of now, there is a requirement by PFRDA that entities must have been in the business of financial services or commodity development for at least 3 years to be eligible to become an Aggregator. While the requirement on the vintage of the Aggregator's business is desirable, the requirement on a limited set of business models may be preventing entities like telecom operators and FMCG outlets from entering this business. We propose the removal of this business requirement while retaining the 3 year vintage requirement, so as to leverage the potential of entities with large distribution networks in both widening and deepening the reach of NPS-S.
- 4.1.3 In order to ensure that citizens as well as local and state government officials are aware of the NPS-S product and its benefits, it is essential that there is a concerted media campaign by the PFRDA, with messages in local language newspapers, radio and television spots -as is the case with the promotion of the National Pulse Polio Programme or the Swachh Bharat Abhiyaan for instance. In the messages broadcast through the media, focus is to be placed on importance of self-funded old age pension, the notion of market-linked returns, Swavalamban matching contribution in perpetuity, the expected pay-outs at the time of annuitisation, as well as the flexibility to make contributions at any Aggregator (inter-operability).
- 4.1.4 In order to ensure that there is a geographically equitable spread of NPS-S as the scheme gathers momentum, we propose that the PFRDA actively track district-wise access to NPS-S and publish an annual list of High Priority Districts that are poorly serviced by Aggregators and therefore have low NPS-S penetration. The list could also take into account other factors that have been known to inhibit access, such as distance from nearest urban centre, the level of poverty, and the ratio of backward castes. Over time, depending on the persistence of districts on this list, additional incentives can be provided for Aggregators to function in these districts.
- 4.1.5 PFRDA must write to state governments that make co-contributions into the NPS-S to ensure that they do so for all citizens of the state and not restrict the benefit only to subscribers accessing the scheme through a certain specified set of Aggregators.
- 4.2.1 In view of the critical importance of technology platform for Aggregators, PFRDA must require all Aggregators to use a technology platform that provides for real-time transactions with the NSDL server for all actions starting from e-KYC authentication, subscriber enrolment and PRAN generation; subscriber contributions and system-generated receipts; speedy settlement and reconciliation; inter-operability across Aggregators; and real-time access to subscriber accounts.
- 4.2.2 In order to ensure that all Aggregators adopt such technology systems in a reasonably quick timeframe, it would be desirable from a public policy perspective for PFRDA to develop, package, and distribute a basic "Technology Starter Pack" to all Aggregators. This can comprise of a technology platform that provides all the

functionality described in Recommendation 4.2.1, as well as training modules for operationalising the technology platform.

- 4.2.3 PFRDA should work with Aggregators to make them adopt options such as SMS, online verification, and/or IVR to make available to subscribers, their real time account data from NSDL systems. Recently, the National Payment Corporation of India (NPCI) together with telecom companies has launched the *99# functionality on USSD. Although more expensive at about Rs. 1.50 per transaction, this channel can provide subscribers instant access to their accounts without any dependency on internet or SMS.
- 4.3.1 For the Aggregator's incentives, we recommend an incentive structure that provides Rs.100 for every customer that contributes a minimum of Rs.1000 (and no incentive payments for subscriber contributions below Rs. 1000), and an ad-valorem rate of 5% of the contribution amount per subscriber for amounts above Rs.1000, subject to a maximum of Rs. 300 per subscriber per year.
- 4.3.2 Aggregator incentives must be paid out by PFRDA on a quarterly basis instead of once a year to ensure that Aggregators' working capital requirements for NPS-S distribution are met in a more reasonable manner.

Recommendations on Customer Protection:

- 5.1.1 In view of the importance of preventing mis-sale and to ensure more suitable pensions investments by all subscribers, we propose that PFRDA commission an intensive research study in order to arrive at a detailed set of Unsuitability guidelines for NPS-S, which will delineate the characteristics that make an individual unsuited to contributing into the program at any given point in time. PFRDA must also require Aggregators to ensure that the NPS-S product is not bundled with other products the Aggregator may be offering, such as credit.
- 5.1.2 In order to ensure that subscriber grievances are given the importance they deserve, all Aggregators should be required by PFRDA to have a well-defined process for grievance redressal that is prominently displayed at every branch of its own and of all branches and outlets of its partners (NL-CCs), and is communicated clearly to subscribers at the time of registration and renewal.
- 5.1.3 If the subscriber is dis-satisfied with the outcome of the Aggregator's internal grievance redressal process, then she should reach out to the GRC at PFRDA. The GRC must be made accessible to NPS-S subscribers and PFRDA must ensure that there is a process for timely resolution of complaints. Subscribers must have their complaints resolved within specified timelines set out by the GRC.
- 5.1.4 PFRDA must in its supervisory role, carry out continuous, ex-post monitoring through information reporting requirements from Aggregators, as well as on-site verification and regular audits. The monitoring process should assess information on Aggregator financials, subscriber complaints and grievance records, service level performance from the time of subscriber contributions on the ground all the way till it reaches their retirement accounts, technology adoption, and risk management capabilities. PFRDA must also engage in mystery shopping audits to check for quality of Aggregator service, especially the nature of subscriber-field staff interaction.
- 5.1.5 PFRDA must lay down clear processes for both the annuitisation of pension corpus of subscribers who are already 60 and waiting for pay-outs, and also for those cases

where subscribers are dead. In most, if not all, of these cases there has been no time to build up a sufficient corpus to enable annuitisation, so the existing corpuses of these subscribers must be made available in totality to them (or their nominees, in the case of death). This must be treated as high priority and resolved at once.

Recommendations for NPS-S Expenditure

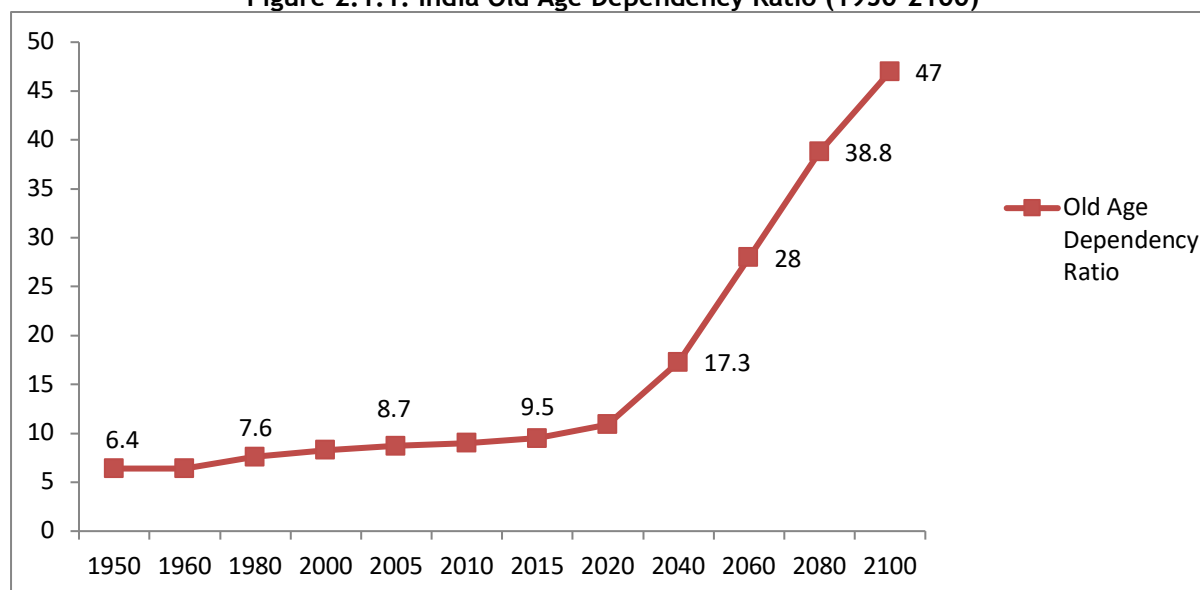
- 6.1.1 Based on the scenario assumed, we estimate that Government expenditure on NPS-S over the next 5 years (2015-16 to 2019-20) will total between Rs.2,537 crore (covering 1.6% of the target population) and Rs.11,276 (covering 10.5% of the target population, with full coverage expected in 2024-25). If Gol were to set aside the complete budgeted expenditure for 2015-16 to 2019-20 with PFRDA in year one, then PFRDA could invest this corpus in an instrument such as an inflation-indexed bond to pay out the projected expenditure (at inflation adjusted rates) over the next five years. Assuming 8% inflation, the amount set aside by Gol in year one would be between Rs. 1,960 crore and Rs. 8,354 crore, depending upon the scenario.

**Section II:
Introduction and Current Status**

Chapter 2.1: Evolution and Design of NPS-Swavalamban

India's old age dependency ratio or the proportion of retired to working age population is projected to increase from 9.5% in 2015 to 28% in 2060 (Figure 2.1.1). India's elderly population (aged 65 years and above) is projected to increase from 5.4% of our population in 2015 to 16.7% by 2060, while the share of working aged (between 20 and 64 years) in the population will increase by just 3% in the same time period. With such a rise in the old age dependency ratio, India could face what is termed a 'demographic echo'- the prospect of fewer working age individuals having to support a large old age population-which could have a debilitating impact on our economy and society. Given India's changing demographic profile, it is essential that we plan for the post-retirement financial wellbeing of a large section of our population.

Figure 2.1.1: India Old Age Dependency Ratio (1950-2100)



The pensions system in economically advanced, industrialised nations is typically categorised into three core pillars. Pillar I forms the benefit extended to the citizen by the State, Pillar II is in the form of mandatory retirement savings at the level of the employer and Pillar III is comprised of voluntary retirement savings, over and above the other pillars. While this structure works effectively in most countries due to organised nature of their respective workforces, what makes the challenge of extending pensions benefit in India unique is the highly informal nature of our economy, which precludes investment in Pillar II savings. It is estimated that almost 85% of India's 46 crore workforce is engaged in the unorganised sector. Defined broadly, unorganised sector workers are those who do not have contracted employment with a formal sector employer and are engaged as home-based, self-employed or wage workers. As the National Commission for Enterprises in the Unorganised Sector (NCEUS) argues, the unorganised sector workforce does not enjoy three types of social protection - employment security (no protection against arbitrary dismissal), work security (no protection against accident and health risks at the workplace) and social security (health benefits, pensions, and maternity benefits). As Kannan & Breman (2013) argue, recent employment trends confirm the growing informalisation of the workforce, even within the formal sector¹. For example, the share of informal workers in the formal sector has increased from 42% in 2000 to 51% in 2010.

Compounding the lack of access to pensions benefit under social security is the fact that the resources offered by other possible sources of post-retirement income like support from

family members and government benefits remain meagre. For instance, it is estimated that only about 7% of all elderly households receive remittances from family living elsewhere. While a majority of India's elderly live in joint, three-generational families, support from joint families is less likely for households in the poorest income quintile and those with nominal educational levelsⁱⁱ. India spends approximately 1.3% of annual GDP on the provision of public pensions, significantly lesser than the 2.5% benchmark for countries with comparable incomes; only 17% of elderly households in India receive some kind of government benefit, including the benefits from the National Old Age Pension Scheme (NOAPS)ⁱⁱⁱ. Additionally, private sources of savings in India like household assets, for instance, remain predominantly invested in tangible, physical assets like land, housing, livestock and jewellery^{iv}. The high correlation of these assets with the fluctuations in the local economy combined with their illiquid and non-tradable nature make them unsuitable investment options for households saving towards retirement.

Given these unique set of challenges and the policy imperative posed by an ageing demographic profile, the Government of India launched the National Pension System (NPS), a scheme that attempts to provide adequate retirement income to every citizen of India. NPS aims to ensure financial security during old age by encouraging citizens to contribute to retirement savings. In September 2010, the Gol introduced the NPS-Swavalamban (NPS-S) to encourage citizens engaged in the unorganised sector to save towards retirement. Under the scheme, Gol contributes Rs. 1000 per year (currently, for a period of five years ending 2016-17) to every NPS account that meets the following criteria:

- i. The subscriber should not be covered under any employer assisted retirement benefit scheme.
- ii. The subscriber should not be covered under social security schemes falling under the purview of any of the following acts:
 - a. Employee Provident Fund and Miscellaneous Provision Act, 1952
 - b. The Coal Mines Provident Fund and Miscellaneous Provision Act, 1948
 - c. The Seamen's Provident Fund Act, 1966
 - d. The Assam Tea Plantation Provident Fund and Pension Fund Scheme Act, 1955
 - e. The Jammu & Kashmir Employee Provident Fund Act, 1961
- iii. The subscriber's contribution to NPS should add up to a minimum Rs. 1000 per annum and maximum Rs.12,000 per annum, for both Tier I and Tier II taken together.
- iv. The matching contribution from Gol will be provided only if the subscriber makes the minimum contribution of Rs.1000 per annum to his Tier I account. This matching contribution is capped at Rs. 1000.

A subscriber may exit from the NPS-S at 60 years of age provided that a minimum of 40% of the pension savings is annuitised. A subscriber has the option to exit before 60 years of age provided that a minimum of 80% of the pension savings is annuitised. A premature exit is also subject to the overriding condition that the amount of pension savings to be annuitised should be sufficient to yield a minimum amount of Rs. 1,000 per month.

The NPS product is a significant step forward from the defined-benefit schemes of the past, such as the National Old Age Pension Scheme and has grown rapidly since inception. As of June 2014, the scheme services 28.16 lakh subscribers. In particular, the NPS-S is very significant in the social security landscape for India on account of some of its design and delivery architecture features:-

- i. Sound Architecture: The NPS, in a similar vein to other social security schemes like the Rashtriya Swasthya Bima Yojana (RSBY), is based on a public-private partnership model, where government regulates, subsidises, and incentivises various stakeholders. However, the private sector is leveraged for distribution and fund management. The NPS architecture is considered in line with international best practices in defined-contribution plan set-up (refer Chapter 2.2).
- ii. Voluntary Contributions: The nature of the plan, which is a defined-contribution scheme that allows for voluntary contributions that are portable, is ideally suited to India's diverse unorganised sector, which is characterised by highly disparate income streams across people, places, and time. Additionally, portability in the design of the scheme is vital in view of the extent of expected rural-urban migration over the next few decades, with over 200 million people moving from villages to cities between 2011 and 2030^v.
- iii. Swavalamban Matching Contribution: The Government's commitment to co-contribute to unorganised sector pensions, and in essence bring them in parity with formal sector workers, is a laudable and highly attractive feature of the scheme. It has previously been noted that this matching contribution is a source of tremendous credibility for the scheme and will be essential for incentivising subscriber take-up as the scheme ramps up to cover a significant portion of the informal sector workforce^{vi}. As of now, the Government of India is committed to the Swavalamban contribution until 2016-17.
- iv. Low Fund Management Fees: Fund Management fees are determined through a competitive bidding process by prospective fund managers, and are around 0.01% per annum^{vii}. This is very low compared to fees charged by most mutual funds, which can be as high as 1.75% per year^{viii}.
- v. Aggregator Model with Capital: The scheme works through distribution agents called Aggregators who are required to hold capital both against operations risk and customer protection risk. This bedrock of well-capitalised Aggregators forms the fundamental building block for a robust delivery mechanism that offers depth and ease of access to the subscribers.
- vi. Contribution for the Long Term: In its current design, the NPS-S is a product that does not offer the subscriber much liquidity until the time of retirement. This is a quintessential feature of the product and has been done in order to enable the building up of a sufficient corpus for life post-retirement.

Chapter 2.2:
Government funded Matching Defined Contributions:
Summary of International Experience

Table 2.2.1 below provides a brief summary of government-funded matching defined contribution schemes across four countries- Thailand, Mexico, Germany and New Zealand. These schemes seek to address challenges similar to the ones articulated in Chapter 2.1 including extending pensions to the informal sector (Thailand, Mexico) and incentivising subscribers to contribute higher amounts (Germany, New Zealand), and their experiences have been instructive in building a robust design and delivery architecture for the NPS-S scheme.

Table 2.2.1: Summary of International Experience

Country	Scheme	Features
Thailand	National Savings Fund	<ul style="list-style-type: none"> ▪ Informal sector workers between 15 and 60 years of age contribute between 50 Thai Baht and 13,200 Thai Bhat (approximately between Rs.95 and Rs. 25,000) per annum. ▪ The Government makes a co-contribution that is graded based on the age of the subscriber. For example, contributions of subscribers between 15 and 30 years of age are matched at 50% by the Government, at 80% for subscribers between 30 and 50 years and a one-to-one matching for subscribers between 50 and 60 years of age. ▪ At least 60% of the corpus must be invested in low-risk securities including government bonds, bank certificates of deposit and highly rated corporate debt instruments. The remainder can be invested in equity markets, real estate, overseas investments and bonds of lower rating. ▪ The Government guarantees a rate of return on the investments, roughly equivalent to the average return on 12-month deposits at the Government savings bank or similar institutions. If the retirement corpus is lesser than what it would have been under the guaranteed instruments, the NSF covers the balance. ▪ If the accumulated corpus is equivalent to a minimum corpus, it is annuitized to provide payments till the subscriber reaches the age of 80 years of age. If the subscriber lives beyond 80 years, the NSF covers her annuity till death. ▪ The pension programme under NSF is fully tax exempt or EEE (exempt exempt exempt), i.e. contributions, earnings and pay-outs are exempt from taxation.
Mexico	Social Contribution Scheme and Solidarity Savings Scheme	<ul style="list-style-type: none"> ▪ There are two types of matching defined contribution schemes in Mexico: Social Contribution Scheme, exclusively targeting low-income workers and Solidarity Savings Scheme, which targets subscribers who wish to voluntarily increase their contributions. ▪ Social Contribution is paid directly into the individual accounts of the worker by the Federal government. It consists of a subsidy equivalent to 5.5% of the minimum wage for each day of work. This is adjusted for inflation every quarter. The scheme is currently restricted to those who earn less than 15 times the minimum wage of their Federal district.

		<ul style="list-style-type: none"> Under Solidarity Savings, the Government contributes 3.25 Mexican dollars for every dollar contributed by the subscriber. The voluntary contribution also has a floor and ceiling for employer contributions- it should be between 2% and 6.5% of the employee contribution base.
New Zealand	Kiwi Saver Scheme	<ul style="list-style-type: none"> The objective of the scheme is to “to encourage a savings habit and asset accumulation among individuals who may not be in a position to enjoy standards of living in retirement similar to those in preretirement”. Subscribers are automatically enrolled into the scheme. If a new employee does not opt out of the scheme in eight-weeks, she is automatically enrolled. Subscribers can withdraw their accumulated balance under circumstances of death, illness or substantial financial hardship. Subscribers who have contributed for 12 months or more can also take a contribution holiday (up to five years) without reason. The Kiwi Saver account is funded by deducting 2%, 4% or 8% of employee earnings through the tax systems. The employer makes a matching contribution which is also automatically deducted. All employers must contribute at least 3% of earnings for member employees. At least three years of contributions to Kiwi Saver entitles subscribers to a first home deposit subsidy. The subsidy is worth NZ\$ 1000 for each year of contribution subject to a ceiling of five years. The Government makes a graded matching contribution of up to NZ\$ 521 a year. In addition, the Government helps the subscriber kick-start the account with a tax-free contribution of NZ\$ 1000.
Germany	Reister Pension Plan	<ul style="list-style-type: none"> The Reister pension scheme is a means-tested pensions scheme that includes employees paying mandatory social insurance contributions, recipients of wage compensation benefits (such as unemployment benefits, child-raising benefits, and so forth), self-employed people who are mandatory members of the public pension system, farmers, and tenured civil servants. Subscribers who contribute greater than 4% of gross earnings to the scheme are eligible for a full subsidy including a matching contribution, a child subsidy and tax contributions. Overall, these subsidies vary depending on income levels and number of children. For the mean earnings level of €42,000, the subsidy rate was 39%. An earlier version of the scheme permitted withdrawals contingent on pay back in monthly instalments by the age of 65 years. The penalty for non-repayment was a payback of subsidies accrued to the subscribers. In 2008, the scheme was amended to allow for up to 100% of accumulated corpus for owner-occupied housing.

Source: Matching Contributions for Pensions: A Review of International Experience (2013), edited by Richard Hinz, Robert Holzmann, David Tuesta and Norikuyi Takayama.

It is apparent that India has unique challenges both in terms of the sheer size of the informal sector -approximately 40 crore - and the fiscal resources required to fund pension benefits for this population. There is a need, in keeping with global trends, to move away from

defined benefit programs with guaranteed returns to defined contribution programs in order to ensure fiscal sustainability and for the Government to be able to meet its commitment to citizens. In view of the high level of informality, unseen in any other country of similar size, and the need to get citizens to actively participate in building their pension corpuses, the emergence of the NPS-S was a significant milestone in public pensions for India. The scheme design of the NPS-S elegantly combines: (i) the Swavalamban matching contribution of Rs. 1000 from the Government of India available to subscribers reaching annual contributions of Rs. 1,000 or more, thus creating a defined contribution mechanism for pensions; and (ii) a delivery architecture based on the creation of network of Aggregators to reach out to every corner of the country to enrol and empower all citizens in the informal workforce to participate in meaningful retirement planning. Based on the study of international experiences, it is clear that the NPS-S takes the lessons of some of the well-designed schemes from across the world, but has done so in such a manner as to make it appropriately relevant to the realities of the Indian context.

Chapter 2.3: Methodology

As the NPS-S enters its fifth year of implementation, this report provides a comprehensive evaluation of the scheme, assessing its performance and impact based on secondary data collected by National Securities Depository Limited (NSDL, the Central Recordkeeping Agency or CRA for the scheme), data on income and expenditure of households serviced by a Rural Financial services Institution (RFI) and a primary survey of Aggregators deploying the scheme on the ground.

Methodology:

Analysis of secondary data:

We analyse secondary data at the following levels:

- i. Subscriber data linked to unique Permanent Retirement Account Number (PRAN)
- ii. Aggregator data linked to unique NPS-Lite Oversight Office (NL-OO) code
- iii. Sub-aggregator data linked to unique NPS-Lite Account Office (NL-AO) code
- iv. Collection centre data linked to unique NPS-Lite Collection Centre (NL-CC) code

The analysis covers four years of scheme data, corresponding to data collected between June 2010 and May 2014. For the purpose of this report, we have defined a year as starting from June and ending in May. This allows us to capture the transactions recorded in the “extended months” of the fiscal year- April and May- that the PFRDA usually deems as the “grace period” for accounting for contributions into the NPS-S scheme for a given fiscal year. We have analysed, overall, data pertaining to 28.37 lakh subscribers, 56 Aggregators, 338 Sub-aggregators and 16,028 collection centres. A complete list of data obtained from NSDL is provided in Appendix B.

Survey of Aggregators:

A select group of 19 Aggregators out of the 56 active Aggregators (an additional 16 Aggregators were not yet active at the time of this analysis) were chosen and a telephonic, qualitative, semi-structured survey was conducted with each of them. These Aggregators were chosen in such a way as to provide representation across the following parameters: (i) business model, (ii) geographical region, (iii) performance, as measured by subscriber contribution and persistence, and (iv) size of subscriber base. The final set of 19 Aggregators provided us with a reasonably representative sample across all these parameters and covered almost 83% of the overall subscriber base.

Table 2.3.1: Summary of surveyed Aggregators

Business Model	Total Count	Surveyed	Regional Spread of Aggregator	% of subscribers covered by Aggregators surveyed
Microfinance Institution (MFI)	13	5	North, South, East, West, Central North-East	33.8%
Distribution Company	14	5	North, South, East, West, Central North-East	29.1%
Government Body	6	3	Central, South, West	13.3%
Bank	19	4	North, South, East, West, Central North-East	5.3%
Federation / Union	2	2	East, South	1.2%

Private Body	2	0	Central	0%
Total	56	19		82.7%

The overall survey was focussed on three important questions from the point of view of the Aggregators regarding the NPS-S scheme. The questionnaire administered on the Aggregators was centred on the following themes:

- i. The specific strategy for targeting subscribers and following up with them is a significant driver of performance. What is the Aggregator's current strategy for targeting new subscribers and following up with existing subscribers, and how has this evolved over time?
- ii. There is currently a matching contribution of Rs. 1000 to incentivise subscribers to contribute at least Rs. 1000 each year, what is the Aggregator's view of the importance of this contribution:
 - a. Should it continue as is, and why?
 - b. Should it not continue in its current form, but used in some other way such as marketing or awareness creation, and why?
 - c. Should it be a combination of (a) and (b) - what would be the precise design?
- iii. The current incentive structure has a one-time fee for each new NPS-S subscriber and Rs. 100 for each subscriber who makes an annual contribution of Rs. 1000 or more:
 - a. Is this a good incentive design going forward, and why?
 - b. What changes would the Aggregator propose to this structure, and why?

The administration of this survey was designed to ensure that data analytics from the secondary data on each Aggregator was used to guide each conversation, in order to ensure a deeper probing of Aggregator performance, and also a more granular discussion on scheme design and incentives. As a consequence, telephonic surveys with each of the Aggregators lasted, on an average, 45 minutes. The insights from the surveys are presented throughout the report. A summary of the salient themes that emerged and the Aggregators' views under each theme are provided in Appendix A.

Analysis of household financial data:

For the purpose of this report, we accessed household level data from a Rural Financial services Institution (RFI) that provides financial products and services to remote rural households in India. This institution currently services approximately 2.25 lakh households in 3 different states of India (Tamil Nadu, Uttarakhand and Odisha) through its 201 branches. The financial services institution captures extensive details of the households it enrolls, and these details provide in-depth insights of household level characteristics which we have used in this report. A brief description of the details captured by the institution that are used in this report is provided below in Table 2.3.2.

Table 2.3.2: Nature of Data from Financial Institution

Household Details	For each family member (including enrolee): - Name, relationship to enrolled member, age, education
Family Income	Income details for each family member, with provision for incomes to be recorded from multiple sources per member: Income-generating activities the member is involved in, net income from the activity, frequency of income, duration of income (Eg: Rs.1000 every month for 5 months in a year)
Family Expenditure	Expenditure amounts and frequency for: - Clothing, education, fees, electricity, festival, food, health, house rent, insurance, shop rent

We use this data for the calculation of post-retirement corpuses required by individuals.

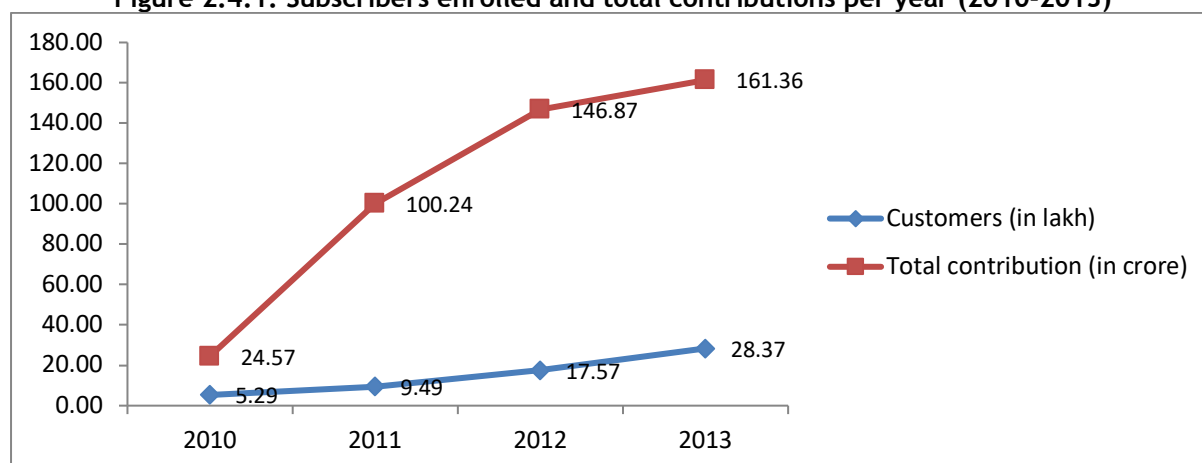
While it would have been ideal to supplement the secondary data analysis, Aggregator surveys, and household financial data analysis with subscriber interviews and surveys, the stringent timelines for report submission meant that this was not feasible. The PFRDA could look to supplement this report with subscriber surveys at a later date.

Chapter 2.4: Current Status

- i. The scheme has demonstrated high rates of growth, both in terms of subscribers registered and total contributions since its inception.

The number of subscribers enrolled in the scheme has increased from 5.29 lakh in year one of the scheme to 28.37 lakh in year four (Figure 2.4.1) The Compounded Annual Growth Rate (CAGR) in subscriber enrolment over the last four years has been 52.16%. Subscriber contributions have also seen high rates of growth in the last four years; from Rs.24.6 crore in 2010 to 161.4 crore in 2013 (Figure 2.4.1). This represents a CAGR of 60.09%.

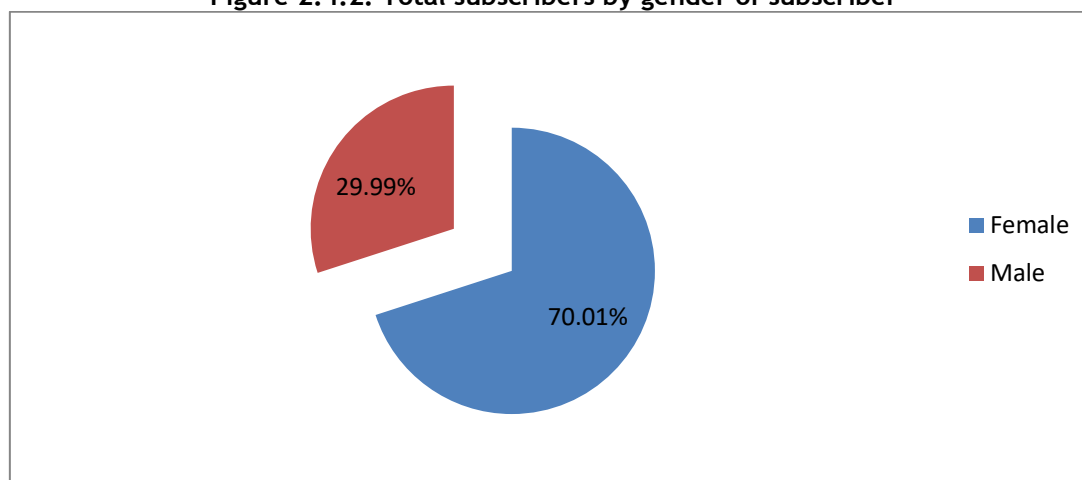
Figure 2.4.1: Subscribers enrolled and total contributions per year (2010-2013)



- ii. The scheme has reached out extensively to women, who have traditionally been excluded from participation in the financial system.

The NPS-S scheme has had considerable success in extending the benefits of co-contribution pension to subscribers who are traditionally excluded from the ambit of the formal financial system. For instance, as Figure 2.4.2 shows an overwhelming majority of the subscribers (70%) in the scheme are women. As a counterfactual estimate, women hold only 30% of the total individual deposit accounts (including current, savings and term deposits) in the country^{ix}.

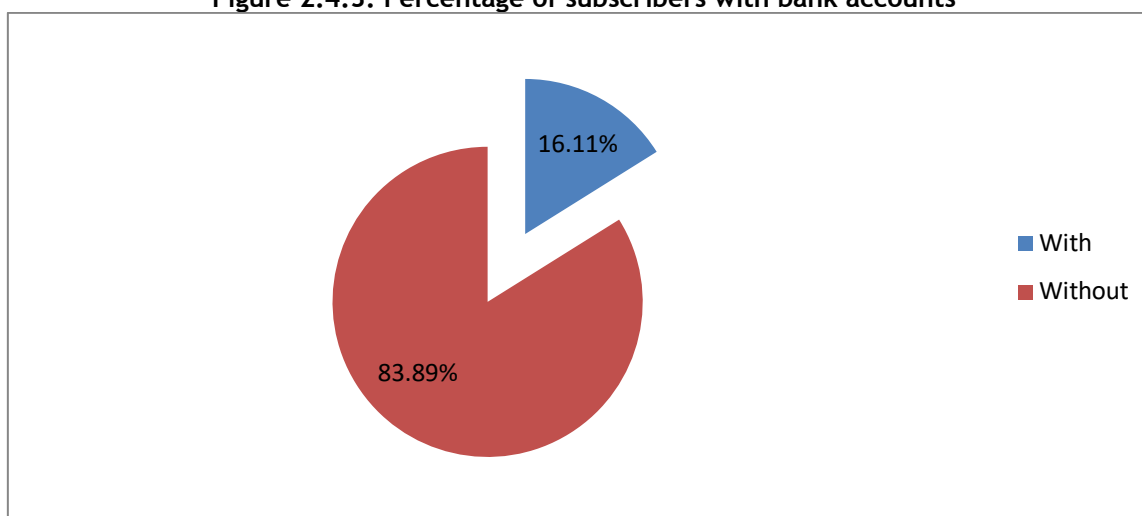
Figure 2.4.2: Total subscribers by gender of subscriber



- iii. The scheme has reached out substantially to unbanked populations, enabling them exposure to diversified financial assets, and away from physical assets.

The scheme has also reached out to subscribers without access to bank accounts and therefore, the formal financial system. As Figure 2.4.3 shows, approximately 84% of the extant subscriber base do not hold a bank account. The scheme has shown considerable foresight through its decision to enrol subscribers without bank accounts, thereby providing a large numbers of subscribers the benefits of access to equity and debt markets. This ensures that, unlike a majority of their other assets, the retirement savings of subscribers are insulated from the fluctuations of the local economy and are uncorrelated with their existing asset portfolio.

Figure 2.4.3: Percentage of subscribers with bank accounts



- iv. There is a diversity of Aggregator business models operating the NPS-S today, and this is valuable as different strategies may work in different contexts.

Table 2.4.1 below provides an overview of the types of Aggregator business models, the number of Aggregators of each type and the percentage of total subscribers with each type. Appendix C provides a detailed analysis of various types of Aggregator business models.

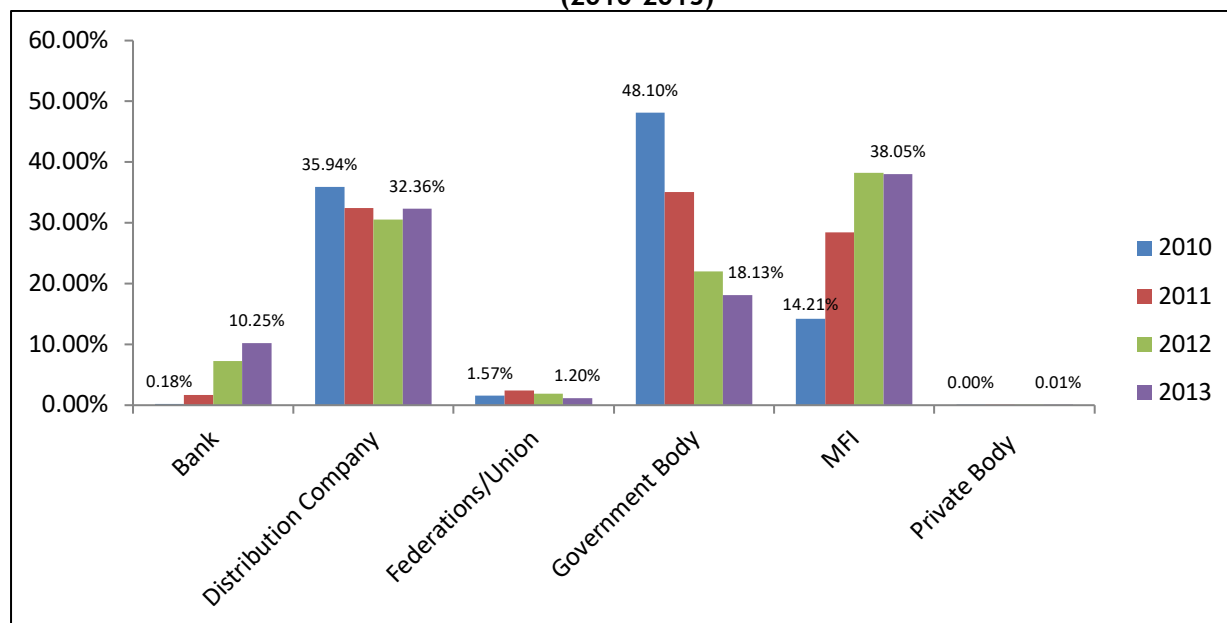
Table 2.4.1: Overview of Types of Aggregators

Type of Aggregator business model	Number of Aggregators	% of total subscribers (2013-14)
Bank	19	10.25%
Distribution Company	14	32.36%
Federations/Union	2	1.20%
Government Body	6	18.13%
MFI	13	38.05%
Private Body	2	0.01%

Figure 2.4.4 presents the year-on-year enrolment of subscribers by each Aggregator type. As a percentage of total subscribers, MFIs and Distribution Companies together hold approximately 70% of the entire subscriber base of NPS-S. Banks have steadily increased their share of subscribers from 0.18% of total subscribers in 2010 to 10.25% of total

subscribers in 2013. Government bodies have, meanwhile, seen their relative share in total subscriptions fall from 48% in 2010 to 18% in 2013.

Figure 2.4.4: Enrolment as a percentage of total subscribers by type of Aggregator (2010-2013)



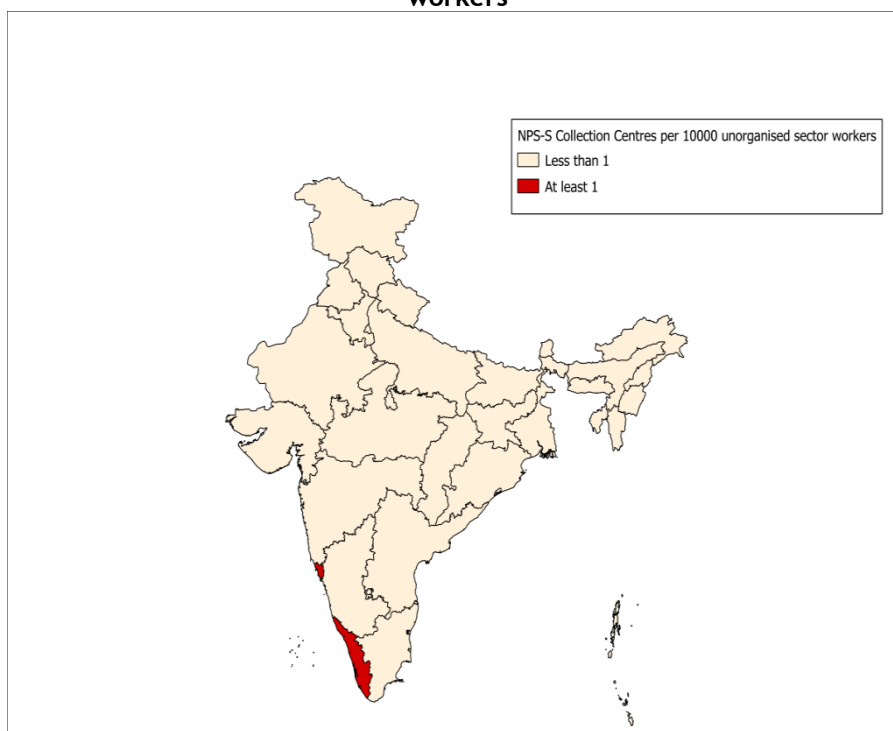
- v. The scheme has made a promising start but there is a long way to go as total enrolment under the scheme as a fraction of target population is less than 1%.

Although the scheme has witnessed impressive growth since the year of inception, from 5.3 lakh subscribers as of May 2011 to 28.4 lakh subscribers as of May 2014, this forms merely 0.8% of the unorganised sector workforce of the country, estimated at approximately 40 crore^x. Only, six states/union territories have achieved greater than 1% coverage of target population, with Kerala having the highest penetration of 2.62%.

- vi. The current spread of active Aggregators means that only two states have at least one active collection centre per 10,000 unorganised workers.

There are, at present, 16,028 collection centres that have enrolled at least one subscriber. This represents, on average, approximately 0.4 collection centres per 10,000 unorganised sector workers in the country. If we assume that the country needs at least one collection centre per 10,000 unorganised workers, only two states- Kerala and Goa- currently meet this goal^{xi}. At a district level, there is the distinct possibility that even within these states there is a substantial variation in distribution of collection centres - which only serves to highlight the fact that the Aggregator network is yet to make any significant dent in creating access to the NPS-S product.

Figure 2.4.5: State-level distribution of NPS-S Collection Centres per 10,000 unorganised workers



A closer examination of the state-wise distribution of collection centres also makes it clear that there exists a high degree of regional variation in the distribution of existing collection centres. For example, collection centres in the four states- Karnataka, Kerala, Maharashtra and Tamil Nadu- constitute nearly half of the entire distribution (see Table 2.4.2).

Table 2.4.2: Collection centres by Region^{xii}

Region	Collection centres as a percentage of total Collection centres	Collection centres per 10,000 population
North	17.87%	0.27
East	7.60%	0.28
North-East	4.40%	0.47
West	25.32%	0.42
Central	4.01%	0.14
South	40.80%	0.70

- vii. Average contribution amounts and activity levels of subscribers have declined over the years; overall persistence of subscribers in the scheme remains low.

Although the number of subscribers enrolled in the scheme has increased year-on-year, the proportion of subscribers who transact at least once in a given year (defined as an active subscriber) has declined significantly. Figure 2.2.2 shows that the first year of the scheme saw 85% of the subscribers transacting at least once; in 2013-14, this has dropped to 65%. Furthermore, the average contribution of a subscriber in the scheme has also declined from Rs. 1,228 in 2011-12 to Rs. 806 in 2013-14.

Figure 2.4.6: Average contribution per subscriber (in Rs.) & Percentage of active subscribers (2010-11 to 2013-14)

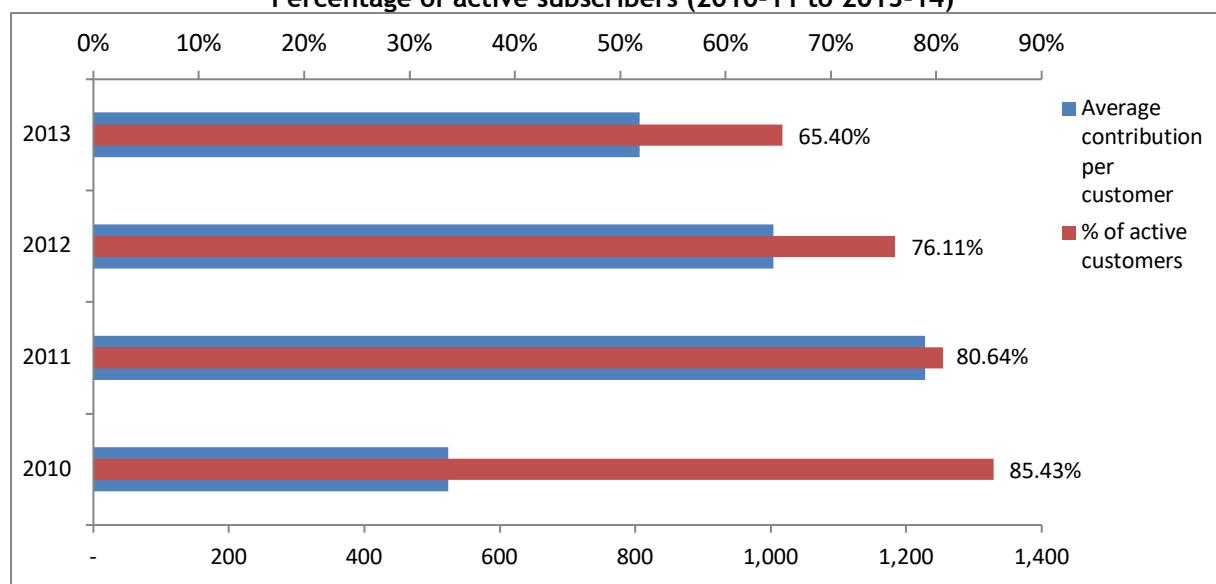


Figure 2.4.7 presents scheme level persistence^{xiii} - defined as the number of subscribers that have contributed Rs. 1,000 at least once, twice, thrice and four times over the course of the scheme. While 75% of subscribers have contributed at least once in the scheme, the number of subscribers who have contributed at least twice in the scheme drops to 50%. The number of subscribers who have contributed in all four years forms 22% of the subscribers who were eligible to contribute in all four years, i.e., of subscribers who were enrolled in 2010-11.

Although only 22% of subscribers enrolled in 2010-11 made a contribution of at least Rs. 1000 in all four years, 48% of the 2010-11 enrollees contributed Rs. 1,000 in the fourth year. On average, each year, approximately half of the subscribers enrolled in 2010-11 contributed Rs. 1,000. This provides evidence that being ineligible for the Swavalamban matching contribution in a given year does not deter subscribers from persisting in the scheme in subsequent years. This is corroborated by research done by Sane and Thomas (2013)^{xiv} who analyse 37,000 NPS-S subscribers and find that only about half of the subscribers reach the minimum co-contribution amount. However, the paper also finds evidence that subscribers persist in contributing to the scheme even if they have not met the minimum contribution for a particular year.

Figure 2.4.7: Persistence of subscribers in NPS-S (per cent of total eligible subscribers)

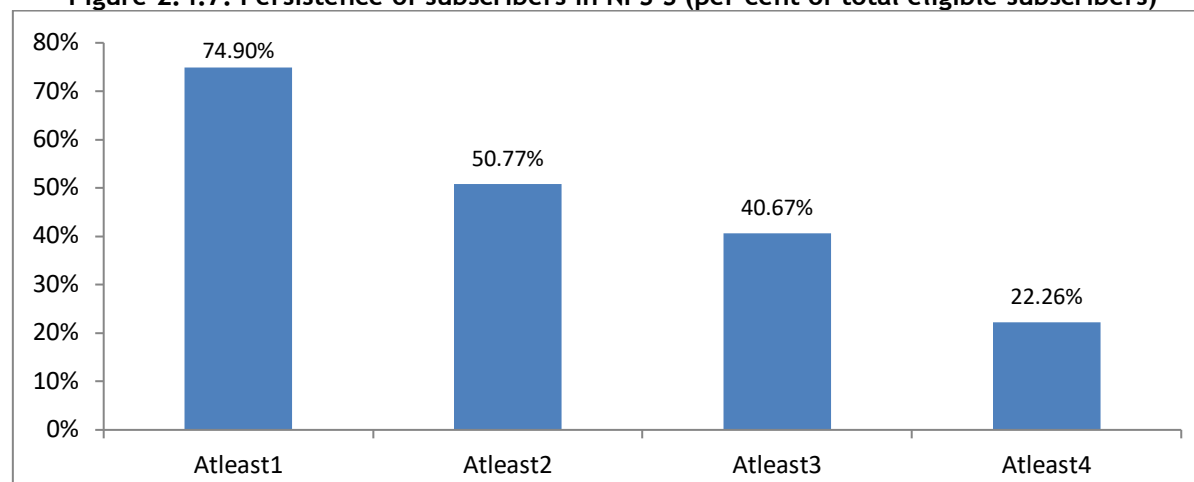


Figure 2.4.8 provides the cumulative distribution of all customer contributions from 2010 to 2013. 42.57% of contributions per year occur in the Rs. 1000- Rs.1500 range. 27% of all customers do not make any contributions and the trend over the four years shows that the proportion of subscribers contributing zero amounts is increasing year on year, from 14.57% in 2010 to 34.60% in 2013. Table 4.2.3 provides the percentage wise distribution of customer contributions for all four individual years.

Figure 2.4.8: Cumulative Distribution of Customer Contributions per annum (2010-2013)

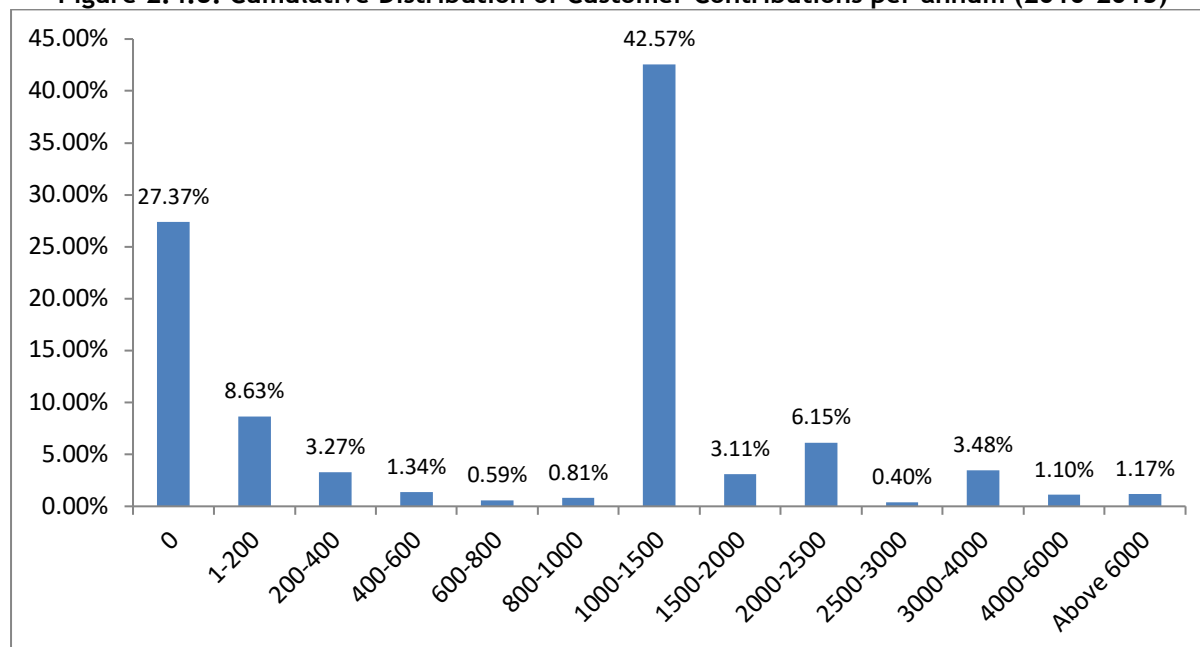


Table 2.4.3: Distribution of Customer Contributions per annum (2010-2013)

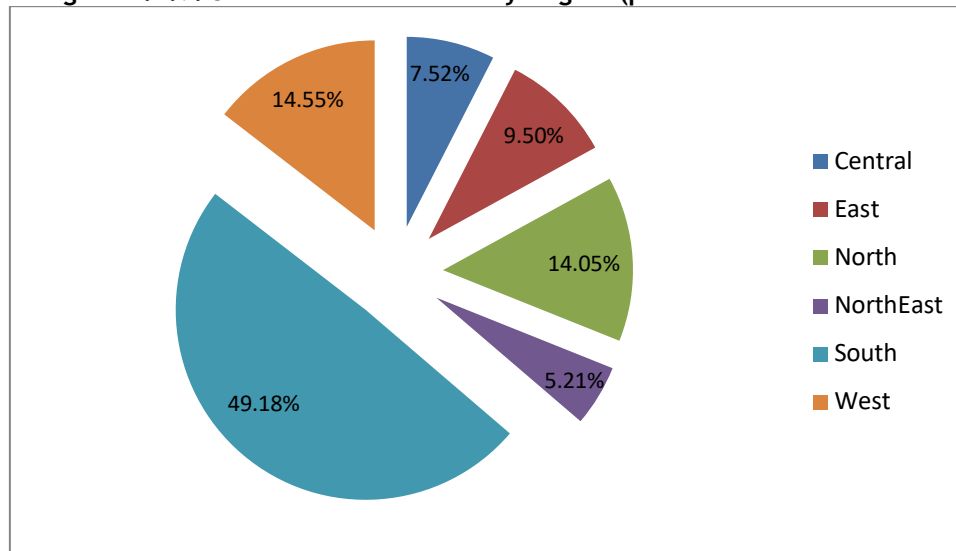
Range (in Rs.)	2010	2011	2012	2013
0	14.57%	19.36%	23.89%	34.60%
>=0 to <200	18.46%	7.55%	9.68%	6.52%
>=200 to <400	5.72%	11.66%	1.85%	0.88%
>=400 to <600	3.68%	1.53%	1.18%	0.95%
>=600 to <800	0.51%	0.94%	0.63%	0.46%
>=800 to <1000	0.27%	1.48%	0.93%	0.62%
>=1000 to <1500	17.59%	38.26%	47.07%	45.88%
>=1500 to <2000	0.00%	5.70%	3.67%	2.48%
>=2000 to <2500	37.90%	2.42%	3.78%	2.94%
>=2500 to <3000	0.31%	0.72%	0.50%	0.25%
>=3000 to <4000	0.65%	6.39%	4.08%	2.67%
>=4000 to <6000	0.16%	1.59%	1.48%	0.87%
At and above 6000	0.18%	2.39%	1.27%	0.88%

- viii. There are regional variations in the enrolment of subscribers, with the Southern states dominating the subscriber base, and the North-Eastern, Central and Eastern states having very low subscriber bases.

As seen in Figure 2.4.9, approximately 50% of the subscriber base resides in the five Southern states of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Telangana. Enrolment in the

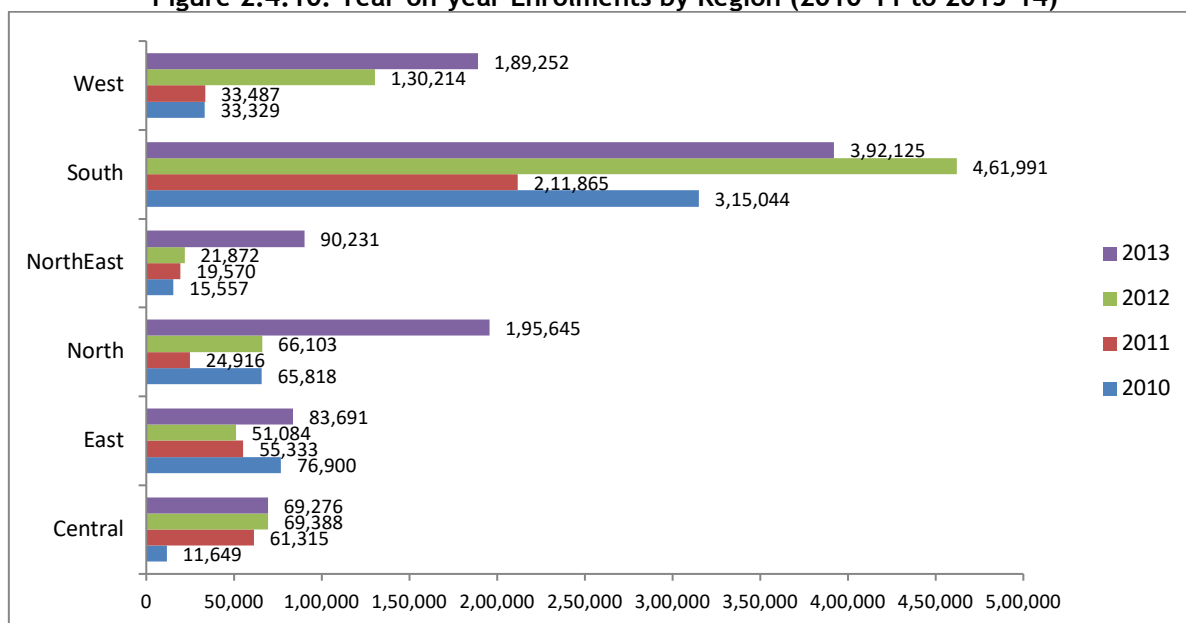
North-Eastern, Eastern and Central states amount to only a little over 22%, highlighting significant regional discrepancy in subscriber enrolments.

Figure 2.4.9: Subscriber Enrolment by Region (per cent of total subscribers)



Furthermore, Figure 2.4.10 shows that year-on-year enrolments in three regions- East, Central and North-East - have stagnated while the South and West have seen intermittent increases in year-on-year enrolments.

Figure 2.4.10: Year-on-year Enrolments by Region (2010-11 to 2013-14)

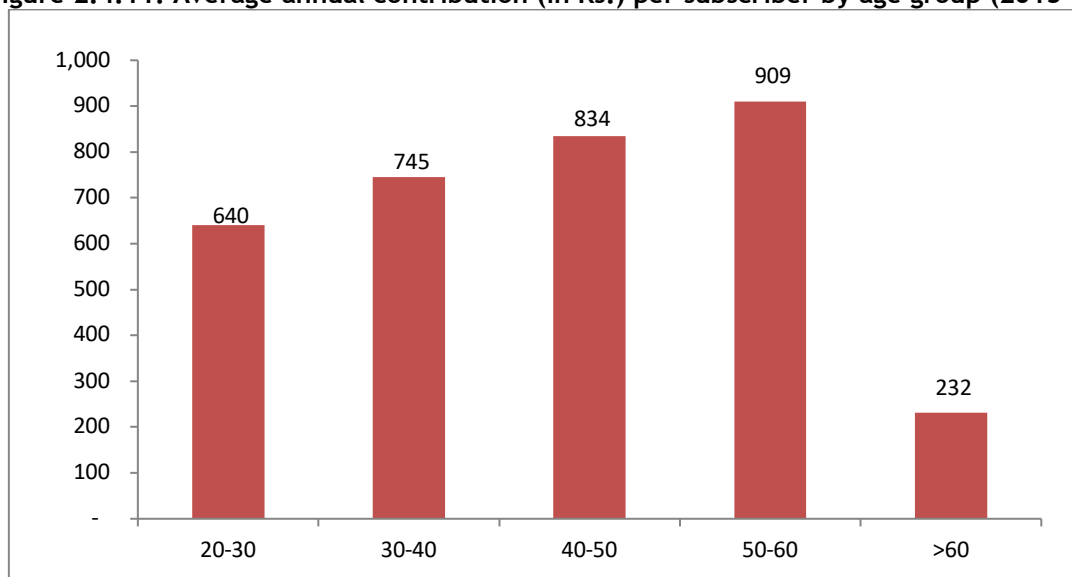


- ix. Subscribers who are closer to the age of exit from the scheme are more active and have larger average contributions.

Figure 2.4.11 shows that subscribers who are closer to the age of exit (60 years) make, on average, larger contributions. For example, in 2013-14, subscribers in the age group 50-60 years contributed, on average, Rs. 269 more than youngest subscribers in the scheme (age

groups 20-30 years). An analysis of subscriber transactions reveals that the active subscribers in the age group 50-60 years make 2.09 transactions per year compared to 1.47 transactions for the youngest age group. Furthermore, the proportion of subscribers who were eligible for the Swavalamban match increased with age; from 48% for the youngest subscriber age group to 56% for subscribers who are in the 50-60 years group.

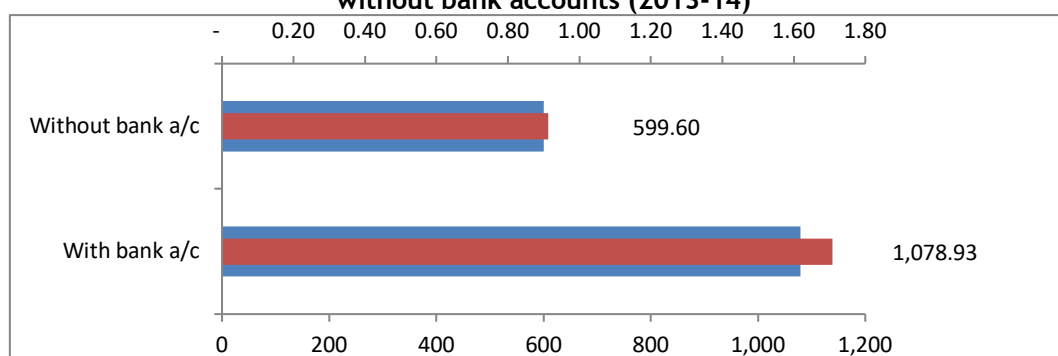
Figure 2.4.11: Average annual contribution (in Rs.) per subscriber by age group (2013-14)



- x. Subscribers who already have bank accounts transact more and make, on average, larger contributions.

Only 16% of subscribers currently enrolled in the NPS-S scheme hold bank accounts. Figure 2.4.12 compares the average contribution and average number of transactions of subscribers with and without bank accounts.

Figure 2.4.12 Average contribution (in Rs.) and number of transactions of subscribers with and without bank accounts (2013-14)



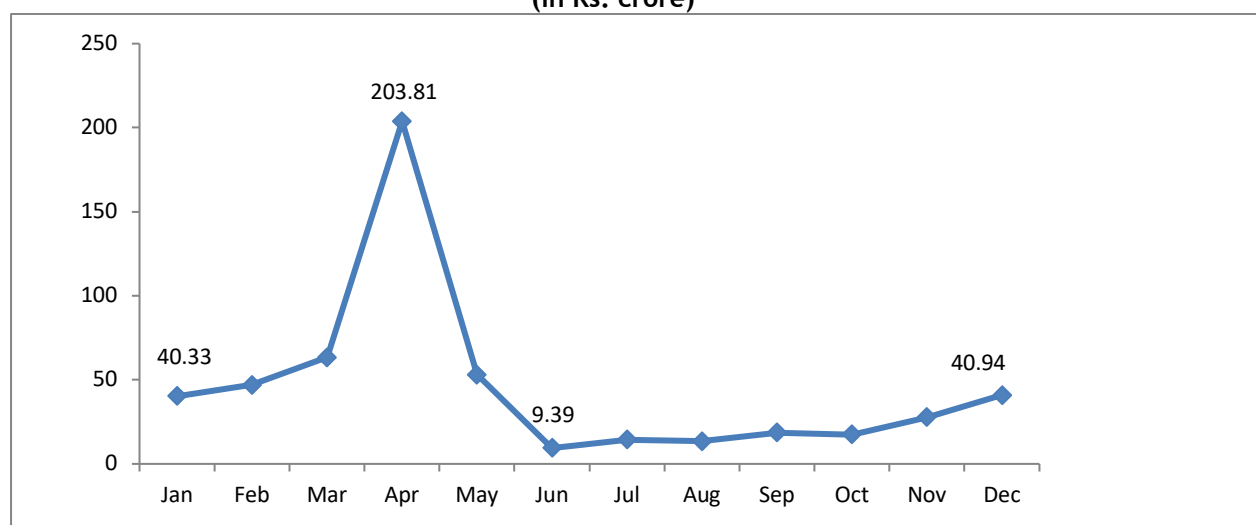
There are significant differences in the average contribution and transaction levels of subscribers with and without bank accounts. For example, in 2013-14, subscribers with bank accounts transacted, on average, 1.71 times in a year compared to 0.91 times for subscribers without bank accounts. Furthermore, subscribers with a bank account contributed, on average, Rs. 629 more than subscribers without accounts. From our survey of Aggregators, it is clear, for instance, that subscribers with bank accounts are willing to automatically deduct their pension contributions from their bank accounts, but Aggregators have been unable to provide this option yet. As the process of bank account creation gathers pace on

the ground, it would be beneficial for Aggregators to focus on strategies that enable the regular deduction of pension contributions directly from the bank account of subscribers, based on a combination of the suitable amount each individual ought to be saving and their ability to pay, and thus ensure greater activity and persistence in the scheme.

- xi. A disproportionate number of transactions are accounted for in April, and more than half the contribution into the scheme in a year is accounted for between March and May.

Figure 2.4.13 represents the distribution of cumulative contribution amounts by month in which they are accounted for. 37% of all contributions in the past four years have been accounted for in a single month, April. 60% of all contributions in the scheme are accounted for between March and May.

Figure 2.4.13: Cumulative contribution amount (2010-11 to 2013-14) by month of accounting (in Rs. crore)



This spike in collections towards the end of the financial year brings into sharp relief the concern that contributing a lump-sum amount in a single payment could potentially be an unsuitable strategy for low-income subscribers to adopt. It is possible that a more suitable strategy for such households could be to apportion the yearly contribution over the course of the year, thereby ensuring that there isn't a spike in expenditure in any given month.

**Section III:
Product Design**

Chapter 3.1: Principle for Coverage and the Need for Illiquidity under Pensions

A general principle for coverage under pensions:

Pension cover must aim to secure a minimum post-retirement income for an individual. In order to arrive at such a pension calculation, we estimate the post-retirement corpus required by individuals across income quintiles and age groups, ranging from 20 years to 55 years. This analysis has been done on data from an RFI pertaining to 2.25 lakh remote rural Indian households.

The current annual expenditure of an individual across income quintiles is provided in Table 3.1.1. Annual expenditure per capita is directly derived from the household level expenditure data collected by an RFI (see Chapter 2.3). The mean household size, in this instance, is four and we arrive at per capita estimates by dividing the aggregate household expenditure by four. Note that the annual per capita expenditure of all individuals in a certain income quintile is assumed to remain the same, irrespective of the age of the individual. A comparison of household expenditure data collected by the RFI with the data collected by the NSSO is provided in Appendix F.

Table 3.1.1: Annual expenditure per capita grouped by income quintiles (in Rs.)

	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
Current Annual Expense	7,534	9,180	10,825	12,676	16,413

Table 3.1.2 provides the expected annual expense for an individual at the age of retirement (assumed to be 60 years); grouped by income quintiles and age of entry into the NPS-S scheme. It is pertinent to note that within an income quintile, the annual expense required by an individual decreases as the age of entry increases. For instance, a 20 year old in the first income quintile requires Rs. 163, 684 while a 55 year old in the same income quintile needs Rs. 11,071. This difference is explained by the adjustment made for inflation (assumed at 8%) for the number of years till retirement. For instance, a 20 year old has 40 years left for retirement and thus, her annual expenditure is adjusted for 40 years of inflation at 8% while for a 55 year old, the inflation adjustment is made for 5 years.

Table 3.1.2: Expected Annual Expense at the Age of Retirement (in Rs.)

Age of Entry into NPS-S	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
20 years	163,684	199,441	235,180	275,391	356,577
25 years	111,401	135,736	160,059	187,427	242,681
30 years	75,818	92,380	108,934	127,560	165,164
35 years	51,600	62,872	74,138	86,815	112,408
40 years	35,118	42,790	50,457	59,085	76,503
45 years	23,901	29,122	34,340	40,212	52,067
50 years	16,267	19,820	23,372	27,368	35,436
55 years	11,071	13,489	15,906	18,626	24,117

The life expectancy of a person is assumed to be 80 years and the post-retirement corpus is estimated for 20 years, from the age of retirement at 60 years. For the purpose of this report, we focus on the post-retirement corpus required by individuals in the lowest income

quintile (Table 3.1.3). This is obtained by multiplying the annual expenses of each individual over a period of 20 years. Implicit in this calculation is the assumption that the corpus is invested in an annuity that provides inflation-protected annual instalments over a period of 20 years. This allows us to calculate the real monthly annuity required by the subscriber at the time of retirement. The present value (PV) of the corpus is arrived at using a discount rate of 8% (which is equivalent to the trend inflation rate of 8%).

Table 3.1.3: Annual Expense, Corpus required at age of retirement, and Present Value of Corpus Required at Age of Retirement across age groups for Income Quintile 1

Age of Individual Today	Annual Expense at Age of Retirement (60 years) (in Rs.)	Corpus Required at Age of Retirement (in Rs.)	PV of Corpus (in Rs.)
(1)	(2)	(3)	(4)
20 years	163,684	3,273,687	150,691
25 years	111,401	2,228,016	150,691
30 years	75,818	1,516,350	150,691
35 years	51,600	1,032,003	150,691
40 years	35,118	702,364	150,691
45 years	23,901	478,017	150,691
50 years	16,267	325,330	150,691
55 years	11,071	221,414	150,691

Table 3.1.3 above presents the inflation-adjusted value and the present value (PV) of the post-retirement corpus required by individuals across age groups in the first income quintile. Let us take the example of an individual who is 20 years of age today. As shown in Column 2 of the table, at the time of her retirement 40 years hence, her inflation-adjusted annual expenditure would be Rs. 163,684. Assuming that she needs a corpus that will support her for 20 years, she ought to have saved Rs. 3,273,687 at the time of retirement (Column 3). The PV of this corpus is Rs. 150,691, which is provided in Column 4 of the Table. Note that the value of the corpus required (Column 3) reduces as the age of the individual today increases. This is because the inflation-adjusted annual expenditure (Column 2) at the time of retirement for an individual who is 20 years old today is higher than that of a 55 year old. However, the PV of the corpuses across all age buckets remains the same at Rs. 150,691. According to the Life Insurance Corporation's annuity rates, the "amount of annuity payable monthly, which can be purchased for Rs. 1 lakh purchase price" is Rs. 644 for an "annuity payable monthly for life with a provision for 100% of annuity payable to spouse on the death of annuitant". Taking these rates, a corpus of Rs. 150,691 will yield the subscriber a monthly annuity of Rs. 970.25 for life, approximately equal to the NPS-S objective of providing Rs.1000 per month^{xv}.

It is important to recognise that different individuals need to save different amounts in order to secure their retirement income, and this is driven by factors such as age, income, and expenditure. Consequently, it is critical to ensure that the design of NPS-S encourages individuals to save as much as they need to secure their post-retirement corpus, and not merely save Rs. 1000 a year in order to be eligible for the Swavalamban matching contribution.

The need for illiquidity as a core design feature of a pensions product:

Tables 3.1.2 and 3.1.3 also make clear that individuals of different income and age profiles will require steady accumulation of different amounts over time in order to create their pension corpuses. In its current design, the NPS-S is a product that does not offer the

subscriber liquidity until the time of retirement in order to enable the building up of a sufficient corpus. Aggregators have articulated subscriber feedback asking for greater flexibility in the design allowing for more liquidity so as to make the product more attractive to subscribers. While there is an undeniable need for products offering liquidity, we argue that the NPS-S is not that product.

The articulated need for NPS-S is to enable the creation of a corpus of funds that individuals can use to finance their retirement. Therefore, the illiquidity offered by NPS-S is perhaps the defining feature of the scheme and is the central benefit that the scheme provides its subscribers, as compared to investments in Mutual Funds or bank account deposits. The PFRDA must not dilute this important feature of the scheme by allowing early and more flexible withdrawals. There must obviously be a public policy impetus to broaden the suite of financial instruments that are available to households currently, including products that offer liquidity. However, this must be fulfilled through other products and the PFRDA must retain its specialised focus on the objective of meeting retirement savings.

Recommendations on Principle for Coverage and the Need for Illiquidity under Pensions:

- 3.1.1 The illiquidity offered by NPS-S is perhaps the defining feature of the scheme and is the central benefit that the scheme provides its subscribers, as compared to investments in mutual funds or bank account deposits. The PFRDA must not dilute this important feature of the scheme by allowing early and more flexible withdrawals.

Chapter 3.2: Design of the Government Contribution

Parity between workers in the formal and informal sectors for pension benefits:

There is considerable uncertainty on the extent and continuation of the Swavalamban benefit post 2016-17 and this is being touted as one of the reasons behind the inability to effectively market the product to subscribers both current and potential. In line with the finding of the report of the Committee to Review Implementation of Informal Sector Pension^{xvi} (CRIISP), there is strong economic logic to extending the matching contribution from Gol for perpetuity:

- i. The government contribution lends immense credibility to the scheme and serves as an incentive for those hesitant to contribute. This has been consistently reiterated by Aggregators as a central impetus behind subscriber contributions. In this early phase of the NPS-S scheme, therefore, it will be of value to continue with the matching contribution so as to most effectively scale up the subscriber base. In the absence of a government contribution, there is also a real risk that low-income households do not build up a corpus for retirement, which would mean that the Government would have to fund old age pension programs like the NOAPS in the future which would place a higher burden on public finances.
- ii. The Swavalamban contribution would also provide workers in the unorganised sector parity with those engaged in the organised sector. For example, up to September 2014, all formal sector employees were provided pension benefits by the Employees' Pension Scheme, 1995 under which the Gol contributes 1.16% of any employee's wages towards their pension, subject to a monthly cap of Rs.6,500. This worked out to Rs. 905 per annum per employee, roughly equal to Rs. 1,000 matched under NPS-S. Since September 2014, Gol has increased the eligible monthly cap to Rs.15,000. Formal sector employees now receive Rs. 2,088 per annum as contribution from the Government. In order to ensure equity, there is every reason to extend the same treatment to the persons engaged in the unorganised sector.
- iii. Providing a matching co-contribution makes more fiscal sense than lowering taxes since an increase in disposable income funded through tax cuts is likely to be channelled towards consumption expenditure, rather than savings. Considering the need for a long-term savings commitment in the creation of a retirement corpus, a matching contribution is a more appropriate device to incentivise this behaviour from subscribers.
- iv. From long-term investment strategy for the Government to create infrastructure and other assets, the funds extended through NPS-S are ploughed back into the equity and debt markets and could be used as capital to finance projects with long gestation periods. Unlike a direct cash transfer, the mandatory lock-in period ensures that the government contribution is efficiently routed back into the economy for investment. In addition to the government contribution, the subscriber contributions ranging from Rs. 1,000 to Rs. 12,000 can also be channelled into such critical investments.
- v. Table 3.2.1 below shows the expected annuity of subscribers of different age groups under the scenario where the matching contribution is discontinued after 2016-17. For instance, we assume that a 20-year contributor contributes Rs.1000 (not inflation-adjusted) till the age of exit at 60 years while the government matches her contribution for a period of 5 years, and not beyond. We run 1000 Monte Carlo simulations to estimate the subscriber's expected terminal amount. We estimate that a 20-year old subscriber will receive a real annuity amount of only Rs. 201 per month. This amount will cover only 20.78% of the subscriber's post retirement expenses. In the interest of providing

subscriber a subsistence level annuity per month that enables her to meet essential expenses, the government needs to continue the matching contribution beyond 2016-17. If not, there is a significant risk from a public policy perspective that even with all the investment in a program like the NPS-S, large cash transfer programs will be required for the retired population in the future.

It is pertinent to note here that the focus should be on the present value or the real value of the annuity per month, provided in Column 4. The Nominal expected amount provided in Column 3 does not account for time value for money, and therefore while it is a seemingly higher amount it is not a realistic representation of the actual value of the monthly annuity available to an individual. The design of the NPS-S should focus on the real values of annuity.

Table 3.2.1: Expected Terminal Amount and Annuity/Month with Government Contribution for a period of 5 years (in Rs.)

Age of Entry into NPS-S	Present Value of Expected Terminal Amount (in Rs.)	Nominal Expected Terminal Amount (in Rs.)	Real Annuity per Month	Nominal Annuity per Month
(1)	(2)	(3)	(4)	(5)
20 years	31,308	680,145	201.62	4,380.14
25 years	29,193	431,622	188.00	2,779.65
30 years	26,378	265,437	169.88	1,709.42
35 years	23,680	162,170	152.50	1,044.37
40 years	21,031	98,022	135.44	631.26
45 years	18,043	57,235	116.20	368.60
50 years	14,689	31,712	94.60	204.23
55 years	10,702	15,724	68.92	101.26

In view of these arguments for ensuring parity of informal sector workers, enhancing scheme credibility, and effectiveness of design, we recommend the continuation of the Swavalamban matching contribution from the Government of India even post 2016-17, with the Government contributing up to Rs. 1,000 per subscriber per year. This remains a significant design feature for ensuring subscriber contributions into the creation of their pension corpus.

Sufficiency of corpus at the time of retirement:

In order to determine the sufficiency of the corpus created under NPS-S, we evaluate the returns at the time of exit under two scenarios- one, perpetual Government contribution of Rs. 1000 (without inflation indexation) and two, with perpetual Government contribution of inflation-indexed Rs. 1000. The calculation of government contribution under both scenarios is based on the assumption that the beneficiary will contribute the current minimum of Rs. 1,000 (inflation-adjusted) that makes her eligible for a concomitant government contribution till the age of exit (60 years). We arrive at the expected terminal values based on a 1,000 trial Monte Carlo simulation that simulates expected returns for the scenarios described above. The analysis assumes that an individual exits from the pension scheme at the age of 60 years and that she can contribute to the scheme till she is 60 years of age. The life expectancy is assumed to be 80 years for all individuals.

Table 3.2.1 presents the annualised return on equity, government securities and corporate debt used for calculating terminal values. For the purpose of this calculation, we have used

returns on equity (9.78%), corporate bonds (36.00%) and government securities (54.22%) in order to mirror the Swavalamban investment mix. The individual share of each asset class in the portfolio mix is arrived at by analysing the investment mixes used by four approved pension fund managers- UTI retirement solutions, Kotak pension fund, SBI pension fund and LIC pension fund- as on March 31, 2014^{xvii}. Return on equity is estimated using the return seen by S&P BSE Top 100 index^{xviii} (monthly data from December 1991 to November 2014) while return on government securities is calculated using returns on 10 year securities (from February 1998 to November 2014)^{xix}. Return on corporate bonds is calculated based on the average spread of AAA rated corporate bonds over government securities from 2003 to 2013^{xx}. Keeping in mind the fact that pension savings will be investment in long duration instruments, we calculate the 10-year annualised returns for all three assets classes. Table 3.2.1 also shows the average annual inflation (Consumer Price Index for Agricultural Labourers) witnessed over the past 30 years (from 1983 to 2012), which stands at about 8%. As seen earlier, we have assumed 8% as the rate of inflation in our estimates. The mean consolidated return (or weighted average return) for the assumed investment mix is 9.74% with a standard deviation of 0.69%. The average consolidated returns vary between 7.66% and 12.06% in the simulations. These estimates are used to calculate expected terminal values under three scenarios below.

Table 3.2.2: Annualised Return on Equity, Government Securities and Corporate Debt

Annualised return	Equity (BSE Top 100)	Government Securities (10 year)	Corporate Debt AAA	Inflation
Mean	19.30%	8.32%	9.33%	8.04%
Median	11.93%	7.96%	8.97%	8.32%
Standard Deviation	39.35%	1.84%	1.84%	3.67%

Table 3.2.2 shows the difference in the present values of expected terminal values for age groups ranging from 20 years to 55 years in the first income quintile under three scenarios that bring out the importance of inflation adjustment of contribution amounts:

- Both subscriber contributions and government matching contributions are adjusted for inflation
- The subscriber contribution is adjusted for inflation while the matching contribution of Rs. 1000 that is not
- Neither subscriber contributions nor matching contributions are adjusted for inflation.

Table 3.2.3: Comparison of mean terminal values across age groups with and without inflation adjusted subscriber and matching contributions

Age of Entry into NPS-S	Present Value of Expected Terminal Amount with inflation adjusted Govt. and Subscriber Contribution (in Rs.)	Real Annuity per Month	Nominal Annuity per Month	Present Value of Expected Terminal Amount with only subscriber contributions adjusted for inflation (in Rs)	Real Annuity per Month	Nominal Annuity per Month	Present Value of Terminal Amount with neither contribution adjusted for inflation (in Rs.)	Real Annuity per Month	Nominal Annuity per Month
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
20 years	127,781	822.91	17,877	86,671	558.16	12,126	45,963	296.00	6,430

25 years	106,526	686.03	10,143	74,248	478.16	7,070	41,692	268.50	3,970
30 years	88,393	569.25	5,728	62,888	405.00	4,075	37,979	244.59	2,461
35 years	70,747	455.61	3,120	51,890	334.17	2,289	33,708	217.08	1,487
40 years	55,026	354.37	1,652	41,904	269.86	1,258	29,254	188.40	878
45 years	39,374	253.57	804	32,123	206.87	656	24,378	156.99	498
50 years	26,338	169.62	366	22,353	143.95	311	18,623	119.93	259
55 years	13,738	88.48	130	12,613	81.23	119	11,443	73.69	108

Figure 3.2.1: Comparison of Monthly Annuity (Real) under three inflation-adjusted scenarios (in Rs.)

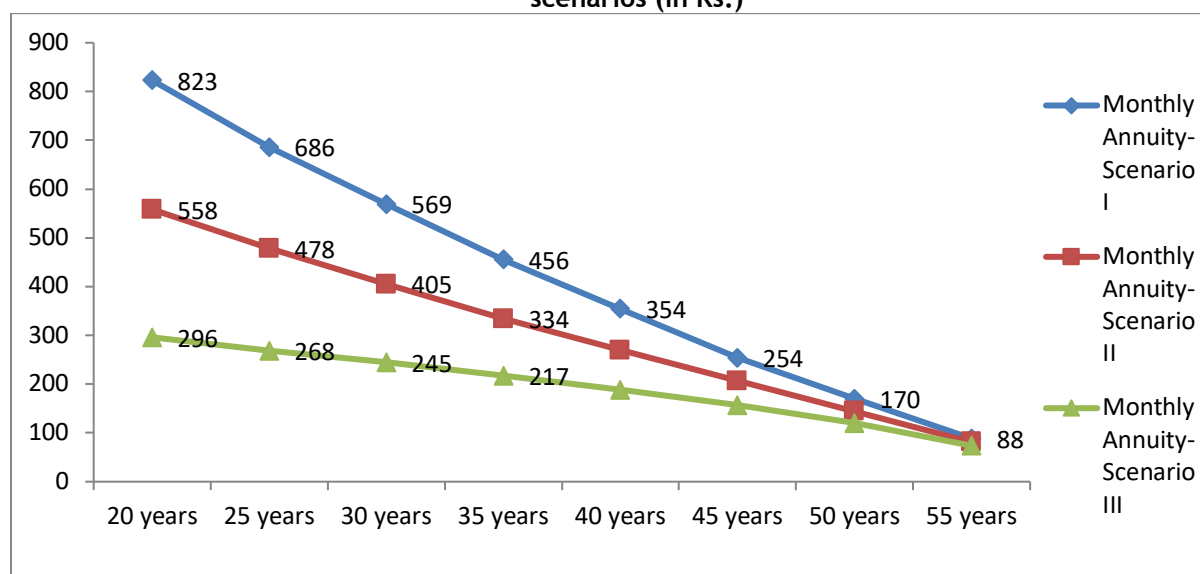


Figure 3.2.1 plots the expected monthly annuity under the three scenarios mentioned earlier. The analysis from Table 3.2.2 and Figure 3.2.1 underlines the need for extending the government contribution until the retirement age of the beneficiary, and indexing it to inflation. As Column 9 shows, a situation where neither the subscriber contribution nor the government contribution is indexed to inflation yields, at the age of 60 years, Rs.296 per month as annuity for a 20 year old. This suffices to cover only 30.50% of her post-retirement expenses. A situation where the subscriber indexes her contributions to inflation while the government provides a nominal Rs. 1000 (Column 6) provides a 20 year old subscriber an annuity of Rs. 558 per month, enough to cover 57.52% of her post-retirement corpus. In the scenario where both contributions are indexed to inflation (Column 3), the subscriber earns an annuity of Rs. 823 per month, covering 84.80% of her post-retirement corpus. As mentioned earlier and is evident from the table above, subscribers have different post-retirement corpuses based on expenses, income and age. This underlines the need to incentivise customers to contribute greater than Rs. 1000 per annum. For instance, contributing Rs. 1000 a year (Column 3), even if inflation adjusted, provides a 35 year old an annuity of Rs. 455 per month, only enough to cover 46.95% of her post-retirement expenses.

In the USA, the Social Security Administration ensures that social security benefits keep up with inflation by announcing Cost of Living Adjustments to benefits every year. These adjustments are in turn linked to the Consumer Price Index (CPI). The PFRDA, in consultation with the Government of India, should announce the inflation-indexed adjustment of the

Swavalamban contribution at regular intervals in time. We propose that the government match be linked to the CPI and be revised every year. This will ensure that the benefits of pension are not eroded over time by inflation.

Recommendations for Design of the Matching Contribution:

- 3.2.1 In view of the arguments for ensuring parity of informal sector workers, enhancing scheme credibility, and effectiveness of design, we recommend the continuation of the Swavalamban matching contribution from the Government of India even post 2016-17, with the Government contributing up to Rs. 1,000 per subscriber per year. This remains a significant design feature for ensuring subscriber contributions into the creation of their pension corpus.
- 3.2.2 The PFRDA, in consultation with the Government of India, should announce the inflation-indexed adjustment of the Swavalamban contribution at regular intervals in time. We propose that the government match be linked to the CPI and be revised every year. This will ensure that the benefits of pension are not eroded over time by inflation.

Chapter 3.3: Linking NPS-S to PMJDY

While we recognise the value of the Swavalamban matching contribution for the NPS-S, it is also important to realise that access to the Swavalamban matching contribution will be driven by the availability of Aggregators in a region. As shown in Figure 2.2.1 (Chapter 2.2), only two states have at least one collection centre per 10,000 unorganised workers, and this spread itself could contribute to inequity in the availability of Swavalamban between individuals in the unorganised sector workforce, depending on where they are geographically situated. Furthermore, at the base growth rates assumed earlier (CAGR on 15.6% in subscriber enrolment), the scheme will cover an estimated 1.39 crore subscribers by 2024-25 and 6.1 crore by 2037-28; 3% and 13.4% of the target population respectively. The NCEUS classifies between 76% and 80% of the unorganised sector workforce as poor and vulnerable, defined as those below the poverty line that was twice that of the official poverty line fixed in 2005. Even if the objective is to cover secure post-retirement corpus for the poor and vulnerable section of the unorganised sector workforce, it is clear that we will need to do substantially more in the next few years. If a large section of the unorganised sector is indeed left out of the safety net provided by the NPS-S today, taking care of them in the future (through an unconditional cash transfer like the NOAPS for instance) could represent an even larger fiscal burden on the Gol.

In the long term, therefore, it would be desirable to alter the mechanics of the government contribution to make it more equitably available to all citizens. This can be achieved by leveraging significant on-ground processes currently underway in the country, namely momentum on Aadhaar enrolment (over 70 crore residents have already been enrolled and it is reasonably expected that all residents will be enrolled by December 2015) and bank account creation through the PMJDY (which expects to universalise bank accounts by August 2018).

In the medium term, as universalisation of Aadhaar linked bank accounts becomes a reality and the NPS-S is linked with the PMJDY program^{xxi}, the Government of India and the PFRDA could consider an alternate design for the government contribution to workers' pensions which could ensure instant, equitable, and complete coverage of all workers. In the new design, the Government could annually contribute Rs. 1000 (inflation adjusted) which is directly and automatically deposited into the Aadhaar linked retirement accounts of all workers (which can be created directly by PFRDA based on Aadhaar information on all working age individuals from the UIDAI). The government contribution here is not designed as a matching amount to a subscriber's contribution, but as a direct and conditional minimum contribution to the retirement corpus of an individual. The conditionality that could be imposed on beneficiaries accessing this Government pension contribution is that it can be available only upon retirement and not prior to it. This will ensure that all workers have a basic minimum corpus that the Government is contributing to building; this is a corpus that individuals should ideally view as a supplement to their own periodic and more substantial pension contributions through Aggregators in order to secure their retirement income.

It is important to note here that the model on the ground need not change, and NPS-S subscribers can continue to make contributions through Aggregators as they do currently. In an environment where inter-operability across Aggregators is made possible using Aadhaar authentication, subscribers should be able to work with any Aggregator touch point to make contributions into their retirement account. Aggregator incentives should be designed in a manner to maximise subscriber contributions so that people are saving enough to create a sufficient pension corpus (discussed in Chapter 4.3).

An inflation-adjusted, annual Rs.1000 contribution from the Gol would enable a 18 year old subscriber (who makes no contribution of her own) get a pension pay-out of between Rs.281 and Rs.431 per month at the age of exit, depending on the rate of growth of the corpus assumed. The range provided here represents a rate of annual growth in corpus of 8% and 10% respectively. For a 41 year old, a similar pay-out would be between Rs.130 and Rs.158 per month at her age of retirement at 60 years.

Enabling the direct seeding of retirement accounts with the government contribution (which will no longer be a matching contribution) will cost the Government of between Rs. 40,861 crore (for the unorganised sector) and Rs. 48,000 crore (for the entire workforce) annually^{xxii} (without inflation adjustment). This works to approximately 0.45% of the current GDP, which is still a very feasible amount in view of India's overall public spending on pensions. For instance, we find that high income countries spend, on average, 7.2% of GDP on public pensions, while medium and low income countries spend 2.5% and 1.1% of GDP respectively^{xxiii}. India currently spends approximately 1.3% for public pensions^{xxiv}, and if we add another 0.45% of GDP to NPS-S pensions spending, the country will need to set aside a total of 1.75% for public pension benefits, which would very much be in line with average pension expenditures of lower middle income countries around the world.

Recommendations on linking NPS-S to PMJDY

3.3.1 In the medium term, as universalisation of Aadhaar linked bank accounts becomes a reality and the NPS-S is linked with the PMJDY, the Government of India and the PFRDA could consider an alternate design to Recommendation 3.2.1 for the government contribution to workers' pensions which could ensure instant, equitable, and complete coverage of all workers. In the new design, the Government could annually contribute Rs. 1000 (inflation adjusted) which is directly and automatically deposited into the Aadhaar linked retirement accounts of all workers (which can be created directly by PFRDA based on Aadhaar information on all working age individuals from the UIDAI). The government contribution here is not designed as a matching amount to a subscriber's contribution, but as a direct and conditional minimum contribution to the retirement corpus of an individual. The conditionality that could be imposed on beneficiaries accessing this Government pension contribution is that it can be available only upon retirement and not prior to it. This will ensure that all workers have a basic minimum corpus that the Government is contributing to building; this is a corpus that individuals should ideally view as a supplement to their own periodic and more substantial pension contributions through Aggregators in order to secure their retirement income.

Chapter 3.4: Optimising Risk Adjusted Returns

For the purpose of evaluating the returns (at the time of exit) from NPS-S, we have calculated expected terminal values from the scheme. The terminal value has been calculated for the following investment mixes:

- a. Current investment mix that invests 9.78%, 36% and 54.22% of the amount in equity market instruments, corporate bonds, and government securities respectively, and
- b. NPS life cycle investment mix that follows an age-linked investment process called the Life Cycle fund mix. The life cycle investment mix is provided in Annexure F.

We arrive at the expected terminal values based on a 1,000 trial Monte Carlo simulation that simulates expected returns for the scenarios described above. Simulating expected returns is a superior approach to assuming a constant rate of growth on asset classes primarily because this approach accounts for the volatility in the return on assets. The analysis assumes that an individual exits from the pension scheme at the age of 60 years and that she can contribute to the scheme till she is 60 years of age. The life expectancy is assumed to be 80 years for all individuals. The rate of return and standard deviation assumed for each asset class is provided in Table 3.2.1 (Chapter 3.2).

Optimising the current NPS-S investment mix:

As mentioned earlier, under the current scheme, a 20-year old subscriber in the first income quintile can earn a monthly annuity of Rs. 201, enough to cover 20.78% of her post-retirement expenses (Table 3.2.1). Expectedly, the gap between the corpuses required and mean terminal values increase as we move down the entry ages. For instance, investment in NPS-S covers only about 13.96% of the post-retirement expenditure of a person whose entry age is 40 years. This problem is a consequence of the sub-optimality of the present investment mix of the scheme, which provides low risk adjusted returns. While the current investment mix may be appropriate for those nearing retirement, and would therefore prefer a large proportion of their portfolio invested in fixed income securities, it is clearly unsuitable for individuals entering the scheme at earlier ages who have the ability to benefit from a greater proportion of investments in equity over longer time horizons.

In this context it is instructive to assess the investment mix of the NPS Main product which spreads its investments over three asset classes - Asset Class E (Equity Market instruments), Asset Class C (fixed income securities other than government securities, like corporate bonds) and Asset Class G (government securities). The proportion of investments across the three asset classes varies according to the age of the subscriber and follows what is called a 'Life Cycle fund mix'. Under this mix, younger subscribers have greater exposure to equity market instruments and this exposure is consistently shifted to fixed income securities as the subscriber ages and time to retirement decreases.

In Table 3.4.2 below, we estimate the expected mean terminal value (assuming inflation adjusted and perpetual matching contribution) of subscribers for ages ranging from 20 years to 55 years under two investment strategies - the current NPS-S investment mix and the Life Cycle fund mix of NPS. We find that there are vast differences in the terminal values under the two strategies. For instance, the monthly annuity for a 20 year old under the Life Cycle fund mix is Rs. 1,228, 49.22% higher than the annuity under the present investment mix. The differences in terminal values under the two strategies become smaller as the entry age approaches 45.

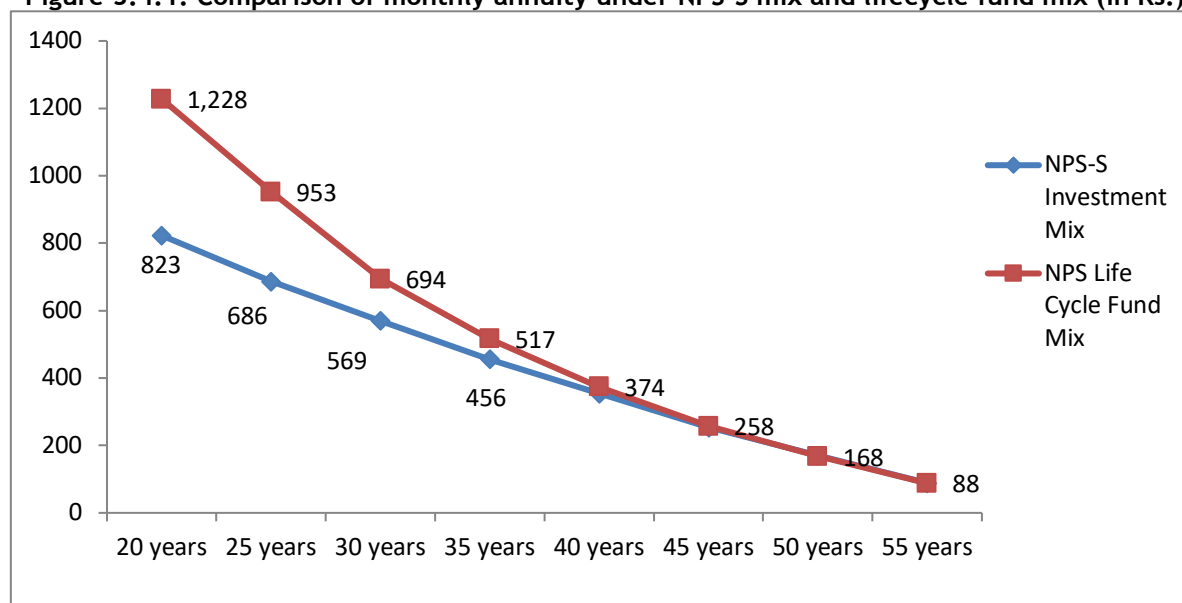
As mentioned earlier, it is pertinent to note here that the focus should be on the present value or the real value of the annuity per month, provided in Column 3 and Column 6. The

Nominal expected amount provided in Column 4 and Column 7 does not account for time value for money, and therefore while it is a seemingly higher amount it is not a realistic representation of the actual value of the monthly annuity available to an individual.

Table 3.4.1: Comparison of mean terminal values under NPS-S Investment Mix and NPS Life Cycle Mix

Age of Entry	Current Investment Mix under NPS-S			NPS Life Cycle Fund Mix		
	Present value of Expected Terminal Amount (in Rs.)	Real Annuity per Month	Nominal Annuity per Month	Present value of Expected Terminal Amount (in Rs.)	Real Annuity per Month	Nominal Annuity per Month
(1)	(2)	(3)	(4)	(5)	(6)	(7)
20 years	127,781	822.91	17,877	190,671	1,227.92	26,676
25 years	106,526	686.03	10,143	147,918	952.59	14,084
30 years	88,393	569.25	5,728	107,705	693.62	6,980
35 years	70,747	455.61	3,120	80,250	516.81	3,539
40 years	55,026	354.37	1,652	58,128	374.34	1,745
45 years	39,374	253.57	804	39,989	257.53	817
50 years	26,338	169.62	366	26,110	168.15	363
55 years	13,738	88.48	130	13,613	87.67	129

Figure 3.4.1: Comparison of monthly annuity under NPS-S mix and lifecycle fund mix (in Rs.)



In view of this significant loss in return faced by the NPS-S subscriber, we propose that the PFRDA should pursue a more optimal age-linked equity allocation, like the life-cycle fund allocation mix used by the main NPS scheme. This will ensure that subscribers accumulate a higher share of their requisite post-retirement corpus.

Capital guarantee and Inflation protection:

As noted by CRIISP, for the NPS to be an attractive investment option, a wider range of features must be made available to the subscriber. For instance, inflation is one of the major risks from the perspective of retirement planning. Even a small fluctuation of 2-3% could potentially deplete the investment corpus. Subscribers of NPS are investing for securing their post-retirement income and it is vital that these investments are protected against inflation losses. By design, NPS should let subscribers benefit from the capital markets and at the same time provide protection from their down side risk.

Capital guarantee and inflation protection are essential features that must be added to protect subscribers. Under the capital guarantee feature, investment should be permitted to be made only in approved fixed income instruments of specified maturities. Pension Fund Managers (PFMs) should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA from time to time.

Table 3.4.2: Investment mix required for capital guarantee
(Source: CRIISP Report)

Investment Horizon (Years)	Market Interest Rate ^{xxv} (%)	PV of Initial Investment (Rs.)	Investment in Debt (Rs.)	Investment in Equity (Rs.)
10	7.99%	46, 355	46, 355	53, 645
15	8.32%	30, 156	30, 156	69, 844
20	8.34%	20, 130	20, 130	79, 870
25	8.40%	13, 316	13, 316	86, 681
30	8.43%	8, 821	8, 821	91, 179

Inflation indexed bonds of different maturities could allow NPS to hedge inflation risk and in turn offer investment products that are protected against inflation. Table 3.4.3 shows that for an initial investment amount of Rs. 1,00,000, capital protection can be offered by investing only Rs. 8820 (or 8.8%) in government securities for 30 years. The remaining Rs. 91,180 can then be invested in equity for capital appreciation.

Recommendations on Optimising Risk Adjusted Returns:

- 3.4.1 In view of a significant loss in return faced by the NPS-S subscriber on account of the conservative investment mix under NPS-S, we propose that the PFRDA should pursue a more aggressive age-linked equity allocation, like the life-cycle fund allocation mix used by the main NPS scheme, in order to ensure that subscribers accumulate a higher share of their requisite post-retirement corpuses.
- 3.4.2 Capital guarantee and inflation protection are essential features that must be added to protect subscribers. Under the capital guarantee feature, investment should be permitted to be made only in approved fixed income instruments of specified maturities. Pension Fund Managers (PFMs) should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA from time to time.

Chapter 3.5: Recommendations on Product Design

- 3.1.1 The illiquidity offered by NPS-S is perhaps the defining feature of the scheme and is the central benefit that the scheme provides its subscribers, as compared to investments in Mutual Funds or bank account deposits. The PFRDA must not dilute this important feature of the scheme by allowing early and more flexible withdrawals.
- 3.2.1 In view of the arguments for ensuring parity of informal sector workers, enhancing scheme credibility, and effectiveness of design, we recommend the continuation of the Swavalamban matching contribution from the Government of India even post 2016-17, with the Government contributing up to Rs. 1,000 per subscriber per year. This remains a significant design feature for ensuring subscriber contributions into the creation of their pension corpus.
- 3.2.2 The PFRDA, in consultation with the Government of India, should announce the inflation-indexed adjustment of the Swavalamban contribution at regular intervals in time. We propose that the government match be linked to the CPI and be revised every year. This will ensure that the benefits of pension are not eroded over time by inflation.
- 3.3.1 In the medium term, as universalisation of Aadhaar linked bank accounts becomes a reality and the NPS-S is linked with the PMJDY, the Government of India and the PFRDA could consider an alternate design to Recommendation 3.2.1 for the government contribution to workers' pensions which could ensure instant, equitable, and complete coverage of all workers. In the new design, the Government could annually contribute Rs. 1000 (inflation adjusted) which is directly and automatically deposited into the Aadhaar linked retirement accounts of all workers (which can be created directly by PFRDA based on Aadhaar information on all working age individuals from the UIDAI). The government contribution here is not designed as a matching amount to a subscriber's contribution, but as a direct and conditional minimum contribution to the retirement corpus of an individual. The conditionality that could be imposed on beneficiaries accessing this government pension contribution is that it can be available only upon retirement and not prior to it. This will ensure that all workers have a basic minimum corpus that the Government is contributing to building; this is a corpus that individuals should ideally view as a supplement to their own periodic and more substantial pension contributions through Aggregators in order to secure their retirement income.
- 3.4.1 In view of a significant loss in return faced by the NPS-S subscriber on account of the conservative investment mix under NPS-S, we propose that the PFRDA should pursue a more aggressive age-linked equity allocation, like the life-cycle fund allocation mix used by the main NPS scheme, in order to ensure that subscribers accumulate a higher share of their requisite post-retirement corpus.
- 3.4.2 Capital guarantee and inflation protection are essential features that must be added to protect subscribers. Under the capital guarantee feature, investment should be permitted to be made only in approved fixed income instruments of specified maturities. PFMs should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA from time to time.

**Section IV:
Aggregator Reach, Performance and Incentives**

Chapter 4.1: Aggregator Business Models and Geographic Reach

Aggregator Business Models:

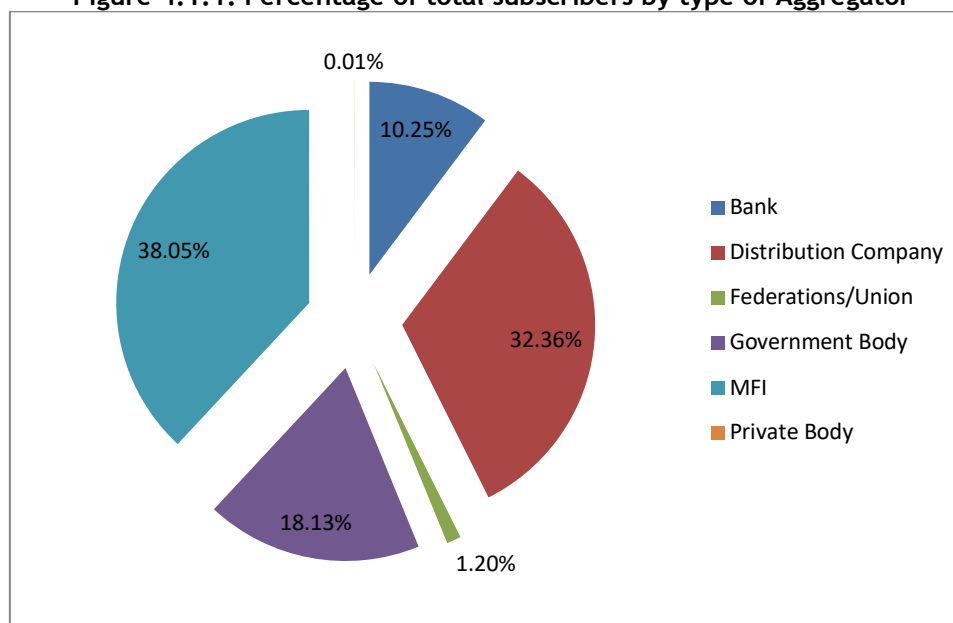
In categorising Aggregators, we found that there were distinct business models that groups of Aggregators followed. This largely followed the categorisation based on institutional types, with some overlaps.

Table 4.1.1: Categorisation of Aggregators

Category	Description	Total Count
Microfinance Institution (MFI)	If the institution has microfinance as an important business and does not have a pan-India presence	13
Distribution Company	If it has a wide network of branches be it for e-governance, or for sale of any financial product including insurance, whether or not it has government shareholding	14
Government Body	If it is a government department becoming an Aggregator for providing NPS-S to its workers or if it is a Welfare Board set up by the Government	6
Bank	If it is a Public Sector Bank, Private Sector Bank or a Regional Rural Bank	19
Federation/ Union	If it is a Federation or Union becoming an Aggregator for providing NPS-S to a specific group of workers of interest to it	2
Private Body	If it is a private institution becoming an Aggregator for providing NPS-S to its workers who fall into the unorganised sector category	2
Total		56

Figure 4.1.1 presents subscribers by the type of Aggregator. MFIs and Distribution Companies form 38% and 32% of the total subscribers respectively.

Figure 4.1.1: Percentage of total subscribers by type of Aggregator



A more detailed description of these different business models as gleaned from the survey of Aggregators is provided in Appendix C.

Widening the Network of Aggregators:

Making available an access point that provides a safe facility to invest for old age is one significant part of the challenge in increasing uptake of the NPS-S scheme. The extent of the challenge was depicted in Chapter 2.1 which outlines the low overall levels of penetration and geographic disparities in access and addressing this will call for a concerted effort to increase the number of Aggregators as well as to improve persistence by each Aggregator. Table 2.2.1 (Chapter 2.1) indicates the urgent need to multiply the overall number of Aggregators themselves besides increasing more and more partnerships between the Aggregators and institutions that prefer to work as NL-CCs to the Aggregators. For instance, many MFIs and Banks are choosing to become NL-CCs and NL-AOs to Aggregators with good back-office and technology facilities rather than to become Aggregators themselves.

In contemplating the widening of the Aggregator network, it must be kept in mind that one of the strongest components in the delivery of the NPS-S scheme is the Aggregator-based model with capital. In order to ensure the continued performance and sustainability of the scheme, the adequacy of current Aggregator capital requirements must not be diluted. Relaxing adequacy of capital norms for Aggregators in the attempt to widen the distribution network could end up creating long-term weaknesses in the distribution model itself. Requiring Aggregators to hold capital against operations risk and customer protection risk is a fundamental building block of the distribution model.

An alternative way to increase outreach in a cost-effective manner, for instance, is by appointing telecom operators and Fast Moving Consumer Goods (FMCG) outlets as Aggregators for NPS-S and enabling them to leverage their business adjacencies and wide distribution networks to achieve deeper penetration of NPS-S. The Payments Banks that will emerge once the Reserve Bank of India (RBI) issues the final guidelines on their creation will also be potential Aggregators to enable much greater reach for NPS-S.

The current eligibility criteria for Aggregators^{xxvi} will need to be suitably modified to enable such entities to become Aggregators. As of now, there is a requirement by PFRDA that entities must have been in the business of financial services or commodity development for at least 3 years to be eligible to become an Aggregator. While the requirement on the vintage of the Aggregator's business is desirable, the requirement on a limited set of business models may be preventing entities like telecom operators and FMCG outlets from entering this business. We propose the removal of this business requirement while retaining the 3 year vintage requirement, so as to leverage the potential of entities with large distribution networks in both widening and deepening the reach of NPS-S.

Improving Recognition of the NPS-S:

In addition to widening the network of Aggregators, the other significant part of the challenge in increasing uptake of NPS-S is making individuals in the unorganised sector aware of such a product and the best way to use it. PFRDA has taken the approach of placing the onus of marketing and awareness creation on the Aggregators and NL-CCs who interface with the target individuals. However, given the enormity and the urgency of the challenge ahead and the very limited performance so far in mobilising the target population, there may be a case to relook at the role that PFRDA can play. The Committee to Review Implementation of Informal Sector Pension (CRIISP) has noted in this regard that, *"It is by now a well-recognised reality of the Indian financial markets that most financial instruments in India are "push" products and not really "pull" products, which means that most financial instruments in the country do not enjoy an automatic demand and need to be sold proactively"*.

The survey of Aggregators revealed that across MFIs, Banks, and Distribution Companies, there is an experience of potential subscribers not being convinced about NPS-S being a government-backed scheme. These institutions have called for a sustained publicity drive from PFRDA and the Central Government through radio, television and vernacular newspapers, hoardings at strategic locations, and in the Block and Taluka level government offices to give the scheme a “government face” in order to increase confidence of subscribers in the scheme. The current marketing efforts from PFRDA are not adequate to reach Tier 2 and 3 cities and villages. Additionally, PFRDA and the Central Government must invest adequately in a strategy to educate the local government bodies and Panchayats about the scheme, as the Aggregators who approach such local government bodies are often met with reluctance and scepticism about the government-backing for the product.

There is, therefore, a clear need to urgently intensify government-led endorsement of the scheme in the print and electronic media so as to mobilise mass enrolments and contributions across the country. In order to ensure that citizens as well as local and state government officials are aware of the NPS-S product and its benefits, it is essential that there is a concerted media campaign by the PFRDA, with messages in local language newspapers, radio and television spots -as is the case with the promotion of the National Pulse Polio Programme or the Swachh Bharat Abhiyaan for instance. In the messages broadcast through the media, focus is to be placed on importance of self-funded old age pension, the notion of market-linked returns, Swavalamban matching contribution in perpetuity, the expected pay-outs at the time of annuitisation, as well as the flexibility to make contributions at any Aggregator (inter-operability).

Differences in geographical spread of NPS-S:

As mentioned earlier (Figure 2.2.1), current data shows that NPS-S penetration in the country as a whole is very low, and this could be explained on account of the newness of the product and low rates of uptake. Over time however, it will be critical for PFRDA to identify regions of the country that systematically exhibit low NPS-S penetration and provide additional incentives for high quality Aggregators who are interested in distributing NPS-S in such regions.

In order to ensure that there is a geographically equitable spread of NPS-S as the scheme gathers momentum, we propose that the PFRDA actively track district-wise access to NPS-S and publish an annual list of High Priority Districts that are poorly serviced by Aggregators and therefore have low NPS-S penetration. The list could also take into account other factors that have been known to inhibit access, such as distance from nearest urban centre, the level of poverty, and the ratio of backward castes. Over time, depending on the persistence of districts on this list, additional incentives can be provided for Aggregators to function in these districts.

State Government Contributions under the NPS-S:

Following the introduction of the Central Government contribution as a feature of the NPS-S scheme, many state governments have also introduced co-contributions of their own. Those subscribers who can avail the state government contribution have the opportunity to avail both the Central Government and the state government contributions to the maximum extent and thus build a larger corpus than those that do not have the option of the state government contribution. Since old age pensions fall under the Concurrent List, states have the freedom to decide on their old age pension policies.

Indeed, in certain States such as Karnataka, these contributions, along with a one-time cash transfer for age groups 47 to 55, and with subscriber contribution of at least Rs.1000 per year could potentially enable the achievement of a corpus that provides reasonable monthly annuity pay-outs from 60 to 70 years of age. However, the Karnataka State Government

contributions are provided only if subscribers are enrolled through the Karnataka State Unorganised Workers Social Security Board and not through any other Aggregator. This has created disincentives for all other Aggregators to operate in the State and their subscribers miss out on state government contributions due to this anomaly.

In order to level the playing field, PFRDA must write to state governments that make co-contributions into the NPS-S to ensure that they do so for all citizens of the state and not restrict the benefit only to subscribers accessing the scheme through a certain specified set of Aggregators.

Recommendations on Aggregator Business Models and Geographic Reach:

- 4.1.1 In order to ensure the continued performance and sustainability of the scheme, the adequacy of current Aggregator capital requirements must not be diluted. Relaxing adequacy of capital norms for Aggregators in the attempt to widen the distribution network could end up creating long-term weaknesses in the distribution model itself. Requiring Aggregators to hold capital against operations risk and customer protection risk is a fundamental building block of the distribution model.
- 4.1.2 As of now, there is a requirement by PFRDA that entities must have been in the business of financial services or commodity development for at least 3 years to be eligible to become an Aggregator. While the requirement on the vintage of the Aggregator's business is desirable, the requirement on a limited set of business models may be preventing entities like telecom operators and FMCG outlets from entering this business. We propose the removal of this business requirement while retaining the 3 year vintage requirement, so as to leverage the potential of entities with large distribution networks in both widening and deepening the reach of NPS-S.
- 4.1.3 In order to ensure that citizens as well as local and state government officials are aware of the NPS-S product and its benefits, it is essential that there is a concerted media campaign by the PFRDA, with messages in local language newspapers, radio and television spots -as is the case with the promotion of the National Pulse Polio Programme or the Swachh Bharat Abhiyaan for instance. In the messages broadcast through the media, focus is to be placed on importance of self-funded old age pension, the notion of market-linked returns, Swavalamban matching contribution in perpetuity, the expected pay-outs at the time of annuitisation, as well as the flexibility to make contributions at any Aggregator (inter-operability).
- 4.1.4 In order to ensure that there is a geographically equitable spread of NPS-S as the scheme gathers momentum, we propose that the PFRDA actively track district-wise access to NPS-S and publish an annual list of High Priority Districts that are poorly serviced by Aggregators and therefore have low NPS-S penetration. The list could also take into account other factors that have been known to inhibit access, such as distance from nearest urban centre, the level of poverty, and the ratio of backward castes. Over time, depending on the persistence of districts on this list, additional incentives can be provided for Aggregators to function in these districts.
- 4.1.5 PFRDA must write to state governments that make co-contributions into the NPS-S to ensure that they do so for all citizens of the state and not restrict the benefit only to subscribers accessing the scheme through a certain specified set of Aggregators.

Chapter 4.2: Aggregator Processes and Technology

The NPS-S scheme is a complex scheme involving many stakeholders such as the Central Government, PFRDA, NSDL, CRA, Aggregators with a wide variety of business models; a wide variety of customer-facing partners such as Labour Boards, Unions, NGOs, MFIs, and banks; and subscribers across different income-profiles and awareness levels. Although different Aggregators have been able to achieve varying degrees of operational success, one common theme that has emerged is that the lack of technology capability has significantly compromised the Aggregator's efficiency and the subscriber's experience of NPS-S.

Aggregator Transactions and Technology Capability:

Keeping in mind the need to bring the entire unorganised sector under the NPS-S scheme, there is a need to urgently strengthen the current technology capabilities of Aggregators in the NPS-S scheme. There are a number of significant challenges on Aggregator operations that can be attributed to their poor technological capabilities:

- Significant delay in generating and providing PRAN to subscriber as a prerequisite to making the first contribution: The current efforts at enrolling unorganised sector workers have not been as effective as expected given that 4 years have passed since the introduction of the scheme. The current process followed across Aggregators essentially consists of application form-filling and KYC document collection by a staff of the NL-CC and its processing either by the NL-AO, the Aggregator's own staff, or by a suitable facilitator appointed by the Aggregator. The application form that has cleared the scrutiny of the staff is forwarded to NSDL which further scrutinises and accepts or rejects the application. If accepted, the PRAN is generated and a batch of physical PRAN cards is sent to the NL-CC or the NL-AO, after which the NL-CC delivers the PRAN card to the subscriber's address or asks the subscriber to collect the card from the NL-CC branch. Some of the Aggregators surveyed report that this process, on occasion, results in a turnaround time of multiple weeks. According to information from the NSDL, PRAN generation occurs within a turn-around-time of 15 days, however the process of reaching the PRAN card from the Aggregator, through the NL-CC, to the subscriber involves substantial delay. Aggregators have conveyed that this is a major hindrance to retaining subscribers who quickly lose interest and consider their initial registration expenses of Rs.100 as a sunk cost. In order to meaningfully address this, Aggregators and NL-CCs will need to have online connectivity and technology capability and be given the option to do instant KYC authentication (either fingerprint or OTP authentication of Aadhaar number) and PRAN generation at the NL-CC level. With this technology, the NL-CC will be able to simultaneously enrol and collect subscriptions. The NL-CC should also be able to print the PRAN card for the subscriber directly for a fee, instead of the subscriber waiting to get it in the mail from NSDL. The generation of this PRAN number must also be accompanied by an SMS from the Aggregator to the mobile number of the subscriber as an additional measure.
- Process of contribution collection data: While subscribers do obtain a receipt from the Aggregator when they make a contribution into NPS-S, it is in most cases not a system-generated receipt. Currently, PFRDA requires that there is a weekly upload of data on collections from each NL-AO to NSDL for all collections in that week. However, in the absence of a system generated, tamper-proof record of each collection from a subscriber, it is, in practice, impossible to ascertain when a collection actually occurred on the ground. In order to ensure process adherence in subscriber collection data, Aggregators must be required to generate automatic receipts to subscribers containing the date of collection, without any scope for manual intervention so that the information available weekly to NSDL is an accurate reflection of ground realities.

- Delay between the subscriber's actual transaction and the Aggregator's accounting of the transaction: When subscribers make a contribution into their NPS-S account, PFRDA requires that the cash collected be deposited into the Aggregator Bank account on the same day or on the next day (if cash is collected after 2pm)^{xxvii}. From the Aggregator's Bank account, money is to be transferred to the designed NPS-Collections Account, which is mandated to be a Current Account, without any withdrawal option. From the Aggregator survey, it is apparent that Aggregators do this transfer into the NPS Collections Account only periodically, and this can vary from between 7 days to as long as 3 months from the time of collecting funds from the subscriber. The current stipulation as per PFRDA guidelines is that there must be a weekly transfer of funds for all collections in that week, but in practice most Aggregators are unable to fulfil this requirement. This can be attributed to the bottlenecks arising out of inadequate technology capabilities of the NL-CCs, over and above business-model-level attributes. From the perspective of customer protection, subscribers are losing out on returns that would have incurred to them had their contributions been credited into the retirement accounts without any delay. It is imperative that transactions are settled on a daily basis to avoid the need for reconciliation at a later date, and that there is a facility to reconcile transactions done on the Aggregator system and amounts deposited in the escrow account of the Aggregator, before generating subscriber contribution files to be uploaded in the NSDL systems. This ensures that amounts collected from subscribers and those deposited in the Trustee Bank account are always matched.
- Lack of PRAN inter-operability: The Aggregator survey revealed that migration of subscribers, both for short term and long term purposes to different locations, is an important factor that can determine the success of efforts taken by the NL-CCs to obtain renewal contributions. Many Aggregators such as MFIs and Distribution Companies send bulk-SMSes to their subscribers while others use printed newsletters and festival greetings posted to subscribers as a channel to give reminders regarding the need to contribute into their NPS-S accounts. Often, these do not reach the intended subscribers because they have migrated to a different location either temporarily or permanently. With 200 million people expected to move from rural to urban India in the next two decades, migration will be a sustained reality in India for the foreseeable future. Robust access to their retirement accounts as well as an ability to seamlessly transact has to be enabled for all subscribers irrespective of which Aggregator they transact with and where they are located temporarily or permanently. However, while there is no regulatory hurdle that is preventing any Aggregator from providing interoperability, no Aggregator or NL-CC has the adequate technological capability to provide this functionality.
- Lack of real-time access to subscriber information: The Aggregator survey revealed that their NL-CCs and their subscribers do not have real-time access to details of their corpus amount and their NAVs. While quarterly updates of the accounts happen, and these can be viewed at the Nodal Office level, the process to obtain this information is cumbersome and involves many intermediaries from the NL-CC to the Aggregator. Subscribers must, however, have an option to obtain account information such as contribution credits, government contribution credits, corpus details, and NAVs on a real-time basis. Aggregators must have the facility to fetch account statements from the NSDL systems on a real-time basis so that subscribers can know up-to-minute balances in their retirement accounts instead of waiting for yearly physical statements.

It is apparent from a reading of these challenges that technology will need to be leveraged in a much more significant manner by Aggregators to ensure a seamless process for identification of subscriber, issuance of PRAN, contribution uploads, and making certain that

the Aadhaar process is leveraged to ensure simple and hassle-free interface for subscribers with Aggregators.

While it is argued that online connectivity is the key bottleneck to leveraging technology to its full extent, the case for this remains unconvincing. This is because, there are concerted efforts already on to lay out the National Optical Fibre Network to all Gram Panchayats in India by the Central Government and it is only a matter of time before a reliable broadband connection becomes a reality across all parts of India. Even in regions where connectivity is not available through the traditional means, innovative alternatives have been used for the interim by many different institutions that operate in remote pockets to overcome this problem.

In view of the critical importance of technology platform for Aggregators, PFRDA must require all Aggregators to use a technology platform that provides for real-time transactions with the NSDL server for all actions starting from e-KYC authentication, subscriber enrolment and PRAN generation; subscriber contributions and system-generated receipts; speedy settlement and reconciliation; inter-operability across Aggregators; and real-time access to subscriber accounts. An interview with NSDL revealed that NSDL is already in talks with PFRDA to create a technology platform.

In order to ensure that all Aggregators adopt such technology systems in a reasonably quick timeframe, it would be desirable from a public policy perspective for PFRDA to develop, package, and distribute a basic “Technology Starter Pack” to all Aggregators. This can comprise of a technology platform that provides all the functionality described above, as well as training modules for operationalising the technology platform.

Subscriber Account Information from NSDL:

Whenever a subscriber wants to know her account balance, she should be able to retrieve this information easily even without the need to visit the NL-CC. Subscribers should be permitted to retrieve information on their retirement accounts from NSDL systems directly.

PFRDA should work with Aggregators to make them adopt options such as SMS, online verification, and/or IVR to make available to subscribers, their real time account data from NSDL systems. Some Aggregators are already using SMS to inform subscribers of contributions reaching their PRANs. Recently, the National Payment Corporation of India (NPCI) together with telecom companies has launched the *99# functionality on USSD. Although more expensive at about Rs. 1.50 per transaction, this channel can provide subscribers instant access to their accounts without any dependency on internet or SMS.

Recommendations on Aggregator Processes and Technology:

- 4.2.1 In view of the critical importance of technology platform for Aggregators, PFRDA must require all Aggregators to use a technology platform that provides for real-time transactions with the NSDL server for all actions starting from e-KYC authentication, subscriber enrolment and PRAN generation; subscriber contributions and system-generated receipts; speedy settlement and reconciliation; inter-operability across Aggregators; and real-time access to subscriber accounts.
- 4.2.2 In order to ensure that all Aggregators adopt such technology systems in a reasonably quick timeframe, it would be desirable from a public policy perspective for PFRDA to develop, package, and distribute a basic “Technology Starter Pack” to all Aggregators. This can comprise of a technology platform that provides all the functionality described in Recommendation 4.2.1, as well as training modules for operationalising the technology platform.

- 4.2.3 PFRDA should work with Aggregators to make them adopt options such as SMS, online verification, and/or IVR to make available to subscribers, their real time account data from NSDL systems. Recently, the National Payment Corporation of India (NPCI) together with telecom companies has launched the *99# functionality on USSD. Although more expensive at about Rs. 1.50 per transaction, this channel can provide subscribers instant access to their accounts without any dependency on internet or SMS.

Chapter 4.3: Aggregator Incentives

The current incentive structure laid out by PFRDA is a graded incentive slab structure that pays out Rs. 100 only in the event that a subscriber is able to reach a contribution level of at least Rs.1000 per year.

As seen in Figures 2.2.1 and 2.2.3 (Chapter 2.2), the current set of Aggregators have not been able to obtain high performance in terms of both the coverage of unorganised sector workers enrolled for NPS-S in their service areas, and their persistence in reaching at least Rs.1000 as contribution in order to receive the Swavalamban matching contribution.

The survey of Aggregators revealed the following as possible explanations for this performance, with some Aggregators providing ideas for change:

- While the incentive structure benefits both Aggregators and beneficiaries, the poorest of the poor subscribers are missed out due to the incentive structure that pays out only upon a subscriber reaching Rs.1000 as contribution. It was felt that there would be a section of the customer base that would not be able to invest Rs.1000 a year. However, the Aggregator expends the same level of promotional efforts for these subscribers as they do for those subscribers who do manage to invest Rs.1000 or above. There needs to be some incentive for reaching out to these subscribers.
- The current structure limits the incentives for Aggregators at a subscriber contribution level of Rs. 1000. This is because the incentive is capped at Rs. 100 per subscriber, and therefore the Aggregator remains neutral for any contribution by the subscriber over this level. The incentive structure needs to be more akin to an ad-valorem or volume-based incentive structure followed by the mutual fund industry.
- Expenditure on working capital is incurred continuously by the Aggregator, while the incentive pay-out happens every 12 to 18 months after the expense has been incurred. The NL-CCs in turn receive their incentives even later and this has been said to cause a decrease in their morale, which affects subscriber enrolments and collections. The timing of incentive pay-out is just as important as the quantum of incentives. Instead of an annual payment, PFRDA must instead make quarterly incentive pay-outs to Aggregators to ensure more effective working capital management for Aggregators.

It is evident that people should be encouraged to save certain minimum amounts so as to secure their post-retirement corpuses. As shown in Table 5.1.1, according to our estimates, a 20-year old in the lowest income quintile needs to save approximately Rs.3700 per annum in order to completely secure her post-retirement expenses. Considering this imperative, and the feedback from Aggregators on the design of the incentive scheme, there is a need to re-evaluate the current structure and consider an alternative ad-valorem incentive structure that could potentially yield the most optimal results for subscribers in the long-term.

An ad-valorem rate ensures that Aggregators are incentivised to encourage enrolled subscribers to contribute much more to reach their requisite corpus, in contrast to the present structure which does not incentivise Aggregators to encourage subscriptions beyond Rs.1000. As the CRIISP report reiterates, “... *an ad valorem approach of charging the subscriber has the potential of merging the advantages of volumes (from small investors) with value (high ticket investments from rich investors).*” We recommend an incentive structure that provides Rs.100 for every customer that contributes a minimum of Rs.1000 (and no incentive payments for contributions below Rs. 1000) and an ad-valorem rate of 5%

of the contribution amount per subscriber for amounts above Rs.1000, subject to a maximum of Rs. 300 per subscriber per year.

However, there remains the concern that households that cannot contribute a minimum of Rs.1000 could be left out of the scheme and therefore, will lack the security of an accumulated post-retirement corpus. We recommend that this be done, as suggested in Chapter 3.3, by enabling the direct seeding of retirement accounts with the government contribution (which will no longer be a matching contribution). This will assure that all households, including those that cannot contribute Rs.1000, have a bare minimum corpus to fall back on post-retirement.

Over time, as the scheme grows in size and scope, we recommend that the ad-valorem incentive structure be suitably modified to reflect the reduction in marginal cost to ensure subscriber persistence. The CRIISP Committee, for instance, recommends an ad-valorem rate of 0.5% of the subscription raised per subscriber, with a suitable floor and ceiling; perhaps, this could be a long-term goal that the PFRDA should target as the subscriber base covers a substantial portion of the unorganised sector workforce and the amounts collected per subscriber increase to more optimal levels.

Recommendations on Aggregator Incentives:

- 4.3.1 For the Aggregator's incentives, we recommend an incentive structure that provides Rs.100 for every customer that contributes a minimum of Rs.1000 (and no incentive payments for subscriber contributions below Rs. 1000), and an ad-valorem rate of 5% of the contribution amount per subscriber for amounts above Rs.1000, subject to a maximum of Rs. 300 per subscriber per year.
- 4.3.2 Aggregator incentives must be paid out by PFRDA on a quarterly basis instead of once a year to ensure that Aggregators' working capital requirements for NPS-S distribution are met in a more reasonable manner.

Chapter 4.4: Recommendations on Aggregator Reach, Performance and Incentives

- 4.1.1 In order to ensure the continued performance and sustainability of the scheme, the adequacy of current Aggregator capital requirements must not be diluted. Relaxing adequacy of capital norms for Aggregators in the attempt to widen the distribution network could end up creating long-term weaknesses in the distribution model itself. Requiring Aggregators to hold capital against operations risk and customer protection risk is a fundamental building block of the distribution model.
- 4.1.2 As of now, there is a requirement by PFRDA that entities must have been in the business of financial services or commodity development for at least 3 years to be eligible to become an Aggregator. While the requirement on the vintage of the Aggregator's business is desirable, the requirement on a limited set of business models may be preventing entities like telecom operators and FMCG outlets from entering this business. We propose the removal of this business requirement while retaining the 3 year vintage requirement, so as to leverage the potential of entities with large distribution networks in both widening and deepening the reach of NPS-S.
- 4.1.3 In order to ensure that citizens as well as local and state government officials are aware of the NPS-S product and its benefits, it is essential that there is a concerted media campaign by the PFRDA, with messages in local language newspapers, radio and television spots -as is the case with the promotion of the National Pulse Polio Programme or the Swachh Bharat Abhiyaan for instance. In the messages broadcast through the media, focus is to be placed on importance of self-funded old age pension, the notion of market-linked returns, Swavalamban matching contribution in perpetuity, the expected pay-outs at the time of annuitisation, as well as the flexibility to make contributions at any Aggregator (inter-operability).
- 4.1.4 In order to ensure that there is a geographically equitable spread of NPS-S as the scheme gathers momentum, we propose that the PFRDA actively track district-wise access to NPS-S and publish an annual list of High Priority Districts that are poorly serviced by Aggregators and therefore have low NPS-S penetration. The list could also take into account other factors that have been known to inhibit access, such as distance from nearest urban centre, the level of poverty, and the ratio of backward castes. Over time, depending on the persistence of districts on this list, additional incentives can be provided for Aggregators to function in these districts.
- 4.1.5 PFRDA must write to state governments that make co-contributions into the NPS-S to ensure that they do so for all citizens of the state and not restrict the benefit only to subscribers accessing the scheme through a certain specified set of Aggregators.
- 4.2.1 In view of the critical importance of technology platform for Aggregators, PFRDA must require all Aggregators to use a technology platform that provides for real-time transactions with the NSDL server for all actions starting from e-KYC authentication, subscriber enrolment and PRAN generation; subscriber contributions and system-generated receipts; speedy settlement and reconciliation; inter-operability across Aggregators; and real-time access to subscriber accounts.
- 4.2.2 In order to ensure that all Aggregators adopt such technology systems in a reasonably quick timeframe, it would be desirable from a public policy perspective for PFRDA to develop, package, and distribute a basic "Technology Starter Pack" to all Aggregators. This can comprise of a technology platform that provides all the

functionality described in Recommendation 4.2.1, as well as training modules for operationalising the technology platform.

- 4.2.3 PFRDA should work with Aggregators to make them adopt options such as SMS, online verification, and/or IVR to make available to subscribers, their real time account data from NSDL systems. Recently, the National Payment Corporation of India (NPCI) together with telecom companies has launched the *99# functionality on USSD. Although more expensive at about Rs. 1.50 per transaction, this channel can provide subscribers instant access to their accounts without any dependency on internet or SMS.
- 4.3.1 For the Aggregator's incentives, we recommend an incentive structure that provides Rs.100 for every customer that contributes a minimum of Rs.1000 (and no incentive payments for subscriber contributions below Rs. 1000), and an ad-valorem rate of 5% of the contribution amount per subscriber for amounts above Rs.1000, subject to a maximum of Rs. 300 per subscriber per year.
- 4.3.2 Aggregator incentives must be paid out by PFRDA on a quarterly basis instead of once a year to ensure that Aggregators' working capital requirements for NPS-S distribution are met in a more reasonable manner.

**Section V:
Customer Protection**

Chapter 5.1: Customer Protection

Old age pension is a complex product that involves, over the working life of a subscriber, regular investments for corpus building, illiquidity of the corpus, inflation protection, complex asset-allocation mix, as well as some commitment from the Government. Given these complexities, and the complexities of each individual subscriber's household, care must be taken to ensure that providers are ensuring the product is suitable for the subscriber.

Suitability of the NPS-S Product:

Table 5.1.1 below presents the minimum investment required per annum (for age groups ranging from 20 years to 55 years) that needs to be made in order to secure post-retirement expenditure corpus of Rs. 150,691 (present value). We assume a consolidated CAGR of investment of 9.76%, the mean annual returns for the extant investment mix. This table assumes that the entire contribution is borne by the subscriber without a concomitant matching contribution from the government. For instance, the minimum annual investment (inflation adjusted) required to secure the post-retirement corpus of a 20 year old in the first income quintile is Rs. 2,364 (Column 2). This would mean that the subscriber contributes an annual amount of Rs. 2,364 indexed to the rate of inflation every year (assumed to be 8%). In order to secure the same post-retirement corpus by contributing a fixed amount annually, without inflation indexation, the subscriber would be required to contribute Rs. 6,539 per annum (Column 3). The required minimum investment increases sharply as the age of the subscriber increases. For instance, for a 40 year old in the first income quintile, the minimum annual contribution required is Rs.5,516 (inflation adjusted).

Table 5.1.1: Investment Required per Annum for Securing Post-Retirement Corpus of Subscribers in Income Quintile 1 (in Rs.)

Investment required per annum (Age-wise in Rs.)	Inflation Adjusted Contributions	Non-Inflation Adjusted Contributions
(1)	(2)	(3)
20 years	2,364	6,539
25 years	2,817	7,185
30 years	3,422	7,961
35 years	4,264	8,944
40 years	5,516	10,292
45 years	7,560	12,367
50 years	11,476	16,203
55 years	21,947	26,304

It is clear that depending on the income, expense, asset and liability profiles of individuals, they will require to save different amounts towards their pension corpus, and Table 5.1.1 presents the range of investments required for different age profiles.

From a customer suitability perspective, it is critical to develop a more nuanced understanding of the characteristics of individuals that make them suited or unsuited to investing in the NPS-S at any given point in time. Other regulators in India have attempted to incorporate Suitability into their customer protection frameworks, for instance, SEBI's Investment Advisers Regulations mandate several Suitability requirements which are applicable to investment advisers. In view of the importance of preventing mis-sale and to ensure more suitable pensions investments by all subscribers, we propose that PFRDA commission an intensive research study in order to arrive at a detailed set of Unsuitability guidelines for NPS-S, which will delineate the characteristics that make an individual unsuited to contributing into the program at any given point in time.

For instance, here is the methodology used in this report to determine the minimum annual savings that subscribers should make towards securing their post retirement corpus. This methodology involves the following steps:

- i. Aggregators should collect information on the current levels of expenditure of the subscriber, which minimally includes expenditure amounts and frequency for the following expenditure heads: clothing, electricity, festival, food, health, house rent, insurance, and shop rent (if applicable).
- ii. Aggregators should be able to use this information to estimate both current expenditure and project the post-retirement annual expenditure of the subscriber. For example, in this report, we've assumed that a 20-year old with current annual expenditure of Rs. 7,534 will have an annual expenditure requirement of Rs. 163,684, at the time of her retirement in 40 years. This is arrived at by adjusting for inflation (at an assumed rate of 8% for 40 years).
- iii. Aggregators can use the projected annual expenditure, calculated in step ii, to arrive at a minimum post-retirement corpus that every subscriber should accumulate to draw down over the course of her retirement. The period of retirement is assumed to be 20 years, with age of retirement at 60 years and life expectancy assumed at 80 years. We arrive at the corpus by multiplying the annual projected expenditure by 20. Implicit in this calculation is the assumption that the corpus is invested in an annuity that provides inflation-protected annual instalments over a period of 20 years. This allows us to calculate the real monthly annuity required by the subscriber at the time of retirement. For the twenty year old, the post-retirement corpus works out to be Rs.150,691 in present value terms. As mentioned earlier, this provides a real monthly annuity of Rs. 970.
- iv. The Aggregator could then arrive at the minimum annual savings that the subscriber needs to make over her lifetime in order to secure the post-retirement corpus calculated in step iii. For instance, the Aggregator could assume two scenarios- assuming CAGR of investment to be 8% and 10%. They could calculate the minimum amount the subscriber should contribute to accumulate the corpus under both assumed scenarios. We estimate this to be approximately Rs.2,364 (inflation-adjusted) for a 20 year old in the lowest income quintile (Table 5.1.1).

PFRDA must also require Aggregators to ensure that the NPS-S product is not bundled with other products the Aggregator may be offering, such as credit.

Processes for Grievance Redressal and Supervision:

There does not exist a clear Grievance Redressal System and Process for subscribers in the NPS-S scheme. Currently, the Central Grievance Management System (CGMS) run by NSDL is the first port of call for subscribers. Subscribers can register complaints with the CGMS through a toll-free number, on the internet and through physical forms available at the PoP. If the CGMS does not respond to the complaint in 30 days or if the subscriber is dissatisfied with the resolution, she can apply to the Grievance Redressal Cell (GRC) of PFRDA. While there is helpline number for making queries by NPS- S subscribers, it does not have grievance redressal capabilities.

In order to ensure that subscriber grievances are given the importance they deserve, all Aggregators should be required by PFRDA to have a well-defined process for grievance redressal that is prominently displayed at every branch of its own and of all branches and outlets of its partners (NL-CCs), and is communicated clearly to subscribers at the time of registration and renewal.

If the subscriber is dis-satisfied with the outcome of the Aggregator's internal grievance redressal process, then she should reach out to the GRC at PFRDA. The GRC must be made accessible to NPS-S subscribers and PFRDA must ensure that there is a process for timely resolution of complaints. Subscribers must have their complaints resolved within specified timelines set out by the GRC.

PFRDA must in its supervisory role, carry out continuous, ex-post monitoring through information reporting requirements from Aggregators, as well as on-site verification and regular audits. The monitoring process should assess information on Aggregator financials, subscriber complaints and grievance records, service level performance from the time of subscriber contributions on the ground all the way till it reaches their retirement accounts, technology adoption, and risk management capabilities. PFRDA must also engage in mystery shopping audits to check for quality of Aggregator service, especially the nature of subscriber-field staff interaction.

Pay-outs upon death and exit from NPS-S:

About 0.26% of total subscribers are beyond the age of 60 years (8449 subscribers) and 50,066 subscribers (1.56% of total subscribers) are expected to cross the age of 60 in the next 3 years. While the chief challenge in these cases would be whether or not there is an adequate corpus to annuitise, lack of clarity regarding the exit policy is a failure of the NPS-S scheme and has severe consequences from the perspective of customer protection.

The Aggregator survey also revealed that there are subscribers who have passed away and that their cases have yet to be resolved in a timely manner. Inordinate delays for receiving very small amounts of money (as the scheme has been in operation only for about 4 years) have been held responsible for low levels of confidence in the scheme and the Aggregators.

PFRDA must lay down clear processes for both the annuitisation of pension corpuses of subscribers who are already 60 and waiting for pay-outs, and also for those cases where subscribers are dead. In most, if not all, of these cases there has been no time to build up a sufficient corpus to enable annuitisation, so the existing corpuses of these subscribers must be made available in totality to them (or their nominees, in the case of death). This must be treated as high priority and resolved at once.

Recommendations for Customer Protection:

- 5.1.1 In view of the importance of preventing mis-sale and to ensure more suitable pensions investments by all subscribers, we propose that PFRDA commission an intensive research study in order to arrive at a detailed set of Unsuitability guidelines for NPS-S, which will delineate the characteristics that make an individual unsuited to contributing into the program at any given point in time. PFRDA must also require Aggregators to ensure that the NPS-S product is not bundled with other products the Aggregator may be offering, such as credit.
- 5.1.2 In order to ensure that subscriber grievances are given the importance they deserve, all Aggregators should be required by PFRDA to have a well-defined process for grievance redressal that is prominently displayed at every branch of its own and of all branches and outlets of its partners (NL-CCs), and is communicated clearly to subscribers at the time of registration and renewal.
- 5.1.3 If the subscriber is dis-satisfied with the outcome of the Aggregator's internal grievance redressal process, then she should reach out to the GRC at PFRDA. The GRC must be made accessible to NPS-S subscribers and PFRDA must ensure that there

is a process for timely resolution of complaints. Subscribers must have their complaints resolved within specified timelines set out by the GRC.

- 5.1.4 PFRDA must in its supervisory role, carry out continuous, ex-post monitoring through information reporting requirements from Aggregators, as well as on-site verification and regular audits. The monitoring process should assess information on Aggregator financials, subscriber complaints and grievance records, service level performance from the time of subscriber contributions on the ground all the way till it reaches their retirement accounts, technology adoption, and risk management capabilities. PFRDA must also engage in mystery shopping audits to check for quality of Aggregator service, especially the nature of subscriber-field staff interaction.
- 5.1.5 PFRDA must lay down clear processes for both the annuitisation of pension corpuses of subscribers who are already 60 and waiting for pay-outs, and also for those cases where subscribers are dead. In most, if not all, of these cases there has been no time to build up a sufficient corpus to enable annuitisation, so the existing corpuses of these subscribers must be made available in totality to them (or their nominees, in the case of death). This must be treated as high priority and resolved at once.

**Section VI:
NPS-S Expenditure**

Chapter 6.1:
Government expenditure on pension under the proposed framework

In order to calculate the Government expenditure on NPS-S matching contribution over the next ten years (2015-16 to 2024-25), we first calculate the number of new subscribers that are expected to be enrolled in the scheme under two scenarios:

- i. A base scenario where we assume that new subscribers will enrol in the scheme at a CAGR of 15.60%; and
- ii. A scenario where the entire target population is covered under scheme by 2024-25 at a CAGR of 58.65%.

Furthermore, based on historical growth rates, we forecast the year-on-year growth in the number of unorganised sector workers, the target population of the scheme (For the detailed assumptions behind the calculation, please refer Annexure E).

Table 6.1.1:
Scenario I: Total subscribers in NPS-S and total unorganised sector workforce (in lakh)

Year	New Subscribers	Old Subscribers	Total subscribers	Total Unorganised Workers	% Covered
2014-15	4.43	28.37	32.79	4,086.13	0.80%
2015-16	5.12	32.79	37.91	4,130.08	0.92%
2016-17	5.91	37.91	43.82	4,174.50	1.05%
2017-18	6.84	43.82	50.66	4,219.40	1.20%
2018-19	7.90	50.66	58.56	4,264.79	1.37%
2019-20	9.14	58.56	67.70	4,310.66	1.57%
2020-21	10.56	67.70	78.26	4,357.02	1.80%
2021-22	12.21	78.26	90.47	4,403.89	2.05%
2022-23	14.11	90.47	104.58	4,451.25	2.35%
2023-24	16.32	104.58	120.90	4,499.13	2.69%
2024-25	18.86	120.90	139.76	4,547.52	3.07%

According to our projections, if enrolments into the scheme increase at a CAGR of 15.60%, over the next 10 years, the scheme will attain a subscriber base of 1.39 crore subscribers. This will form 3.07% of the target population of the scheme.

Table 6.1.2:
Scenario II: Total subscribers in NPS-S and total unorganised sector workforce (in lakh)

Year	New Subscribers	Old Subscribers	Total subscribers	Total Unorganised Workers	% Covered
2014-15	16.64	28.37	45.01	4,086.13	1.10%
2015-16	26.40	45.01	71.40	4,130.08	1.73%

2016-17	41.88	71.40	113.28	4,174.50	2.71%
2017-18	66.44	113.28	179.72	4,219.40	4.26%
2018-19	105.41	179.72	285.13	4,264.79	6.69%
2019-20	167.23	285.13	452.36	4,310.66	10.49%
2020-21	265.31	452.36	717.67	4,357.02	16.47%
2021-22	420.91	717.67	1,138.58	4,403.89	25.85%
2022-23	667.78	1,138.58	1,806.35	4,451.25	40.58%
2023-24	1,059.43	1,806.35	2,865.78	4,499.13	63.70%
2024-25	1,680.78	2,865.78	4,546.56	4,547.52	99.98%

If the scheme were to enrol the entire target population by 2024-25, the enrolment rate would have at a CAGR of 58.65%. This is shown in Table 6.1.2.

We now use the projections made in Tables 6.1.1 and 6.1.2 to calculate the government expenditure on NPS-S (including matching contributions and Aggregator incentives) over the next ten years under the two scenarios mentioned earlier. We make the following assumptions for these calculations:

- The matching contribution from the Government is adjusted for inflation every year. The rate of inflation is assumed to be 8.08%.
- The average persistence per year or the percentage of people who are eligible for the matching contribution every year is assumed to be 70% of total subscribers.
- The Aggregator receives Rs.120 per annum for every new subscriber who is eligible for a Swavalamban match and Rs.100 per old subscriber who is eligible for the Swavalamban match.
- The annual rate of growth of GDP is assumed to be 5%.

Table 6.1.3:
Scenario I: Government expenditure on pensions (2014-15 to 2024-25)

Year	Contribution per eligible Subscriber	Total Matching Contribution (in Rs. crore)	Aggregator Incentives (in Rs. crore)	Total Expenditure (in Rs. crore)	GDP Projected (in Rs. crore)	Total Expenditure as a % of GDP
2014-15	1,000	229.56	23.58	253.14	9461979	0.003%
2015-16	1,081	286.81	27.25	314.07	9935077	0.003%
2016-17	1,168	358.35	31.51	389.85	10431831	0.004%
2017-18	1,263	447.72	36.42	484.14	10953423	0.004%
2018-19	1,365	559.38	42.10	601.49	11501094	0.005%
2019-20	1,475	698.90	48.67	747.57	12076149	0.006%
2020-21	1,594	873.21	56.26	929.47	12679956	0.007%
2021-22	1,723	1,090.99	65.04	1,156.03	13313954	0.009%
2022-23	1,862	1,363.09	75.18	1,438.27	13979652	0.010%
2023-24	2,012	1,703.05	86.91	1,789.96	14678635	0.012%

2024-25	2,175	2,127.79	100.47	2,228.27	15412566	0.014%
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According to our projections, under scenario I, Government expenditure on the NPS-S scheme will increase from Rs.253 crore in 2014-15 to Rs.2228 crore by 2024-25. As mentioned earlier, in 2024-25, this Expenditure will cover just over 3% of the target population of the scheme and will form 0.014% of our projected annual GDP.

Table 6.1.4:
Scenario II: Government expenditure on pensions (2014-15 to 2024-25)

Year	Contribution per eligible Subscriber	Total Matching Contribution (in Rs. crore)	Aggregator Incentives (in Rs. crore)	Total Expenditure (in Rs. crore)	GDP Projected (in Rs. crore)	Total Expenditure as a % of GDP
2014-15	1,000	315.05	33.83	348.89	9461979	0.004%
2015-16	1,081	540.21	53.68	593.89	9935078	0.006%
2016-17	1,168	926.30	85.16	1,011.46	10431832	0.010%
2017-18	1,263	1,588.31	135.11	1,723.42	10953423	0.016%
2018-19	1,365	2,723.47	214.35	2,937.81	11501095	0.026%
2019-20	1,475	4,669.90	340.06	5,009.96	12076149	0.041%
2020-21	1,594	8,007.42	539.51	8,546.93	12679957	0.067%
2021-22	1,723	13,730.24	855.93	14,586.17	13313955	0.110%
2022-23	1,862	23,543.10	1,357.94	24,901.03	13979652	0.178%
2023-24	2,012	40,369.10	2,154.37	42,523.46	14678635	0.290%
2024-25	2,175	69,220.45	3,417.90	72,638.35	15412567	0.471%

Under Scenario II where we assume that the scheme will cover the entire target population by 2024-25, the expenditure will rise from Rs. 348 crore in 2014-15 to Rs. 72,638 crore in 2024-25, or 0.471% of the GDP.

Based on the scenario assumed, we estimate that Government expenditure on NPS-S over the next 5 years (2015-16 to 2019-20) will total between Rs.2,537 crore and Rs.11,276 crore. We estimate that this will cover between 1.6% and 10.5% of the target population by 2019-20 respectively. If Gol were to set aside the complete budgeted expenditure for 2015-16 to 2019-20 with PFRDA in year one, then PFRDA could invest this corpus in an instrument such as an inflation-indexed bond to pay out the projected expenditure (at inflation adjusted rates) over the next five years. Assuming 8% inflation, the amount set aside by Gol in year one would be between Rs. 1,960 crore and Rs. 8,354 crore, depending upon the scenario.

We also provide below (in Tables 6.1.5 and 6.1.6) the extent of government expenditure relaxing the assumption that matching contributions are indexed to inflation. Based on this scenario, expenditure on NPS-S over the next 5 years (2015-16 to 2019-20) will total between Rs.1,996 crore and Rs.8,541 crore, covering 1.6% and 10.5% of the target population by 2019-20 respectively.

Table 6.1.5:

Scenario I: Government expenditure on pensions (2014-15 to 2024-25) without inflation indexation

Year	Contribution per eligible Subscriber	Total Matching Contribution (in Rs. crore)	Aggregator Incentives (in Rs. crore)	Total Subsidy (in Rs. crore)	GDP Projected (in Rs. crore)	Total Subsidy as a % of GDP
2014-15	1,000	229.56	23.58	253.14	9461979	0.003%
2015-16	1,000	265.37	27.25	292.63	9935077	0.003%
2016-17	1,000	306.77	31.51	338.28	10431831	0.003%
2017-18	1,000	354.63	36.42	391.05	10953423	0.004%
2018-19	1,000	409.95	42.10	452.05	11501094	0.004%
2019-20	1,000	473.90	48.67	522.57	12076149	0.004%
2020-21	1,000	547.83	56.26	604.09	12679956	0.005%
2021-22	1,000	633.29	65.04	698.33	13313954	0.005%
2022-23	1,000	732.08	75.18	807.27	13979652	0.006%
2023-24	1,000	846.29	86.91	933.20	14678635	0.006%
2024-25	1,000	978.31	100.47	1,078.78	15412566	0.007%

Table 6.1.6:
Scenario II: Government expenditure on pensions (2014-15 to 2024-25) without inflation indexation

Year	Contribution per eligible Subscriber	Total Matching Contribution (in Rs. crore)	Aggregator Incentives (in Rs. crore)	Total Subsidy (in Rs. crore)	GDP Projected (in Rs. crore)	Total Subsidy as a % of GDP
2014-15	1,000	315.05	33.83	348.89	9461979	0.004%
2015-16	1,000	499.83	53.68	553.51	9935077	0.006%
2016-17	1,000	792.98	85.16	878.14	10431831	0.008%
2017-18	1,000	1,258.06	135.11	1,393.17	10953423	0.013%
2018-19	1,000	1,995.91	214.35	2,210.26	11501094	0.019%
2019-20	1,000	3,166.51	340.06	3,506.57	12076149	0.029%
2020-21	1,000	5,023.67	539.51	5,563.18	12679956	0.044%
2021-22	1,000	7,970.05	855.93	8,825.98	13313954	0.066%
2022-23	1,000	12,644.48	1,357.94	14,002.41	13979652	0.100%
2023-24	1,000	20,060.46	2,154.37	22,214.83	14678635	0.151%
2024-25	1,000	31,825.93	3,417.90	35,243.83	15412566	0.229%

Recommendations for NPS-S Expenditure

6.1.1 Based on the scenario assumed, we estimate that Government expenditure on NPS-S over the next 5 years (2015-16 to 2019-20) will total between Rs.2,537 crore (covering 1.6% of the target population) and Rs.11,276 (covering 10.5% of the target population, with full coverage expected in 2024-25). If Gol were to set aside the complete budgeted expenditure for 2015-16 to 2019-20 with PFRDA in year one, then

PFRDA could invest this corpus in an instrument such as an inflation-indexed bond to pay out the projected expenditure (at inflation adjusted rates) over the next five years. Assuming 8% inflation, the amount set aside by Gol in year one would be between Rs. 1,960 crore and Rs. 8,354 crore, depending upon the scenario.

Appendices and Endnotes

**Appendix A:
Responses from the Aggregator Survey**

Subscriber Incentives

Themes	Observations and Responses
Should Swavalamban continue?	All Categories of Aggregators agreed that Swavalamban helps greatly to market the scheme. This is the most important attraction for obtaining enrolments. Lack of clarity on till when it will continue is demotivating as people lose interest in the scheme. People also think the scheme might stop with political changes. The Scheme must continue at least for another 10-20 years.
Inadequate corpus at the time of annuity creation	Government Bodies felt that a higher budget can be allocated for 45-60 yr old subscribers as otherwise, the small annuity amounts will spread bad reputation for the scheme. MFIs, Banks and Distribution Companies stated that the limit of up to Rs.12000 can be increased as there are many subscribers who are able to reach that level. This will also help to build sufficient corpus.
Problems due to State Govt co-contribution	MFIs and Distribution Companies pointed out that they can operate only as Facilitators for Government Bodies as otherwise subscribers cannot avail state government contribution. Their subscribers ask them why they cannot obtain state government contribution. Banks stated that those enrolling through them will not get state government contribution.
Amounts lesser than Rs.1000 ineligible for Govt co-contribution	MFIs, Banks, Distribution Companies and Government Bodies opined that a proportionate matching contribution from a minimum of Rs.500 onwards would make the scheme meaningful for poorer sections of the unorganised sector who badly need old age support.
Inability to commit Rs.1000 every year	MFIs and Government Bodies opined that reaching the Rs.1000 contribution is difficult in economically backward regions and this makes the scheme less attractive.

Aggregator Performance and Strategy

Themes	Responses, reactions, thoughts
Cash Management, Technology capabilities of NL-CCs/sourcing entities	MFIs' systems range from excel-based tracking of subscribers to online platforms and mobile applications for the field staff. One Distribution Company chooses only those NL-CCs with good cash management facilities. Distribution Companies and Banks opine that NL-CC branches must have access to NSDL to check statements when subscribers ask.
Delay in delivering PRANs to subscribers	Federations/Unions and Distribution Companies felt that this is a major hindrance in retaining subscribers and requested that this process be decentralised to regional offices. Distribution Companies engage many different types of NL-CCs. For these NL-CCs, it takes from many weeks for PRANs to reach subscribers. While NSDL has a turn-around-time of 15 days for PRAN generation, there are delays in reaching KYC documents to the NSDL, as well as delays in reaching the PRAN card to the subscriber by the Aggregator/NL-CC. Some of the Banks and Distribution Companies suggested that PRANs can be delivered directly to subscriber's address. Due to this delay, there is reputation loss and loss of subscriber's first contribution.

No returns on marketing efforts if not converted into a Rs.1000 contribution	MFIs and Distribution Companies stated that marketing expenses are incurred for new and existing subscribers but until the contributions reach Rs.1000 per PRAN, there is no revenue to be made.
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Aggregator Incentives

Themes	Responses, reactions, thoughts
Adequacy of Incentive Structure	<p>While MFIs, Banks and Distribution Companies stated that the incentive structure was of good design, Government Bodies refrained from commenting on incentives except stating that the poorest of the poor get missed out due to the incentive structure. Also, one Distribution Company did not favour a slab structure, while one MFI found it to be cumbersome.</p> <p>Both Distribution Companies and MFIs suggested that an additional slab for Aggregators reaching more than 50,000 but less than 1 lakh Swavalamban-eligible subscribers be introduced into the incentive structure. Once an Aggregator has provided the product through an NL-CC (say an NGO) that works with a small number of subscribers, it is only through this NL-CC that the Aggregator can be in touch with the subscribers. It is therefore important that the efforts of the small NL-CCs don't go to waste because they were unable to obtain contributions reaching Rs.1000.</p> <p>One MFI opined that incentives must be as a % of amounts canvassed by the field staff, just as is followed for mutual funds. A minimum amount can be paid out to Aggregator for those subscribers who do not reach Rs.1000 contribution but who nonetheless transacted smaller amounts.</p>
Challenges in getting Renewal contributions	<p>MFIs and Distribution Companies stated that efforts that go into obtaining renewal contributions are as much as or even greater than that for 1st time contributions due to visits to subscriber residences and that therefore, PFRDA must introduce incentives for renewal contributions that are lesser than Rs.1000. Banks, Distribution Companies and Government Bodies stated the main challenges to be with respect to migration of subscribers, change in mobile numbers due to migration, shortage of money to contribute, and the shortage and transfer of bank staff. Banks also mentioned that branches are not able to monitor subscribers as, in the manner in which the process is structured, all information rests with the Zonal office, and all applications and contributions are to be collected at branch level, transferred to intermediate levels before it can reach the Zonal office. Besides, bank staff are burdened by NPL tracking and have about 30 products to sell. MFIs find it difficult to assign monthly deductions from bank accounts as hardly anyone transacts with their bank accounts.</p>
Lack of government backing	<p>MFIs and Distribution Companies stated that they face a challenge convincing Government departments, NGOs, Labour Welfare Boards, as well as subscribers that this is a government-backed scheme when there is no government representative in these conversations (this is also due to lack of awareness about the scheme). Those private sector Aggregators who work as facilitators to Government Bodies are not faced with this problem as there is always a government representative giving</p>

	legitimacy to the scheme during enrolment camps conducted by the Aggregator. When government contributions get delayed, subscribers fear that this might be a scam or a fraudulent scheme. PFRDA also must be neutral in its support to private and government agencies wanting to enter the business.
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PFRDA, NSDL and Central Government level Issues

Themes	Observations and Responses
Lack of awareness of the scheme among people	MFIs, Banks, and Distribution Companies stated that awareness about the product and that it is a government-backed product is very low among the unorganised sector workers and that awareness creation and publicity by PFRDA through radio, television, vernacular newspapers, hoardings at strategic places and in Block and Taluka level government offices is needed to increase the confidence of subscribers in the scheme. There is a need to urgently intensify advertisements in the media, else people are suspicious of the providers, and this is also aggravated by the delays in obtaining PRAN cards. The current marketing efforts from PFRDA are not adequate to reach Tier 2 and 3 cities and villages so that people become aware of the product and demand for it from providers. There is also a need for the government-led marketing efforts to focus on explaining 'market-linked' returns. Federations/Unions stated that the application forms need to be in vernacular language also as legal documents are involved. Many of the Banks indicated that a 'mass drive' such as was done for PMJDY and the Swatch Bharat Campaign could have much greater results in terms of uptake. One Distribution Company opined that the 'government face' was missing for the product, such as a logo on the PRAN card, a letter from the Government along with the PRAN card, government logo on the Account Statement, the SMSes and so on, and having these will help considerably in boosting confidence especially when private Aggregators are interfacing with the subscribers.
Lack of awareness among local and State Govt bodies approached by Aggregators	MFIs, Banks and Distribution Companies stated that many of the State and local government bodies, Panchayat Mukhiyas were not aware of the scheme when Aggregators approached them for partnering opportunities. PFRDA must have a strategy for each State.
Payout of incentives to Aggregators	MFIs and Distribution Companies opined that incentives can be paid out at least semi-annually as the expenses are incurred continuously while the payout happens 1-1.5 yrs after the expense has been incurred. The NL-CCs in turn receive their incentives very late and results in demotivated institutions that the Aggregator has to deal with. The timing of incentive payouts is equally important as compared to the quantum of incentives.
Death cases and Annuity Cases	MFIs, Distribution Companies and Government Bodies have been faced with death cases as well as cases where subscribers have reached 60 years and thus for whom annuity payouts will have to be started/corpus has to be returned. There is no clear process laid out for this and this has resulted in ad hoc case-by-case clearance from PFRDA/NSDL.
Levelling the playing field	MFIs have requested that PFRDA indicate to state governments to allow all subscribers (irrespective of which Aggregator) to avail

	of state government contributions. Also, in trying to get banks' cooperation in setting up deductions from bank accounts, there is lack of cooperation from banks as they are unaware of Aggregators operating. Banks can be given instructions regarding Aggregators.
Login for NL-CCs	Banks and Distribution Companies have requested that NSDL give access for the NL-CCs to check statements of their subscribers.
Access to Ac for Statement Subscriber	Banks and Distribution Companies have stated that subscribers can be given access to NSDL website where they can check their statements using T-PIN sent through SMS as is done for the main NPS scheme. Literacy levels are not an issue when it comes to checking web-links through smart phones at least in the cities.
Cases of fraudulent providers	Distribution Companies have indicated that fraudulent individuals pose as representatives of Aggregators (as well as fraudulent websites) and illegally collect money from potential subscribers. PFRDA must have a Vigilance Office that checks on such activities, and put out advertisements regarding the same.

Product Features

Themes	Observations and Responses
Surety of returns	MFIs, Banks, Distribution Companies, Federations/Unions and Government Bodies have stated that without clarity on how much the returns would be at the age of 60, or the minimum guaranteed payout amount, it is very difficult to convince subscribers about the scheme. The idea of returns linked to capital markets is difficult to use as a way to communicate the returns. A fixed return or rate of interest is to be communicated like in the case of PPF and contribution amounts will definitely increase. Government Bodies opine that younger people, in 20-25 ages, are not interested in NPS-S as they do not know where they will be in 30 years and they do not want to contribute for that long a period without knowing how much assured return is possible.
Capital Protection	MFIs, Banks and Distribution Companies stated that principal should be safe as there is no guarantee on returns.
Lock-in	MFIs, Banks and Distribution Companies opined that without other savings avenues, the lock-in period is for too long and that there should be an option available to break part of the corpus after say 20 years for expenditure during emergencies and events like marriage.
Liquidity / Line of Credit	One Bank and one Distribution Company suggested that as a liquidity feature for this highly illiquid product, a loan facility / line of credit can be given to the extent of the corpus.

**Appendix B:
Complete List of Secondary Data**

PRAN Registration Table	
Variables	Description
SUB_PRAN	PRAN ID
STATUS	Status of account/PRAN
SUB_SEX	Gender
SUB_DOB	Date of Birth
MOBILE_NO_PRESENT	Presence of mobile number(Y/N)
SUB_COR_ADDR4	Permanent Address of PRAN
STATE_NAME	State
COUNTRY_CODE	Country code(IN-India)
SUB_COR_ADDR_PIN	Pin code
SUB_INCOMP_BNK_DTLS	Presence of bank account(Y/N)
SUB_BNK_NAME	Name of Bank
NOM_FLG	Presence of Nominee(Y/N)
PFM_A	Pension fund Manager A
PFM_B	Pension fund Manager B
PFM_C	Pension fund Manager C
FIRST_SNO_PERC_SHR	Share of 1st Nominee
FIRST_SNO_NOM_REL	Relationship with 1st Nominee
SECOND_SNO_PERC_SHR	Share of 2nd Nominee
SECOND_SNO_NOM_REL	Relationship with 2nd Nominee
THIRD_SNO_PERC_SHR	Share of 3rd Nominee
THIRD_SNO_NOM_REL	Relationship with 3rd Nominee
PRAO_AIN	Aggregator ID
PRAO_OFFC	Aggregator Name
PAO_AIN	Sub-Aggregator ID
PAO_OFFC	Sub-Aggregator Name
NLCC_ID	Collection Centre ID
DOE	Date of Enrolment
NLCC_OFFC	Collection Centre Name

Transactions Table	
SUB_PRAN	PRAN ID
SUB_STS	Status of PRAN
CONTR_TYPE	Type of Contribution
CA_DT	Transaction Date
PSD_TIER1_GOVТ_CONTR_AMT	Govt. contribution amount
PSD_TIER1_SELF_CONTR_AMT	Self-contribution amount

Evaluation of the National Pension System - Swavalamban Scheme
Dvara Research (Formerly known as IFMR Finance Foundation)

PRAO_AIN	Aggregator ID
PRAO_OFFC	Aggregator Name
PAO_AIN	Sub-Aggregator ID
PAO_OFFC	Sub-Aggregator Name

NL-CC Level Details	
DDO_TAN	Collection centre ID
DDO_OFFC	Collection centre Name
DDO_ADDR_LN1	Address line 1
DDO_ADDR_LN2	Address line 2
DDO_ADDR_LN3	Address line 3
DDO_ADDR_LN4	Address line 4
STATE_NAME	State Name
DDO_PIN_CD	Pin Code

Appendix C: Aggregator Business Models

A brief exposition of each of these business models is provided below:

The MFI Model: This category consists of NBFCs and Section 25 Companies that are engaged in providing microfinance activities. On the basis of the surveys, some of the attributes of the model are:

- Many of the MFIs offer NPS-S to their microfinance clients, but realised over time that many of their early NPS-S subscribers did not contribute Rs. 1000 regularly, as a result of which only a few of them were becoming eligible for Government's Swavalamban co-contribution. MFIs have responded by adjusting their strategies as well, for instance, one MFI shifted to targeting only those clients who were expected to have surpluses, specifically at the times they would have these surpluses, such as after harvest for agricultural households or towards the end of financial year for traders.
- MFI clients began perceiving any kind of deduction as a compulsory expense that they had to incur in order to avail a microloan, similar to the expenditure on premiums for life insurance at the time of loan disbursement.
- MFIs are spreading their reach by partnering with NGOs, workers associations, Unions, and Workers Welfare Boards (these are under the state governments) to source subscribers in large numbers. Subscribers obtained through such formal groups were found to be more literate and aware than MFI clients themselves, and are more willing to contribute larger amounts in lesser number of instalments.
- MFIs have not been able to obtain contributions from subscribers in the form of monthly or quarterly deductions from bank accounts.
- Some of the MFIs have Business Correspondent operations with banks, but the technology support for the BC operations is not sufficient to begin providing NPS-S.

The Distribution Company Model: This category consists of a set of Aggregators loosely defined by characteristics such as having a pan-India presence in terms of the spread of their offices or branches and/or selling different types of financial products and services for retail consumers. While these Aggregators include credit providers such as an HFC and an NBFC that offers gold loans, all these institutions are providing the NPS-S scheme to subscribers across India (as opposed to MFIs with regional operations). Features of this model include:

- The financial services the Distribution Companies currently provide cater to a segment of consumers who are more suited for the main NPS product due to their higher income levels as compared to those characterised as unorganised sector workers typically meant for the Swavalamban benefit. One such Aggregator has LIC Agents who receive annual commissions of less than Rs.1 lakh (and therefore belong to the unorganised sector) as their predominant subscriber base. Based on individual consent, amounts are deducted on a monthly basis from the LIC Commissions, and are usually about Rs.100 per month.
- These Aggregators are reaching out to a majority of their potential subscribers en-masse through worker associations, Unions, government departments (see Government Body category), Government Welfare Boards and other Nodal Agencies as well as banks and MFIs, rather than attempting to become NL-CCs themselves as their dominant strategy.

The Government Body Model: These are Government Departments and Construction Workers' and Unorganised Sector Workers' Welfare Boards and are therefore regional and sectoral providers of the NPS-S scheme.

- Subscribers under these institutions are more amenable to monthly payments during monthly meetings with Labour Officials and Inspectors, who have the mandate of enforcement of labour laws and are therefore given monthly targets for interacting with

unorganised sector workers at the District and Taluka level, as well as to monthly deductions from honorariums received from the Government Department as is the case with Anganwadi workers and helpers who are subjected to deductions of Rs.150 and Rs.85 a month from their honorariums of Rs.5500 and Rs.2750 respectively. The monthly deductions carried out by the Government Department are carried out at the departmental level and therefore does not require any monthly interaction with subscriber on a one-on-one basis.

- These Government Departments use Distribution Companies as their Facilitators to carry out back-office services and therefore, a resource from the Distribution Company is typically deployed at the Government Department to carry out this function. One of the better performing Welfare Board has trained their Facilitators (Distribution Company) to identify the 42 categories of unorganised sector workers in their camps, common collection locations, and in the places of their occupations where contributions may get collected. Facilitators also send bulk SMSs as well as use call centre operations for giving reminders to subscribers.

The Bank Model: This group includes public sector banks, regional rural banks and a few private sector banks. Salient features include:

- Most of the subscribers are members of SHGs, those mobilised through BC activities in rural areas and mini-deposit scheme agents, a few are obtained through NGOs and private companies (such as sugarcane farmers through CSR activities of sugar mills), and some through camps conducted by bank officials, Nodal Officers, and very rarely, walk-in customers.
- Although sourcing is not done in the branches, all subscribers have to come to a bank branch to contribute money. Among the banks surveyed, neither the good nor the bad performers used a Distribution Company or any other agency as a Facilitator to handle back-office activities, although some were keen on obtaining such help from a Facilitator. Banks were not aware of any restrictions that prevented such a partnership.
- Among subscribers who contributed under this model, bimonthly, quarterly (at Rs.300-400 per quarter), half-yearly (at Rs.500 per half year) contributions were observed. Other than the best performing bank, no other bank had evolved a technology platform or had specially designed employee-reward systems in place for obtaining superior performance from bank employees.
- Except for the best performing bank, all others mentioned banking-related work consuming most of their time, because of which staff did not have enough bandwidth to focus on outreach for the NPS-S scheme.

The Federation / Union Model: This universe comprises of two Aggregators, one a Federation and the other a Union.

- These provide NPS-S only to their members and are not inherently designed to reach out to other potential subscribers outside of their organisational purview.
- The Union deducts monthly contributions from the payments they make to their members (subscribers), the Federation collects contributions in the months of January to March.

The Private Body Model: The two Aggregators who fall under this category provide NPS-S to their own workers who fall into the unorganised sector category.

Appendix D: Data Analysis

In this section, we present a comprehensive analysis of the NPS-S database obtained from NSDL. For ease of analysis, we have classified data based on the following:

1. Type of Aggregator business model
2. Region
3. Age
4. Gender
5. Possession of bank account

1. Type of Aggregator business model

Appendix C provides a detailed analysis of various types of Aggregator business models.

Figure D1: Active subscribers as a percentage of total subscribers by type of Aggregator (2010-2013)

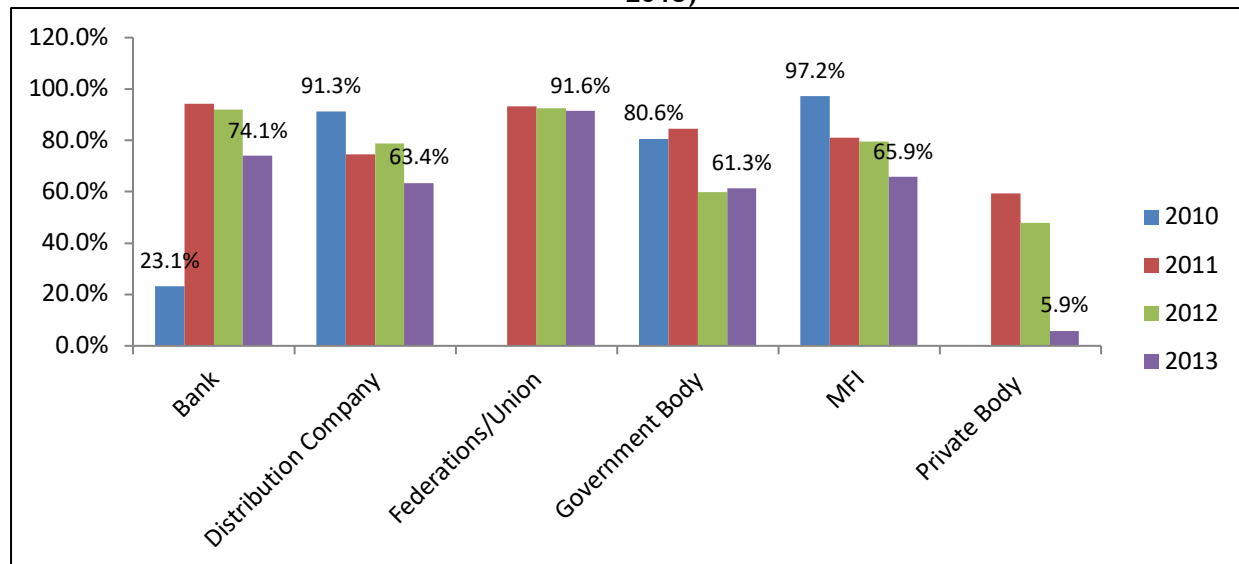


Figure D2: Persistence levels by type of Aggregator

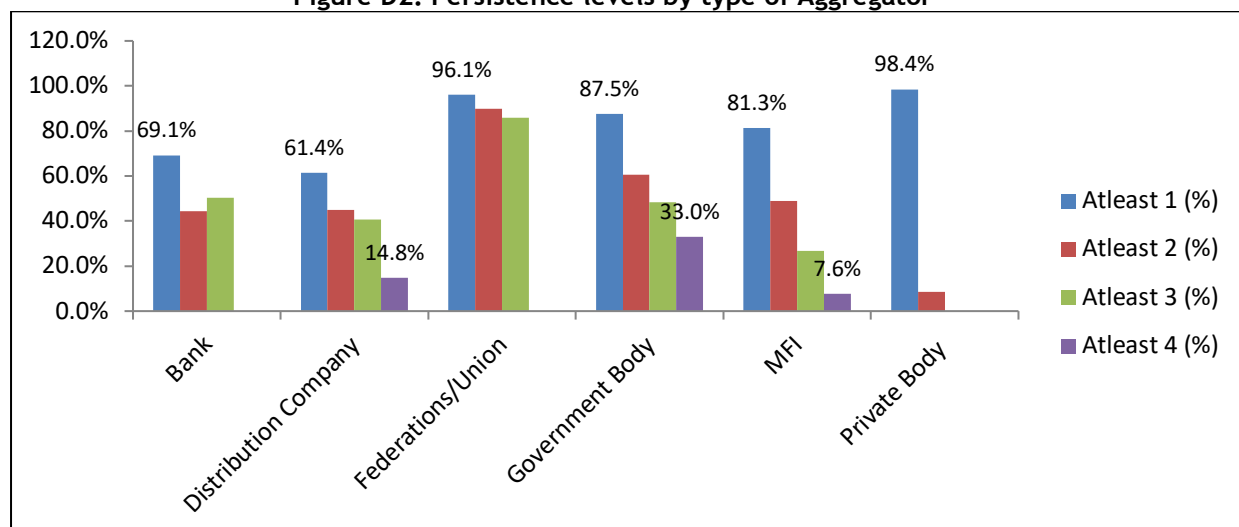


Figure D1 shows that Federations and Unions have highest number of active subscribers as a percentage of their total subscriber base. Approximately 92% of their subscribers have transacted at least once in the year 2013. It is also interesting to note that apart from Federations and Unions, all other Aggregator types have seen a fall in the percentage of active subscribers from 2010 to 2013. The most drastic fall in activity levels is for private bodies, which witnessed a fall in percentage of active subscribers from 59% in 2011 to 6% in 2013. The high proportion of active subscribers among Federations and Unions could be partially attributed to their unique collection strategies that focus on high frequency collection (often monthly) of small subscription amounts.

Figure D3: Average transactions per subscriber by type of Aggregator (2011-2013)

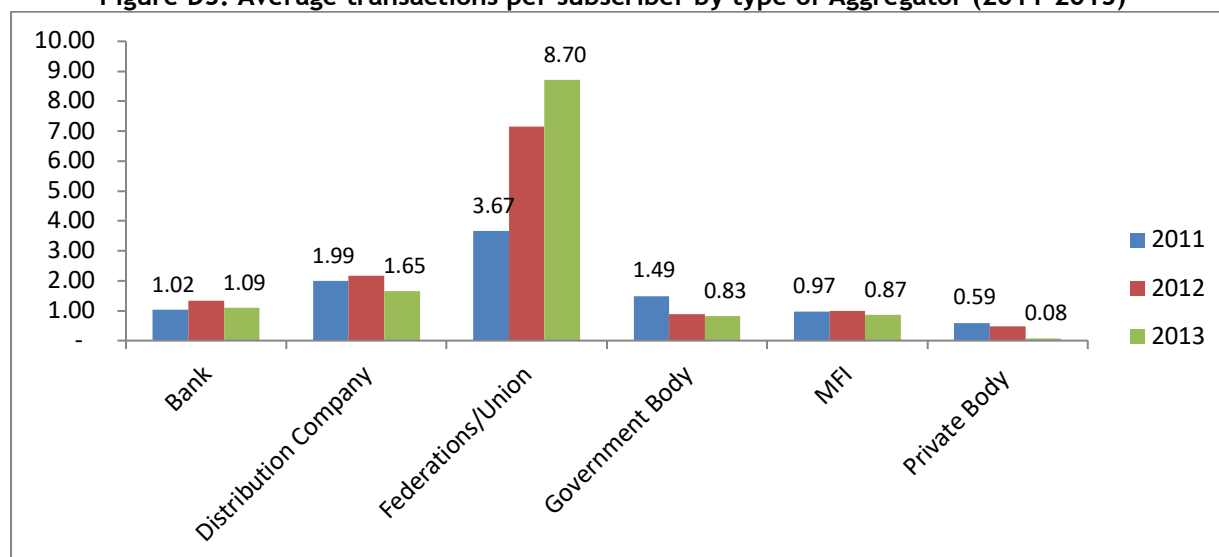
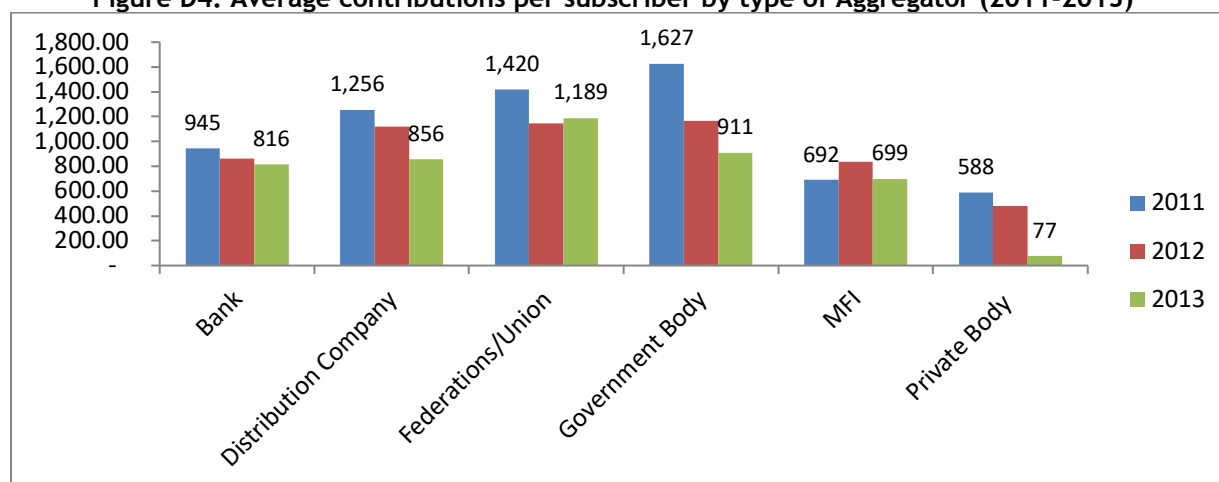


Figure D2 shows that persistence levels of subscribers of all types of Aggregators, except perhaps Federations and Unions, fall in the second year of subscription into the scheme. For instance, the percentage of subscribers, affiliated to an MFI Aggregator, who have contributed at least once is 81.3%. However, number of customers who contributed at least twice as a percentage of all subscribers who are eligible to contribute twice fall to 49%. The percentage of subscribers who contribute at least four times further falls to 7.6%. 86% of subscribers affiliated to Federations and Unions, on the other hand, contribute at least thrice into the system, the highest level of persistence among all Aggregator types.

Figure D4: Average contributions per subscriber by type of Aggregator (2011-2013)



As mentioned earlier, it is clear from our survey of Aggregators that Federations and Unions adopt a high frequency subscription collection strategy. Figure D3 shows that average transactions per subscribers for all Aggregators, except Federations and Unions, have either remained constant or declined. Subscribers affiliated to Federations and Unions transacted on average 8.7 times in 2013, up from 3.7 in 2013. Average contributions per subscriber have declined for all types of Aggregators, except MFIs, from 2011 to 2013. While average subscriptions for subscribers affiliated to MFIs have remained constant (Figure D4), it remains below Rs. 1000, the minimum contribution required to get a matching contribution from the Government. Only one Aggregator type, Federations and Unions, have average subscriptions above Rs. 1000.

2. Region

Although reduced from 61% to 38%, the majority of subscribers are from the Southern States. Over the years, 2010 to 2013, the proportion of subscribers from the North and West has increased while other regions, especially Central and North-East states continue to remain underrepresented (Figure D5).

Figure D5: Subscribers as a percentage of total subscribers by region (2010-2013)

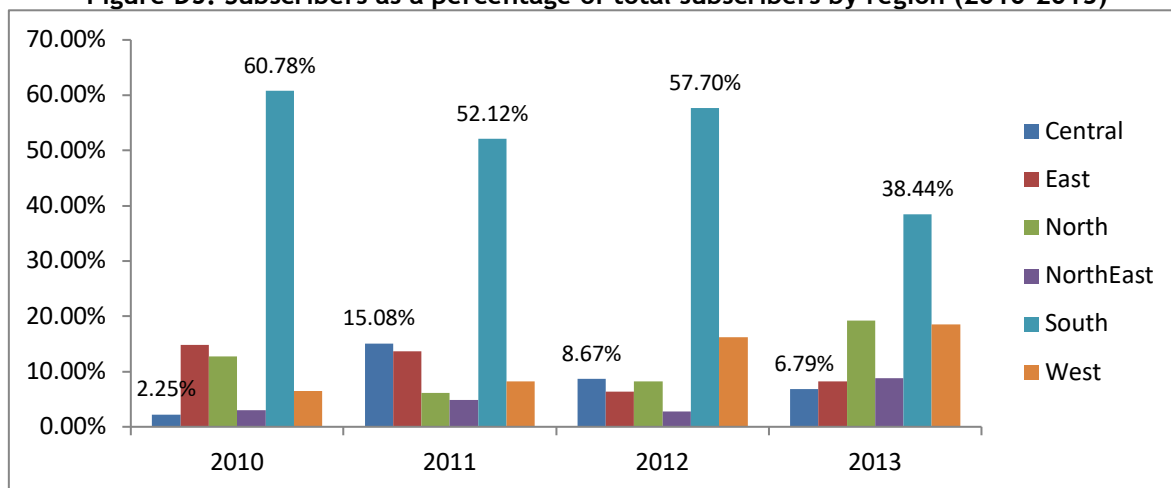
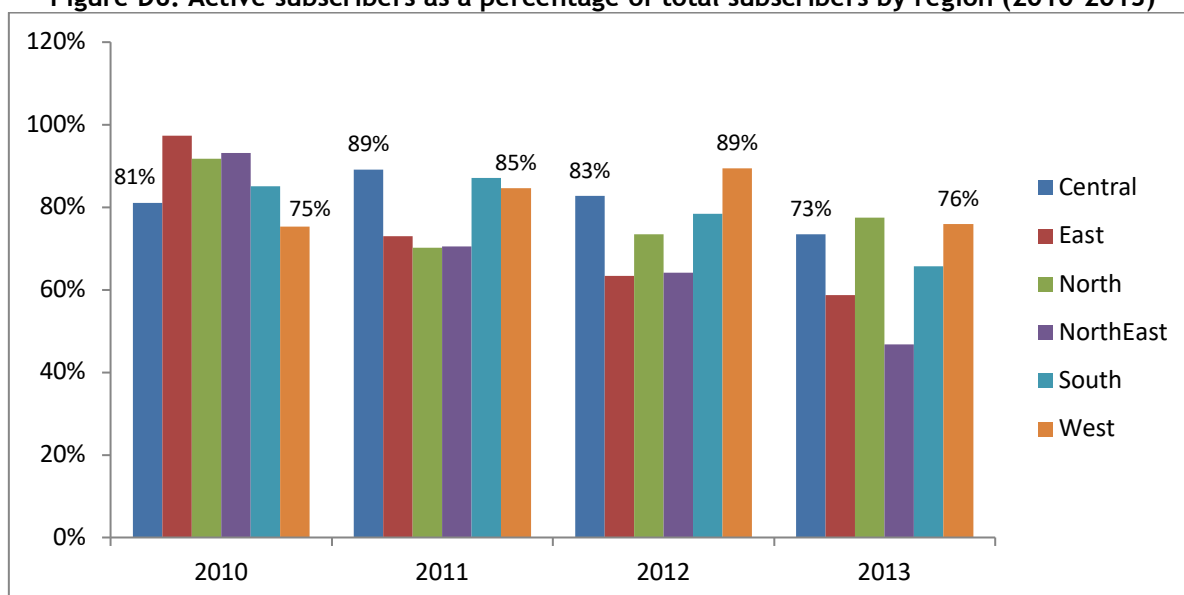
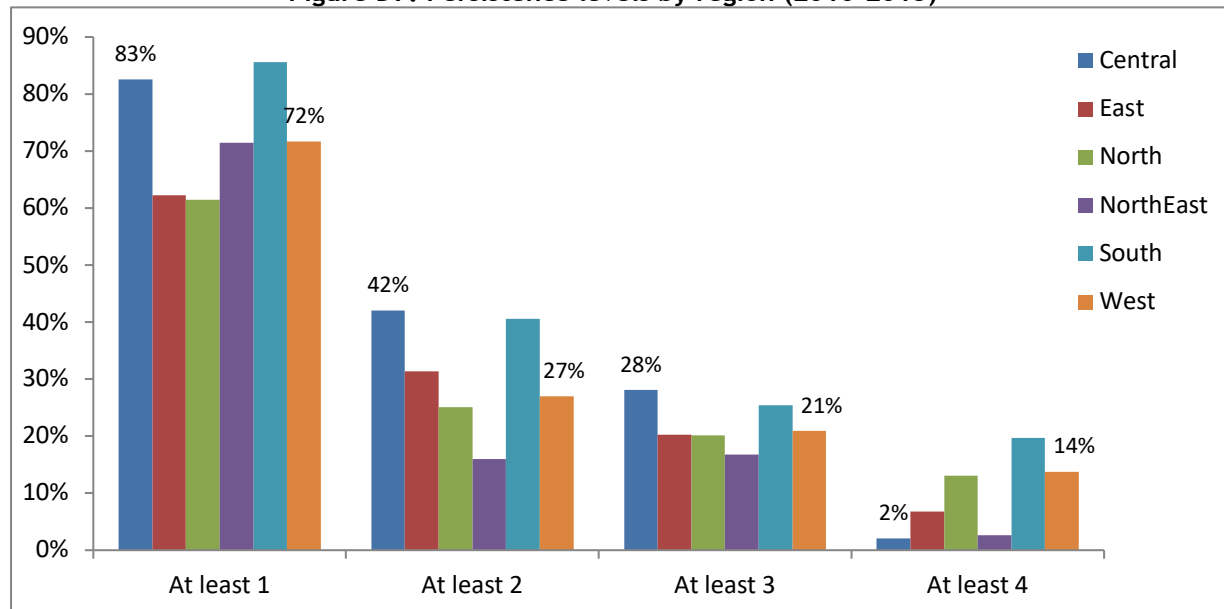


Figure D6: Active subscribers as a percentage of total subscribers by region (2010-2013)



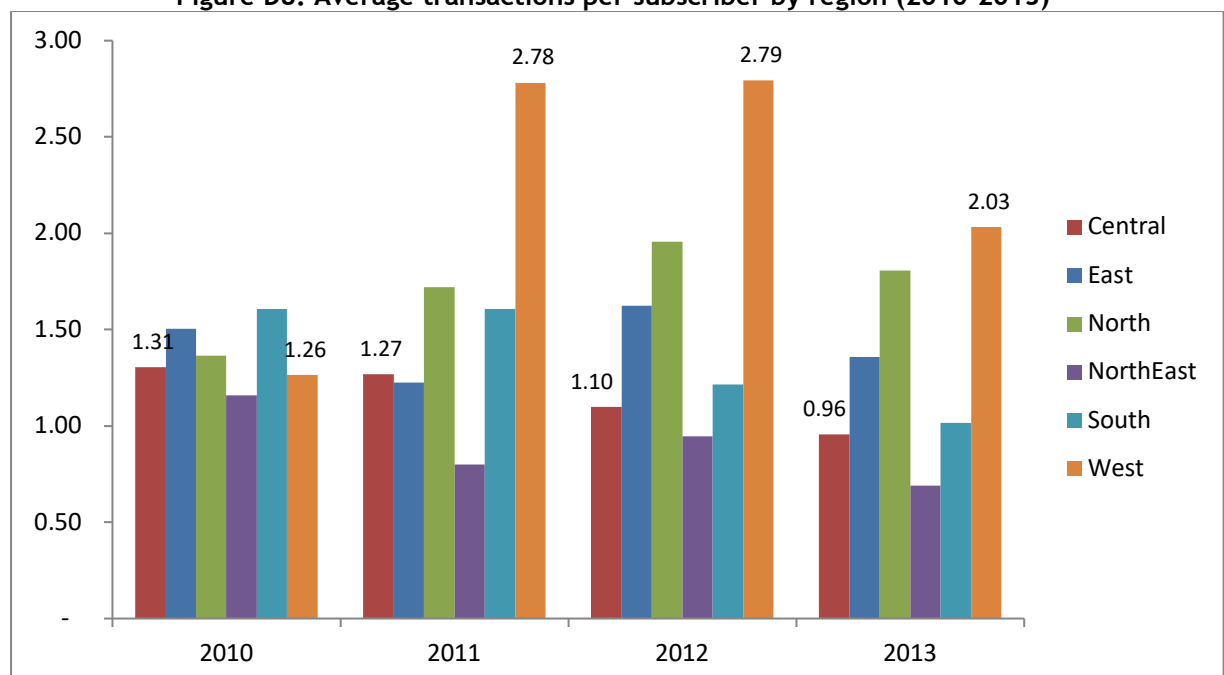
While there is no discernable difference in the percentage of active subscribers across different regions shown in Figure D6, it must be noted that the percentage of subscribers in the North-East making at least one transaction per year has fallen from 93% to 47%.

Figure D7: Persistence levels by region (2010-2013)



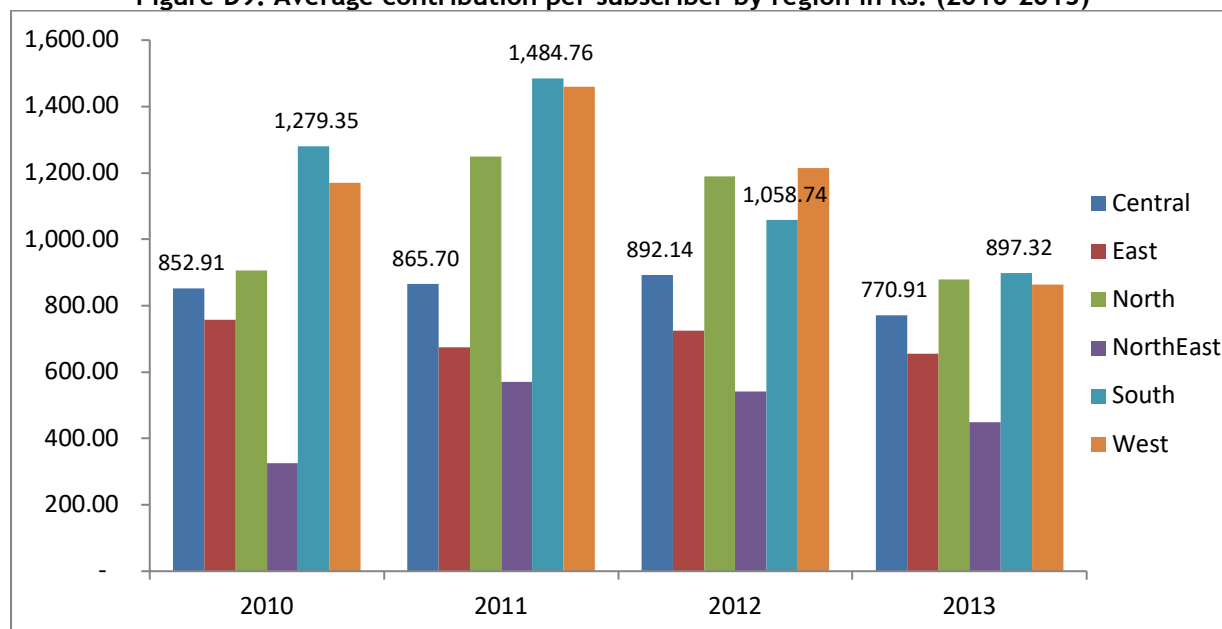
Subscribers in the Southern and Western regions have the highest levels of persistence (Figure D7). For example, 20% and 14% of subscribers from the South and West respectively have contributed at least four times. In comparison, only 2% and 3% of subscribers in the central and north-east regions have contributed at least four times into their retirement accounts.

Figure D8: Average transactions per subscriber by region (2010-2013)



Except for subscribers in the Western region, average transactions per subscriber have declined from 2010 to 2013 (Figure D8). For example, average transactions per subscriber in the North-East have reduced from 1.16 to 0.69 transactions per year. Average number of transactions for subscribers in the Western region has increased from 1.26 transactions per year to 2.03 transactions per year in 2013. This rise could be partially attributed to the presence of Aggregators who adopt a high frequency subscription collection strategy.

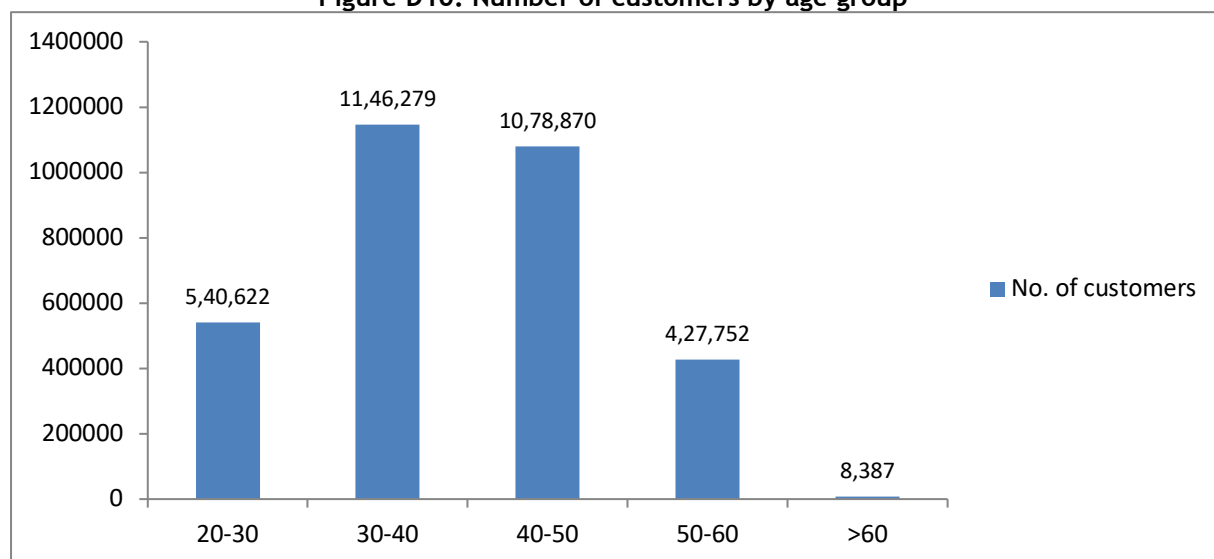
Figure D9: Average contribution per subscriber by region in Rs. (2010-2013)



Subscribers in two regions, South and West, have contributed above Rs. 1000, on average, from 2010 to 2012 (Figure D9). In the year 2013, average contribution per subscriber in all regions fell below Rs. 1000, the minimum amount to secure a matching contribution.

3. Age

Figure D10: Number of customers by age group



While the largest proportion of subscribers falls within the 30-40 years and 40-50 years of age buckets (Figure D10), there is no discernible difference in the percentage of active

subscribers by age. As shown in Figure D11, the percentage of subscribers who transact at least once in a year seems to be uniform across all age groups, except in the oldest age group (60 years and above).

Figure D11: Active subscribers as a percentage of total subscribers by age (2013-14)

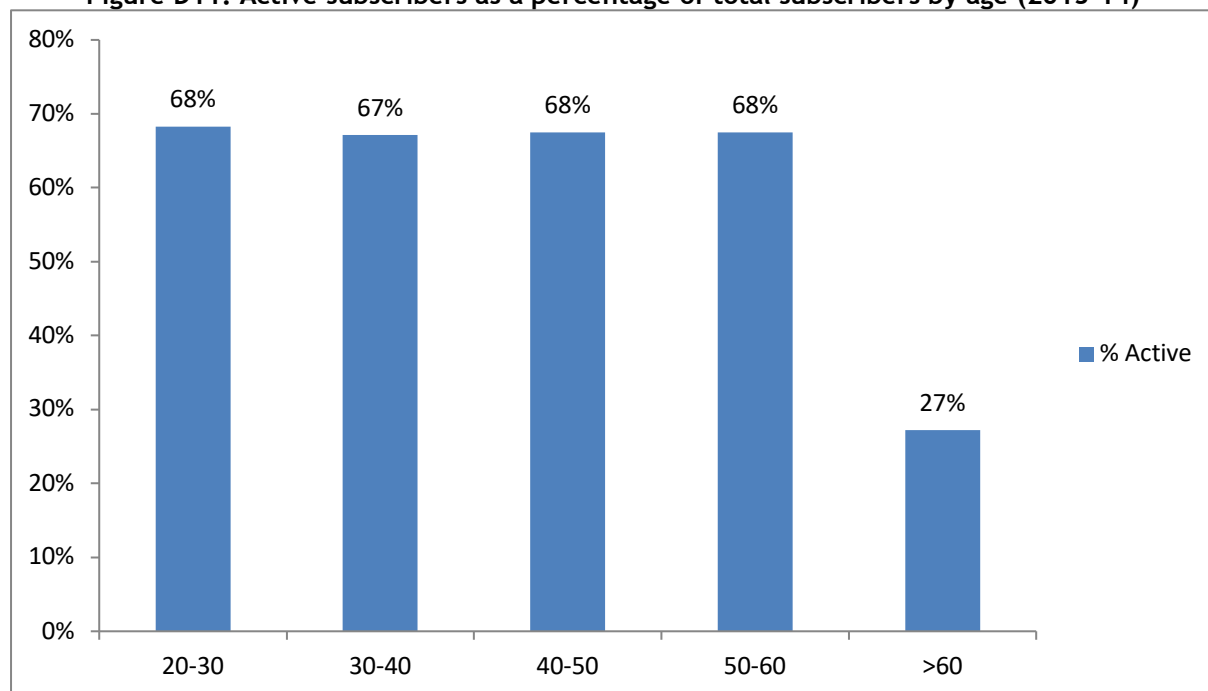


Figure D12: Average number of transactions by age group

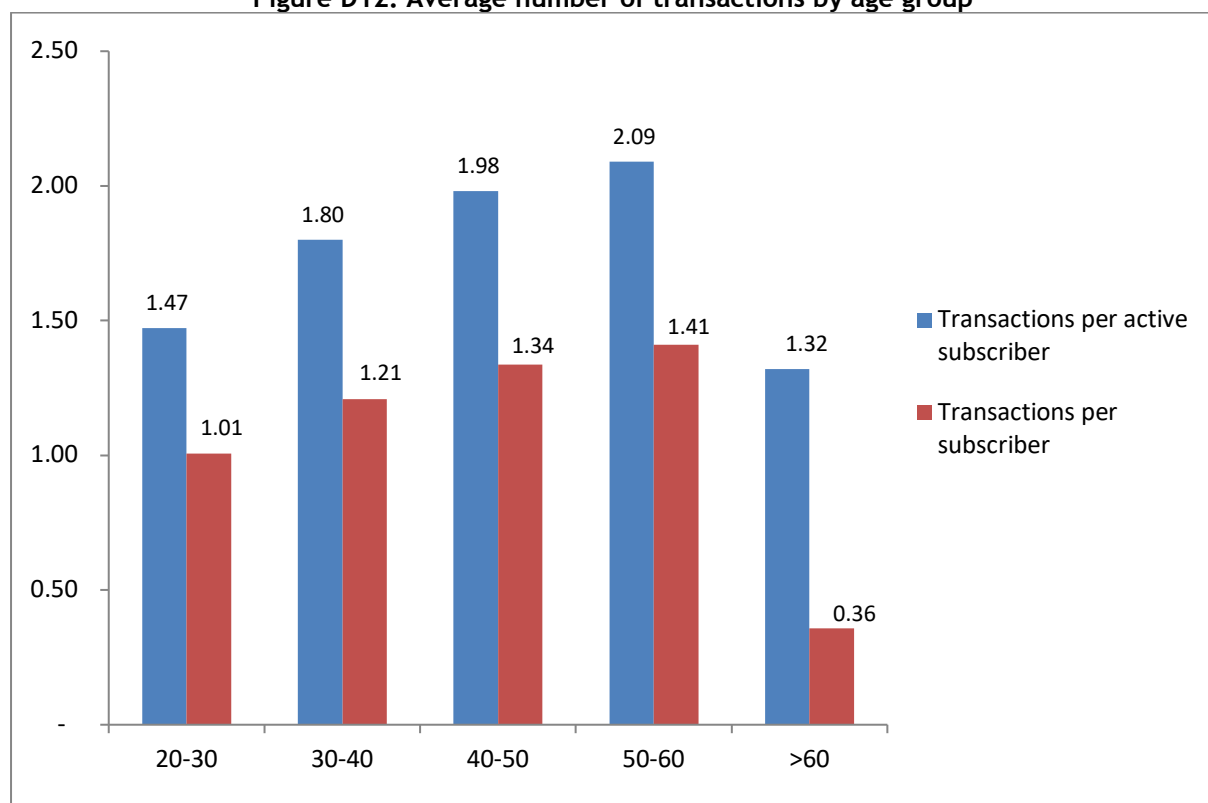


Figure D13: Contributions per subscriber by age group

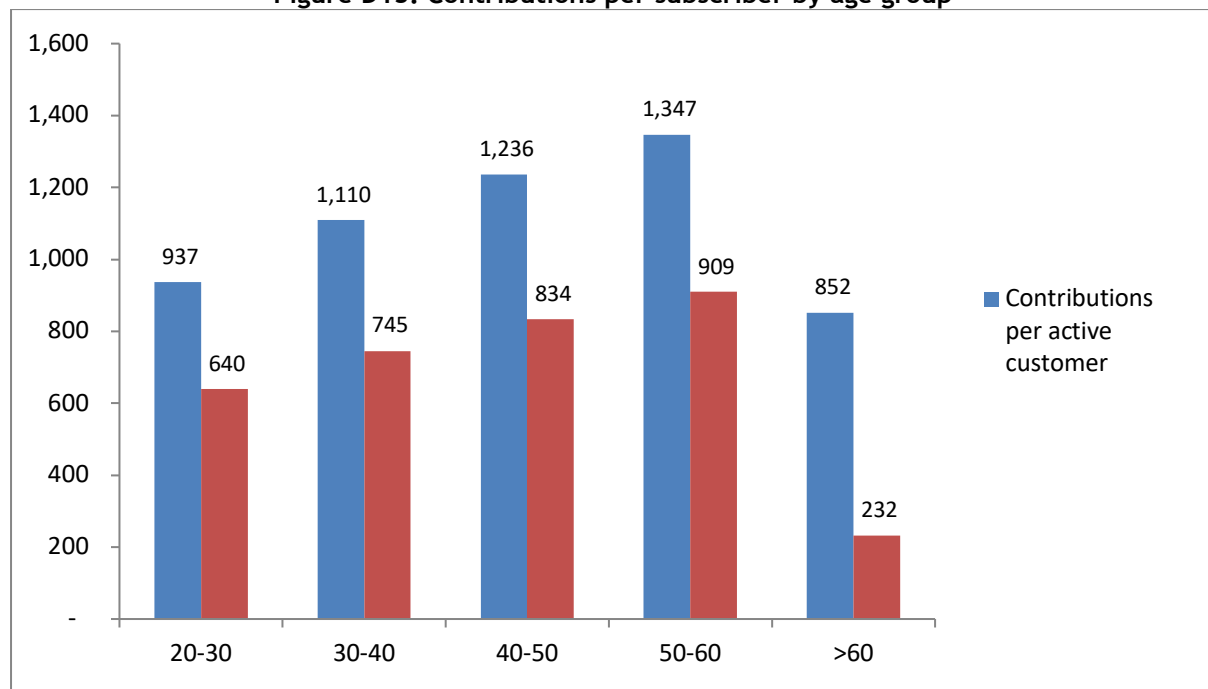
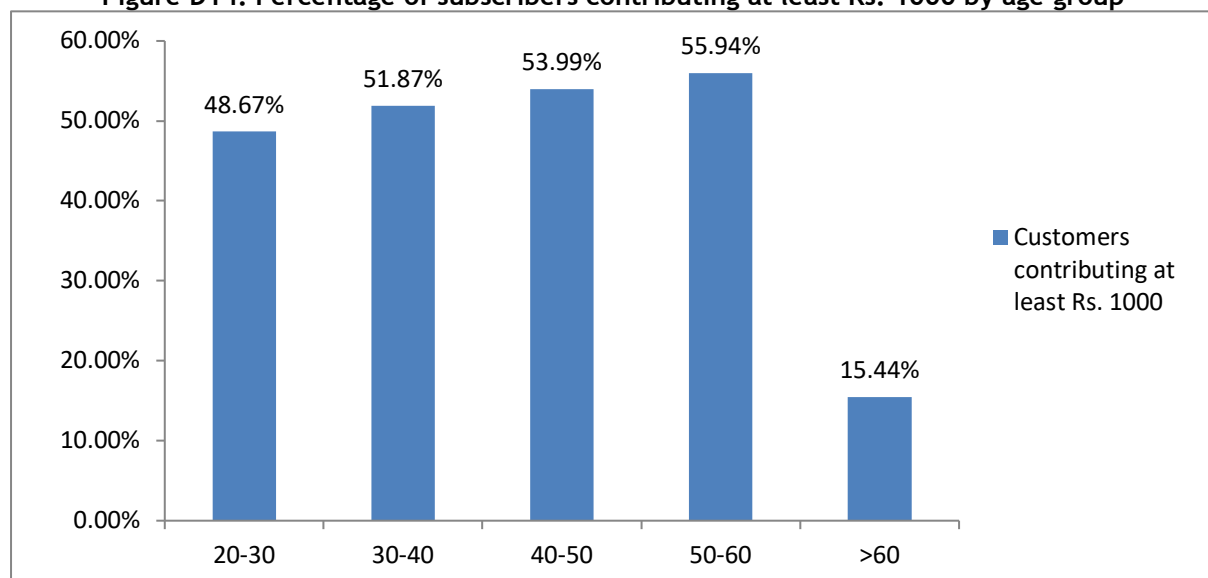


Figure D14: Percentage of subscribers contributing at least Rs. 1000 by age group



As mentioned in Chapter 2.2, subscribers who are closer to the age of exit from the scheme are more active and have larger average contributions. For example, the average number of transaction per active subscriber in the age group 50-60 years was 2.09 in the year 2013-14 (Figure D12). In comparison, the average transaction per active subscriber for the youngest cohort was 1.47. This is true of average contribution per subscriber as well. Furthermore, average contribution per active subscriber in the 50-60 years age group was Rs. 410 higher than the youngest cohort in the scheme (Figure D13). As a consequence, the percentage of subscribers who are eligible for the Swavalamban matching contribution also rises with the age of the subscribers (Figure D14). 48.7% of subscribers in the 20-30 years of age group were eligible for the matching contribution in 2013-14. In comparison, this figure was 54% and 56% for subscribers in the 40-50 years and 50-60 years of age groups. Once the

subscriber hits the age of exit from the scheme, transactions and average contributions fall drastically.

4. Gender

An overwhelming majority of the subscribers of NPS-S (70%) are women. However, males appear to be both more active (Figure D15) in terms of average transactions made and in terms of the average contributions (Figure D16). For instance, women made, on average, 0.91 transactions in the year 2013-14. In comparison, average transaction per year for males was 1.34. Furthermore, average contribution per male was higher (by Rs.40) than average contributions made by women in the year 2013-14.

Figure D15: Average Transactions per customer and active customer by gender

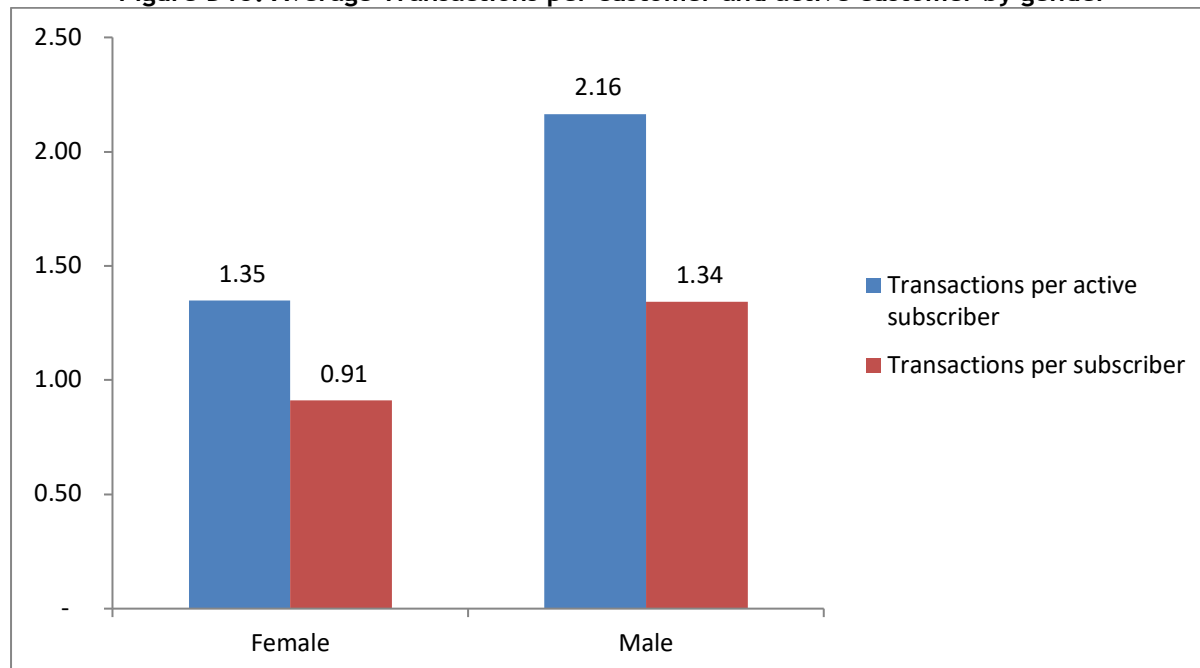


Figure D16: Average contribution per subscriber and active subscriber by gender

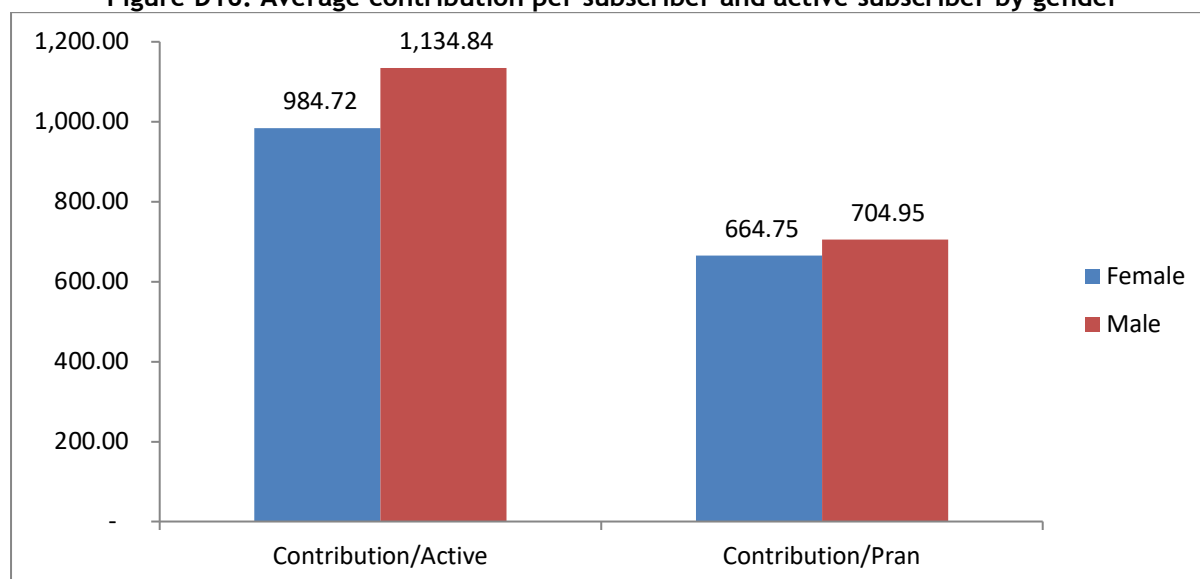
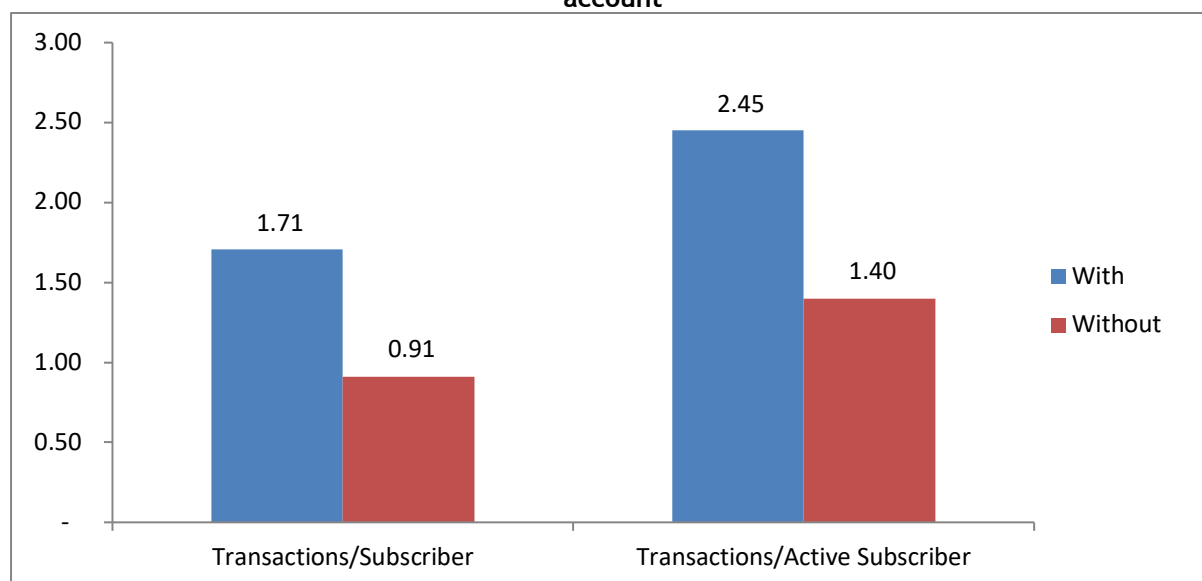
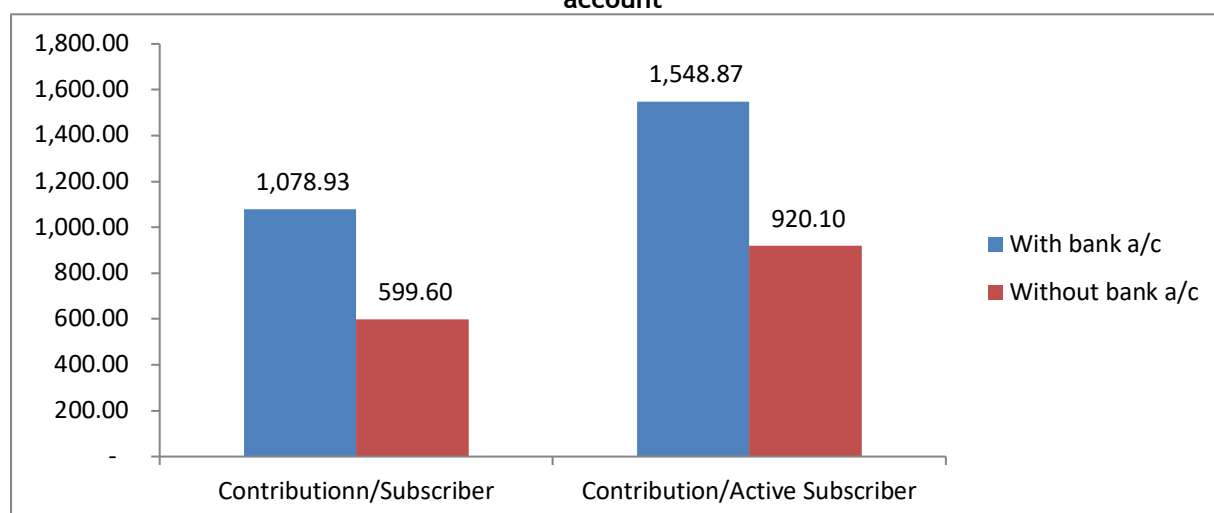


Figure D17: Transactions per subscriber and active subscriber based on possession of bank account



As mentioned in Chapter 2.2, subscribers who already have bank accounts (16% of total subscribers) transact more and make, on average, larger contributions. There are significant differences in the average contribution and transaction levels of subscribers with and without bank accounts. For example, in 2013-14, active subscribers with bank accounts transacted, on average, 2.45 times in a year compared to 1.40 times for subscribers without bank accounts (Figure D17). Furthermore, active subscribers with a bank account contributed, on average, Rs. 470 more than active subscribers without accounts (Figure D18). From our survey of Aggregators, it is clear, for instance, that subscribers with bank accounts are willing to automatically deduct their pension contributions from their bank accounts, but Aggregators have not been able to provide this option yet. As mentioned earlier, as the process of bank account creation gathers pace on the ground, it would be beneficial for Aggregators to focus on strategies that enable the regular deduction of pension contributions directly from the bank account of subscribers, based on a combination of the suitable amount each individual ought to be saving and their ability to pay, and thus ensure greater activity and persistence in the scheme.

Figure D18: Contributions per subscriber and active subscriber based on possession of bank account



Annexure E Forecasting Unorganised Sector Workforce

In this section, we provide a detailed, step by step analysis of how the projections regarding the unorganised sector workforce were made. The projected figures are used in the report to estimate the total government outlay required. We use data from three rounds of NSSO Surveys of Employment and Unemployment in India - 1999-2000, 2004-05 and 2009-10. This data has been summarised in Table E1 below.

Table E1: Profile of workforce in India from 1990-00 to 2009-10 (in million)

Source: Mehrotra et al (2012)^{xxviii}

Year	1999/2000			2004/05			2009/10		
	Sector	Total	Unorganised	Organised	Total	Unorganised	Organised	Total	Unorganised
Agriculture	237.67	232.2	5.47	258.93	252.8	6.09	244.85	242.11	2.74
Industry	64.89	44.81	20.08	85.73	60.35	25.38	99.02	65.07	33.95
Services	94.2	65.62	28.57	112.81	81.72	31.09	116.34	80.15	36.19
Total	396.76	342.63	54.12	457.47	394.87	62.56	460.21	387.33	72.88

The projections for unorganised sector population from 2010 to 2017 have been made using the elasticity approach. Using the data from NSSO, we calculate income^{xxix} elasticity of employment in the organised and unorganised sectors. The formula for calculating income elasticity of employment is provided below:

$$\text{Elasticity}_{\text{Total employment}} = \frac{\text{Total Employment}_{2009-10} - \text{Total Employment}_{1999-2000}}{\text{Total Employment}_{1999-2000}} \div \frac{\text{GDP}_{2009-10} - \text{GDP}_{1999-00}}{\text{GDP}_{1999-00}}$$

The income elasticity of employment calculated based on the formula above is presented in Table E2.

Table E2: Income Elasticity of Employment (1999-00 to 2009-10)

Elasticity	Organised	Unorganised	Total
Agriculture	-0.59	0.05	0.04
Industry	0.81	0.53	0.62
Services	0.31	0.26	0.28
Total	0.41	0.15	0.19

We then multiply the elasticities calculated in Table E2 by the expected compounded annual GDP growth rate to arrive at employment growth rates. The employment growth rates presented in Table E3 assume a compounded annual GDP growth rate of 7%.

Table E3: Growth Rate of Employment

Growth rates of employment	Organised	Unorganised	Total
Agriculture	-4.11%	0.35%	0.25%
Industry	5.69%	3.73%	4.34%
Services	2.20%	1.83%	1.94%
Total	2.86%	1.08%	1.32%

According to our projections, employment in agriculture will grow at a CAGR of 0.25% while employment in industry and services will grow at 4.34% and 1.94% respectively. Overall, the growth rate of the organised sector workforce will outpace that of the unorganised sector at 2.86% compared to 1.08% in the unorganised sector.

We use the projected growth rates of employment presented in Table E3 to forecast unorganised sector workforce population for the time period 2010 to 2017. This is presented in Table E4.

Table E4: Projected Profile of Workforce in India from 2009 to 2020 (in million)

Year	Organised	Unorganised	Total	% Organised	% Unorganised
2009	72.88	387.33	460.21	15.84%	84.16%
2010	74.96	391.5	466.28	16.08%	83.96%
2011	77.11	395.71	472.43	16.32%	83.76%
2012	79.31	399.96	478.65	16.57%	83.56%
2013	81.58	404.26	484.96	16.82%	83.36%
2014	83.91	408.61	491.36	17.08%	83.16%
2015	86.3	413.01	497.84	17.34%	82.96%
2016	88.77	417.45	504.4	17.60%	82.76%
2017	91.31	421.94	511.05	17.87%	82.56%
2018	93.92	426.48	517.79	18.14%	82.37%
2019	96.60	431.07	524.62	18.41%	82.17%
2020	99.36	435.70	531.53	18.69%	81.97%
2021	102.20	440.39	538.54	18.98%	81.77%
2022	105.12	445.13	545.64	19.27%	81.58%
2023	108.13	449.91	552.84	19.56%	81.38%
2024	111.22	454.75	560.12	19.86%	81.19%
2025	114.39	459.64	567.51	20.16%	80.99%

According to Table E4, the share of unorganised sector in the total workforce will decline from 84.16% to 81.97% by 2020. However, the number of unorganised sector workers will increase from 408.61 million to 435.70 million.

Annexure F:
Life Cycle Investment Mix- NPS & Comparison of Household Data collected by the RFI with NSSO data

Table F1: NPS Life Cycle Investment Mix

Age of entry	Asset Class E	Asset Class C	Asset Class G	Age of entry	Asset Class E	Asset Class C	Asset Class G
20	50%	30%	20%	41	38%	24%	38%
21	50%	30%	20%	42	36%	23%	41%
22	50%	30%	20%	43	34%	22%	44%
23	50%	30%	20%	44	32%	21%	47%
24	50%	30%	20%	45	30%	20%	50%
25	50%	30%	20%	46	28%	19%	53%
26	50%	30%	20%	47	26%	18%	56%
27	50%	30%	20%	48	24%	17%	59%
28	50%	30%	20%	49	22%	16%	62%
29	50%	30%	20%	50	20%	15%	65%
30	50%	30%	20%	51	18%	14%	68%
31	50%	30%	20%	52	16%	13%	71%
32	50%	30%	20%	53	14%	12%	74%
33	50%	30%	20%	54	12%	11%	77%
34	50%	30%	20%	55	10%	10%	80%
35	50%	30%	20%	56	10%	10%	80%
36	48%	29%	23%	57	10%	10%	80%
37	46%	28%	26%	58	10%	10%	80%
38	44%	27%	29%	59	10%	10%	80%
39	42%	26%	32%	60	10%	10%	80%
40	40%	25%	35%				

Table F2: Comparison of Household Data collected by the RFI with NSSO data for a district in Tamil Nadu

Household Size	Quintile-1	Quintile-2	Quintile-3	Quintile-4	Quintile-5	Average Expenditure per Household NSSO 2009-10
1 to 2	23,009	27,505	31,130	35,340	41,113	20,880
3	30,329	33,811	36,009	40,071	45,326	41,760
4	34,719	37,859	41,874	46,233	51,266	55,680
5	36,370	39,573	44,262	48,863	54,158	69,600
>6	38,862	40,932	46,559	51,591	58,557	83,520

Table F3: Comparison of Household Data collected by the RFI with NSSO data for a district in Odisha

Household Size	Quintile-1	Quintile-2	Quintile-3	Quintile-4	Quintile-5	Average Expenditure per Household NSSO 2009-10
1 to 2	20,658	27,821	32,246	39,011	51,539	14,724
3	23,457	27,821	32,246	39,011	51,539	29,448
4	27,354	32,000	36,082	42,059	51,539	39,264
5	30,220	34,260	37,935	42,233	52,609	49,080
>6	31,436	35,896	40,064	46,307	57,516	58,896

Table F4: Comparison of Household Data collected by the RFI with NSSO data for a district in Uttarakhand

Household Size	Quintile-1	Quintile-2	Quintile-3	Quintile-4	Quintile-5	Average Expenditure per Household NSSO 2009-10
1 to 2	20,920	27,430	31,464	40,558	44,164	31,446
3	22,908	27,231	33,501	41,331	46,596	62,892
4	25,501	30,490	34,983	41,517	49,352	83,856
5	25,696	31,055	36,503	42,230	50,354	104,820
>6	26,706	32,423	36,631	42,230	51,602	125,784

Source: Key Indicators of Household Consumer Expenditure in India, 2009-10. NSSO

Endnotes

- ⁱ Kannan, K.P & Breman, Jan. The Long Road to Social Security. Oxford University Press. 2013
- ⁱⁱ Source: India Human Development Survey conducted by the NCAER and the University of Maryland, 2004-05. Available at: http://ihds.umd.edu/IHDS_files/09HDinIndia.pdf
- ⁱⁱⁱ *Ibid*
- ^{iv} Prasad, V, Sahasranaman, A, Santadrashan, S & Khaitan, R. How Much Can Asset Portfolios of Rural Households Benefit from Formal Financial Services? NSE-IFMR Financial Inclusion Working Paper Series. 2014
- ^v Based on data from the [Census of India \(2011\)](http://censusindia.gov.in/2011-prov-results/paper2/data_files/india/Rural_Urban_2011.pdf) and [McKinsey Global Institute's report on India's urban awakening \(2010\)](http://www.mckinsey.com/~media/McKinsey/dotcom/Insights%20and%20pubs/MGI/Research/Urbanization/Indias%20urban%20awakening%20Building%20inclusive%20cities/MGI_India_urban_awakening_executive_summary.ashx), available at http://censusindia.gov.in/2011-prov-results/paper2/data_files/india/Rural_Urban_2011.pdf, and http://www.mckinsey.com/~media/McKinsey/dotcom/Insights%20and%20pubs/MGI/Research/Urbanization/Indias%20urban%20awakening%20Building%20inclusive%20cities/MGI_India_urban_awakening_executive_summary.ashx
- ^{vi} Source: Report of the Committee to Review Implementation of Informal Sector Pension, available at: <http://pfrda.org.in/WriteReadData/Links/CRIISP%20Report968189485914554fbe-b348-4274-8fec-e5efa81a9102.pdf>
- ^{vii} Source: [https://npscra.nsdl.co.in/download/Revision%20of%20Investment%20Management%20Fees%20\(IMF\)%20for%20Private%20Sector%20NPS.pdf](https://npscra.nsdl.co.in/download/Revision%20of%20Investment%20Management%20Fees%20(IMF)%20for%20Private%20Sector%20NPS.pdf)
- ^{viii} Source: http://www.business-standard.com/article/pf/mutual-funds-get-costlier-114082500009_1.html
- ^{ix} Source: Table No. 1.21, Basic Statistical Returns of Scheduled Commercial Banks in India. Reserve Bank of India. Vol.42. July 2014.
- ^x According to the Census 2011, the working population of India is 48 crore. The unorganised sector is estimated to form 83% of India's workforce.
- ^{xi} The Report of the Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households (<http://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/CFS070114RFL.pdf>) argues that India needs, at a district level, at least one credit access point per 10,000 people. We assume a similar vision for the distribution of NPS-S access points in the country.
- ^{xii} North: Jammu & Kashmir, Himachal Pradesh, Uttarakhand, NCR, Chandigarh, Uttar Pradesh, Haryana; West: Punjab, Rajasthan, Gujarat, Maharashtra, Goa, Dadra & Nagar Haveli, Daman & Diu; East: Orissa, West Bengal, Sikkim, Bihar, Andaman & Nicobar Islands; Central: Madhya Pradesh, Jharkhand, Chhattisgarh; North-East: Assam, Arunachal Pradesh, Nagaland, Meghalaya, Manipur, Tripura, Mizoram; South: Kerala, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Pondicherry, Lakshadweep.
- ^{xiii} Persistence is defined as the number of subscribers who contribute Rs. 1,000 at least x number of times into the scheme as a percentage of subscribers who are eligible to contribute at least x times. For example, the number of subscribers who have contributed Rs. 1000 at least 4 times is represented as a percentage of subscribers who are eligible to contribute at least 4 times, i.e., as a percentage of subscribers who were enrolled in the 2010-11.
- ^{xiv} *In search of inclusion: informal sector participation in a voluntary, defined contribution pension system*, Renuka Sane, Susan Thomas. *Journal of Development Studies*, Forthcoming. Working paper available at: <http://www.igidr.ac.in/pdf/publication/WP-2013-022.pdf>
- ^{xv} Source: http://www.licindia.in/nps/annuity_rate.pdf
- ^{xvi} For instance, a perpetual matching contribution "makes more sound fiscal sense than lowering taxes since any increase in disposable income from tax cuts tends to go towards consumption rather than result in increased savings". For a detailed analysis of the

economic logic, refer to the CRIISP Recommendations Pages 45-46. Available at:

<http://pfrda.org.in/writereaddata/linkimages/CRIISP%20Report9681894859.pdf>

^{xvii} Source: http://www.licpensionfund.in/pdf/LITE_Schedule_VI_2013-14R.pdf

Source: <http://www.sbipensionfunds.com/docs/NPS%20Lite.pdf>

Source: <http://kotakpensionfund.com/downloads/NPSLiteAnnualReport310314.pdf>

Source: [http://www.utimf.com/UTI-MF-](http://www.utimf.com/UTI-MF-Microsites/retirement/pdf/9_UTIRSL_NPS_Accounts_FY_2013-14_Scheme_NPS_Lite.pdf)

[Microsites/retirement/pdf/9_UTIRSL_NPS_Accounts_FY_2013-14_Scheme_NPS_Lite.pdf](http://www.utimf.com/UTI-MF-Microsites/retirement/pdf/9_UTIRSL_NPS_Accounts_FY_2013-14_Scheme_NPS_Lite.pdf)

^{xviii} Source: <http://www.bseindia.com/indices/indexarchivedata.aspx>

^{xix} Source: Reuters

^{xx} Source: <http://rbi.org.in/scripts/PublicationsView.aspx?id=15725#T7>

^{xxi} Page 11, Pradhan Mantri Jan-Dhan Yojana Brochure. Available at:

<http://financialservices.gov.in/banking/PMJDY%20BROCHURE%20Eng.pdf>

^{xxii} Based on a work force of 48 crore people.

^{xxiii} Source: World Social Security Report (2010-11), International Labour Organisation.

Available at:

http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_146566.pdf

^{xxiv} This includes government spending on organised sector pension schemes such as EPS and defined contribution schemes for public sector employees; pensions under the National Social Assistance Program (NSAP) such as NOAPS, National Widow Pension Scheme, and National Disability Pension Scheme; and NPS-S.

^{xxv} Source: G-Sec Yield Curve dated 6th September, 2010.

^{xxvi} Available at: <http://pfrda.org.in/MyAuth/Admin/showimg.cshtml?ID=58>

^{xxvii} Guidelines in supplement to “Regulations for Aggregators under NPS Lite-2010”;

available at: <http://pfrda.org.in/MyAuth/Admin/showimg.cshtml?ID=57>

^{xxviii} Mehrotra, Santosh et al. *Creating Employment in the Twelfth Five Year Plan*.

Vol.XLVII, No 19. Economic and Political Weekly. May 2012.

^{xxix} We use GDP at constant prices (Base year-2004-05) for calculating income elasticity of employment