Comprehensive Social Security for the Indian Unorganised Sector

Recommendations on Design and Implementation

Report

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IFMR Finance Foundation
&
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Preface

Social Security is widely seen as a fundamental building block of a just and equitable society. While ideas of welfare, pension and charity have been with us since the times of the earliest civilizations, the modern concept of social security can arguably trace its origins to the aftermath of the industrial revolution. The profound changes in social and economic structures wrought by the industrial revolution created the environment for the development of organised systems of welfare provision spearheaded by the state. The International Labour Organisation defines "social security" as comprising of nine elements: medical benefits, sickness benefits, unemployment benefits, old-age support, employment injury support, family support, maternity benefits, invalidity benefits and survivor's benefits.

With more than 85% of the labour force in the unorganised sector, it is no surprise that the provision of comprehensive social security for the unorganised sector has been a stated objective of the Indian government. In the spirit of extending social security to the unorganised sector and keeping in mind long term demographic trends which indicate a rapidly ageing population and a non-declining unorganised sector workforce, the Government of India passed the Unorganised Workers' Social Security Act in 2008. The passage of the Act also tied in with the introduction of several publicly provided social security schemes, the three predominant schemes being: Rashtriya Swasthya Bima Yojana, a national health insurance scheme largely for the below poverty line population; Aam Aadmi Bima Yojana, a life insurance scheme; and National Pension Scheme – Swavalamban, a pension scheme specifically for the unorganised sector workforce. While these schemes represent an important step forward in India's ability to provide adequate, reliable, and affordable social protection options for its vulnerable population, they still suffer from considerable weaknesses and, as a consequence, citizens in the unorganised sector continue to be exposed to the risks of mortality, health events and longevity, which significantly impact their long-term well-being.

In this report, we attempt to analyse and characterise the nature of the challenges in the design and implementation of these schemes, and use this understanding as the basis to draw out lessons on design and implementation of a Comprehensive Social Security Scheme for India. The report covers the entire gamut of issues from ownership structure, program coverage, and delivery architecture to the specific design elements of individual social security products, namely life insurance, health insurance, and pensions.

We hope that the analysis and recommendations in this report are a meaningful addition to the debate on the design and implementation of social security for India.

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List of Acronyms and Abbreviations

AABY	Aam Aadmi Bima Yojana
AML	Anti-Money Laundering
AO	Area Office
APBS	Aadhaar Payments Bridge System
APL	Above Poverty Line
ATM	Automated Teller Machine
BC	Business Correspondent
BPL	Below Poverty Line
CAGR	Compounded Annual Growth Rate
CBS	Core Banking System
CCG	Clinical Commissioning Group
CFT	Combating of Financing of Terrorism
CHC	Community Health Centre
CoN	Certificate of Need
CPI	Consumer Price Index
CRA	Central Recordkeeping Agency
CRIISP	Committee to Review Implementation of Informal Sector Pension
CSS	Comprehensive Social Security
CVD	Cardio-Vascular Disease
DBT	Direct Benefit Transfer
DFKO	District Field Key Officer
EID	Temporary Enrolment ID
EPF	Employee Provident Fund

FMCG	Fast Moving Consumer Goods
FO	Field Officer
GDP.	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoI	Government of India
HLEG	High Level Expert Group
HO	Head Office
IFMR	Institute for Financial Management and Research
IIN	Issuer Identification Number
IRDA	Insurance Regulatory and Development Authority
JBY	Janashree Bima Yojana
KYC	Know Your Customer
LIC	Life Insurance Corporation of India
MFI	Micro Finance Institution
MSBY	Matri Shakti Bima Yojana
NA	Nodal Agency
NAC	National Advisory Council
NBFC	Non-Banking Financial Company
NGO	Non-Governmental Organisation
NHS	National Health Service
NHSB	National Health Security Board
NHSO	National Health Security Office
NIU	National Information Utilities
NOAPS	National Old Age Pension Scheme
NPCI	National Payments Corporation of India
NPCS	National Payments Corporation of India

NPS	National Pension Scheme
NPS-S	National Pension Scheme – Swavalamban
NREGA	National Rural Employment Guarantee Act
NRHM	National Rural Health Mission
NSDL	National Securities Depository Limited
NSSA	National Social Security Administration
NSSO	National Sample Survey Organisation
OOPS	Out Of Pocket Spending
PCT	Primary Care Trusts
PFM	Pension Fund Managers
PFRDA	Pension Fund Regulatory and Development Authority
PHC	Primary Health Centre
POP	Point of Presence
PRAN	Permanent Retirement Account Number
PV	Present Value
RAS	Rajiv Aarogyasri Scheme
RBI	Reserve Bank of India
RGLIS	Rural Group Life Insurance Scheme
ROSCA	Rotating Savings and Credit Association
RSBY	Rashtriya Swasthya Bima Yojana
SERP	Society for Elimination of Rural Poverty
SHG	Self Help Group
SMS	Short Message Service
SNA	State Nodal Agency
SPV	Special Purpose Vehicle
SSGIS	Social Security Group Insurance Scheme

SSSA	State Social Security Administration
TPA	Third-Party Administrators
UCS	Universal Coverage Scheme
UHC	Universal Health Care
UIDAI	Unique Identification Authority of India
UWSSA	Unorganised Workers' Social Security Act
WHO	World Health Organisation

SECTION 1
Introduction, Executive Summary, and List of Recommendations

Chapter 1.1
Introduction and Executive Summary

Approximately 85% of India's 460 million strong labour force are categorised as 'unorganised sector' workers. 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). In the spirit of extending social security to the unorganised sector and keeping in mind long term demographic trends which indicate a rapidly ageing population and a non-declining unorganised sector workforce, the Government of India passed the landmark Unorganised Workers' Social Security Act (UWSSA) in 2008. The purpose of the Act was to provide India's large unorganised sector workforce with a minimum level of social protection that would enable them to endure income and health related shocks, stay out of poverty, and ultimately allow them to lead dignified lives.

The passage of the UWSSA has tied in with the introduction of several publicly provided, national and state level social security schemes in the insurance and pension sectors.

The proposed Comprehensive Social Security (CSS) Scheme should aim, at minimum, to provide financial protection against the most critical risks confronting the well-being of households and individuals – the risks of death, health shocks and income security in old age. While other risk management products can be added on to the CSS over time, this report focuses its recommendations on three predominant schemes at the national level:

i. Rashtriya Swasthya Bima Yojana (RSBY), a national health insurance scheme largely for the below poverty line population.
ii. Aam Aadmi Bima Yojana (AABY), a life insurance scheme also largely for the below poverty line population.
iii. National Pension Scheme - Swavalamban (NPS-S), a pension scheme specifically for the unorganised sector workforce.

These schemes represent an important step forward in India's ability to provide adequate, reliable, and affordable social protection options for its vulnerable population, but they still suffer from considerable weaknesses. These weaknesses can be broadly attributed to the effectiveness of institutional design and the design of product-level features of these schemes. The report makes specific recommendations on each of these dimensions in order to ensure universal coverage for beneficiaries under well-designed schemes with a uniform authentication mechanism and a single window architecture for access and use.

I. Ensuring Effectiveness of Institutional Design

The efficacy of current institutional designs governing these schemes is driven by the following:

A. Ownership and Coverage

Challenges: The biggest challenge in the present institutional design of social security schemes is the fragmented ownership structure of these schemes. NPS-Lite is under the Pension Fund Regulatory and Development Authority (PFRDA), AABY is under the Ministry of Finance, and RSBY is under the Ministry of Labour and Employment. Currently, multiple stakeholders own the social security schemes. For example, AABY is a scheme that can be said to be owned by three entities. At the national level, the scheme is administered by the Life Insurance Corporation of India (LIC) but the implementation is done through state level nodal agencies. For instance, in Andhra Pradesh, there are two levels of Nodal Agencies to administer the scheme - the Society for Elimination of Rural Poverty (SERP) is responsible for overall facilitation, monitoring and evaluation of the Scheme, while at the district level the Zilla Samakhya functions as implementation agency for overall management of the Scheme. It is not clear which of the three entities have an explicit ownership role under the present architecture. The absence of a clear owner for the scheme leads to fragmentation of responsibilities and inefficiencies in delivery of benefits.

Additionally, since social security is a subject in the Concurrent List of the Constitution, there are several instances of overlap between social security schemes provided by the Centre and the state governments. Many states provide a minimum pension floor that has come into conflict with the centrally provided National Old Age Pension Scheme (NOAPS) and the NPS. While it is admirable that some states provide higher benefits to their citizens, a lack of coordination between the centre and the state governments has led to inequitable distribution of social security benefits across India, where richer states provide much higher benefits compared to poorer ones. There are also wide disparities in the coverage of social security schemes across states. For instance, beneficiaries in two states, Andhra Pradesh and Maharashtra, accounted for 52% of all beneficiaries covered under the AABY scheme. Additionally, close to 80% of all claims processed under the scheme were from Andhra Pradesh. Although a scheme like RSBY has achieved a wide coverage of 35.23 million households there exist large inter-state variations in coverage. For instance states in the north-east, Madhya Pradesh and Uttar Pradesh fall short of the national average (51% coverage) while states like Andhra Pradesh and Kerala have more than 75% coverage.

As a result of this fragmented ownership structure, data on social security schemes are captured separately today. For example, analysis of RSBY data is contracted out to GIZ, life insurance data is housed at LIC, and pension data is housed by the Central Record Keeping Agency and owned by PFRDA. There is no way to access data on usage across schemes for a single individual, as datasets are not merged. Fragmented collection of data combined with the lack of human resources devoted to data analysis has resulted in low levels of product

innovation, development, and learning. Access to high-quality data relating to take-up and use of social security by beneficiaries is a pre-requisite for identifying weaknesses and innovating on changes to drive the design and implementation of schemes. There is a pressing need to bring this fundamental function under a unified authority that can 'own' the operationalisation of social security schemes in the country.

Moreover, schemes like AABY and RSBY rely on beneficiary lists like the BPL list (merged with other employment lists such as 'NREGA workers' or 'railway porters' list) to identify beneficiaries. The use of such lists is fraught with multiple difficulties. First, people move in and out of poverty frequently due to various income and health related shocks that can occur instantaneously. A listing exercise conducted once every ten years is an inadequate mechanism to capture these shifts in economic well-being. Second, there is a question on the veracity of BPL lists as being actually representative of the true BPL population. As BPL status is now equated with the eligibility for various benefits such as subsidised food, gas, and insurance, it is highly sought after by even the non-poor. This has led to the capture of benefits by those who are undeserving, due to the mis-allocation of BPL. Equally distressing is the non-issuance of BPL cards to those who deserve them. These problems have served to further the inequitable distribution of social security benefits.

Recommendations: Considering the scale that CSS aims to achieve, there is a need to develop an institutional mechanism that can deliver the benefits of social security equitably. CSS should aim to create an open architecture that can ultimately cover the entire unorganised sector.

i. CSS to be Owned and Governed by the National Social Security Administration (NSSA): The CSS scheme must be governed by The National Social Security Administration, a special purpose vehicle (SPV) set up as a Trust. The Board of Trustees will be chaired by the Prime Minister, and the Board itself should be comprised of the Ministers (or other senior representatives) who head the Ministries relevant to CSS. The NSSA should aim to bring together a wide range of stakeholders as members of the Board, like independent experts on life insurance, health insurance and public health, and pensions; representatives of insurance companies, pension fund managers, distributors; a representative from Aadhaar; and representatives of unorganised sector workers such as from labour unions and welfare boards. The NSSA will be a controlling vehicle and not an operating vehicle governing the CSS scheme. It will act as a point of convergence for the scheme, provide clarity on the roles and responsibilities of various entities and seek to bring in innovation in design and delivery through robust data collection, and research and development. The NSSA Trust should be responsible for: i) defining the scheme; ii) providing clarity on roles and responsibilities of the various stakeholders; iii) implementation design; iv) monitoring and evaluation; v) appointment of distributors; vi) record keeping; vii) systems design; viii) financial management; ix) capacity building; x) research and development; and xi) standardisation of processes.

Further, each state will constitute independent State Social Security Administrations (SSSA) or its equivalent that will own and govern the implementation of the scheme at the state level. Each State should have an independent SSSA, or an equivalent entity responsible for i) contracting of service providers and insurance companies, ii) establishing the target beneficiaries, iii) awareness creation, iv) mobilising resources for enrolment, and v) grievance redressal and monitoring.

ii. Open Architecture and Universal Coverage: The only meaningful path to resolving the problem of inequitable coverage and delivery of social security benefits is to universalise CSS. As a principle, we propose that the CSS must aspire to create an open architecture that aims at universal coverage. Since CSS is meant to provide minimal levels of social security, it is only appropriate that it be made available to all citizens of India. While budgetary resources will determine the extent of subsidy available under the program, it is essential that an unsubsidised version of the program be available to all citizens, in the spirit of universal coverage under social security.

Additionally, coverage under all the schemes must be targeted at every eligible individual, and not just heads of households, because this would be fundamentally inequitable and result in outcomes such as discrimination against women in the provision of social security.

iii. Identification of Beneficiaries through Self-Reporting: There is no clear, fool-proof and cost effective mechanism available to identify and separate organised sector and unorganised sector workers today. The UWSSA sought to work around this problem by requiring individuals to register themselves as unorganised workers with the district administration by self-declaration. We recommend, in the spirit of the UWSSA, that the principle for identifying unorganised sector workers be based on self-reporting by individuals. However, we recommend that this be done not at the level of the district administration but with the aggregator as in the case with NPS-S currently. The design of the schemes and the extent of benefits provided can act as a natural filter against the entry of citizens from the formal sector into the subsidised version of the program.

B. Delivery Architecture

Challenges: The fragmented ownership structure and the lack of coordination among the different Ministries running the scheme has led to an equally fragmented delivery of schemes, resulting in the end user having to access the schemes through multiple channels. For example, an unorganised sector worker who is eligible for comprehensive social security has to enrol for health insurance at an RSBY enrolment station, buy pension through an aggregator such as a bank, and enrol for life insurance through one of LIC's nodal agencies. Further, this multiple-window architecture cannot be accessed using a uniform authentication mechanism with each scheme having laid out its own processes. For example, accessing RSBY requires the beneficiary to hold an RSBY card while NPS-S requires a Permanent Retirement Account Number (PRAN). This has led to significant non-pecuniary costs to beneficiaries in the form of

long distances to access points and multiplicity of documents required for authentication and access to services.

Apart from the NPS-S, which employs an aggregator-led model for distribution, most social security schemes including the AABY and RSBY rely on state level nodal agencies for the distribution of the scheme. Under this delivery model, state governments appoint a nodal agency, usually a state government department, to oversee the overall implementation of the program. For example, in 44% of RSBY implementing states, the nodal agency is the Department of Labour. The National Rural Health Mission and Department of Health and Family Welfare constitute another 24% of nodal agencies. Nodal agencies like state government departments often suffer from weak institutional and staff capacity which hinders the implementation of programs. Implementing large schemes like CSS require concerted effort, usually from multiple government functionaries, and nodal agencies are often unable to achieve this coordination. Further, it is unclear whether nodal agencies have any specific incentives to implement the scheme. In the absence of specific incentives, the implementation of the scheme becomes just another function to perform among many administrative duties.

The nodal agency led model also does not provide ease of access to the beneficiary on a continuous basis. For example, most enrolments for the schemes are done through enrolment camps that are run periodically, typically once a year. The process of claiming benefits under AABY place substantial burden on the beneficiary in terms of time taken and costs involved in the processing of claims. Such a model does not encourage the development of a long-term relationship of the distributor with the beneficiary.

There is also a need to hold distributors to a higher standard of responsibility towards the beneficiary. While the central role of the distributor is in ensuring that the schemes reach all eligible citizens, over time it is critical that they use their proximity to beneficiaries to develop deep expertise about their household situation, financial needs, risks and goals and utilise this knowledge to recommend appropriate protection levels for them. This will be critical to ensuring the financial well-being of each beneficiary.

Recommendations: In order to enable ease of access for the beneficiary, there is an urgent need to create a single-window architecture offering all products in order to eliminate the inefficiencies associated with multiple purchase points and to enable ease of access for the beneficiary. Further, there is a need to simplify the process of accessing benefits by providing the beneficiary with a unified authentication process that can be used across all social security schemes.

iv. Aadhaar-Enabled Platform for Delivery: All CSS products should be linked to the Aadhaar platform, which will be the sole document or ID required for access by beneficiaries. With the number of people with an Aadhaar ID expected to reach 600 million in the next two years, switching to an Aadhaar-enabled platform will offer considerable ease of access to the beneficiary. However, in areas where internet

connectivity is poor, we propose that the RSBY smart card or other identification be continued, with the objective that it will be replaced by Aadhaar as connectivity improves.

v. Aggregator-led Distribution of CSS: The Aggregator model currently used for NPS-S distribution should be adopted for the delivery of CSS. The aggregator should be the single window through which beneficiaries access benefits of social security. The aggregator-led model is a low-cost delivery model that can offer proximity, build trust with the beneficiary, and ensure high outreach. Entities with high outreach like the postal department, telecom and FMCG companies should be leveraged for the effective delivery of CSS products. Existing state-level nodal agencies can also become aggregators for the distribution of CSS. Enabling CSS distribution through a range of public and private entities with deep penetration into remote areas will ensure high coverage and effective delivery of benefits. Aggregators, by design, will be naturally incentivised to extend the reach of CSS because their remuneration will be tied to the extent of distribution of CSS products. The responsibilities of aggregators will include beneficiary identification, marketing and awareness creation, enrolment, CSS provision to beneficiaries, and servicing post provision.

vi. Aggregators to Recommend Suitable Level of Protection for Life and Health Insurance and for Pensions: Aggregators should over time not only offer the basic CSS products but also be able to recommend suitable amounts of each of these products for each citizen, based on an evaluation of their financial needs and situations. While the distributor may or may not be able to offer the additional requirement for each beneficiary with its existing product suite, it should offer each citizen the knowledge that CSS provides only a minimum level of social security, and use its expert judgment to recommend additional levels of protection that each citizen needs so as to fully protect themselves against these risks.

II. Product Level Features

While ownership structures, extent of coverage, and delivery architecture are system-level changes applicable to the delivery of CSS, there are also specific product (or scheme) level feature modifications that can enhance the effectiveness of the current schemes.

A. AABY Life Insurance

Challenges: The specific challenges in the design of the AABY scheme are related to its price, extent of coverage offered, and eligibility age for coverage.

The extent of life and accident cover required for an individual should be closely tied to the individual's human capital. Analysis reveals that the extent of coverage provided by AABY does not provide adequate cover for even a 50 year old in the lowest income quintile.

The current price of the AABY product is much higher than extant term life insurance policies in the Indian market. It is estimated that AABY premiums are more than 160% of the market price. Therefore, the extent of cover provided for the current premium of Rs. 200 should be higher than Rs. 30,000, and is estimated to be in the range of Rs. 50,000 or higher for natural death, keeping accidental death coverage at Rs. 75,000.

Currently, AABY offers life insurance cover for beneficiaries up to 59 years of age. However, the human capital of a 59 year old in the bottom income quintile is negative, which indicates that she is, on average, not contributing to the income of the household. In such a situation, the offering of life insurance to such an individual is unsuitable.

Recommendations: There is a need to articulate the specific objective of life insurance under CSS and also provide a strategy for reduction in the premiums currently charged.

vii. Principle for Life Insurance under CSS: The objective of life insurance protection under CSS should be clearly articulated. One direction to go in would be to articulate that life insurance under CSS should aim to cover the human capital of a 40 year old in the bottom income quintile.

viii. Re-price the Product by Opening up to Market: It is clear that there needs to be a fundamental change in the pricing of the product. This can be achieved only by opening up the product premium for competitive bidding from life insurance companies in the market, similar to the model currently followed by RSBY for health insurance.

ix. Reduce Upper Limit on Age of Eligibility for Life Insurance: Comparing human capital values across income quintiles, it is clear that the expected loss of income to the household from the death of even a 55 year old is low. Therefore, the upper limit on age of eligibility of the scheme should be reduced from 59 years to 55 years. This offers the advantage of providing enhanced coverage for the rest of the working population.

B. RSBY Health Insurance

Challenges: The challenges in the design of the RSBY product pertain to the lack of cover for tertiary care and incentives for insurance providers. In addition to these product level issues, there are also broader challenges around the trends of disease burden in India as well as the coverage by hospitals, and their impact on RSBY.

Currently, the RSBY product offers insurance cover of up to Rs.30, 000 for secondary treatment. Beneficiaries are however not covered for tertiary care, and this is particularly an issue for lower income households because the cost associated with tertiary care is substantially higher than secondary care. A single event of hospitalisation for tertiary care

can send a household into a poverty spiral. Some states have taken the lead on this, with Tamil Nadu and Andhra Pradesh offering tertiary insurance cover for households.

The current tenure of contracts for insurance companies under RSBY is one year. The short tenure of the contract does not provide adequate incentives for insurers to develop preventive hospitalisation mechanisms against high risk diseases, as these strategies will take time to yield outcomes in the form of lower claims from insurers.

The case of Cardio-Vascular Disease (CVD) is especially pertinent while considering secondary care in India. The disease burden of India clearly illustrates that CVD is a growing risk for India, and the World Health Organisation estimates it to be the largest cause of death and disability in India by 2020. Combined with this is the fact that the cost per incidence of hospitalisation for CVD is over Rs. 40,000. Therefore, it is essential that the design of RSBY ensures that insurers under RSBY have their incentives aligned with public policy, and that in cases like CVD the RSBY response does not inadvertently end up exacerbating hospitalisation costs overall.

Equity in RSBY usage will also be dependent on the density of hospitals present in different parts of the country. There are large regional variations in terms of distribution of hospital infrastructure. Urban India has twice the number of hospitals as rural India, despite the fact that it has less than half the population of rural India. Rationalising this distribution will be critical in ensuring the equitable usage of RSBY over time.

Recommendations: India needs a Universal Health Care (UHC) scheme that delivers on the entitlement of every resident of the state to receive a comprehensive package of healthcare. As a part of that package, RSBY should be designed to form the component providing secondary and tertiary insurance. In the design of the RSBY, there is a need to rethink the term of contract for insurers and the need for developing preventive care protocols for CVD under RSBY. In addition, strategies for inclusion of tertiary care and equity in hospital distribution need to be carefully developed.

x. Introduce Preventive Care Protocols for CVD and Extend the Length of Health Insurance Contracts: In order to guard against the increasing risk of disease burden attributable to CVD, and in view of the fact that the preventive protocol for CVD is easily implementable at a known, reasonable cost of Rs. 55 per year, insurance companies should be required to provide preventive care protocols for CVD as a part of the RSBY insurance package. Insurance companies can benefit by offering this protocol in a given location only when they are in business in that location over a substantial length of time. This will incentivise insurers to ensure that beneficiaries are appropriately screened at the time of enrolment and are following the requisite preventive regime for CVD so that the benefits of prevention are observable in the form of lower CVD related claims in the future. The present tenure of insurance contracts under RSBY is one year, and does not allow for this benefit accrual. The tenures of insurance contracts under RSBY

should be extended to 3 years. Additionally, the quality of existing services delivered by the insurance company should be factored into the bidding process at the time of rebidding for the contract.

xi. State Governments to Top up Tertiary Care Health Insurance: Following the lead of states like Andhra Pradesh and Tamil Nadu, all state governments should be incentivised to take the lead in providing tertiary insurance cover for their citizens. This could be done by requiring states to provide tertiary care as a condition to get access to RSBY's secondary care package. Poorer states should have special dispensation where they can get greater support from the centre. A combination of secondary and tertiary care will enable complete health insurance coverage for households.

xii. Publication of Estimated Need of Hospital Beds in the State: The SSSA should publish an estimated number of hospital beds required in each district of each state every year. State-level entities that register hospitals should consider the estimated need before approving hospitals in a certain district of the state.

C. NPS-S Pension

Challenges: The challenges in the NPS-S pensions product pertain to issues in the design that exacerbate the risk of inadequate cover at the time of retirement and the absence of a minimum social security pension payout without beneficiary contribution.

The objective of pension cover under social security is to secure a minimum post-retirement income for an individual. However, analysis reveals that the expected returns from NPS-S for a beneficiary in the lowest income quintile who is 20 years old today forms just 31% of the corpus required by her at the time of retirement. The coverage is lower as the age of the beneficiary increases. We believe that the current coverage is inadequate for the beneficiary to efficiently manage her longevity risk. In addition, currently, NPS-S invests 85% of the subscriber's savings in government securities and the remaining 15% in equity instruments. The inadequate cover provided by the product is a direct consequence of this investment mix. If the aim of social security pension is to secure a minimum post-retirement income (the post-retirement corpus required by individuals in the lowest income quintile) the present scheme clearly falls short of this objective. In addition, the Government of India (GoI) has only announced that the matching contribution of Rs. 1000 will be available for a finite period of time, therefore putting in doubt a central incentive in the design of the scheme.

Additionally, the NPS-S matching contribution is available only to those individuals who reach the minimum threshold of Rs. 1000 of savings. While a minimum investment amount in order to get the matching contribution is a good incentive to ensure that people contribute to this level, it does not address the issue that there may be many individuals for whom it will be

impossible to reach the minimum Rs. 1000 level and therefore that it may be an unsuitable product for them.

Recommendations: India needs a pensions scheme that delivers real returns on investment, enabling households to save long-term for retirement, and is designed in such a way that it not unsuitable for the poorest citizens. As a principle, the pension product under CSS should aim to cover the post-retirement expenditure of individuals in the lowest income quintile.

xiii. Redesigning the Investment Mix Along With Perpetual Matching Contribution and Indexation to Inflation: The conservative investment mix of NPS-S is the primary reason beneficiaries fail to secure their post-retirement corpus. The current NPS-S investment mix should be changed to the life cycle fund mix, where the risk profile of asset allocation changes with age, as in the case of the main NPS product. In addition, the matching contribution from GoI in the NPS-S scheme be made perpetual and in line with the pension that is offered to workers engaged in the organised sector. There is strong economic rationale to extending government contribution for perpetuity. For example, a government contribution of Rs. 1000 through the life of a person joining the scheme at 20 years of age increases the present value of her terminal amount by Rs. 11, 000. Even such a contribution, which is not adjusted for inflation, reduces the expected shortfall from required post-retirement corpus (for the lowest income quintile) to 62% - a reduction of 7% from shortfall observed under the present scheme. In view of such significant shortfalls, it is also vital that both the minimum subscriber contribution and the concomitant matching contribution be adjusted for inflation every year.

    Further, NPS-S should offer capital guarantee to beneficiaries. Under the capital guarantee feature, pension Fund Managers (PFMs) will 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. Investing in inflation indexed bonds of different maturities could allow NPS to hedge inflation risk and in turn offer investment products that are protected against inflation. We expect that the change in funding mix, along with perpetual contribution and inflation indexing will enable a 20 year old in the lowest income quintile investing Rs. 1000 per year to cover up to 85% of her post-retirement corpus.

xiv. Reduce Subscriber Minimum Pension Contribution, and Provide Unconditional Cash Transfer of Rs. 1000 per Month for the Elderly Poor: There should be a two-tier design for the NPS-S, which merges the designs of the current NPS-S and the National Old Age Pension Scheme (NOAPS):

    a. For the elderly vulnerable poor who are unable to contribute, there should be an unconditional cash transfer of Rs. 1000 per month provided under CSS which should be indexed to inflation.

b. The minimum contribution for NPS-S should be reduced to Rs. 500 and the matching government contribution under the scheme should be a graded one, mirroring the subscriber's contribution up to a maximum of Rs. 1000 per annum. This will allow more subscribers to participate in the scheme and thus increase take-up.

III. Overall Expenditure

The overall expenditure outlay is based on the following assumptions:

i. The per person premium for AABY Life Insurance is Rs. 300
ii. The per household premium for RSBY Health Insurance (secondary and tertiary with CVD cover) is Rs. 1,250
iii. The Pensions component of CSS is a combination of a Rs. 1,000 per month unconditional cash transfer for the vulnerable poor and an NPS-S matching contribution of Rs. 1,000 per unorganised sector beneficiary
iv. Take up rates are based on the observed performance of these products

Table 1.1.1
Total Outlay Required Under CSS for the Unorganised Sector (in Rs.): 2013-2017

Scheme	Outlay	GoI Contribution	States Contribution
Life Insurance	Rs. 148 billion	Rs. 74 Billion	Rs. 74 Billion
Pension (NPS-S)	Rs. 409 billion	Rs. 409 billion	-
Unconditional cash transfer for the elderly poor	Rs. 661 billion	Rs. 330 billion	Rs. 330 billion
Health Insurance	Rs. 402 billion	Rs. 266 Billion	Rs. 137 Billion
Total	**Rs. 1620 billion**	**Rs. 1079 billion**	**Rs. 541 billion**
As a % of GDP	**0.34%**	**0.23%**	**0.11%**

The total expenditure burden on the government (state and central combined) over a five year period would be Rs. 1,620 billion or about 0.34% of the GDP per annum for unorganised sector coverage. This will mean an additional marginal expenditure of Rs. 520 billion (excluding the unconditional cash transfer for the elderly poor) over the budgeted expenditure between 2013 and 2016.

IV. Bundling of products under CSS

The design of CSS can be thought of in the following ways:

Pensions to act as an entry barrier to CSS: Under this option, life and health insurance will be made available to the beneficiary only on the condition that she contributes a minimum of Rs. 500 to her NPS-S account. Since the pension product requires a prolonged period of investment before the realisation of any return, it will be the most difficult to deliver. The expectation is that take up of pensions will be low if the products in CSS are available in a stand-alone manner. However, considering the public policy imperative of ensuring that individuals and households are saving for retirement, this design is intended to nudge the beneficiary towards such savings by making pensions an entry point in order to be able to access life and health insurance.

All products under CSS to be standalone: There is an argument that forced bundling using pensions as an entry barrier could end up compromising the welfare of many individuals and households. Therefore, an alternate path to take would be to allow all schemes under CSS be sold individually. Thus, a beneficiary will be provided the option of contributing the amount of her choice to NPS-S and the benefits of life and health insurance will not be contingent on a minimum pension contribution.

Recommendation:

xv. Since it is ex-ante unclear which of the two designs would lead to the most optimal outcomes, the implementation of CSS in the entire country should be based on a careful evaluation of the costs and benefits of offering a pilot scheme under the two designs mentioned above.

V. Implementation Roadmap

CSS for the unorganised sector should be implemented in the entire country only after a careful evaluation under a pilot scheme.

Recommendation:

xvi. The pilot scheme be implemented initially across 20 districts in the country over a period of two years. Selection of districts under the pilot scheme must pay attention to the following parameters:

a. Level of Aadhaar coverage: The pilot scheme should be implemented in a mix of districts with high and low levels of Aadhaar coverage. This will enable the identification of operational and design problems before scaling up of the scheme.

b. Degree and quality of internet coverage: The RSBY card should be replaced by a common Aadhaar platform that enables the beneficiary to access all schemes under CSS. All transactions under such a system will require internet connectivity and information will be stored in an online cloud. Thus, implementing the pilot scheme in districts where internet connectivity is high will enable us to evaluate the functioning of the scheme better.

c. Type of aggregator: Districts should be evaluated based on the type of aggregator that services the beneficiaries. Aggregators tend to operate under several models (such as post offices, MFIs, NGOs, banks, state nodal agencies, welfare boards) and testing the pilot scheme under different aggregator models will help us identify those features that ensure high quality servicing of beneficiaries.

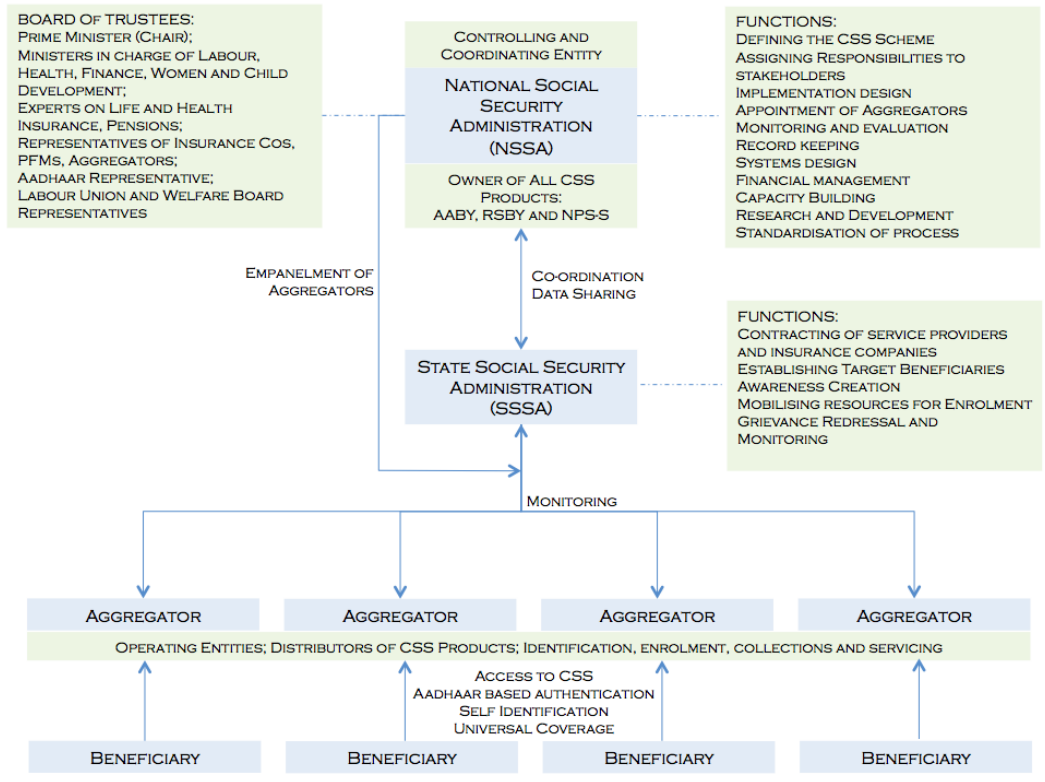
d. Design of the scheme: As discussed in the previous section, the pilot should also be used to test the efficacy of the bundled and unbundled designs for CSS.

We thus propose that a rigorous, scientific impact evaluation be conducted by independent researchers before CSS is scaled up to be delivered across the country.

VI. Overall Architecture of the CSS Scheme

Figure 1.1.1 below summarises the different entities (NSSA, SSSA, and Aggregators) involved in the delivery of CSS to the beneficiary and the roles that they will perform in the proposed architecture.

Figure 1.1.1
Overall Architecture of the CSS Scheme



As illustrated in the figure, CSS will be helmed by the NSSA, who will act as a coordinating and controlling vehicle. The NSSA will work in conjunction with the SSSA, who in turn will be responsible for implementing CSS at the state level. They will closely monitor the aggregators who will be the single window through which beneficiaries will access all CSS products. Beneficiaries will self-identify themselves using the Aadhaar based authentication platform. CSS for the unorganised sector will have an open architecture that aims at universal coverage.

VII. Conclusion

An effective social security financial protection package must cover at least three risks – risk of death, risk of health shocks and risk of income security in old age. The effective delivery of CSS will be contingent on driving system level changes combined with product level design modifications. A program like the CSS should be available to every citizen with subsidies built in for the unorganised sector. The program should be owned and governed by a Special Purpose Vehicle called the National Social Security Administration (NSSA), which will be a coordinating, and not an operating entity. The NSSA should work in conjunction with state level SSSAs to implement and monitor the program. Aadhaar based identification must become the mode for authentication into CSS, irrespective of the product or service taken. Delivery of CSS must be done through the Aggregator model adopted by the PFRDA for NPS currently. Specific product level design issues need to be carefully addressed using the strategies outlined earlier. It is unclear at the beginning if the products must be bundled, with pensions acting as a barrier to access life and health insurance or if all should be available individually. There is a need for a two-year pilot in 20 districts to evaluate the design of the scheme, the efficacy of Aadhaar authentication and the type of aggregator distributing CSS, and the results from this study should drive the future implementation of CSS.

It is apparent that there is a clear and present need for a minimum social security financial protection for citizens of India. National trends such as the implementation of Aadhaar and the use of the 'Aggregator' based models to reach unorganised sector citizens have created the infrastructure upon which an ambitious social security program can be created. Unlike in the past, we stand now in a position where the promise of universal social security can be substantially redeemed, ensuring certain fundamental protections that will enable a life of basic dignity for all citizens.

Chapter 1.2
List of Recommendations

Recommendations on Proposed Implementation Architecture

Recommendation 2.2.1:
Use of Existing, but Modified Schemes:
Continue to use the three existing schemes, Aam Aadmi Bima Yojana (AABY), Rashitriya Swasthya Bima Yojana (RSBY), and National Pension Scheme – Swavalamban (NPS-S), significantly modified to accommodate for various design and implementation related weaknesses, to be offered under a single-window architecture.

Recommendation 2.2.2:
Universal Coverage:
All products under CSS should be available to all eligible members of the household. Additionally, in keeping with the spirit of social security as a minimum level of protection, CSS should be made available for all citizens. While the subsidy may be provided only to the unorganised sector, an unsubsidised version of the CSS product must be available to everyone.

Recommendation 2.2.3:
Identification of Unorganised Sector Workers:
The principle for identifying unorganised sector workers should be based on self-reporting by individuals (as recommended under the UWSSA) but not at the district administration; instead self-reporting can be done as in the case with NPS-S currently. This can be an effective and cost efficient strategy for identification of unorganised sector workers.

Recommendation 2.2.4:
Aadhaar-Based Platform for Authentication:
Access to all CSS products (RSBY, AABY, NPS Lite) should be linked to the Aadhaar platform. However, for such a system to work, online connectivity must be ensured at all points of service. In places where internet connectivity is poor, the RSBY smart card can be continued with the objective that it will be replaced by Aadhaar as connectivity improves. We, therefore, propose a gradual shift from one system to another.

Recommendation 2.3.1:
Ownership and Governance by the National Social Security Administration:
The CSS scheme and all products therein should be owned and governed at the central level by The National Social Security Administration (NSSA), a special purpose vehicle (SPV) set up as a Trust.

Recommendation 2.3.2:
Board of Trustees of the NSSA:
The NSSA should be helmed by a Board of Trustees that is chaired by the Prime Minister. The board itself should be comprised of the Ministers (or other senior representatives) who head

the ministries relevant to CSS such as the Ministries of labour, health, finance and women and child development. Other members of the Board include independent experts on life insurance, health insurance and public health, and pensions; representatives of insurance companies, pension fund managers, distributors; a representative from Aadhaar; and representatives of unorganized sector workers such as from labour unions and welfare boards.

Recommendation 2.3.3:
Nature and Responsibilities of the NSSA:
The NSSA Trust should be a controlling and coordinating entity, and not an operating entity. It should be responsible for: i) defining the scheme; ii) providing clarity on roles and responsibilities of the various stakeholders; iii) implementation design; iv) monitoring and evaluation; v) appointment of distributors; vi) record keeping; vii) systems design; viii) financial management; ix) capacity building; x) research and development; and xi) standardisation of processes.

Recommendation 2.3.4:
Functions of State Social Security Administrations:
Each state should have an independent State Social Security Administration (SSSA) responsible for: i) contracting of service providers and insurance companies; ii) establishing the target beneficiaries; iii) awareness creation; iv) mobilising resources for enrolment; and v) grievance redressal and monitoring

Recommendation 2.4.1:
Aggregator led Model for Distribution of CSS:
The distribution of CSS should be led by Aggregators, who shall be the single point of interaction for the beneficiary to access all components of CSS. The NSSA should follow the Aggregator eligibility guidelines as laid down currently by PFRDA. In addition to the existing list of Aggregators allowed under PFRDA, the postal department, telecom and FMCG company networks should be leveraged to deliver financial products under the CSS suite.

Recommendation 2.4.2:
Functions of the Aggregator:
Aggregators shall perform functions relating to identification of beneficiaries, marketing and awareness creation, enrolment and collections, and servicing.

Recommendation 2.4.3:
Aggregator Incentives for Life and Health Insurance, and Pensions:
Aggregators should be provided with Rs. 20 per enrolled family in health insurance, and Rs 10 per enrolled beneficiary in life insurance. The incentive fee for pensions should be 5% for contributions below Rs. 1000, and a flat incentive fee of Rs.100 for Rs.1000 and above.

Recommendation 2.4.4:
Publication of List of High Priority Areas and Quality of Aggregator Service Reports:

SSSA should publish a list of areas that are poorly serviced by aggregators annually. The list should take into account at least three factors: distance from nearest urban centre, level of poverty, and ratio of backward castes, and any additional factor that the SSSA deems suitably important. The SSSA should also annually publish reports on complaints received and action taken as well as biennial mystery shopping report.

Recommendations on Product Level Features

Recommendation 3.1.1:
Objective of Life Insurance under CSS:
Life Insurance under social security should work towards covering, at minimum, the human capital of a 40 year old in the bottom quintile.

Recommendation 3.1.2:
Beneficiaries Must Be Informed of Suitable Life Insurance Cover:
It is essential that the beneficiary is informed that life insurance cover under social security ensures only a minimum human capital cover. The Aggregator should inform the beneficiary about the value of her human capital, the recommended cover that she should ideally take, and the cover provided by social security.

Recommendation 3.1.3:
Re-Pricing Life Insurance:
Life Insurance needs to be re-priced by opening it up to the market. The life insurance product premium should be opened up for competitive bidding from life insurance companies in the market, similar to the model currently followed by RSBY for health insurance.

Recommendation 3.1.4:
Reduce Upper Limit on Age of Eligibility for Life Insurance:
The upper limit on age of eligibility of the scheme should be reduced from 59 years to 55 years.

Recommendation 3.2.1:
Introduce Preventive Care Protocol for Cardio-Vascular Disease in RSBY:
A preventive care protocol for CVD should be introduced as part of the RSBY health insurance plan in view of the high risk of incidence and easy-to-implement prevention strategy.

Recommendation 3.2.2:
Extend Length of Insurer's Contract:
The tenure of insurance contracts should be increased to 3 years. Further, the quality of existing services delivered by the insurance company should be factored into the bidding process.

Recommendation 3.2.3:
States to Provide Top up Tertiary Care Health Insurance:

State Governments should top up RSBY with tertiary health care insurance, thereby ensuring complete health insurance coverage for households.

Recommendation 3.2.4:
Publication of Estimated Need of Hospital Beds in the State:
The SSSA should publish an estimated number of hospital beds required in each district of the state every year. State-level entities that register hospitals should consider the estimated need before approving hospitals in a certain district of the state.

Recommendation 3.3.1:
Objective of Pension under CSS:
The pension product under the CSS scheme should, at minimum, cover the post-retirement expenditure of individuals in the lowest income quintile.

Recommendation 3.3.2:
Perpetual Matching Contribution for Pensions:
The matching contribution from GoI under NPS-S should be made perpetual and in line with the pension that is offered to workers engaged in the organised sector.

Recommendation 3.3.3:
Index Pension Contributions to Inflation:
The NSSA should announce the inflation-indexed adjustment of social security benefits every year. The minimum contribution and the government match should be linked to the Consumer Price Index (CPI) and be revised every year.

Recommendation 3.3.4:
Design of Pension under CSS:
The minimum contribution for NPS-S should be fixed at Rs. 500 and the matching government contribution under the scheme should mirror the subscriber's contribution up to a maximum of Rs. 1000 per annum. Further, an unconditional cash transfer of Rs. 1000 per month should be provided for the elderly among the vulnerable poor. This amount must be inflation-indexed and adjusted every year.

Recommendation 3.3.5:
Re-design the Investment Mix for Pensions:
The current NPS-S investment mix should be changed to the life cycle fund mix as in the case of the main NPS product so that the investment mix changes with age and offers the expectation of higher return on savings.

Recommendation 3.3.6:
Capital Guarantee for Pensions:
Investment of NPS-S contributions should be permitted to be made only in approved fixed income instruments of specified maturities and PFMs should not have the discretion of

investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA.

Recommendation 3.3.7:
Beneficiaries Must be Made Aware of Adequacy of NPS Corpus for Post-retirement Life:
Beneficiaries under CSS should be informed that their NPS-S investments do not completely secure their post-retirement future and aggregators should advise them on the minimum savings they need to make every year towards retirement.

Recommendations on Implementation

Recommendation 5.1.1:
Bundling of Products:
Of the two options available: (i) the bundled option where a beneficiary is required to invest in pensions in order to access life and health insurance; and (ii) the unbundled option where all products are available standalone, it is not clear which one will be more welfare enhancing in the long term. The choice between these options should be made after a careful evaluation under a pilot scheme.

Recommendation 5.2.1:
Pilot for CSS:
A 20 district pilot for implementation of the CSS must be conducted and this should encompass variations in extent of Aadhaar penetration, access to connectivity, design (bundled or unbundled), and the type of aggregator. The pilot will be for a duration of 2 years, on completion of which a formal research report assessing operational and financial feasibility, product take-up and usage, and product impact will be put out by a neutral research organisation.

SECTION 2
Current Status and Proposed Implementation Architecture

Chapter 2.1
Current Government Sponsored Plans

With the objective of providing social security to the most vulnerable sectors of society, the GoI has been actively involved in sponsoring a range of large social welfare schemes including both national and state government initiatives. There are three prominent social security schemes for the unorganised sector, sponsored by the GoI, that offer life insurance, health insurance and pension: Aam Aadmi Bima Yojana (AABY) Life Insurance scheme, Rashtriya Swasthya Bima Yojana (RSBY) Health Insurance and National Pension Scheme – Swavalamban (NPS-S). Table 2.1.1 summarises the major features of these schemes.

AABY is the central life insurance scheme aimed at the unorganised sector. The most current version of the scheme was launched in January 2013 by merging two previous life insurance schemes – Janashree Bima Yojana (JBY) covering 45 occupational groups and – Aam Aadmi Bima Yojana (AABY) covering solely poor landless households in rural areas. The merging of these two schemes, identical in their structure apart from the beneficiaries targeted, allows for a more extensive and uniform process, thereby covering the entire unorganised sector encompassing households that are either BPL or marginally APL.

Rashtriya Swasthya Bima Yojana (RSBY) was launched by the GoI in 2007, to provide BPL families with access, choice and financial-risk protection for in-patient health care services. RSBY provides annually renewable coverage for up to Rs. 30,000 of cashless inpatient services to a maximum of 5 members per household on a 'floater' basis, largely covering secondary healthcare procedures.

In 2010, the National Pension System (NPS) was extended to all citizens of India, including the unorganised and economically disadvantaged sectors of society with limited potential for accumulated savings under an adapted scheme known as NPS – Swavalamban (NPS-S). This scheme aims to encourage individuals from the unorganised sector to voluntarily start saving for their retirement, by providing an incentive co-contribution of Rs.1000 to each subscriber that is willing to participate and save at least Rs.1000 per year in a non-withdrawal retirement account.

Apart from the three schemes mentioned above, there are large state government funded schemes that offer life insurance, health insurance and pensions. Table 2.1.2 lists some of the prominent state government initiated social security schemes. For example, the Matri Shakti Bima Yojana (MSBY) in Himachal Pradesh provides life insurance cover to all women below the poverty line by providing relief to family members in case of their death or disablement (including surgical operations like sterilisation, and complications at time of child birth), as well as in the case of the accidental death of their husband.

Although RSBY is the first pan-India health insurance scheme to enrol BPL beneficiaries on such a large scale, it has not been rolled out in some states due to the presence of already existing large state initiatives. For example, the Rajiv Aarogyasri Health Insurance Scheme was launched in Andhra Pradesh in 2007 for BPL families with support for primarily life-

threatening diseases and the associated tertiary hospitalisation cover. The scheme follows similar implementation architecture as that of RSBY, by including both insurance companies and empaneled hospitals.

An important pension plan provided to the unorganised sector by a state government is Abhaya Hastham, an initiative of the Andhra Pradesh Government which jointly sells pensions and life insurance to women members of SHGs in rural and urban areas. Contributions are set to a minimum of Rs.360 per year with an equal co-contribution from the state government over the entire accumulation period. The beneficiary is then eligible for a minimum monthly pension of Rs.500 or above depending on how much they contributed. This scheme has had a very considerable take-up rate in the state, partly due to its lower contribution requirements but also thanks to its community based organisations that have been very effective in raising awareness amongst the target population.

The Central Government also provides a minimum pension floor to all BPL persons of Rs.200 per month, under the aegis of the National Old Age Pension Scheme (NOAPS). State governments add between Rs.75 and Rs.300 per month[1]. This is widely thought to be a vastly inadequate amount, and is also beset with implementation problems.

Table 2.1.1
Current Schemes Initiated by Government of India

Scheme	Aam Aadmi Bima Yojana (AABY)[2]	Rashtriya Swasthya Bima Yojana (RSBY)	National Pension Scheme – Swavalamban (NPS-S)
Objective	AABY is a life insurance product that covers the head or earning member of the family, with the condition that he is between the ages of 15 to 59. The scheme includes members from 47 different occupational groups (BPL and marginally APL).	RSBY provides BPL families with access, choice and financial-risk protection for in-patient health care services.	NPS-S offers retirement savings for the unorganised and economically disadvantaged sectors of society with limited potential for accumulated savings.
Benefits	AABY offers a cover of Rs. 30,000 on natural death, Rs. 75,000 on death or permanent disability due to accident, and Rs. 37,500 on partial disability due to accident.	RSBY offers inpatient care, restricted by package limits (700 procedures[3], 5 days post-hospitalisation drugs, and transportation costs of Rs.100) and subject to an annual ceiling of Rs.30,000 per family, covered on a cash-less basis.	GoI contributes Rs.1000 a year as co-contribution if Rs.1000 has been saved by the beneficiary. At the retirement age of 60 years, if the beneficiary has saved the minimum amount, he should have accumulated enough pension wealth to benefit from a minimum amount of Rs.1000/month[4].
Implementation Architecture	LIC was chosen as the implementing agency. LIC is responsible for both directly managing the insurance product, including issuing the master policy and disbursing claims, as well as marketing the product to Nodal Agencies on behalf of the Central Government.	RSBY adopts an institutional framework within which the Central Government, State Nodal Agencies (SNAs), hospitals, and insurance companies all share responsibilities.	NPS-S has a unique implementation architecture. While it is centrally managed through the PFRDA, the scheme makes use of both "Aggregators" under the NPS-Lite Model and "Points of Presence" (POPs) under the Unorganised Sector Model. Data is recorded by the Central Record-keeping Agency (CRA).
Claims	Required documents are collected and verified by the Nodal Agency. These are passed on to LIC for approval and disbursement of the benefit to the nominees' account.	Smartcards have Rs.30,000/year credited to it for direct use at any empaneled hospital. Hospitals "block" the required amount on admission, and on completion of treatment send an electronic report to the insurer for reimbursement.	At the exit age of 60 years, the subscriber can apply for his monthly pension support. There is the option for early withdrawal though this is less attractive as it results in a lower remaining pension wealth post annuitisation. In case of death prior to 60 years, pension wealth can be withdrawn as a lump sum by the nominee.
Funding	The premium is Rs.200/year. This amount is split equally between the Central Government and the Nodal Agency. The Nodal Agency may ask the beneficiary to contribute towards its premium amount (except for rural landless households).	On average the premium is Rs.540/family per year. This is split 75:25 by the Central and State Government respectively[5]. A contribution of Rs.30/family is taken from the beneficiary at enrolment and at every renewal.	The Central Government co-contributes Rs.1000 to all beneficiaries who have saved between Rs.1000 and Rs.12000 per annum. This co-contribution is currently in place for a 4 year period.

Table 2.1.2
Other Large Scale National and State Initiatives

Scheme	State/ National	Product	Beneficiary	Benefits	Premium	Implementation
Janashree Bima Yojana plus Add on Group Insurance Scheme[6]	National	Life insurance	Specific occupational groups (e.g. powerloom workers, handloom, sheep breeders)	Rs.60,000 in case of natural death, or Rs.1,50,000i n case of accidental death.	Rs.330 shared by the central and state Government, as well as beneficiary.	This scheme is implemented through the occupational group centres (e.g. Regional Textiles Commissioner's office).
Yeshasvini Co-operative Farmers Health Care Scheme	Karnataka	Health insurance	Members of rural cooperative societies, regardless of poverty status.	Hospitalisation for more than 1,200 notified surgeries with a ceiling of Rs.2,00,000/person.	Rs.150/person per year. Beneficiary contributes 58% and State Government 42%.	Implemented by the Yeshasvini Co-operative Farmers Health Care Trust, along with the support from third party administrators.
Rajiv Aarogyasri Community Health Insurance Scheme	Andhra Pradesh	Health insurance	All families BPL are automatically enrolled.	938 hospitalisation procedures (largely tertiary care and some secondary) for a maximum cover of Rs.1,50,000/family per year.	Rs.429/family, subsidised entirely by the state government.	Implemented by the Aarogyasri Health Care Trust along with an insurance company as executing agency.
Chief Minister Kalaignar's Insurance Scheme	Tamil Nadu	Health insurance	Families earning less than Rs.72,000/year (BPL), or members of 26 welfare boards.	400 surgical procedures with a maximum cover of Rs.1,00,000 over 4 years/family.	Rs.469/family entirely finances by the state government.	TN Health Systems Society is the main governing body, with a multi-insurer consortium as implementing agents.
Vajpayee Aarogyasri Scheme	Karnataka	Health insurance	BPL families residing in Gulbarga division.	402 hospitalisation procedures and 50 follow-up packages covering only tertiary care for a maximum of Rs.1,50,000/year.	Funded entirely by the state government.	Suvarna Arogya Suraksha Trust along with licensed third party administrators.
RSBY Plus	Himachal Pradesh	Health insurance	All beneficiaries enrolled under RSBY	Top-up to RSBY coverage, to include tertiary care services, as well as transport and medical expense, amounting to Rs.1,75,000 beyond	Rs.364/family including service tax. Additional funds are provided by the State	Implemented through the same process as RSBY.

				what is provided by RSBY.	Government general revenues.	
Apka Swasthya Bima Yojana	Delhi	Health insurance	All beneficiaries eligible for RSBY	Top-up scheme covering high cost tertiary care services which are not included under RSBY.	Funded by the State Government.	Implemented through the same process as RSBY.
Abhaya Hastham	Andhra Pradesh	Pension & Life insurance	Women members from SHGs in rural and urban areas.	Minimum monthly pension of Rs.500. Life insurance cover of Rs.30,000 in the case of natural death and Rs.75,000 in the case of accidental death or permanent disability of the beneficiary's spouse.	Co-contribution of Rs.360 by the State Government into the pension accounts. Rs.15 contribution from the beneficiary. Life insurance covered under AABY.	Implementing agency is the Society for Elimination of Rural Poverty, with the support of Community Based Organisations.
Indira Gandhi Old Age Pension Scheme	National	Pension	BPL individuals above 60 years.	Minimum monthly pension of Rs. 275 to Rs.500 based on age and co-contribution from State Governments.	Rs.200 is provided by the Central Government, while States can provide between Rs.75 to Rs. 300/month.	Launched by the Ministry of Rural Development and implemented through the National Social Assistance Programme.

Chapter 2.2
Coverage

I. Product Mix

The proposed Comprehensive Social Security (CSS) Scheme should aim, at minimum, to provide financial protection against critical risks confronting the well-being of households and individuals. In particular, the CSS should cover –

i. the risk of death of income earners
ii. the risk of health shocks in a household
iii. the risk of income insecurity in old-age

It is well recognised that the death of the primary income earner, an unexpected health shock requiring expensive surgery, or the inability to save regularly for retirement could fundamentally compromise the well-being of households. However, the usage of appropriate financial products such as life insurance, health insurance, and pension schemes can mitigate these risks and protect households. The objective of the CSS program is to provide minimal levels of these protections to households and individuals through the use of appropriate financial products.

We have refrained from including direct cash transfer schemes in the form of maternity assistance and scholarships for girl students in this report as we believe that they do not fall under the ambit of financial products. All products considered in this report aim to mitigate specific risks through pooling of resources and investment in assets (in the case of pension). However, once the architecture that we propose for financial protection is operational, cash transfer schemes such as maternity assistance and scholarships can be added to CSS at no additional marginal cost.

Recommendation 2.2.1:
Use of Existing, but Modified Schemes:
Continue to use the three existing schemes, Aam Aadmi Bima Yojana (AABY), Rashitriya Swasthya Bima Yojana (RSBY), and National Pension Scheme – Swavalamban (NPS-S), significantly modified to accommodate for various design and implementation related weaknesses, to be offered under a single-window architecture.

II. Universal Coverage

It is desirable that a social security program such as CSS not be discriminatory in nature and be available to all citizens to ensure that a minimum level of protection is provided for all. Currently, AABY and NPS are targeted to the heads of households. This is fundamentally inequitable and over time could result in outcomes such as discrimination against women in the provision of social security.

As a principle, therefore, we propose that the CSS must aspire to create an open architecture that aims at universal coverage. Since CSS is meant to provide minimal levels of social security, it is only appropriate that it be made available to all citizens of India. While budgetary resources will determine the extent of subsidy available under the program - and this subsidy should be used only for vulnerable poor households or graded for the entire unorganised sector - it is essential that an unsubsidised version of the program be available to all citizens, in the spirit of universal coverage under social security.

Therefore, we recommend that they be available universally to all eligible members of the household.

Recommendation 2.2.2:
Universal Coverage:
All products under CSS should be available to all eligible members of the household. Additionally, in keeping with the spirit of social security as a minimum level of protection, CSS should be made available for all citizens. While the subsidy may be provided only to the unorganised sector, an unsubsidised version of the CSS product must be available to everyone.

III. Identification of Beneficiaries through Self-Reporting

Currently, the CSS has been conceived as a scheme for the 'unorganised' sector in India. As per the Unorganised Workers' Social Security Act (UWSSA) 2008[7], an 'unorganised worker' is defined as: "*a home based worker, self-employed worker, or a wage worker in the unorganised sector and includes a worker in the organised sector who is not covered by any of the Acts*[8] *mentioned in Schedule II of this Act*".

While the definition provides a broad sense of an 'unorganised worker', the true challenge on the ground will revolve around the identification of these unorganised sector workers. There is no clear, fool-proof mechanism available to identify and separate organised sector and unorganised sector workers today.

The UWSSA sought to work around this problem by requiring individuals to register themselves as unorganised workers with the district administration by self-declaration. This self-declaration was to form the basis for registration as an unorganised worker and to determine eligibility for schemes under the Act. It is obvious that this is a cumbersome process with clear concerns around effectiveness and cost. It, however, serves to highlight the fact that currently there is no obvious strategy to identify unorganised sector workers, and that an exhaustive process of this nature would need to be put in place if unorganised workers are to be identified.

The principle for identifying unorganised sector workers should be based on self-reporting by individuals (as recommended under the UWSSA) but not at the district administration; instead self-reporting can be done by beneficiaries. This is the strategy that has been adopted by the PFRDA for the NPS-S currently. Beneficiaries under NPS-S directly self-report with the

aggregator that they are employed in the unorganised sector and are not covered under the Employee Provident Fund (EPF) scheme.

Additionally, the design of the CSS and the extent of protection offered provide a natural disincentive for middle and high income citizens from registering for CSS. For instance, consider the Rs. 30,000 quantum of life insurance cover available under the AABY – this works out to 0.5% and 1.17% of the human capitals of a 20-year old in the fifth and fourth income quintiles respectively. Similarly, health cover under the RSBY is at Rs. 30,000 respectively, while the NPS-S earns a matching contribution of Rs. 1000 per year. In view of this design, it is not at all apparent that middle and high income individuals will seek to enter into the CSS and this has been borne out by the experience of the NPS-S. Translating this self-reporting mechanism to the CSS program can be an effective and cost efficient strategy for identification of unorganised sector workers.

Recommendation 2.2.3:
Identification of Unorganised Sector Workers:
The principle for identifying unorganised sector workers should be based on self-reporting by individuals (as recommended under the UWSSA) but not at the district administration; instead self-reporting can be done as in the case with NPS-S currently. This can be an effective and cost efficient strategy for identification of unorganised sector workers.

IV. Authentication and Enrolment

Existing social security schemes in India use a variety of different platforms to identify, enrol, and service the client. AABY and RSBY rely on a beneficiary list provided by the State Nodal Agency (SNA) to identify clients. States usually undertake a comprehensive data collection exercise once every ten years to identify people who are below the poverty line (BPL). This list is usually merged with other employment lists such as 'NREGA workers' or 'railway porters' to produce a master list of beneficiaries for such welfare schemes.

The current enrolment systems possess several advantages and efficiencies. One of the oft-cited advantages to RSBY, for instance is its enrolment system, which uses scheduled, moving enrolment stations that camp out in a village or town for 1-2 days. A beneficiary who is interested in enrolling visits the station, pays Rs 30, and is provided with a 'smart-card' that is issued after biometric data is collected and eligibility is confirmed (by matching the name on an existing identification card such as BPL or NREGA card or with the pre-existing eligibility list provided by the SNA).

Two features of the current identification and enrolment mechanisms stand out:

i. The RSBY 'smart card': This is a unique identity card that is matched to biometric information, which is similar to the Aadhaar number. However, information, such as account balance, is stored on a chip that is embedded in the card itself. This enables offline, cashless transactions at the hospital. When a beneficiary has to

pay for a procedure, they simply submit their card at the hospital, provide a fingerprint to identify themselves with that card, and then the cost is deducted from the balance that is stored on the chip.

ii. Mass enrolments: RSBY (and AABY) enrol beneficiaries *en masse*, at enrolment stations that are located at well-known public centres in villages and towns. Dates for enrolment are advertised well in advance. The entire process of enrolment is relatively easy, which includes submission of some basic ID proof, fingerprinting, photographs, and the on-the-spot issuance of the smart card. This ease of enrolment has led to a quick and wide expansion of the plan across several states. Because enrolment is easy, cheap (for the beneficiary), and can only be done during specific time windows, it has led to the creation of a very large group of insured beneficiaries that are not adversely selected into the pool.

While these are undeniably attractive features, there are significant concerns of mis-targeting and multiple-window access for beneficiaries that make the current system unsuitable as an effective enabling platform for delivery of CSS:

i. Use of BPL lists for targeting: There are multiple problems with using the BPL list for identifying beneficiaries. First, people move in and out of poverty frequently due to various income and health related shocks that can occur instantaneously. A listing exercise conducted once every ten years is an inadequate mechanism to capture these shifts in economic well-being. Second, the issuance of BPL cards has been riddled with corruption. As 'BPL status' is now equated with the eligibility for various benefits such as subsidised food, gas, and insurance it is highly sought after by even the non-poor. This has led to the capture of a large amount of benefits by those who are undeserving. Equally distressing is the non-issuance of BPL cards to those who deserve them. A scheme like NPS does not have a targeting problem, as it is available to anyone who chooses to buy it.

ii. Multiple identification and authentication windows: Enrolment into CSS schemes is also done in different ways. RSBY uses insurance companies and contracted Third Party Administrators (TPAs) to enrol beneficiaries while AABY uses state nodal agencies. AABY is now being added to the RSBY enrolment platform in a series of pilots. Further, this multiple-window architecture cannot be accessed using a uniform authentication mechanism since each scheme has laid out its own processes. For example, accessing RSBY requires the beneficiary to hold an RSBY card while NPS-S requires a Permanent Retirement Account Number (PRAN). This has led to significant non-pecuniary costs to beneficiaries in the form of long distances to access points and multiplicity of documents required for authentication and access to services.

Aadhaar-Enabled Platform

For successful delivery of CSS benefits to India's unorganised sector, it is essential that we have a single identification and authentication platform linking all the schemes under CSS.

Such a solution is available today in the form of Aadhaar enabled identification. The Aadhaar is a unique, 12 digit identification number for all residents of India, issued on a voluntary basis. The Aadhaar number is issued upon collection of a person's basic demographic and biometric (finger scan and iris scan) data, which allows for unique identification. Its primary purpose is to enable a direct transfer of benefits (DBT) from government schemes that the beneficiary is eligible for, into her bank account. The rollout of the Aadhaar scheme has gathered considerable momentum in the past year, and is expected to reach 600 million people by 2015.

A system based on Aadhaar can resolve multiple problems with the current system linked to beneficiary identification, real time transfer of subsidies, and leakages in the system. This system can also provide ease of access to the beneficiary, with the Aadhaar number forming the basis for identification and entry into all products in the CSS. The Aadhaar platform has the following features that make it the most effective platform for identification and authentication.

i. Cost Effectiveness: According to one estimate (Nagpal 2011), it costs approximately Rs.150 per person to print and issue a smart card. This is almost one-third the cost of the premium itself. RSBY officials justify these costs on the basis of the transactional advantages they offer (such as off-line processing and cashless transacting). However, Aadhaar also offers cashless transacting, and will not require an expensive chip embedded in the card. While this will enable only online verification and transacting at the point of service, it is expected that internet connectivity will be ubiquitous in the near future[9]. It is also relatively cheap to provide internet connections at all points of service within the next 3 years. If assumed that CSS will roll out to 200 million households in the next 5 years, this equates to a potential cost saving of Rs. 30 billion.

ii. Single platform linking all schemes under CSS: All social security and welfare schemes must be offered through a single-window architecture. This has several advantages on the demand and supply side. It will provide the beneficiary with one interface for buying different products, accessing information, redressing grievances, and claiming benefits. On the supply side, a single distribution channel for all products will enable cost-savings, better coordination of the various schemes, and an ability to gather and analyse data across schemes. Further, having a single card and account through which all transactions are made could significantly reduce non-pecuniary costs, associated with engaging into a new financial scheme for households. Because the current RSBY enrolment platform is ill-equipped to collect or disburse cash (from NPS, AABY), due to it not being linked to a banking channel, it cannot form the basis for the CSS.

Aadhaar as the identification criteria, will enable cashless transacting based on information stored in an online 'cloud'.

Recommendation 2.2.4:

Aadhaar-Based Platform for Authentication:

Access to all CSS products (RSBY, AABY, NPS Lite) should be linked to the Aadhaar platform. However, for such a system to work, online connectivity must be ensured at all points of service. In places where internet connectivity is poor, the RSBY smart card can be continued with the objective that it will be replaced by Aadhaar as connectivity improves. We, therefore, propose a gradual shift from one system to another.

Chapter 2.3
Ownership and Governance

The critical drivers of the success of a scheme such as the CSS will be the clarity of the ownership structure and quality of governance. Currently, the AABY, RSBY and NPS-S schemes are standalone programs with no coordination. Creating a cohesive ownership and governance framework requires a deeper understanding of the challenges in the current system, especially those of coordination and overlap.

i. Lack of Coordination: Current social security schemes are run by various ministries. NPS and AABY are run under the Ministry of Finance, while RSBY is run under the Ministry of Labour and Employment. The primary health schemes such as National Rural Health Mission (NRHM) are run by the Ministry of Health. This has led to a fragmented delivery of schemes that has resulted in the end user having to access them through multiple channels. An unorganised sector worker that demands comprehensive social security has to enrol for health insurance at an RSBY enrolment station, buy a pension through an aggregator such as a bank, and enrol for life insurance through one of LIC's nodal agencies.

ii. Fragmentation of Ownership: As noted in the recommendations of the Committee to Review Implementation of Informal Sector Pension (CRIISP)[10], "*it is by now a well-recognized 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 committee also notes that the biggest problem with the NPS architecture is the absence of any clear idea about who owns the customer. None of the entities in the scheme have an explicit marketing role leading to a lack of delineation of clear responsibilities on customer awareness, customer acquisition, and customer servicing. The same holds true of other social security schemes as well. There is an absence of any clear idea about who owns the customer under RSBY and AABY as well. While the government contribution in NPS-S and payment of premium for health and life insurance are incentives for enrolling into the program, it should be noted that the distribution channel of the product and the implementation of the scheme are just as, if not more, important than the design. This is a point that is often overlooked and it needs to be ensured that financial products are branded, marketed and sold proactively. This requires that one entity has ownership of the scheme and that they incentivise aggregators to sell the product. Currently, multiple stakeholders own the products that come under the ambit of CSS. For example, AABY is a scheme that can be said to be owned by three entities. At the national level, the scheme is administered by the LIC but the implementation is done through state level nodal agencies. For instance, in Andhra Pradesh, there are two levels of Nodal Agencies to administer the scheme - the Society for Elimination of Rural Poverty (SERP) is responsible for overall facilitation, monitoring and evaluation of the Scheme, while at the district level the Zilla Samakhya functions as implementation agency for overall management of the Scheme.

iii. Centre-State Overlaps: There are also several instances of overlap between schemes provided by the centre and the states. For example, many states provide a minimum pension floor that has come into conflict with the centrally provided NOAPS and the NPS-S. Andhra Pradesh, for instance, provides a minimum monthly pension through its Abhaya Hastam program which is designed similar to the NPS. While it is admirable that some states provide pension benefits to their citizens, a lack of coordination between centre and state has led to inequitable pension coverage across India, where richer states have provided much higher pension benefits compared to poorer ones.

iv. Lack of R&D: Currently, data on all schemes are captured separately. Analysis of RSBY data is contracted out to GIZ, life insurance data is housed at LIC, and pension data is housed by the Central Record Keeping Agency and owned by PFRDA. There is no way to access data on usage across schemes for a single individual, as datasets are not merged. There is also a lack of human resources currently devoted to data analysis, which has resulted in low levels of product innovation, development, and learning.

I. The Trust Structure for Provision of Public Services

The issues highlighted above point to three key design elements that will be essential in a well-functioning ownership and governance structure for CSS:

i. A unified agency to own schemes so as to ensure convergence
ii. A degree of separation between the political set up and implementation
iii. Active coordination between the central implementing agency and states

In fact, the UWSSA appears to have clearly tried to address exactly these issues when it envisaged the creation of a National Social Security Board (NSSB) to own all social security schemes in the country and State Social Security Boards (SSSBs) in each state to ensure coordination. However, the implementation of the NSSB and SSSBs have been fraught with difficulty with only a handful of states having formed SSSBs and states like Tamil Nadu declining to create such an entity. This can be partially attributed to the one aspect that the UWSSA does not address – i.e. the separation between the political set up and implementation. This is not uncommon in traditional models that have always relied on the purchaser and the provider being the same entity. For instance, the Ministry of Health in most countries is provided the funding as well as the mandate for delivering public health services. Many countries have found that this yields sub-optimal results like inefficient delivery of health services, and have therefore moved towards separating the purchaser and provider of such public services. As a consequence, countries such as Thailand and the UK have moved towards creating a 'Trust' structure which creates a distinction between the purchaser and the provider of public services. These countries have found that the organisational and governance efficiencies provided by this structure have resulted in improved outcomes for citizens.

For example, in Thailand the National Health Security Office (NHSO) oversees the implementation of the Universal Coverage Scheme (UCS) or the '30 Baht Scheme', a universal health coverage scheme that offers a comprehensive package of care, including both curative and preventive care. The NHSO consists of two governing national boards, the National Health Security Board (NHSB) and the Health Service Standard and Quality Control Board[11]. The NHSB is chaired by the Minister of Public Health and consists of members from various public and private organisations including the permanent-secretary of related ministries like Ministry of Defence and Ministry of Finance. Other representatives from professional health bodies, municipalities and non-profit organisations are also included as the members. In addition, experts in health insurance, medical sciences and public health, traditional and alternative medicine, finance, law and social sciences can be appointed as board members by the Cabinet. This structure enabled a degree of separation from the political set up and the involvement of a wider range of agencies and stakeholders in decision-making processes which improved the efficiency, transparency, responsiveness and accountability of the scheme. Further, by acting as the purchaser on behalf of UCS, the NHSO ensured that the Ministry of Public Health no longer wielded control over government spending on health-care services. An independent study set up to assess ten years of the scheme singled out the creation of NHSO as the most noteworthy innovation of the UCS.

The use of the Trust architecture has led to the phenomenal success of the UCS since its launch in 2001. Within one year of its launch, it achieved near universal coverage, covering about 75% of the Thai population. Research has also found that the scheme has had a measurable positive impact on income inequality in Thailand[12]. The share of household out-of-pocket payments for health and the share of households facing catastrophic spending on health also decreased considerably from 2000 to 2006 - the poorest income quintile experienced a 77.5% reduction in the proportion of households facing catastrophic health expenditure.

Other countries like the United Kingdom have also looked to incorporate these design elements by shifting to a Trust structure. Under a recent set of reforms to the National Health Service (NHS), NHS England- the operating vehicle of NHS was made an independent body that has considerable freedom from control by the government. The Department of Health (DH) will now be responsible only for strategic leadership of both the health and social care systems. It will no longer be the headquarters of the NHS, nor will it directly manage any NHS organisations.

In summary, the Trust structure for provision of public services offers the following advantages:

i. Provides a Degree of Separation from the Political Set-up and Its Uncertainties: The Trust structure enables the implementation of policies in a continuous and consistent manner as it is separated from the uncertainties attached with the political system. As is evident in the case of delivery of public health services in both United Kingdom and Thailand, Trust entities have been provided greater autonomy and freedom from the

control of the government. This degree of separation from the political set-up and incorporation of a wider spectrum of entities into the functioning of the scheme, especially local stakeholders, increased the efficiency and transparency of the schemes and has been critical to their success

ii. Enables Greater Capacity Building: The Trust structure allows for the recruitment of adequate manpower in the implementation of schemes. For instance, the NHSO in Thailand sees itself as a learning organisation that seeks competent human resources and aims to continuously develop them in line with the vision, mission and objectives of the organisation. The Trust model offers the potential for better information management and learning. The Rajiv Aarogyasri Scheme (RAS), run by the Rajiv Aarogyasri Trust under the Andhra Pradesh government, is a prime example of a scheme that has better information management systems than national level schemes like the RSBY. For instance, the RAS scheme has better analytics on disease burden than RSBY. Further, the structure lends itself to the creation of right technical capacity for the implementation of the scheme. The RAS Trust coordinates the activities of the insurance company and the involvement of all the sections of government that could help in the implementation of the scheme. The scheme also consists of a unique set of functionaries in the form of Arogyamitras, who are trained by the Trust and insurance companies, based on training material provided by the Trust. In addition, the scheme utilises high-end technology through a dedicated real-time online workflow system created by Tata Consultancy Services in collaboration with the Trust, and by connecting all Arogyamitras through a closed user-group mobile network. As of 2009-10, the program has enrolled 22.4 million beneficiaries in Andhra Pradesh[13] and this stands testimony to the success of the scheme.

iii. Ensures Clear Ownership of the Scheme: The Trust structure enables the housing of related schemes within a single entity that takes complete ownership of the program. The Trust acts as a controlling vehicle, not an operating vehicle, for the scheme. For example, the NHSO in Thailand is an autonomous organisation that acts as a controlling vehicle overseeing a variety of functions like the development of benefit packages, creation of health care service standards, laying down criteria for fund management, building up a modern system of internal auditing, using modern information and communication technology to support operations, and developing a work administration that is more responsive to the public. The regional offices of the NHSO take responsibility for administering the scheme and monitoring the fund management at the local level. This also ensures that the implementation of the scheme responds to the local health needs.

The Trust structure therefore, combines the three key design elements that are vital to the successful implementation of CSS in India. There is a need to create a national level Trust to oversee the implementation of CSS and, therefore, we recommend the creation of the National Social Security Administration (NSSA), a special purpose vehicle (SPV) set up as a

Trust to own all the products under the CSS. The NSSA should replace the current National Social Security Board (NSSB).

Recommendation 2.3.1:
Ownership and Governance by the National Social Security Administration:
The CSS scheme and all products therein should be owned and governed at the central level by The National Social Security Administration (NSSA), a special purpose vehicle (SPV) set up as a Trust.

II. Composition of the NSSA

The Trust structure enables a combination of political oversight with technocratic expertise in execution. Since the CSS is a public scheme it is only appropriate that the direction for the program comes from elected representatives. In view of this, it is desirable that the Board of Trustees is chaired by the Prime Minister and that the board itself is comprised of the Ministers (or other senior representatives) who head the ministries relevant to CSS (Ministry of Labour and Employment, Ministry of Health, Ministry of Finance, Ministry of Women and Child Development, etc.). Constructing the Board of Trustees in this manner enables co-ordination for the CSS at the highest level and gives a clear sense of public ownership to the Trust, thus ensuring democratic propriety. Other members of the Board should include independent experts on life insurance, health insurance and public health, and pensions; representatives of insurance companies, pension fund managers, distributors; a representative from Aadhaar; and representatives of unorganised sector workers such as from labour unions and welfare boards. As mentioned earlier, the involvement of a wide range of agencies and stakeholders in the decision-making process has been a critical component in the success of social security schemes in other countries.

Recommendation 2.3.2:
Board of Trustees of the NSSA:
The NSSA should be helmed by a Board of Trustees that is chaired by the Prime Minister. The board itself should be comprised of the Ministers (or other senior representatives) who head the ministries relevant to CSS such as the Ministries of labour, health, finance and women and child development. Other members of the Board include independent experts on life insurance, health insurance and public health, and pensions; representatives of insurance companies, pension fund managers, distributors; a representative from Aadhaar; and representatives of unorganized sector workers such as from labour unions and welfare boards.

III. Functions of the National Social Security Administration

The nature of the Trust entity that owns the CSS – whether it is designed to be an operating vehicle or a controlling vehicle - will be critical to determining its chances of long-term success. Historical experience suggests that operating vehicles tend to spawn large bureaucracies that are unresponsive to citizen needs over time and the very fact that they are large bureaucracies makes it difficult to effect deeper changes in culture and practice,

even if the problem is identified. As the Thailand example makes clear, one of the drivers of their success was the design of the NHSO as a controlling vehicle, not as an operating vehicle. Since the need for accountability over the long run is an aspect critical to the functioning of CSS, we propose that the NSSA be a controlling and coordinating entity responsible for contracting, issuing guidelines, and monitoring and evaluating the CSS. The NSSA should not be involved in direct implementation, but must oversee the performance of the scheme and take corrective actions as required. We envisage that the NSSA will be responsible for the following functions:

i. Definition of Scheme*:* The NSSA will be responsible for defining the components of the social security scheme, the various benefits under each component, and the eligibility criteria. The NSSA will own all the products under CSS – AABY, RSBY and NPS-S. This will mean that these products and related processes will move from the Ministry of Finance, Ministry of Labour and Employment, and the PFRDA respectively to the NSSA.

ii. Provide Clarity on Roles and Responsibilities*:* Due to the current lack of clarity on division of roles, the NSSA's primary function will be to create a clear set of targets, guidelines, and tasks for each of the functionaries involved in the scheme such as distributors, insurance companies, fund managers, and the various government ministries and departments at central and state level.

iii. Implementation Design*:* The NSSA will be responsible for working with the various stakeholders (government, industry, and academic representatives) to design and enforce the implementation architecture, incentive structures, enrolment mechanisms, and cost containment mechanisms for the scheme in the long-run.

iv. Monitoring and evaluation*:* The NSSA will be tasked with designing monitoring systems, conducting provider audits, implementing fraud and corruption control measures and standards, provider empanelment and dis-empanelment guidelines, and quality measurement and reporting. This function includes analysis of data collected during enrolment and made available using the link with Aadhaar. Such data will give aggregate and regional measures of take-up and usage, for instance number of beneficiaries enrolled in CSS, claims made for life and health insurance, disease trends, amount of money contributed to the pension account, and trends in pension investments etc. This analysis will be essential to track overall as well as regional trends across the country.

v. Appointment of Distributors: The authority to appoint distributors of CSS products should rest with the NSSA as many distributors could be national level entities that will likely have operations that traverse state boundaries.

vi. Record Keeping*:* Data on distribution, usage of services, settlement of claims, and transfer of benefits must be stored on a centralised database housed at the NSSA. The

agency will be responsible for regular analysis of data, as well as the furnishing of financial statements to beneficiaries in a timely and transparent manner.

vii. Systems Design*:* The NSSA will be responsible for the development of a high quality IT platform that will facilitate the real time transfer of data from the various stakeholders (aggregators, hospitals, insurance companies, and fund managers) into a centralised database. A new National Information Utilities (NIU) company may be set up to work as a contractor to the NSSA for this purpose, or an existing platform such as the NSDL may be leveraged.

viii. Financial Management*:* The NSSA will act as the custodian of the scheme fund, and will be responsible for drawing and disbursing finances from the various ministries involved, ensuring that funds reach the various State Social Security Authorities (SSSAs) in a timely way.

ix. Capacity Building: One of the key weaknesses of the current schemes is a lack of trained professionals working at the Central and State government level, resulting in ad-hoc outsourcing of several functions such as design, pricing, data analysis, and research. The NSSA must conduct an appraisal of the various capacities required, and ensure the provision of adequate human resources at every level.

x. Research and Development*:* The NSSA must act as a hub for research and development in the areas of insurance, long term savings, and other forms of social protection. Much is yet to be learned about the barriers to demand and supply for such products, and it must be part of the mandate of the NSSA to fund research that will guide and improve future implementation in these areas.

xi. Standardisation of Processes*:* The NSSA must enable standardisation of delivery and access such as through the creation of a standard KYC process for enrolling beneficiaries into the scheme so as to ensure ease and simplicity of access to beneficiaries.

Recommendation 2.3.3:
Nature and Responsibilities of the NSSA:
The NSSA Trust should be a controlling and coordinating entity, and not an operating entity. It should be responsible for: i) defining the scheme; ii) providing clarity on roles and responsibilities of the various stakeholders; iii) implementation design; iv) monitoring and evaluation; v) appointment of distributors; vi) record keeping; vii) systems design; viii) financial management; ix) capacity building; x) research and development; and xi) standardisation of processes.

IV. State Social Security Administrations (SSSA)

Each state should have an autonomous body similar to the NSSA that works with the State Government, the NSSA, and aggregators, to carry out implementation related tasks. States could either decide to newly constitute State Social Security Administrations (SSSA) or designate a specific department or entity under the state government (such as the Society for Elimination of Rural Poverty in Andhra Pradesh) that they deem competent enough to implement the scheme as the SSSA.

Since social security is a subject in the Concurrent List of the Constitution, state governments are empowered to implement schemes of their choice and as a consequence there may be overlap between national and state schemes. In this context, while it is critical to recognise that while the NSSA has a role to work closely with the SSSAs in ensuring that obvious overlaps between state level and national social security schemes are minimised, it is also essential that NSSA is constantly learning from state level schemes, as they may be designed based on the specific realities of different states. This multiplicity is not undesirable considering the scale and spread of India, where different regions may demand different solutions. The NSSA should put in processes to imbibe these learnings into the design of its own social security offerings over time.

The specific set of functions of SSSAs should include:

i. Contracting of Service Providers and Insurance Companies: The SSSA, working under the national level guidelines issued by the NSSA, should be given the authority to contract or empanel insurance companies and hospitals that operate under the scheme.

ii. Target Beneficiaries: As discussed earlier, we recommend that all unorganised sector workers be made eligible for subsidised CSS benefits. However, if the state government, in consultation with the SSSA, decides that the subsidy will be provided to only a sub-section of the unorganised sector (such as the vulnerable poor) these sections will need to be clearly identified. The SSSA should implement the scheme for the targeted beneficiaries.

iii. Awareness Creation: As mentioned earlier, under the present design no single entity is responsible for this function and we believe that this had led to low take up and usage of social security schemes in several states. The SSSA or its equivalent should be given the responsibility of creating awareness about the schemes in their respective states. General awareness on the availability and features of the scheme should be delivered through frequent radio and TV advertisements in local languages. Annexure B provides examples of best strategies for awareness creation. The SSSA can use these strategies to effectively create awareness about social security schemes.

iv. Mobilisation for Enrolment: The SSSA should help fund and organise enrolments into the scheme by connecting distributors and hospitals to district offices, Gram

Panchayats, SHGs, and other federations that can provide large pools of potential beneficiaries.

v. Grievance Redressal and Monitoring: The SSSA should manage a well-functioning call centre and an SMS-based information provision system. A beneficiary must be able to register a grievance over the phone on a toll-free number, through text-messages, through the distributor or directly at the SSSA. The SSSA should ensure that all grievances are addressed within 30 days of complaint registration. The SSSA should also monitor the quality of service provided by distributors of CSS on the ground.

Recommendation 2.3.4:
Functions of State Social Security Administrations:
Each state should have an independent State Social Security Administration (SSSA) responsible for: i) contracting of service providers and insurance companies; ii) establishing the target beneficiaries; iii) awareness creation; iv) mobilising resources for enrolment; and v) grievance redressal and monitoring

Chapter 2.4
Delivery Architecture

Considering the number of beneficiaries that CSS aims to cover, the success of the program is closely tied to the distribution strategy that it chooses to implement. The traditional distribution channel in social security programs like RSBY and AABY is the state nodal agency (SNA) led model. Under this approach, the state governments appoint a nodal agency, usually a state government department, to oversee the overall implementation of the program. In 44% of RSBY implementing states, the nodal agency is the Department of Labour[14]. However, there exist several weaknesses in the present distribution model that make it unsuitable as a sustainable long-term distribution channel for CSS:

i. Multiple window architecture: Currently, an unorganised sector worker who is eligible for CSS has to enrol at three separate windows in order to be completely covered under the scheme. An unorganised sector worker that demands comprehensive social security has to enrol for health insurance at an RSBY enrolment station, buy a pension through an aggregator such as a bank or MFI, and enrol for life insurance through one of LIC's nodal agencies. Since schemes are delivered through three different entities, this creates considerable hardship for the beneficiary.

ii. Inequitable coverage: The coverage of schemes like AABY remains inadequate from a pan-India perspective. For example, beneficiaries in two states (Andhra Pradesh and Maharashtra) accounted for 52% of all beneficiaries covered under the AABY scheme. Additionally, close to 80% of all claims processed were from Andhra Pradesh. Although schemes like RSBY have achieved wide coverage (35.23 million households[15]), there exists large inter-state variations in coverage. For instance states in the north-east, Madhya Pradesh and Uttar Pradesh fall short of the national average (51% coverage) while states like Andhra Pradesh and Kerala have more than 75% coverage.

iii. Weak institutional and staff capacity: Nodal agencies like state government departments often lack robust institutional and staff capacity which hinders the implementation of programs. Implementing large schemes like CSS require concerted effort, between government and non-government stakeholders, and nodal agencies have often been unable to achieve this coordination.

iv. Lack of incentives: It is unclear whether nodal agencies have any specific incentives to implement the scheme. In the absence of specific incentives, the implementation of the scheme becomes just another function to perform among many administrative duties. For instance, the SNAs have been formally entrusted with the responsibility of creating awareness about social security schemes through 'Field Key Officers', but their performance varies widely across districts, and is largely dependent on the investment by and motivation of the District Commissioner.

v. Lack of continuous ease of access to the beneficiary: The nodal agency led model does not provide ease of access to the beneficiary on a continuous basis. Currently, most enrolments are done through enrolment camps that are run periodically - once a year. If a beneficiary were to miss this camp, it becomes very difficult to get access to the product. In comparison, if enrolling for CSS were possible at the nearest post office or bank branch at any time, this would tremendously ease the problem of access.

I. The Aggregator-Led Distribution Model

Based on the discussion on current distribution architecture, it is apparent that a successful distribution model for CSS should ensure the following outcomes:

i. A single window architecture for the delivery of all benefits
ii. High, equitable and cost-effective coverage of beneficiaries, especially in rural areas
iii. Strong, continuous relationship with the beneficiary that offers her ease of access

For CSS to have meaningful reach into the unorganised sector, it is also essential that the distribution architecture employed enables extended reach into rural areas in a sustainable manner.

One way to manage the twin challenges of operational cost and distribution channel design is to work through 'Aggregators'. Aggregators are entities that offer deep, last mile connectivity to remote households, have prior experience of working with potential CSS beneficiaries, and can potentially undertake the entire process from enrolment to servicing of clients.

Currently, PFRDA's NPS-Lite and NPS-S schemes use Aggregator led models to distribute pension plans. In the NPS-Lite distribution model, aggregators are intermediaries identified and approved by PFRDA, that perform subscriber interface functions in respect of their constituent groups. Aggregators are entities that are already in existence and have had a continuous functional relationship with a known customer base for delivery of some socio-economic goods or services. Between March 2011 to March 2013, Aggregators have registered 1.87 million customers under NPS-Lite[16].

A typical aggregator works in a three-tier structure. The three levels of operation are the branch, the area office, and the head office. The local branch of a typical aggregator houses the Field Officers (FO), an accountant and a Branch Manager. The FOs are responsible for the collection of payments and disbursement of loans. The area office operates out of one of the branches in the area and is responsible for the operations of usually 20 branches. The area office reports to the head office, which looks after functions like planning, MIS, audit, human resource development, and administration.

The aggregator led model offers several advantages over conventional distribution models for CSS and can be expected to be replicated across the country to sustainably deliver a range of products under CSS:

i. Single-window Architecture: An Aggregator, by definition, has the ability to deliver all the products under CSS to its customers, thus offering a single-window interface for beneficiaries to access the entire CSS package and making the beneficiary experience of CSS much simpler and more efficient.

ii. Low Marginal Cost: Due to an aggregator's pre-existing network, the marginal cost of offering financial products like NPS-S, AABY, and RSBY, along with other services would be low (A detailed analysis of the operating cost of aggregator branches is provided in Annexure A). Encouragingly, in the last decade the small value transaction space (both in rural and as well as urban areas) has seen the emergence of institutions that operate at scale to originate loans (Micro Finance Institutions) or distribute banking services (Business Correspondents). Though there is still a long way to go, the possibility of finding high quality aggregators is higher than it was even a few years ago.

iii. High Outreach: The aggregator led model can potentially reach out to even the remotest corners of the country. For instance, apart from MFIs and BCs, the existing network of many entities like cooperative banks, self-help promotion institutions, and Regional Rural Banks could be leveraged to expand coverage. Institutions like welfare boards that currently provide social security to large sections of the unorganised sector in states like Kerala and Tamil Nadu could be empanelled as aggregators to provide CSS[17].

iv. Proximity and Trust: Aggregators like the post office branch, MFI or NGO are often the intermediaries that are closest to the beneficiary. Their continued presence and proximity simplifies the process of enrolling in CSS, paying pensions contributions, and accessing benefits. A channel which maintains strong relationships with their clients will have an advantage of selling a product better.

v. Capacity to Support a Sales Strategy: This is especially important for more complex products like insurance and pensions. In this capacity, community based organisations or SNAs may not always have the expertise and administrative potential, and may need a lot of training before being able to carry out functions such as customer acquisition and support. On the other hand, MFIs and commercial banks can more readily carry out these functions, as they are part of their core business.

Currently, the following entities are currently considered as aggregators by PFRDA:

i. Nodal offices running certain schemes for identified beneficiary groups under Central and State Governments
ii. Micro-Finance Institutions (MFIs)
iii. Non-Banking Finance Companies (NBFCs)
iv. Non-Government Organisations (NGOs)
v. Commercial banks employing the business correspondent (BC) model

vi. Entities running common service centres under National E-Governance Plan

As the Committee to Review Implementation of Informal Sector Pension (CRIISP) recommends[18], the extensive network of the postal department and various telecommunications service providers should be leveraged to distribute products under CSS. These entities are often closest to the beneficiaries and offer great ease of access. Additionally, CRIISP also notes that some of the well-known Fast Moving Consumer Goods (FMCG) companies, as well as some third party corporate agents, which have extensive reach into rural India should be appointed as distributors to add NPS to their existing suite of products. This is also applicable to the distribution of CSS.

According to the PFRDA, in order for an aggregator to be eligible[19], it must:

i. be a registered entity, registered under any of the following: Societies Registration Act 1860 (or a State amendment of this Act); Indian Trusts Act, 1862; Charitable and Religious Trusts Act, 1920; Indian Companies Act, 1956 (Section 25, for non-profit companies); Indian Companies Act 1956 with necessary certification from RBI (for NBFCs); Indian Companies Act 1956, for any other company.
ii. have been in business of financial services or community development for at least 3 years.
iii. have a formal governance structure (Board, Managing Committee or equivalent) with members on board having adequate experience in financial services / social development.
iv. meet the following net worth criteria:-
    a. Rs.1.0 crore for those having been in business for last 3-5 years.
    b. Rs.50.0 lakhs for those having been in business for more than 5 years.
    c. For entities having exceptional track record and more than 10 years of experience, the net worth criteria can be relaxed at the discretion of PFRDA
v. have the ability to manage large customer databases as well as robust cash management and transfer capabilities

We recommend that NSSA follows the PFRDA guidelines on eligibility criteria for Aggregators.

Recommendation 2.4.1:
Aggregator led Model for Distribution of CSS:
The distribution of CSS should be led by Aggregators, who shall be the single point of interaction for the beneficiary to access all components of CSS. The NSSA should follow the Aggregator eligibility guidelines as laid down currently by PFRDA. In addition to the existing list of Aggregators allowed under PFRDA, the postal department, telecom and FMCG company networks should be leveraged to deliver financial products under the CSS suite.

II. The Role of the Aggregator

Based on the experience from NPS, we propose that the Aggregator should perform the following key functions:

i. Identification of the Beneficiary*:* The aggregator, whether it is the post office, an NGO, an MFI, or a commercial bank, will be responsible for ensuring that products are sold to those who are eligible to receive them. As indicated earlier, we recommend self-reporting to aggregators as being a sufficient means of identifying that the individual is an unorganised sector worker. Aggregators should be equipped with internet ready mobile devices either at the branch office or at the field level, to enable real time verification of eligibility status when selling the product. The risk of mis-selling the product to an ineligible household will be greatly reduced as the account will only be activated once the online verification and matching with the eligibility list is completed. While it is under the purview of the states to determine eligibility into the scheme, we recommend that all unorganised sector workers be made eligible for CSS benefits.

ii. Marketing and Creation of Awareness*:* Aggregators, who are essentially sellers of financial products, have a naturally in built incentive to create awareness and provide information, as this will have positive spill-over effects on other products being sold by them, as well as increase customer retention for future sales. Because of this natural incentive linked to the aggregator's profit, there is no requirement for special incentives on this front.

iii. Enrolment and collections*:* The Aggregator will be responsible for ensuring high and equitable coverage in the area that it services. The Aggregator will form the single window through which the beneficiary can enrol for all social security schemes under CSS. The Aggregator will also be responsible for collecting contributions from customers for pensions.

iv. Servicing the Client*:* Once a customer is enrolled, they need to be provided with information on product features, provider networks, access to benefits, and claims settlement procedures. In addition, the Aggregator should have a well-defined process for grievance redressal that is prominently displayed at every branch or outlet and communicated clearly to customers at the time of registration and renewal. The Aggregator must also indicate to customers that they could contact the SSSA in case they feel their grievances were not dealt with to their satisfaction.

    Further, the aggregator must have the ability to recommend suitable life insurance, health insurance, and pension cover to the beneficiary.

In summary, the envisioned role of the aggregator is one of a 'service provider', which extends far beyond the enrolment stage. Aggregators can also play an active role in expediting Aadhaar-based delivery of services, as detailed in Annexure D. They will need to achieve equitable coverage of their target market, create awareness, collect contributions, and service the client.

Recommendation 2.4.2:
Functions of the Aggregator:
Aggregators shall perform functions relating to identification of beneficiaries, marketing and awareness creation, enrolment and collections, and servicing.

III. Incentives for Aggregators

The current incentives provided to the distributors of RSBY, NPS, and AABY, have resulted in an inequitable distribution of the product. We recommend a combination of monetary incentives and guidelines for aggregators in order to ensure high volume of coverage, equitable coverage and provision of information on access to services and product usage, and quality of service provision.

i. Volume of Enrolments:

a. Life and Health Insurance: Although life and health plans will be sold for free to the target beneficiaries, incentives will be required to ensure a high volume of enrolments. The current distribution mechanism for RSBY and AABY addresses this aspect in a reasonably effective way. RSBY enrolment is done at enrolment camps that are set up in public centres on a specified date. The system has proven effective at minimising adverse selection due to the mass enrolment feature, but it has caused many eligible candidates to be left out due to the narrow enrolment windows. Distributing through Aggregators will ease this, as enrolment into the scheme will be available at any time. However, enrolment into these schemes cannot be left only to the discretion of the customer, due to the problems of adverse selection from voluntary enrolment. Therefore, in order to maximise enrolment, Aggregators can both conduct mass enrolment camps at specified dates, and provide the products to those who wish to purchase them at a later date. We believe that a flat enrolment rate, as is currently provided to TPAs, will suffice in motivating aggregators to conduct mass camps, as they provide a cost effective way to enrol as many candidates as possible. Aggregators should be provided with Rs. 20 per enrolled family in health insurance, and Rs 10 per enrolled beneficiary in life insurance.

b. Pensions: Currently, aggregators are incentivised at a flat Rs 92 per person who enrols into NPS-Lite and contributes a minimum of Rs 1000. An additional Rs 92 is provided if the enrolee contributes at least the same amount in the second year as well. If the beneficiary does not meet this minimum contribution, the aggregator is not compensated at all. This structure was designed to ensure that Aggregators were incentivised to get individuals to invest Rs. 1000 each year. However, this means that aggregators have no incentive to reach out to those who they deem unable to reach Rs. 1000 and may mean that individuals wanting to save lesser than Rs. 1000 may be excluded. In order to address this problem, we recommend that the Aggregator be compensated at a lower rate of 5% for all savings below Rs.

1000 a year and a flat fee of Rs. 100 for savings of Rs. 1000 and more. For example, if an individual contributes Rs. 500, the government incurs a Rs. 500 match and a Rs. 25 incentive payment to the aggregator, a total payment of Rs. 525. If an individual contributes Rs. 1300, the government match would be Rs. 1000.

Recommendation 2.4.3:
Aggregator Incentives for Life and Health Insurance, and Pensions:
Aggregators should be provided with Rs. 20 per enrolled family in health insurance, and Rs 10 per enrolled beneficiary in life insurance. The incentive fee for pensions should be 5% for contributions below Rs. 1000, and a flat incentive fee of Rs.100 for Rs.1000 and above.

ii. Equitable Coverage: Providing only a flat, per beneficiary rate to the aggregators may result in high volumes, but it could also result in inequitable coverage. Hard to reach areas, or areas with low populations could be left out entirely. Although the flat fee structure described above will compel the aggregator to visit as many villages as possible, there is still the possibility that very remote locations which involve large distances and high operational costs are left out.

The SSSA must track the coverage by Aggregators in each state. In the event that coverage remains inequitable in some areas, the SSSA must identify ill-serviced areas in the state as 'high priority areas'. This should be based on a combination of at least three factors:

a. distance from nearest urban centre,
b. level of poverty, and
c. ratio of backward castes.

SSSAs can choose to incorporate other factors, but they should be clearly defined. Consequently, the SSSA must annually put out a list of 'high priority areas' in each state that are not adequately covered by Aggregators. Depending upon the extent of exclusion, the SSSA can choose to provide additional incentives to aggregators to service these high priority areas and ensure equitable coverage.

iii. Quality of Service Provision: The existing distribution networks for life and health insurance do not address this adequately. This is primarily because it is under the purview of the state governments to provide service. Aggregators, however, are naturally incentivised to provide their customers with high quality services. This is because a good client-service provider relationship is in their direct interest, and since this relationship has a repeated game flavour, it could directly impact the take-up of other financial products and re-enrolment in subsequent years. Therefore, it is expected that by purely shifting the distribution of these products to aggregators (and away from the state), servicing will improve more naturally.

Despite these natural incentives, we recommend that the State Social Security Administration (SSSA) assess the quality of customer service using the following strategies:

a. Mystery shopping at Aggregator branches where an independent auditor acts as a potential beneficiary and monitors the provider responses. This allows the monitoring body to verify whether the provider is complying with the required regulations. For instance, an auditor could verify whether an aggregator is correctly applying KYC norms, that a non-beneficiary auditor should not be enrolled, that information passed on concerning the products available under CSS is done appropriately. The advantage of using audit surveys is that it limits recall bias from the beneficiary. A Mystery Shopping report should be published biennially.

b. Compilation of individual complaint-level reports from the SSSA grievance redressal mechanism on the nature of complaint, Aggregator involved, time of complaint, time of resolution and resolution achieved. This report should be put out every year.

Persistent poor performance by an Aggregator over time should be grounds for dis-empanelment of the Aggregator by the NSSA in consultation with the SSSA from providing CSS in the state.

Recommendation 2.4.4:
Publication of List of High Priority Areas and Quality of Aggregator Service Reports:
SSSA should publish a list of areas that are poorly serviced by aggregators annually. The list should take into account at least three factors: distance from nearest urban centre, level of poverty, and ratio of backward castes, and any additional factor that the SSSA deems suitably important. The SSSA should also annually publish reports on complaints received and action taken as well as biennial mystery shopping report.

Chapter 2.5
Recommendations on Proposed Implementation Architecture

Recommendation 2.2.1:
Use of Existing, but Modified Schemes:
Continue to use the three existing schemes, Aam Aadmi Bima Yojana (AABY), Rashitriya Swasthya Bima Yojana (RSBY), and National Pension Scheme – Swavalamban (NPS-S), significantly modified to accommodate for various design and implementation related weaknesses, to be offered under a single-window architecture.

Recommendation 2.2.2:
Universal Coverage:
All products under CSS should be available to all eligible members of the household. Additionally, in keeping with the spirit of social security as a minimum level of protection, CSS should be made available for all citizens. While the subsidy may be provided only to the unorganised sector, an unsubsidised version of the CSS product must be available to everyone.

Recommendation 2.2.3:
Identification of Unorganised Sector Workers:
The principle for identifying unorganised sector workers should be based on self-reporting by individuals (as recommended under the UWSSA) but not at the district administration; instead self-reporting can be done as in the case with NPS-S currently. This can be an effective and cost efficient strategy for identification of unorganised sector workers.

Recommendation 2.2.4:
Aadhaar-Based Platform for Authentication:
Access to all CSS products (RSBY, AABY, NPS Lite) should be linked to the Aadhaar platform. However, for such a system to work, online connectivity must be ensured at all points of service. In places where internet connectivity is poor, the RSBY smart card can be continued with the objective that it will be replaced by Aadhaar as connectivity improves. We, therefore, propose a gradual shift from one system to another.

Recommendation 2.3.1:
Ownership and Governance by the National Social Security Administration:
The CSS scheme and all products therein should be owned and governed at the central level by The National Social Security Administration (NSSA), a special purpose vehicle (SPV) set up as a Trust.

Recommendation 2.3.2:
Board of Trustees of the NSSA:
The NSSA should be helmed by a Board of Trustees that is chaired by the Prime Minister. The board itself should be comprised of the Ministers (or other senior representatives) who head the ministries relevant to CSS such as the Ministries of labour, health, finance and women and child development. Other members of the Board include independent experts on life

insurance, health insurance and public health, and pensions; representatives of insurance companies, pension fund managers, distributors; a representative from Aadhaar; and representatives of unorganized sector workers such as from labour unions and welfare boards.

Recommendation 2.3.3:

Nature and Responsibilities of the NSSA:

The NSSA Trust should be a controlling and coordinating entity, and not an operating entity. It should be responsible for: i) defining the scheme; ii) providing clarity on roles and responsibilities of the various stakeholders; iii) implementation design; iv) monitoring and evaluation; v) appointment of distributors; vi) record keeping; vii) systems design; viii) financial management; ix) capacity building; x) research and development; and xi) standardisation of processes.

Recommendation 2.3.4:

Functions of State Social Security Administrations:

Each state should have an independent State Social Security Administration (SSSA) responsible for: i) contracting of service providers and insurance companies; ii) establishing the target beneficiaries; iii) awareness creation; iv) mobilising resources for enrolment; and v) grievance redressal and monitoring

Recommendation 2.4.1:

Aggregator led Model for Distribution of CSS:

The distribution of CSS should be led by Aggregators, who shall be the single point of interaction for the beneficiary to access all components of CSS. The NSSA should follow the Aggregator eligibility guidelines as laid down currently by PFRDA. In addition to the existing list of Aggregators allowed under PFRDA, the postal department, telecom and FMCG company networks should be leveraged to deliver financial products under the CSS suite.

Recommendation 2.4.2:

Functions of the Aggregator:

Aggregators shall perform functions relating to identification of beneficiaries, marketing and awareness creation, enrolment and collections, and servicing.

Recommendation 2.4.3:

Aggregator Incentives for Life and Health Insurance, and Pensions:

Aggregators should be provided with Rs. 20 per enrolled family in health insurance, and Rs 10 per enrolled beneficiary in life insurance. The incentive fee for pensions should be 5% for contributions below Rs. 1000, and a flat incentive fee of Rs.100 for Rs.1000 and above.

Recommendation 2.4.4:

Publication of List of High Priority Areas and Quality of Aggregator Service Reports:

SSSA should publish a list of areas that are poorly serviced by aggregators annually. The list should take into account at least three factors: distance from nearest urban centre, level of poverty, and ratio of backward castes, and any additional factor that the SSSA deems suitably

important. The SSSA should also annually publish reports on complaints received and action taken as well as biennial mystery shopping report.

Section 3
Product Level Features

Chapter 3.1
Life Insurance

I. A General Principle for Life Insurance Cover under Comprehensive Social Security

Life insurance is a financial product that helps the household tide over the shock of loss of income due to the unexpected death of an income earning member. The extent of life and accident cover required for an individual is closely tied to the individual's 'human capital'. An individual's human capital can be defined as the net present value of the future real expenditure and earning streams associated with that individual[20]. Ideally, therefore, life insurance must cover the extent of human capital of any individual, which reflects the loss of earnings to the household in case of death of that individual.

Life insurance under social security must clearly indicate, therefore, the minimal extent of human capital that public policy deems must be protected for all citizens. Human capital is a function of multiple variables like age, education and skill level of the individual. Both education and skill level of the individual are highly correlated to her income, and so we use income as a proxy variable to calculate human capital.

We choose the human capital associated with a particular age and income profile below which it is considered infeasible for a household to function effectively upon the death of an income earner. In order to make this assessment, it is useful to analyse the human capital matrix across different ages and incomes. This analysis has been performed on data from a financial services firm that is operational across rural districts in three states of India[21]. It is pertinent to note that households in the first and second income quintile are below the official poverty line estimated by the Expert Group to review the methodology for estimation of poverty[22], defined as expenditure per capita of Rs. 27.2 in rural areas.

The table below provides the value of human capital for ages ranging from 20 to 55 grouped by income quintiles. In view of the fact that social security is designed to provide a minimum cover in case of the income-earner's death, it is pertinent to focus on the human capital of the lowest income quintile. It is striking that there is an order of magnitude difference between the human capital of a 50 year old at Rs. 32,123 and a 20 year old at Rs. 467,548.

Table 3.1.1: Human Capital (Age-wise) for earning member

Age	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
20 years	467,548	1,071,936	1,661,201	2,567,983	5,889,806
25 years	394,977	920,731	1,433,253	2,223,217	5,122,805
30 years	322,406	769,526	1,205,305	1,878,450	4,355,803
35 years	249,836	618,320	977,357	1,533,684	3,588,802
40 years	177,265	467,115	749,409	1,188,918	2,821,801
45 years	104,694	315,909	521,461	844,151	2,054,800
50 years	32,123	164,704	293,513	499,385	1,287,799
55 years	-40,447	13,498	65,565	154,618	520,797

Covering the human capital of a 40 year old in the first income quintile – a cover of Rs. 1,75,000 - would require a premium in the range between Rs. 460 and Rs. 675, substantially higher than the Rs. 200 premium in force currently. While there may be financial constraints that prevent extant life cover under social security from being set at this level, it is useful to articulate this – the human capital of a 40 year old in the bottom quintile should be the life insurance coverage goal to work towards over a specified period of time

Recommendation 3.1.1:
Objective of Life Insurance under CSS:
Life Insurance under social security should work towards covering, at minimum, the human capital of a 40 year old in the bottom quintile.

The current coverage provided for natural death under the Aam Aadmi Bima Yojana (AABY) and Janashree Bima Yojana (JBY) is Rs. 30,000, which according to the human capital calculations does not provide adequate cover for even a 50 year old in the lowest income quintile. Considering the fact that a younger income earner's death will have a tremendous impact on the well-being of the household, as evidenced by the human capital calculations, it is clear that the present coverage under life insurance must be enhanced. In section C, we provide indicative human capital that can be covered at different levels of premium.

However, the actual extent of human capital cover that can be provided is a function of the premium that the Government can afford to pay as subsidy. From the perspective of Suitability, it is essential that the individual be informed that life insurance cover under social security ensures only a minimum human capital cover. It must be the duty of aggregators to inform the beneficiary about the value of her human capital, the recommended cover that she should ideally take, and that social security covers only a part of it.

Recommendation 3.1.2:
Beneficiaries Must Be Informed of Suitable Life Insurance Cover:
It is essential that the beneficiary is informed that life insurance cover under social security ensures only a minimum human capital cover. The Aggregator should inform the beneficiary about the value of her human capital, the recommended cover that she should ideally take, and the cover provided by social security.

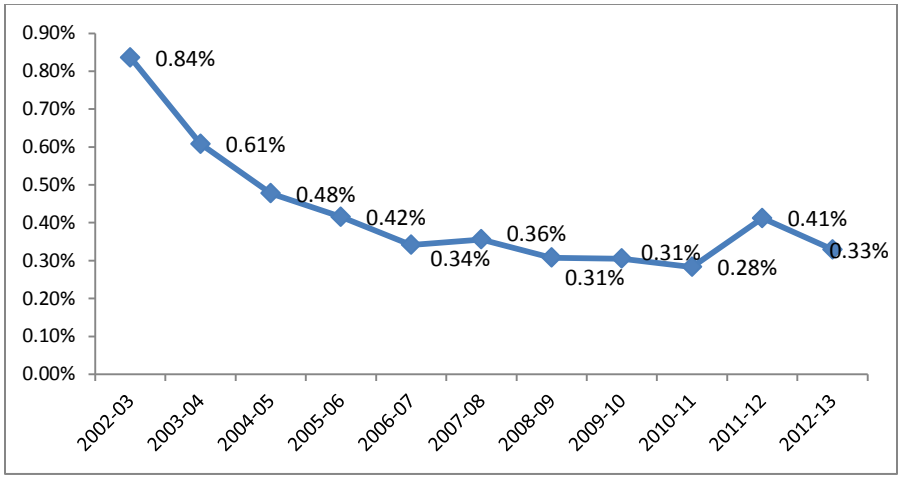
II. The Current Product: Design, Price, and Performance

Janashree Bima Yojana (JBY) is a government sponsored insurance scheme launched in August 2000, which replaced the Social Security Group Insurance Scheme (SSGIS) and Rural Group Life Insurance Scheme (RGLIS). JBY covers workers between 18 and 59 years of age under 45 occupational groups like beedi workers, fishermen, plantation workers etc. and provides a cover of Rs. 30,000 on natural death, Rs. 75,000 on death due to accident and permanent disability due to accident, and Rs. 37,500 on partial disability due to accident. The premium

of Rs. 200 per person per annum is shared between the Central Government (50%) and the Nodal Agency and/or the beneficiary (50%). Aam Aadmi Bima Yojana (AABY) is a social insurance scheme started in October 2007 that offers the same benefits as the JBY to rural landless households. The premium amount is Rs. 200 and is shared equally by the Central Government and the State Government. Both schemes are implemented through LIC.

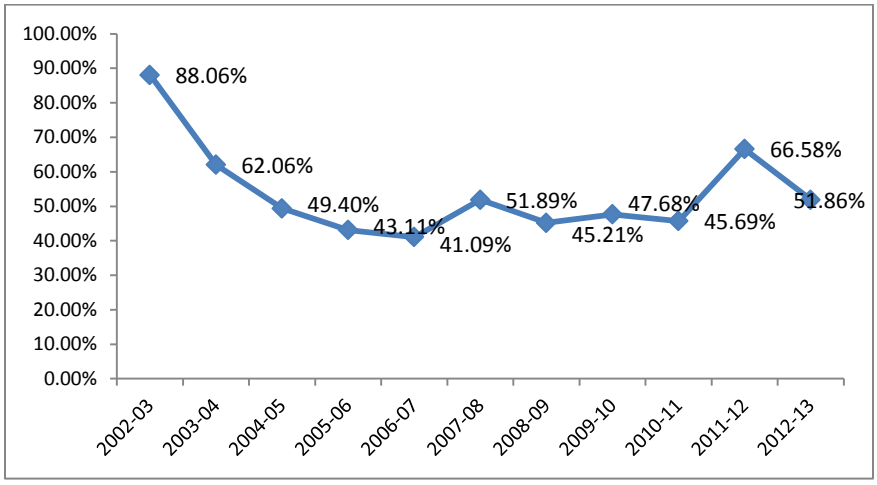
In 2012, AABY and JBY were merged for better administration and provision of services. An analysis of the performance of the two schemes reveals the following: There has been a steady decline in the incidence ratio[23] since the inception of the JBY scheme – from 0.84% in 2002-03 to 0.33% in 2012-13 (Figure 3.1.1). The combined performance of the products since 2008-09 reveals that incidence has remained fairly consistent between 0.31% and 0.33% (except for a spike to 0.41% in 2011-12). This level of incidence is at par with the aggregate market incidence ratio of 0.309%[24].

Figure 3.1.1: Incidence Ratio for AABY-JBY



The Claims Ratio[25] of the products has also declined from 88.06% in 2002-03 to 51.86% in 2012-13 (Figure 3.1.2 below). In the past five years, with the data of the two schemes merged, the claims ratio has been in the 45% to 50% range (with the exception of 2012, when it spiked to 66.58%). The low claims ratio over a reasonable time frame of the product is a reasonable indicator of over-pricing of the product[26,27,28]

Figure 3.1.2: Claims Ratio for AABY-JBY



III. Recommendations for Re-Designing Life Insurance

The analysis of the existing products clearly reveals that there is a need to relook at the pricing, extent of cover and eligible age for life insurance under CSS.

A. Price

As the claims ratio indicates, the premium for the AABY-JBY schemes appear too high for the extent of cover provided. In order to calculate a more appropriate and realistic price for the current AABY product, we use two approaches:

i. The actuarially fair premium: Based on market mortality rates laid out by IRDA, the actuarially fair premium for AABY is Rs. 86[29]. Considering that the scheme has been witnessing incidence ratios at par with the market, it is clear that the present premium of Rs. 200 is at 230% of fair price. Even accounting for adverse deviation margins, administrative expenses and taxes that would need to be layered on top of the actuarially fair price, the current premium appears over-priced.

ii. The market price for life insurance: Based on price points provided by the financial services firm in our analysis, we calculate that the price for an actual life and accident cover similar to that by AABY is Rs. 123, inclusive of margin for adverse deviation, administrative expenses and taxes. Based on this analysis, the current AABY product is priced at 163% of the market price.

Based on this analysis, the current premium of Rs. 200 should fetch a cover much higher than Rs. 30,000 and could be in the range of Rs. 50,000 or higher on natural death, keeping accidental death coverage at Rs. 75,000. If the premium were enhanced to Rs. 300, this would fetch a natural death cover over and above Rs. 75,000 and an accidental death and permanent disability cover at or above Rs. 1,25,000.

Under the current design of AABY, a part of the positive surplus (65% to 95%) after allowing for expenses and contingent reserves for unreported claims is returned to the GoI as a

deduction from gross premium for next policy year (called Experience Rating Adjustment or ERA). This essentially means that the effective premium being paid under AABY is less than Rs. 200. However, the beneficiary is being subject to a sub-optimal policy with a notional premium of Rs. 200 but protection provided is at a much lower level than such a premium warrants; the ERA is flowing back to the government each year and is of no benefit to the end user. Instead, if a fairly priced policy at a premium of Rs. 200 were purchased, the beneficiary would clearly gain from having a higher level of protection.

It is clear that there needs to be a fundamental change in the pricing of the life insurance product and this can be achieved only by opening up the product premium for competitive bidding from life insurance companies in the market, similar to the model currently followed by Rashtriya Swasthya Bima Yojana (RSBY) for health insurance.

Recommendation 3.1.3:
Re-Pricing Life Insurance:
Life Insurance needs to be re-priced by opening it up to the market. The life insurance product premium should be opened up for competitive bidding from life insurance companies in the market, similar to the model currently followed by RSBY for health insurance.

B. Eligibility Age

As shown in Table 3.1.1, the human capital of a 55 year old in the lowest income quintile is Rs. - 40,447. Negative value of human capital indicates that this individual's expected future earnings are lower than her expected future expenditure. Comparing human capital values across income quintiles, it is clear that the expected loss of income to the household from the death of a 55 year old is low. However, the human capital remains positive for individuals in the other income quintiles. The human capital of a 55 year old in the third income quintile is Rs. 65,000.

Thus, we recommend that the upper limit on age of eligibility of the scheme be reduced from 59 years to 55 years. This offers the advantage of providing enhanced coverage for the rest of the working population.

Recommendation 3.1.4:
Reduce Upper Limit on Age of Eligibility for Life Insurance:
The upper limit on age of eligibility of the scheme should be reduced from 59 years to 55 years.

Table 3.1.2 below presents the human capital cover under both the current and proposed eligibility age. At a premium of Rs. 200, the human capital cover offered on natural death can approximately be increased between Rs. 17,500 and Rs. 50,000 by reducing age of eligibility to 55 years. An increase of Rs. 50,000 to Rs. 75,000 can be offered as cover on accidental death. This ensures that the benefits of government subsidy are received by those who are

most at risk. For instance, Rs. 1,75,000 is sufficient to cover the human capital of a 40 year old in the lowest income quintile. Additionally, compared to an expected premium of between Rs. 460 and Rs. 675 for providing this cover under the current eligibility criteria, the premium drops to between Rs. 345 and Rs. 510 (inclusive of an accidental death cover of Rs. 1,75,000). This reduction in premium is due to the fact that, the mortality rates of individuals in the age group 55-60 years are the highest. The overall premium amount for the new covered population (18-55 years) reduces since the age groups (55-60 years) that are most at risk are not covered by the scheme.

Table 3.1.2: Human Capital Cover under Current & Proposed Eligibility Age

Premium	Human Capital cover under current eligibility age (18-59 years)	Human capital cover under proposed eligibility age (18-55 years)
Rs. 200	Rs. 50,000 to Rs. 75,000 on natural death, Rs. 75,000 on accidental death.	Rs. 70,000 to Rs. 1,00,000 on natural death, Rs. 1,00,000 on accidental death.
Rs. 300	Rs. 75,000 to Rs. 110,000 on natural death, Rs. 1,25,000 to Rs. 150,000 on accidental death.	Rs. 1,00,000 to Rs. 1,50,000 on natural death, Rs. 1,75,000 to Rs. 2,00,000 on accidental death.

Program Expenditure

In this section, we estimate the expenditure burden on the government for the life insurance component of Comprehensive Social Security under various scenarios.

Scenarios:

i. Premium variations: based on a premium of Rs. 200 per person per annum and Rs. 300 per person per annum respectively

ii. Extent of subsidy: based on full population or only vulnerable poor[30] coverage

Under these scenarios, the expected government expenditure is as follows:

Table 3.1.3: Coverage and Extent of Subsidy under a Premium of Rs. 200

Premium / Extent of subsidy	Full Unorganised Sector Population	Only Vulnerable poor
Rs. 200	80.9 billion	29.7 billion
Rs. 300	121.3 billion	44.6 billion

A premium of Rs. 300, as described earlier, will fetch a natural death cover from Rs. 1,35,000 to Rs. 212,500 and an accidental death and permanent disability cover ranging from Rs. 1,75,000 to Rs. 2,50,000. These limits are substantially greater than the cover provided for a premium of Rs. 200 today. In view of this, the total annual outlay by the government to provide life insurance under CSS will be between Rs. 44.6 billion (vulnerable poor coverage) and Rs. 121.3 billion (for full unorganised workforce coverage) for the first year. An analysis of the expected outlays over the first five years of the program (2013-17) is presented below.

We provide two projections based on expected take-up rates of the product. The expected take up scenarios are provided in Table 3.1.4. The data obtained from the financial services institution forms the basis for observed take up rates of life and accident insurance. The second scenario assumes 100% coverage in 5 years.

If the government decided to subsidise only the vulnerable poor population, then applying these take up scenarios and assuming a premium of Rs. 300, the expected government outlay for the next 5 years will be in the region of Rs. 39.0 billion to Rs. 62.2 billion.

Table 3.1.4: Take up Scenarios of % of Unorganised Sector Workforce Covered per Year

Year	% of Unorganised sector workforce covered	
Take up Scenario	**High Take Up**	**Low Take Up**
2013	20%	10%
2014	40%	25%
2015	60%	25%
2016	80%	28%
2017	100%	31%

In Table 3.1.5, we present a scenario where GoI decides to keep the premium of the program at Rs. 300 and extend coverage to all unorganised sector workers. A year by year outlay for five years of the program is provided. Assuming the high take up rate scenario, total outlay required in the first year is Rs. 24.3 billion covering 20% of the target population. By the end of the fifth year the outlay increases to Rs. 126.6 billion as the scheme achieves complete coverage. This is the maximum amount that needs to be spent annually to cover every worker in the unorganised sector. The total outlay required for the five years would be Rs. 374.4 billion.

Under the corresponding low take up scenario, outlay required is Rs. 39.2 billion for the fifth year but this assumes coverage of 31% of unorganised workers. The total expected outlay for five years under the low take up scenario is Rs. 148.1 billion.

In summary, based on the take up rates, the total expenditure burden of providing life and accident insurance to all members of the unorganised sector is expected to range between Rs. 148.1 and Rs. 374.4 billion for the next five years.

Table 3.1.5: Government Expenditure on Life and Accident Insurance 2013-17 (in Rs.)
(Premium of Rs. 300/capita/annum)

Take Up Scenario	High Take Up		Low Take Up	
Year	Individuals Covered	Total Expenditure	Individuals Covered	Total Expenditure
2013	80,852,996	24,255,898,653	40,426,498	12,127,949,327
2014	163,445,270	49,033,580,911	102,153,294	30,645,988,069
2015	247,804,884	74,341,465,079	103,252,035	30,975,610,450
2016	333,960,301	100,188,090,192	116,886,105	35,065,831,567
2017	421,940,392	126,582,117,635	130,801,522	39,240,456,467
Total		374,401,152,470		148,055,835,880

As presented in Table 3.1.5, the total outlay over the 5 year period under the high take up scenario is Rs. 374.4 billion, which works out to an average of Rs. 74.9 billion per annum. Based on our calculation, this is equivalent to 0.08% of GDP[31] per annum. However, if life cover were subsidised only for the vulnerable poor, then the average outlay per annum is Rs. 12.4 billion, or 0.01% of the GDP. A comparison with global trends in social security outlay is provided in Table 3.1.6. Globally, low income countries spend about 0.3% of GDP on survivor and disability insurance while medium and high income countries spend 0.4% and 2.5% of GDP respectively[32].

Table 3.1.6: Comparison of Global Expenditure on Life and Disability Insurance
(as % of National GDP)

India (Only vulnerable poor coverage)	0.01%
India (complete unorganised sector coverage)	0.08%
Low Income Countries	0.30%
Medium Income Countries	0.40%
High Income Countries	2.50%

Chapter 3.2
Health Insurance

I. A General Principle for Health Insurance Cover Under Comprehensive Social Security

India needs a Universal Health Care (UHC) scheme that delivers on entitlement of every resident of the state to receive a comprehensive package of healthcare[33]. To offer universal health care, the High Level Expert Group on UHC estimates that India needs to spend about 2.5% of GDP[34] in comparison of 1% of GDP that is being spent today[35]. The National Advisory Council (NAC) Report provides a detailed plan for roll-out of UHC. More than 70% of total healthcare investment is expected to go to preventive, promotive and curative care at sub-centres/ Primary Health Centres (PHC). These centres in turn are expected to manage 95% of patient burden. This will not only reduce the cost of healthcare, but will improve health of the nation as well. However, some of the challenges impeding UHC are:

i. Given the scarce resources, there are questions around how all components of UHC, primary, secondary and tertiary, can be offered in a systematic and efficiently incentivised manner.

ii. PHCs and CHCs are not evenly distributed. The segments of the population whose health care needs are greatest have very poor access to primary health care through PHCs or CHCs[36]. A continuous and concerted effort is required to equip PHCs to fit into their envisaged role.

iii. As cited in NAC report, the current health insurance framework has extensive focus on curative care at hospitals. "Excess" supply in terms of creating excess hospital or bed capacity can be detrimental to the whole concept of universal health care.

While we are in complete support of the vision outlined by the NAC, our focus will be on designing the financial protection component for healthcare under CSS to further the objective of UHC and address some of the challenges outlined. In other words, our recommendations are on how to improve health insurance for the unorganised sector, which is only one of the components that will eventually be needed to improve health outcomes for the unorganised sector, the others being improvements in the public health system that will be necessary to provide protection against higher frequency, primary health events.

Health insurance reduces the cost of financing health care, enabling greater access to care. It pools risks such that less-needy households who do not suffer illness provide funds for needy households who do. This is less costly than financing through savings or borrowing, both of which require sacrifice by the household hit (or about to be hit) by illness[37]. Insurance has its costs in the form of moral hazard and administrative expenses[38], but these costs are lower than alternative methods of financing when asset and credit markets are imperfect, as is often the case in developing countries such as India[39]. Public health insurance therefore could have an important role in lower-income countries especially because private insurance is lacking. In India, the private health insurance market is underdeveloped[40] and caters to the

richer segment of the population[41]. As a result, only 5% of India's population has private health insurance[42]. Although informal insurance is an important part of overall risk-coping, it is unable to fully buffer large health risks[43]. As a result it is essential that Central Government – in conjunction with state governments – must take steps toward providing free health insurance cover for the poor.

We acknowledge that the majority of out of pocket health spending in India is for primary health care events, which can only be sufficiently addressed through improvements in the public health system. However, health coverage under CSS is designed to cover unexpected healthcare expenditures. This is because unexpected health expenditures, given their low-frequency nature, need financial arrangements that make available the benefits of pooling to protect individuals and households from the extreme financial impact of these events. Unless there is active policy intervention to ensure that this pooling happens, it is unlikely that spontaneous, sufficient pools of capital will get created, thus making the financial protection arrangement unavailable even to those individuals and households that are interested in it. Health insurance, as a part of the vision of UHC, plays an important role of protecting individuals and households from extreme healthcare shocks by insuring expenditures on low probability and high value health care events.

II. Current Product

A. Notable Features

RSBY health insurance was introduced in 2007, and has achieved rapid growth in a relatively short period of time. It is based on a reasonably sound public-private-partnership model that has some notable features –

i. Supply and Demand: RSBY is celebrated as an intervention that addresses both supply and demand for healthcare. Most government services focus on supply, providing different components of a health system, such hospital or medicines. Such a framework lacks short---term accountability: a poor patient without resources to turn to the private sector has no alternative, and provider salaries are fixed irrespective of performance. Under RSBY, the insurance coverage empowers the patient to choose between a series of public and private providers so that the money follows the patient.

ii. Incentives: RSBY includes carefully calibrated incentives. Public hospitals are incentivised to satisfy customers, who can otherwise "vote with their feet" and switch providers. Private providers have incentives to offer services in remote areas that were not previously profitable. Package rates encourage hospitals to keep costs low, in contrast to a fee---for---service system where there are incentives to add nonessential components to increase the patient's bill. Insurance companies have incentives to minimise costs through the tender system, to promote widespread enrolment so they maximise premium payments, and to check hospital fraud that cuts into their profits.

iii. Addresses Adverse Selection: RSBY overcomes adverse selection by enrolling households as a unit, and not individuals. Mass enrolment camps, and the targeting of large groups has also minimised this problem.

iv. Has a dynamic learning process: Recognising that outpatient care accounts for a significant portion of Out Of Pocket Spending (OOPS), RSBY is now piloting coverage for up to 10 medical consultations per year. To address quality, RSBY is experimenting with a rating program that allows hospitals with minimal facilities to participate on the condition that they make annual improvements.

v. Attracts voluntary state participation: States are not required to join RSBY. The program's approach was to roll out in a handful of initial willing states to demonstrate proof of concept with the expectation that other states would see the impact and join. This has worked fairly effectively, as RSBY is now serving 30 states and union territories.

vi. Offers portability of coverage to mobile populations: An RSBY member can use his smart card to access hospital services anywhere in the country, provided the hospital is empanelled. This has a tremendously beneficial effect on migrant populations.

B. Program Weaknesses

Despite its strength in ability to enrol large numbers of people, use of technology, and the leveraging of private sector expertise in insurance, the program is riddled with significant weaknesses, such as:

i. Enrolment inconsistencies: RSBY currently has over 35 million households enrolled. Research has noted several design and implementation issues around RSBY. For instance, a Maharashtra based household survey found that the flat premium paid per household enrolled gives insurance companies less incentive to reach out to remote households[44]. The same study in Maharashtra found that annual changes in insurance providers created confusion among both beneficiaries and providers. Further, it has been observed that the distribution of cards and information on empanelled hospitals does not always follow standard procedures[45].

ii. Inconsistencies in quality of hospitalisation service: By design, RSBY is a scheme that is meant to work offline. However, a qualitative study of hospitals in Chhattisgarh found this rarely occurred, as hospitals were concerned that claims would be rejected. This made it impossible to swipe the smart card within 24 hours of admission or discharge when electricity was unavailable[46]. The same study found that after a change in TPA a year earlier, three out of four of the primary health centres in the Raipur district could not treat RSBY patients because software was not updated. Further, in terms of services, a study conducted in Maharashtra found that the majority of RSBY usage

went towards low severity conditions like fevers, weakness, debility, backaches, and abdominal pain[47].

iii. Abuse: In the Maharashtra study, doctors listed patients with abdominal pain as surgical cases and documented those with minor fever as intensive care unit patients. Rathi notes: "*While the well- endowed private hospitals cherry pick cases, the public hospitals are left with the chronic and day-to-day cases for which the packages offered are not profitable, often these hospitals find inappropriate ways to compensate such as prolonging hospital stay*" (Rathi, Mukherji, and Sen 2012). In Dasgupta's study in Chhattisgarh, patients with common illnesses like diarrhoea and malaria were admitted for five days and charged an average of Rs. 3,750 although they only needed Rs. 100 worth of medicine (Dasgupta et al. 2013).

iv. Smart card costs: Each smart card costs approximately Rs. 30, with another Rs. 90 required for the enrolment process, accounting for a significant proportion of premium costs.

v. The Use of BPL Lists: The BPL list has been criticised for including significant numbers of APL households, while excluding an equally significant number of actual BPL households. As a consequence, some needy families are unable to participate.

C. Coverage

RSBY has been rolled-out in 500 districts out of a total of 640 districts of India as on June 2013. The program coverage is approximately 50% of eligible customers. The insurance premium is determined at the district level, based on an open tender process. The average premium is Rs. 448, with wide variations between districts across the country.

Table 3.2.1: Maximum and minimum values of coverage and premium

	Coverage	Premium
Minimum	9.68% in Delhi	Rs. 288 in Meghalaya
Maximum	78.11% in Andhra Pradesh	Rs. 738 in Kerala

The central government contributes 75% of premium amount and state government contributes 25%. Customers are expected to pay the cost of the card which is Rs. 30. A total of 12,536 hospitals are empaneled by RSBY out of which 65% are private hospitals.

Table 3.2.2: Hospital Statistics

Number of hospitals	12,536
Number of private hospitals	8096 (65%)
Number of hospitals per 10,000 enrolled families	3.57

III. Recommendations for Re-designing Health Insurance

We recommend that the current RSBY product form the centrepiece of the health insurance component of CSS, and propose that the following components be built around it in order to address some of the weaknesses highlighted in the preceding section:

A. Developing Preventive Care Protocols for Cardiovascular Disease in RSBY and Extending the Length of the Insurer Contract

According to the World Health Organisation (WHO)[48], cardiovascular disease (CVD) will be the largest cause of death and disability in India by 2020. Diabetes, high cholesterol, and hypertension along with obesity (measured with the help of body-mass-index) are the main drivers of CVD risk[49]. The Global Burden of Disease 2010 analysis[50] also highlights high blood pressure and high total cholesterol as major risk factors for Indian population.[51] The WHO also estimates that the overall prevalence of diabetes, hypertension and heart diseases is 62.47, 159.46 and 37.00 per 1,000 persons respectively in India. The prevalence of diabetes is expected to increase threefold to 187.37 per 1,000 persons and that of hypertension is expected to double to 318.91 per 1000 persons in 2025 which will lead to loss of approximately 17.9 million productive years of life in 2025[52]. Circulatory ailments have been the largest contributor to total claims paid in any given year. The percentage difference between the claim amount paid for circulatory ailments and second-highest ailment in terms of claims paid is close to 50%. The number of claims for circulatory cases has also increased by 70% from 2007 to 2010. Total claim paid for circulatory cases has increased by 96% from 2007 to 2010 whereas average claim amount has increased by 15% from Rs. 40,231 to Rs. 46,320 within the same time frame.

However, CVD is an ailment that can be identified and prevented by using cost-effective techniques as highlighted in the NAC report on universal health cover[53] and proven by many studies[54]. A non-laboratory risk stratification tool which measures simple markers like body-mass-index, blood pressure, tobacco consumption etc. can be used to risk-stratify customers in low, medium and high risk of CVD.[55] Post risk-stratification, for very high risk customers, a presumptive treatment plan with a suitably designed multi-drug cocktail[56] with required follow up and a detailed treatment plan for customers with existing clinical condition can be of great use. NAC recommends offering these preventive care services through enrolment procedure and 'starter packs' i.e. at the time of enrolment for CSS, a rapid risk assessment by the insurance companies for selected diseases can stratify customers as per their risk levels. Suitable preventive protocols can then be suggested for high risk customers.

We recommend that such a protocol for CVD be introduced as part of the RSBY health insurance plan itself. Requiring the CVD preventive care protocols as part of the RSBY insurance package will incentivise insurers to ensure that customers are screened and protocols implemented appropriately, so as to ensure that hospitalisations on account of CVD are minimised and claims paid out reduced.

By assuming long-term adherence of 40% in those with existing disease and 20% in those without existing disease, India is expected to experience reduction in deaths due to CVD by 5.8 million over a ten year period. The average annual cost of such intervention is expected to be around Rs. 55 per person. Such an arrangement also helps to build skilled, trained and experienced man-power in preventive care, which in the long-run can be a valuable human resource pool for PHCs.

Recommendation 3.2.1:
Introduce Preventive Care Protocol for Cardio-Vascular Disease in RSBY:
A preventive care protocol for CVD should be introduced as part of the RSBY health insurance plan in view of the high risk of incidence and easy-to-implement prevention strategy.

Insurance companies can benefit by offering preventive care services for CVD in a given location only when they are in business in that location over a substantial length of time. This is because a longer tenure contract provides the appropriate incentives for insurance companies to perform preventive care services most efficiently as the benefit of low claims arising due to preventive care services will manifest over a period of a few years in the form of lower hospitalisation requirement and thus lower claims. We therefore recommend tenures of 3 years for these insurance contracts. Further, at the time of rebidding for the contract, the quality of existing services delivered by the insurance company must be factored into the bidding process.

Recommendation 3.2.2:
Extend Length of Insurer's Contract:
The tenure of insurance contracts should be increased to 3 years. Further, the quality of existing services delivered by the insurance company should be factored into the bidding process.

B. Tertiary Insurance Cover to be Provided by State Governments

In addition to the secondary treatment covered under the RSBY, it is essential that citizens are also covered for catastrophic health events. This refers to events that have a very low probability of occurrence but represent a very high cost, such as emergency care in the case of road accidents. States such as Andhra Pradesh and Tamil Nadu already are already implementing catastrophic care insurance schemes for households below the poverty line.

Andhra Pradesh, for instance, implements the Rajiv Arogyasri Scheme (RAS) which provides up to Rs. 2,00,000 of household cover for treatment of serious ailments requiring hospitalisation and surgery through an identified network of healthcare providers. A total of 938 treatments are covered in the scheme[57]. Tamil Nadu, meanwhile, is implementing the Chief Minister's Comprehensive Health Insurance Scheme, which provides coverage up to Rs. 1,00,000 per household per year on a floater basis for tertiary care. Himachal Pradesh and Delhi have created 'top-up' schemes to the RSBY in order to cover individuals with tertiary care. In Himachal Pradesh RSBY Plus, funded by the State Government's general revenues, provides an

additional coverage of Rs.1,75,000 so as to include an additional 326 procedures like cardiac surgeries, genito-urinary surgeries, and spinal surgeries amongst others.

Following the lead of these states, we recommend that all state governments take the lead in providing tertiary insurance cover for their citizens. A combination of secondary and tertiary care will enable complete health insurance coverage for households. The central government should incentivise state governments to provide tertiary cover by making access to RSBY for the state conditional on the state government creating tertiary insurance scheme. For states that do not have the financial wherewithal, the central government will need to work out appropriate premium-sharing arrangements. This is discussed in further detail in Chapter 4.1.

Recommendation 3.2.3:
States to Provide Top up Tertiary Care Health Insurance:
State Governments should top up RSBY with tertiary health care insurance, thereby ensuring complete health insurance coverage for households.

C. Certificate of Need (CoN) Based Allocation of Medical Facilities

In order to safeguard adequate focus on preventive and primary care in the long run we need to ensure that unwarranted supply-side capacity is not getting built up in the system in the form of excess hospital and bed capacity[58]. The United States has been using the method of Certificate of Need (CoN)[59] to ensure that the medical facilities are constructed only if there is sufficient need. In the USA, the state level health agencies periodically publish an estimated need for hospital beds within the districts of the state. While the CoN review criteria vary from state to state, most states require compliance with the following criteria:

i. Need: Need is the primary focus of CoN evaluations in the USA. Most state agencies use specified mathematical formulae and methodologies to determine need. State agencies periodically publish the need for medical services in districts within the state. This determination of published need enables service providers to plan opening of hospitals in underserved areas.

ii. Cost Containment: The CoN Program determines whether an applicant fulfils the Cost Containment criterion by assessing:
    a. Whether superior alternatives, in terms of cost, efficiency, or effectiveness, are available or practicable;
    b. In a proposed construction project the reasonableness of the costs, scope, and methods of construction and energy conservation and the impact this proposed project would have on the costs and charges to the public;
    c. The ability of the project to involve appropriate improvements or innovations in the financing and delivery of health services which foster cost containment and which promote quality assurance and cost effectiveness.

iii. Financial Feasibility: For instance, in the state of Washington the determination of Financial Feasibility is based on the following criteria:

a. The ability of the applicant to meet the immediate and long range capital and operating costs of the project;
b. The costs of the project, including any construction costs, will probably not result in an unreasonable impact on the costs and charges for health services;
c. The ability of the applicant to appropriately finance the project that is undertaken.

iv. Structure and Process of care: This criterion focuses on the quality of health care services provided by the applicant and proposed in the evaluation. The CoN Program evaluates:

a. The availability of a sufficient supply of staff;
b. The relationship the proposed service has with ancillary and support services as being sufficient to support the proposed health service (i.e. assistance from hospitals);
c. Assurance that the project is in conformance with state licensing requirements and requirements under the Medicaid and Medicare programs, if applicable;
d. The ability of the proposed project to promote continuity in the provision of health care, not result in an unwarranted fragmentation of services, and have an appropriate relationship to the service area's existing health care system;
e. Assurance that the proposed project will be provided in a manner that ensures safe and adequate care in accordance with state and federal laws.

On the one hand this method helps to contain unnecessary expansions of hospitals and on the other, it diverts resources to areas where medical facilities are required. A study conducted by the IMS Institute for Healthcare Informatics reveals that urban residents, who form just 28 per cent of India's population have access to 66 per cent of the total hospital beds available in India while the remaining 72 per cent of rural population is left with access to just one-third of hospital beds across the country. Further, an analysis of the RAS[60] reveals that there is severe inequity in the geographical distribution of hospitals in each district and that beneficiaries are therefore expending additional cost and time in accessing medical services – 52% of beneficiaries spend money out-of-pocket on transportation in order to access medical services under RAS. There is a clear need to have hospitals and medical facilities to be located closer to citizens who lack access and to prevent crowding of hospitals in areas that are already well served.

In India, public health and hospitals are State subjects of the Constitution and the process for registration of hospitals varies from state to state. We recommend that the SSSA publish a document that outlines the estimated need for hospital beds in districts within the state every year. The state government entity that registers hospitals should take cognizance of this estimated need before using a CoN-like approach to determine the final approval to establish hospitals in a given region. This will guide the flow of resources to areas that are most deficient in the supply of medical services.

Recommendation 3.2.4:
Publication of Estimated Need of Hospital Beds in the State:
The SSSA should publish an estimated number of hospital beds required in each district of the state every year. State-level entities that register hospitals should consider the estimated need before approving hospitals in a certain district of the state.

IV. Program Expenditure

In this section, we estimate the expenditure burden on the government for the health insurance component of CSS under various scenarios.

i. Premium variations: based on a premium range of Rs. 1000 to Rs. 1250 per household per annum for the enhanced coverage proposed

ii. Extent of subsidy: based on full population or only for coverage of vulnerable poor

Table 3.2.3: Extent of subsidy

Premium/Extent of Subsidy	Full Population	Only vulnerable poor
Rs. 1, 000	202.1 billion	69.1 billion
Rs. 1, 250	252.7 billion	86.4 billion

These scenarios assume that all households are covered; therefore, in essence, these numbers reflect maximum annual outlay for the first year of the program. It is expected that the annual expenditure for the first year, depending on the choice of extent of cover and the premium bid, could be anywhere between Rs. 69.1 billion (for covering the vulnerable poor at Rs. 1, 000 premium) to Rs. 252.7 billion (for full population coverage at Rs. 1, 250 premium).

An analysis of the expected outlays over the first five years of the program (2013-17) is presented below. We provide two projections based on expected take-up scenarios of the product, as provided in Table 3.2.4.

Table 3.2.4: Take up Scenarios - % of Unorganised sector workforce covered

Year	% of Unorganised sector workforce covered	
Take up Scenario	Scenario 1: High Take Up	Scenario 2: Low Take Up
2013	20%	15%
2014	40%	20%
2015	60%	30%
2016	80%	40%
2017	100%	50%

Projecting the expenditure for health insurance under CSS as proposed, we first assess the outlay in case subsidies are provided only to cover the vulnerable poor. In this case, we find

that the total outlay over the next 5 years could be anywhere between Rs. 107.1 billion and Rs. 259.2 billion, depending upon the premium and the level of product take up as outlined in Table 3.2.5.

Table 3.2.5: Projection for financial outlay to cover only vulnerable poor households (in Rs.)

	High Take Up			Low Take Up		
Premium		**Rs. 1,000**	**Rs. 1,250**		**Rs. 1,000**	**Rs. 1,250**
Year	**Households Covered**	**Outlay**	**Outlay**	**Households Covered**	**Outlay**	**Outlay**
2013	13,822,035	13,822,035,000	17,277,543,750	10,366,527	10,366,527,000	12,958,158,750
2014	27,644,071	27,644,071,000	34,555,088,750	13,822,035	13,822,035,000	17,277,543,750
2015	41,466,106	41,466,106,000	51,832,632,500	20,733,053	20,733,053,000	25,916,316,250
2016	55,288,142	55,288,142,000	69,110,177,500	27,644,071	27,644,071,000	34,555,088,750
2017	69,110,177	69,110,177,000	86,387,721,250	34,555,089	34,555,089,000	43,193,861,250
Total		**207,330,531,000**	**259,163,163,750**		**107,120,775,000**	**133,900,968,750**

In contrast, if the government were to subsidise the provision of health insurance under CSS to all households in the unorganised sector, we expect that the 5-year outlay could vary between Rs. 322.1 billion and Rs. 780.0 billion (Table 3.2.6).

Table 3.2.6: Projection for financial outlay to cover all households (In Rs.)

	High Take Up			Low Take Up		
Premium		**Rs. 1,000**	**Rs. 1,250**		**Rs. 1,000**	**Rs. 1,250**
Year	**Households Covered**	**Outlay**	**Outlay**	**Households Covered**	**Outlay**	**Outlay**
2013	40,426,498	40,426,498,756	50,533,122,195	30,319,873	30,319,873,317	37,899,841,646
2014	81,722,635	81,722,634,851	102,153,293,564	40,861,317	40,861,317,426	51,076,646,782
2015	123,902,442	123,902,441,798	154,878,052,248	61,951,221	61,951,221,899	77,439,026,124
2016	166,980,150	166,980,150,320	208,725,187,900	83,490,075	83,490,075,160	104,362,593,950
2017	210,970,196	210,970,196,059	263,712,745,074	105,485,098	105,485,098,030	131,856,372,537
Total		**624,001,920,784**	**780,002,400,981**		**322,107,585,832**	**402,634,481,039**

If the government decided to cover only the vulnerable poor, the average annual outlay (at Rs. 1250 premium) would be Rs. 51.8 billion (0.05% of the GDP). However, if the government

were to cover all unorganised sector households, then the average annual outlay would be Rs. 156.0 billion (0.16% of GDP).

Chapter 3.3
Pension

I. A General Principle for Pension Cover under Social Security

Pension cover under social security must aim to secure a minimum post-retirement income for an individual. In order to arrive at such a pension floor under social security, we analyse the post-retirement corpus required by individuals across income quintiles and age groups, ranging from 20 years to 55 years. This analysis has been performed on data from a financial services firm that is operational across rural districts in three states of India.[61] It is pertinent to note that households in the first and second income quintile are below the official poverty line estimated by the Expert Group to review the methodology for estimation of poverty[62], defined as expenditure per capita of Rs. 27.2 in rural areas.

Table 3.3.1: 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 3.3.1 above presents the inflation-adjusted (nominal) value and the present value (PV) of the post-retirement corpus required by individuals across age groups in the first income quintile. The analysis assumes that individuals retire at the age of 60 years and that they live up to 80 years of age. 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[63].

Table 3.3.2: Present Value of Post-Retirement Corpuses required across income quintiles

	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
Age of Entry into Pension Scheme	**Present Value of Corpus (in Rs.)**	**Present Value of Corpus (in Rs.)**	**Present Value of Corpus (in Rs.)**	**Present Value of Corpus (in Rs.)**	**Present Value of Corpus (in Rs.)**
20-55 years	150,691	183,609	216,511	253,531	328,272

Table 3.3.2 shows the PV of corpuses required at retirement for individuals across age groups (ranging from 20 years to 55 years) and income quintiles. If the aim of pensions under social security is to guarantee a minimum post-retirement corpus, we propose that the pension product under the Comprehensive Social Security scheme for the unorganised sector aim to cover the post-retirement expenditure of individuals in the lowest income quintile. It is pertinent to note that this forms just 46% of the corpus required by a 20 year old in the highest income quintile. However, social security can aim to provide only a minimum post-retirement income, and not cover the entire corpus required by individuals across income quintiles.

Recommendation 3.3.1:
Objective of Pension under CSS:
The pension product under the CSS scheme should, at minimum, cover the post-retirement expenditure of individuals in the lowest income quintile.

II. Current Product

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 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 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 GoI will be provided only if the subscriber makes the minimum contribution of Rs.1000 per annum to his Tier I account.

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.

A. Notable Features

The NPS product is a significant step forward from the defined-benefit schemes of the past, such as the National Old Age Pension Scheme. In particular, it is notable for –

i. Sound Architecture: The NPS product, in a similar vein to the RSBY product, 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.

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.

iii. Swavalamban match: The government's commitment to co-contribute to unorganised sector pensions, and in essence act in the same vein as an employer would for a formal sector employee, is a laudable and highly attractive feature of the scheme.

iv. Fund management fees: Fees are determined through a competitive bidding process by prospective fund managers, and are around 0.0009% per annum. This is very low compared to fees charged by most mutual funds, which can charge up to 1.75% per year (Asher, 2010).

B. Program Weaknesses

i. Poor awareness creation: The government does not take advantage of mass media channels to create awareness about the benefits of a pension plan. There is ample evidence from other countries, as well as India, that shows that the use of TV, newspapers, and radio, can have a significant role to play in creating awareness and education about complex financial products.

ii. Structural weaknesses: The product itself, in the way it is currently designed, may not be a suitable match for the savings needs of the very poor. A conservative investment mix and lack of inflation indexation means that the product covers only a small part of the beneficiary's post-retirement corpus.

C. Design, Price, and Performance

NPS-S invests 85% of the subscriber's savings in government securities and the remaining 15% in equity instruments. Table 3.3.3[64] provides the present value of the expected terminal amount (amount that is obtained at exit age) that the present investment-mix will yield for subscribers whose entry ages range from 20 years to 55 years. Column 3 of the table provides the expected terminal values of individuals whose entry ages vary from 20 years to 55 years. Expected terminal values reduce as age increases since the investment amount and investment period of a 20 year old entering the scheme today is higher than that of a 55 year old. Column 4 provides the present value of the expected terminal amount. We compare the present value of expected returns (Column 4) for a 20 year old, who enters the scheme today to the post-retirement corpus required by individuals in the lowest income quintile. We find that the terminal value covers only 31% of the person's requisite post-retirement corpus. 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 17% of the post-retirement expenditure of a person whose entry age is 40 years[65].

Table 3.3.3: Expected Terminal Amount, Present value of Terminal Amount and Shortfall from corpus required

Age of Entry into NPS-S	PV of Corpus (in Rs.)	Expected Terminal Amount of investment in NPS-S (in Rs.)	Present Value of Expected Terminal Amount (in Rs.)	Shortfall from Corpus Required
(1)	(2)	(3)	(4)	(5)
20 years	150,691	1,011,130	46,543	69.11%
25 years	150,691	619,109	41,873	72.21%
30 years	150,691	368,860	36,656	75.67%
35 years	150,691	212,806	31,073	79.38%
40 years	150,691	120,815	25,921	82.80%
45 years	150,691	65,803	20,744	86.23%
50 years	150,691	33,204	15,380	89.79%
55 years	150,691	14,738	10,030	93.34%

This analysis reveals two fundamental weaknesses of the scheme as it is currently structured:

i. First, without a matching contribution from GoI, NPS-S does not provide enough incentive for a person to join the scheme. As the report of the Committee to Review Implementation of Informal Sector Pension[66] (CRIISP) notes there is strong economic logic to extending the matching contribution from GoI for perpetuity. Any contribution

from the government lends immense credibility to the scheme and serves as an incentive for those hesitant to contribute. A matching contribution would also provide workers in the unorganised sector parity with those engaged in the organised sector. At present, all formal sector employees are provided pension benefits by the Employees' Pension Scheme, 1995 under which the GoI contributes 1.16% of any employee's wages towards their pension (subject to a monthly cap of Rs.6500)[67]. There is every reason to provide the same treatment to the persons engaged in the unorganised sector.

ii. Second, the expected return from investment in NPS-S for a 20 year old covers only about 31% of her post-retirement expenditure. If the aim of social security pension is to secure a minimum post-retirement income (the post-retirement corpus required by individuals in the lowest income quintile) the present scheme clearly falls short of this objective. As we shall see in the ensuing section, this problem is partly a result of the present investment mix of the scheme, which is too conservative.

Based on data from a financial services firm that offers the NPS product in rural India, we find that take-up levels have been low to start off with, at close to 12%. It is likely that the minimum contribution is acting as entry barrier, deterring customers from investing in the scheme. Additionally, the majority of the subscribers who take up the product do not make the minimum contribution of Rs. 1000 required for the matching government contribution under the scheme. For the customers who enrolled in 2010-11, persistence levels of those contributing Rs. 1000 (out of all those contributing any amount) was in the range of 35% in 2011-12 and 2012-13. These are initial trends and as aggregators appropriately market the product, it can be expected that persistence rates will improve.

III. Recommendations for Re-designing Pensions

A. Contributions to be Made Perpetual, and Indexed to Inflation

Table 3.3.4 below shows the difference in the present values of expected terminal values for age groups ranging from 20 years to 55 years under two scenarios - one, with a matching contribution of Rs. 1000 that is not adjusted for inflation and two, with an inflation adjusted matching contribution by the government.

Table 3.3.4: Comparison of mean terminal values across age groups with and without inflation adjusted matching contribution

Age of Entry into NPS-S	Present Value of Expected Terminal Amount with inflation adjusted Govt. Contribution (in Rs.)	Shortfall from required corpus (with inflation adjusted Govt. Contribution)	Present Value of Expected Terminal Amount with Rs. 1000 Govt. Contribution (in Rs.)	Shortfall from required corpus (with Rs. 1000 Govt. Contribution)
(1)	(2)	(3)	(4)	(5)
20 years	86,589	42.54%	57,010	62.17%
25 years	74,747	50.40%	50,540	66.46%
30 years	64,220	57.38%	44,539	70.44%
35 years	53,864	64.26%	38,869	74.21%
40 years	42,840	71.57%	32,936	78.14%
45 years	32,125	78.68%	26,143	82.65%
50 years	21,556	85.70%	18,492	87.73%
55 years	10,756	92.86%	10,092	93.30%

The analysis from Table 3.3.4 underlines the need for extending the matching contribution until the retirement age of the beneficiary, and indexing it to inflation. For instance, a government contribution of Rs. 1000 through the life of a person joining the scheme at 20 years of age increases the present value of her terminal amount by Rs. 11,000. Even such a contribution, which is not adjusted for inflation, reduces the expected shortfall from required post-retirement corpus (for the lowest income quintile) to 62% - a reduction of 7% from shortfall observed under the present scheme (presented in Table 3.3.3).

We propose that the matching contribution from GoI be made perpetual and in line with the pension that is offered to workers engaged in the organised sector. As noted earlier, there is strong economic rationale to extending government contribution for perpetuity.

Recommendation 3.3.2:
Perpetual Matching Contribution for Pensions:
The matching contribution from GoI under NPS-S should be made perpetual and in line with the pension that is offered to workers engaged in the organised sector.

Since the minimum subscriber contribution and the government co-contribution are currently not indexed to inflation, the scheme does not adequately cover a beneficiary's post-retirement corpus. For instance, the present value of the terminal amount expected from a scheme that adjusts matching contribution for inflation every year is Rs. 86,589 (Column 2) (for a subscriber entering at 20 years of age). This would be sufficient to cover 57.5% of her post-retirement expenditure. 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 CPI.

The NSSA, in consultation with the government should announce the inflation-indexed adjustment of social security benefits every year. It is vital that both the minimum subscriber contribution and the concomitant matching contribution be adjusted for inflation at regular intervals in time. We propose that the minimum contribution and the government match be linked to the Consumer Price Index (CPI) and be revised every year. This will ensure that the benefits of social security are not eroded over time by inflation.

Recommendation 3.3.3:
Index Pension Contributions to Inflation:
The NSSA should announce the inflation-indexed adjustment of social security benefits every year. The minimum contribution and the government match should be linked to the Consumer Price Index (CPI) and be revised every year.

However, there remain concerns that a contribution of Rs. 1000 (inflation-adjusted) would be a heavy burden for subscribers in the lowest income quintile to bear. An increase in the minimum contribution would deter many from entering the scheme and availing the benefit of matching contribution. As noted earlier, the minimum contribution of Rs. 1000 could already be deterring subscribers from joining and investing more in the scheme. Moreover, there still remains the concern that those individuals without any surplus income (like the vulnerable poor) might not be able to save enough to contribute to the scheme and thus, accumulate a post-retirement corpus. The NPS-S is an unsuitable financial product for these individuals and it could be welfare reducing for them to postpone current consumption towards accumulating a post-retirement corpus. They require an unconditional cash transfer such as the National Old-Age Pension Scheme (NOAPS).

We recommend an unconditional cash transfer of Rs. 1000 per month be provided for the elderly among the vulnerable poor. Calculated on a daily basis, the benefit comes to about Rs. 33 per day per person, marginally above the official estimated urban poverty line[68]. This could be financed equally by the GoI and State governments with GoI providing additional assistance to unorganised sector workers in states with weak finances. Additionally, we recommend that minimum contribution for NPS-S be fixed at Rs. 500 and that the matching government contribution under the scheme be graded one, mirroring the subscriber's contribution up to a maximum of Rs. 1000 per annum.

Recommendation 3.3.4:
Design of Pension under CSS:
The minimum contribution for NPS-S should be fixed at Rs. 500 and the matching government contribution under the scheme should mirror the subscriber's contribution up to a maximum of Rs. 1000 per annum. Further, an unconditional cash transfer of Rs. 1000 per month should be provided for the elderly among the vulnerable poor. This amount must be inflation-indexed and adjusted every year.

B. Re-designing the Investment Mix

The investment mix of NPS-S, where 85% is invested in government securities and 15% in equity, differs vastly from that of the NPS product. NPS investments are spread 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'[69].

In Table 3.3.5 below, we estimate the expected mean terminal value (assuming inflation adjusted 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 find mix of NPS. We find that there are vast differences in the terminal values under the two strategies. For instance, the present value of the terminal amount for a 20 year old under the Life cycle fund mix is Rs. 128,918, 49% higher than under the present investment mix. The shortfall from required post-retirement corpus falls to 14.45% (as seen in Column 5 of the Table). The differences in terminal values under the two strategies become negligible as the entry age approaches 45. This is because the investment strategies start to mirror each other as the age of the subscriber increases. However, it is pertinent to note that the life cycle fund mix yields higher returns for subscribers who enter the scheme young - for a 35 year old, the terminal value is 7.6% higher (column 4) under the life cycle fund mix.

Recommendation 3.3.5:

Re-design the Investment Mix for Pensions:

The current NPS-S investment mix should be changed to the life cycle fund mix as in the case of the main NPS product so that the investment mix changes with age and offers the expectation of higher return on savings.

Table 3.3.5: 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	Difference	Shortfall
	Present value of Expected Terminal Amount (in Rs.)	Present value of Expected Terminal Amount (in Rs.)		
(1)	(2)	(3)	(4)	(5)
20 years	86,589	128,918	48.89%	14.45%
25 years	74,747	100,280	34.16%	33.45%
30 years	64,220	77,445	20.59%	48.61%
35 years	53,864	57,968	7.62%	61.53%
40 years	42,840	44,690	4.32%	70.34%
45 years	32,125	32,165	0.12%	78.65%
50 years	21,556	21,235	-1.49%	85.91%
55 years	10,756	10,585	-1.60%	92.98%

C. Capital Guarantee

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. Inflation indexed bonds of different maturities could allow NPS to hedge inflation risk and in turn offer investment products that are protected against inflation.

Recommendation 3.3.6:

Capital Guarantee for Pensions:

Investment of NPS-S contributions should be permitted to be made only in approved fixed income instruments of specified maturities and PFMs should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA.

Table 3.3.6 shows that for an initial investment amount of Rs. 1,00,000 capital protection can be offered by investing only Rs. 8820 in Government securities for 30 years. The remaining Rs. 91,180 can then be invested in Equity for capital appreciation.

Table 3.3.6: Investment mix required for capital guarantee (Source: CRIISP Report)

Investment Horizon (Years)	Market Interest Rate[70] (%)	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

D. Suitability of NPS-S

Table 3.3.7 below presents the minimum investment required per annum (for age groups ranging from 20 years to 55 years) that need to be made in order to secure post-retirement expenditure corpus. 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. 3,767 (Column 2). There are marked differences in the minimum investment required as we move along income quintiles; a 20 year old in the highest income quintile needs to save about Rs. 8,200 per annum (Column 6).

Table 3.3.7: Investment Required per Annum for Securing Post-Retirement Corpus[71]

Investment required per annum (Age-wise in Rs.)	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
(1)	(2)	(3)	(4)	(5)	(6)
20 years	3,767	4,590	5,413	6,338	8,207
25 years	4,305	5,246	6,186	7,244	9,379
30 years	5,023	6,120	7,217	8,451	10,942
35 years	6,028	7,344	8,660	10,141	13,131
40 years	7,535	9,180	10,826	12,677	16,414
45 years	10,046	12,241	14,434	16,902	21,885
50 years	15,069	18,361	21,651	25,353	32,827
55 years	30,138	36,722	43,302	50,706	65,654

From a Suitability perspective, it is important that beneficiaries under CSS be informed that their NPS-S investments do not completely secure their post-retirement future. A beneficiary currently has incentive to contribute up to Rs. 1000 per annum. Even with a matching government contribution, a 20 year old needs to invest Rs. 1,767 more into the scheme. Therefore, it is important that CSS is seen as a scheme that secures a minimum corpus, not the entire corpus. Beneficiaries must be informed of this and also be advised on the minimum savings they need to make every year towards retirement by aggregators (based on calculations in Table 3.3.7).

Recommendation 3.3.7:

Beneficiaries Must be Made Aware of Adequacy of NPS Corpus for Post-retirement Life:

Beneficiaries under CSS should be informed that their NPS-S investments do not completely secure their post-retirement future and aggregators should advise them on the minimum savings they need to make every year towards retirement.

IV. Program Expenditure

In this section, we estimate the expenditure burden of the government for the NPS-S component of the Comprehensive Social Security for the recommended option under two scenarios[72]:

i. Take up Rates: Under this scenario, we calculate expenditure burden on the government based on low take up rates and high take up rates of the scheme. The Planning Commission estimates provide us a scenario of high take up rates. Low take up rate scenario assumes coverage of 30% at the end of the fifth year. The take up rates and population covered under both scenarios are provided in Table 3.3.8.

ii. Contribution Rates: Under the first scenario, we assume that 30% of the beneficiaries contribute Rs. 1000 (or more), 30% contribute an average of Rs. 750 and 40% contribute the recommended minimum of Rs. 500. This is the low contribution rate scenario. In this case, government contributions will mirror the assumed contributions. Under the second scenario, we assume that all beneficiaries contribute Rs. 1000 (or more) and thus become eligible for the maximum government contribution of Rs. 1000. This is the high contribution rates scenario.

Table 3.3.8: Take up Scenarios - Percentage of Unorganised sector Workforce Covered per Year

Year	% of Unorganised sector workforce covered			
Take up Scenario	High Take up Rate	Population covered	Low Take up Rate	Population covered
2013	20%	80,852,996	5%	20,213,249
2014	40%	163,445,270	10%	40,861,317
2015	60%	247,804,884	15%	61,951,221
2016	80%	333,960,301	20%	83,490,075
2017	100%	421,940,392	30%	126,582,118

The average annual expenditure on NPS-S over the next 5 years based on the two scenarios is presented below in Table 3.3.9.

Table 3.3.9: Average Annual Expenditure Under the Take Up and Contribution Scenarios

Take up/ Contribution rates	Low Contribution rates	High contribution rates
High Take up	Rs. 189.75 billion	Rs. 304.25 billion
Low Take up	Rs. 50.66 billion	Rs. 81.69 billion

The year by year expenditure and coverage under both scenarios are presented in Table 3.3.10 below. The analysis in Table 3.3.10 describes the maximum outlay that the government would need to keep aside for NPS-S under the two contribution rate scenarios that were assumed earlier. The total outlay required to cover every worker in the unorganised sector over the next five years is between Rs. 948.76 billion (low contribution

rate scenario) and Rs. 1.52 trillion (high contribution rate scenario). The expenditure in the fifth year represents the maximum amount that the government should keep aside for covering all unorganised sector workers.

Table 3.3.10: Program Expenditure (2013-2017) Under the High Take up Scenario

		Low Contribution Rates	High Contribution Rates
Year	Take Up Rates	Total Expenditure	Total Expenditure
2013	20%	60,589,365,844	80,852,995,511
2014	40%	123,284,444,257	175,703,664,930
2015	60%	188,148,653,579	286,369,518,606
2016	80%	254,358,843,377	414,877,837,859
2017	100%	322,382,842,956	563,488,372,857

In Table 3.3.11 below, we estimate the government outlay required to provide a monthly benefit of Rs. 1000 per month per person to the destitute elderly population. The annual outlay works out to be Rs. 264.5 billion. We estimate that this would cover a population of about 22 million elderly vulnerable poor. Over a period of five years, the overall outlay would be Rs. 1.32 trillion. Under the low take up scenario, we assume that the monthly benefit will cover only 50 per cent of the target population resulting in an overall outlay of Rs. 661 billion over 2013-2017.

Table 3.3.11: Outlay Required for Covering Elderly among the vulnerable poor under CSS

Year	BPL elderly covered	Total Outlay
2013	22,043,052	264,516,624,000
2014	22,043,052	264,516,624,000
2015	22,043,052	264,516,624,000
2016	22,043,052	264,516,624,000
2017	22,043,052	264,516,624,000
Total		1,322,583,120,000

Therefore, in order to guarantee a minimum social security pension to all unorganised sector workers as recommended, we estimate that the total outlay required would be between Rs.2.27 trillion and Rs. 2.84 trillion. This works out to an annual average outlay of between Rs. 454.26 billion and Rs. 568.51 billion; equivalent to between 0.48% and 0.60% of the GDP[73].

Presently, the combined outlay by state governments and GoI on pensions for government employees and under EPS (Employee Pension Scheme) is about 1.25% of the GDP[74]. The proposed outlay would amount to about 1.85% of GDP. A comparison with global trends on pension expenditure has been provided in Table 3.3.12[75]. If state governments were to

contribute as much as GoI to NPS-S beneficiaries, the total outlay required on pensions under CSS would be 0.92% of GDP per annum.

Table 3.3.12: Comparison of Global Expenditure on Pensions

India (Proposed Expenditure)	1.85% (0.60% on CSS pension and 1.25% on formal pension schemes)
Low Income Countries	1.10%
Medium Income Countries	2.50%
Medium Income Countries	7.20%

Chapter 3.4
Recommendations on Product Level Features

Recommendation 3.1.1:
Objective of Life Insurance under CSS:
Life Insurance under social security should work towards covering, at minimum, the human capital of a 40 year old in the bottom quintile.

Recommendation 3.1.2:
Beneficiaries Must Be Informed of Suitable Life Insurance Cover:
It is essential that the beneficiary is informed that life insurance cover under social security ensures only a minimum human capital cover. The Aggregator should inform the beneficiary about the value of her human capital, the recommended cover that she should ideally take, and the cover provided by social security.

Recommendation 3.1.3:
Re-Pricing Life Insurance:
Life Insurance needs to be re-priced by opening it up to the market. The life insurance product premium should be opened up for competitive bidding from life insurance companies in the market, similar to the model currently followed by RSBY for health insurance.

Recommendation 3.1.4:
Reduce Upper Limit on Age of Eligibility for Life Insurance:
The upper limit on age of eligibility of the scheme should be reduced from 59 years to 55 years.

Recommendation 3.2.1:
Introduce Preventive Care Protocol for Cardio-Vascular Disease in RSBY:
A preventive care protocol for CVD should be introduced as part of the RSBY health insurance plan in view of the high risk of incidence and easy-to-implement prevention strategy.

Recommendation 3.2.2:
Extend Length of Insurer's Contract:
The tenure of insurance contracts should be increased to 3 years. Further, the quality of existing services delivered by the insurance company should be factored into the bidding process.

Recommendation 3.2.3:
States to Provide Top up Tertiary Care Health Insurance:
State Governments should top up RSBY with tertiary health care insurance, thereby ensuring complete health insurance coverage for households.

Recommendation 3.2.4:
Publication of Estimated Need of Hospital Beds in the State:

The SSSA should publish an estimated number of hospital beds required in each district of the state every year. State-level entities that register hospitals should consider the estimated need before approving hospitals in a certain district of the state.

Recommendation 3.3.1:
Objective of Pension under CSS:
The pension product under the CSS scheme should, at minimum, cover the post-retirement expenditure of individuals in the lowest income quintile.

Recommendation 3.3.2:
Perpetual Matching Contribution for Pensions:
The matching contribution from GoI under NPS-S should be made perpetual and in line with the pension that is offered to workers engaged in the organised sector.

Recommendation 3.3.3:
Index Pension Contributions to Inflation:
The NSSA should announce the inflation-indexed adjustment of social security benefits every year. The minimum contribution and the government match should be linked to the Consumer Price Index (CPI) and be revised every year.

Recommendation 3.3.4:
Design of Pension under CSS:
The minimum contribution for NPS-S should be fixed at Rs. 500 and the matching government contribution under the scheme should mirror the subscriber's contribution up to a maximum of Rs. 1000 per annum. Further, an unconditional cash transfer of Rs. 1000 per month should be provided for the elderly among the vulnerable poor. This amount must be inflation-indexed and adjusted every year.

Recommendation 3.3.5:
Re-design the Investment Mix for Pensions:
The current NPS-S investment mix should be changed to the life cycle fund mix as in the case of the main NPS product so that the investment mix changes with age and offers the expectation of higher return on savings.

Recommendation 3.3.6:
Capital Guarantee for Pensions:
Investment of NPS-S contributions should be permitted to be made only in approved fixed income instruments of specified maturities and PFMs should not have the discretion of investing in any other instruments for the purpose of capital protection, other than those approved by PFRDA.

Recommendation 3.3.7:

Beneficiaries Must be Made Aware of Adequacy of NPS Corpus for Post-retirement Life:

Beneficiaries under CSS should be informed that their NPS-S investments do not completely secure their post-retirement future and aggregators should advise them on the minimum savings they need to make every year towards retirement.

Section 4
Overall Expenditure

Chapter 4.1
Overall Expenditure under CSS

Table 4.1.1 presents the total outlay that will be required under all schemes covered by the CSS for unorganised sector over the next five years. This estimate assumes the low take up scenario across all products. The required outlays are presented over three scenarios - one, an estimate of outlay required for universal coverage; two, an estimate of expenditure for total coverage only of vulnerable poor households and three, estimates provided by the Planning Commission[76].

The proposed cost sharing mechanism between the centre and state governments is as follows:

i. Life insurance: The premium should be shared equally by the central government and the state governments.
ii. Health insurance: We recommend that the premium for RSBY be shared in the following way:
    a. 90% from GoI and 10% from respective state governments for the states of Jammu & Kashmir and the seven states of the north-east
    b. 75% from GoI and 25% from respective state governments for states with Per Capita Income below the national average. This category included eight states
    c. Equal contribution from GoI and respective state governments for states with Per Capita Income above the national average. This category includes 11 states.
iii. Pensions: We recommend the following cost sharing mechanism for pension:
    a. The Rs. 1,000 contribution to the beneficiary's account under NPS-S should be borne entirely by the central government.
    b. The unconditional cash transfer scheme under which the elderly among the vulnerable poor are provided Rs. 1000 per month should be shared equally by the centre and state governments.

The estimates provided below show the combined outlay (centre and state governments) required for CSS.

Table 4.1.1: Total Outlay Required Under CSS for 2013-2017

Scheme	Universal Coverage of Unorganised Sector	Only BPL or vulnerable poor coverage	Planning Commission
	Total Outlay (5 years)	Total Outlay (5 years)	Total Outlay (5 years)
Life Insurance	148,055,835,880	62,319,159,000	120,000,000,000
Pensions	1,069,741,560,000	661,291,560,000	600,000,000,000
Health Insurance	402,634,481,039	133,900,967,938	450,000,000,000
Total Outlay	1,620,431,876,919	857,511,686,938	1,170,000,000,000
% of GDP (per annum)	**0.34%**	**0.18%**	**0.25%**

According to our calculations, a low take-up scenario across products under CSS will cost Rs. 1.62 trillion over a period of five years. Covering the vulnerable poor alone will cost Rs. 857.51 billion over five years. This corresponds to 0.34% and 0.18% of the GDP per annum for the next five years. About 65% of the entire outlay is earmarked for the pension component of CSS.

Our estimates are significantly higher than the estimates of the Planning Commission outlay for coverage of the entire unorganised sector. We explain the reasons for the difference in estimated outlays in Annexure C: Statistical Annexure of the report.

Table 4.1.2 presents the outlay required by GoI and state governments respectively for CSS. We present two outlay scenarios below - (i) Universal coverage (low take-up) and (ii) vulnerable poor or BPL population alone.

Table 4.1.2: GoI and State governments outlay for CSS (in Rs.)

	Universal Coverage		Vulnerable Poor coverage	
	GoI	State Governments	GoI	State Governments
Life Insurance	74,000,000,000	74,000,000,000	31,159,579,500	31,159,579,500
Pensions	739,354,220,000	330,645,780,000	330,645,780,000	330,645,780,000
Health Insurance	265,980,000,000	137,020,000,000	93,730,677,557	40,170,290,381
Total Outlay	1,079,334,220,000	541,665,780,000	455,536,037,057	401,975,649,881
% of GDP (per annum)	0.23%	0.11%	0.10%	0.08%

According to our estimates, GoI and State governments will require to keep aside 66% and 34% of the total outlay respectively for universal coverage. For the vulnerable poor coverage (excluding NPS-S from total pension outlay), GoI and state governments will require to keep aside 53% and 47% of the total outlay respectively.

Table 4.1.3 presents the annual expected outlay required for providing the recommended incentives to aggregators. We estimate that incentives to aggregators will cost Rs. 467.18 million per annum for covering the vulnerable poor and Rs. 8.94 billion under the low take up scenario for universal coverage. The outlay required for covering the entire unorganised sector exceeds the former due to the availability of NPS-S to individuals with surplus income. The vulnerable poor will be covered under the unconditional cash transfer scheme which will not require facilitation by aggregators.

Table 4.1.3: Average Outlay Required per Annum for providing incentives to aggregators

	BPL Coverage	Complete Coverage
Life Insurance	1,644,822,213	4,935,194,529
Health Insurance	691,101,770	6,442,151,697
Pensions	-	33,309,798,000
Total	2,335,923,983	44,687,144,226

Table 4.1.4 presents the costs provided above as a percentage of GDP.

Table 4.1.4: Average Outlay Required per Annum on incentives to aggregators as a Percentage of GDP

% of GDP	Complete Coverage	BPL Coverage
Life	0.001%	0.0003%
Health	0.001%	0.0005%
Pensions	0.007%	-
Total	**0.009%**	**0.001%**

In total, complete coverage will require an outlay equivalent to 0.35% of the GDP per annum for the next 5 years, while covering the vulnerable poor will require an outlay of 0.18% of the GDP per annum.

Table 4.1.5: Marginal Expenditure on CSS for the unorganised sector (2013-2016)

Scheme	Budgeted Expenditure (Rs.)	Estimated Expenditure under CSS (Rs.)	Marginal Expenditure (Rs.)
AABY	23,701,100,000	108,815,379,413	85,114,279,413
RSBY	62,650,000,000	270,778,108,502	208,128,108,502
NPS-S	12,268,020,000	239,451,004,227	227,182,984,227
Total	**98,619,120,000**	**619,044,492,142**	**520,425,372,142**

The budgeted expenditure for the three schemes under CSS for 2013-2016 is Rs. 98 billion. According to our low take-up estimates, covering two earning members per household under AABY and NPS-S and offering RSBY at a premium of Rs. 1250 to the household will cost a total of Rs. 620 billion, placing a marginal expenditure burden of Rs. 521 billion (excluding the unconditional cash transfer).

Table 4.1.6: Total Outlay for complete Universal coverage

Scheme	Universal Coverage of Unorganised Sector (Rs.)	Only BPL or vulnerable poor coverage (Rs.)
	Total Outlay (5 years)	Total Outlay (5 years)
Life Insurance	374,401,152,470	62,199,159,300
Pensions	2,843,875,509,764	1,322,583,120,000
Health Insurance	780,002,400,980	259,163,163,750
Total Outlay	3,998,279,063,214	1,643,945,443,050
% of GDP (per annum)	0.85%	0.35%

According to our calculations, complete unorganised sector coverage (the high take-up scenario for all products) under CSS would cost Rs. 4.0 trillion over five years while covering the vulnerable poor would cost Rs. 1.6 trillion. **This is 0.85% and 0.35% of the GDP per annum respectively.**

Section 5
Implementation Roadmap

Chapter 5.1
Bundling of Products

As recommended in the previous chapters, the elderly among vulnerable poor should have access to a direct cash transfer pension amounting to Rs. 1000 per month. In addition, the vulnerable poor will also have access to subsidised life and health insurance. For the rest of the unorganised sector population, there are two ways in which to implement delivery of CSS:

i. Pensions to act as an entry barrier to CSS: Under this option, life and health insurance will be made available to the beneficiary only on the condition that she contributes a minimum of Rs. 500 to her NPS-S account. As mentioned earlier, despite the matching contribution from the government, take up rates for NPS-S remains low. This is due to two possible reasons:

   a. Irrational constraints due to behavioural biases, which lead the consumer to believe that the pension product is unsuitable for them when in fact it may be welfare enhancing, and/or
   b. The possibility that the consumer is acting rationally, which means the design of the product is actually not suited towards the savings needs of the consumer.

   Irrationality can be overcome through awareness creation, but rational behaviour that leads to low take up will require a re-think on product design. It is likely that the low take-up is a result of both factors – some level of behavioural bias leading to 'short term thinking', as well as some reflection of the lack of actual need for this product, which could be due to various reasons – inflexibility, high retirement age, high entry barrier for the match, existence of suitable formal and informal alternatives, etc.

   Our approach has been to try and confront both factors by addressing aspects of awareness creation and information delivery, as well as product design. If it is deemed, through rigorous pilot studies, that the benefits of saving towards pensions might not be immediately apparent to myopic consumers, and public policy might need to nudge them towards saving for post-retirement[77], then it may be a good idea to provide this nudge by way of using the pension product as an entry barrier to the CSS scheme. In other words, one can only buy into life and health insurance *if* they contribute the minimum amount into their pension account.

   However, one must be cognizant of the fact that there are two severe limitations to this approach. First, this option curtails the autonomy of the consumer to decide what is best for her. Second, it could lead to a severe penalty in the form of denial of benefits of health and life insurance to beneficiaries who do not contribute the minimum amount to pensions.

ii. All products under CSS to be standalone: Under this option, we propose that all schemes under CSS be sold individually. Thus, a beneficiary will be provided the option

of contributing the amount of her choice to NPS-S and the benefits of life and health insurance will not be contingent on a minimum pension contribution. However, beneficiaries will receive a matching contribution from the government only on contributing the proposed minimum of Rs. 500 per annum. A serious limitation with this option is the risk of low take up rates for pension. Since beneficiaries do not always see the benefit of saving for long periods of time for pay-outs in the distant future, contributions to pensions could be very low. If public policy deems that citizens should be able to live a dignified life post-retirement then the fact that people do not participate voluntarily in pension plans is a serious concern.

It is ex-ante unclear which of the two options is welfare enhancing for the beneficiary. Therefore, we recommend that one of the two options be selected after a careful evaluation of the costs and benefits of both under the pilot scheme.

Recommendation 5.1.1:
Bundling of Products:
Of the two options available: (i) the bundled option where a beneficiary is required to invest in pensions in order to access life and health insurance; and (ii) the unbundled option where all products are available standalone, it is not clear which one will be more welfare enhancing in the long term. The choice between these options should be made after a careful evaluation under a pilot scheme.

Chapter 5.2
Roadmap for Implementation of CSS

We recommend that CSS for the unorganised sector be implemented in the entire country after a careful evaluation under a pilot scheme. We propose that the pilot scheme be implemented across 20 districts in the country. Selection of districts under the pilot scheme must pay attention to the following parameters:

i. Level of Aadhaar coverage: We propose that the pilot scheme be implemented in a mix of districts with high and low levels of Aadhaar coverage. This will enable us to identify and address operational and design problems before scaling up of the scheme.

ii. Degree and quality of internet coverage: We recommend that the RSBY card be replaced by a common Aadhaar platform that enables the beneficiary to access all schemes under CSS. All transactions under such a system will require internet connectivity and information will be stored in an online cloud. Thus, implementing the pilot scheme in districts where internet connectivity is high will enable us to evaluate the functioning of the scheme better.

iii. Design of CSS: We recommend that the implementation of CSS in the entire country be based on a careful evaluation of the costs and benefits of offering the pilot scheme under the two designs mentioned below:

   a. Pensions as the entry barrier to CSS, and
   b. All products under CSS to be standalone. Each design can be implemented in half the districts identified under the pilot scheme.

iv. Type of aggregator: We recommend that districts be evaluated based on the type of aggregator that services the beneficiaries. Aggregators tend to operate under several models (such as post offices, MFIs, NGOs, banks, state nodal agencies, welfare boards) and testing the pilot scheme under different aggregator models will help us identify those features that ensure high quality servicing of beneficiaries.

We recommend that the pilot be run over a period of 24 months, and rollout to be introduced in a phase-in manner which will enable a comparison of outcomes between districts with and without CSS. We thus propose that a rigorous, scientific impact evaluation that measures the following outcomes be conducted by independent researchers –

i. Operational feasibility: The first objective of the study should be to assess whether the newly proposed architecture is stable, reliable, and safe. This will involve studying:

   a. the Aadhaar based platform - whether it is reliable, safe, user-friendly, and ultimately is able to serve as a suitable replacement for the RSBY smart card,

b. an assessment of whether the aggregator is performing their various functions (enrolment, marketing, client servicing) up to the required standard,
c. whether grievances are being redressed appropriately, and
d. whether data and funds are flowing without hindrance through the architecture.

ii. Financial feasibility: Part of the study will have to look into the various incentives proposed, and assess whether they lead to higher volumes, greater equity, more frequent customer interactions, and greater customer satisfaction and awareness about the product.

iii. Product take-up: The study will have to measure how take-up of each individual product is influenced by variables such as:

a. using pension as entry barrier vs. offering products individually,
b. old incentive structure vs. new,
c. different aggregator models.

Results can then be compared to take-up rates for the individual products under the current architecture, in the same or similar districts.

iv. Product usage: Once enrolment is complete, the study will have to measure whether products are being used. For health insurance, we will measure hospitalisation rates, awareness rates, barriers to usage, and satisfaction with the service. For life insurance, we will measure claims ratios, ease of claims settlement procedures, and usage of the pay-outs. With pension, we will measure amounts of contribution, frequency of contribution, ease of deposit, and access to information.

v. Product Impact: Ultimately, a phased-in rollout with a randomised design will enable us to compare various socio-economic outcomes between those who receive CSS and those who do not, which will ultimately allow us to say whether or not these products are truly welfare enhancing, and if so, in what ways they provide relief against risk.

Recommendation 5.2.1:
Pilot for CSS:
A 20 district pilot for implementation of the CSS must be conducted and this should encompass variations in extent of Aadhaar penetration, access to connectivity, design (bundled or unbundled), and the type of aggregator. The pilot will be for a duration of 2 years, on completion of which a formal research report assessing operational and financial feasibility, product take-up and usage, and product impact will be put out by a neutral research organisation.

Chapter 5.3
Recommendations on Implementation

Recommendation 5.1.1:

Bundling of Products:

Of the two options available: (i) the bundled option where a beneficiary is required to invest in pensions in order to access life and health insurance; and (ii) the unbundled option where all products are available standalone, it is not clear which one will be more welfare enhancing in the long term. The choice between these options should be made after a careful evaluation under a pilot scheme.

Recommendation 5.2.1:

Pilot for CSS:

A 20 district pilot for implementation of the CSS must be conducted and this should encompass variations in extent of Aadhaar penetration, access to connectivity, design (bundled or unbundled), and the type of aggregator. The pilot will be for a duration of 2 years, on completion of which a formal research report assessing operational and financial feasibility, product take-up and usage, and product impact will be put out by a neutral research organisation.

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Annexure A
Calculating the Operating Costs of an Aggregator Branch

The revenue centre for an aggregator is its branches, out of which the field officers (FO) operate. The FOs' only and most valuable resource is their time. The entities that will be ideal for the role of aggregators are the ones who have a large client base. This automatically means that their FOs will have very high client load per day. An aggregator is generally able to service a high number of clients by following a set of standard operating procedures for their daily activities. In such a scenario, introducing of a new product and the servicing of its clients means that the field officer will have to squeeze time for these activities in their daily schedules. Keeping this in mind, it is only logical that the analysis of the aggregator's costs is done with respect to the additional time it takes for the entity to offer the additional product.

For the purpose of this analysis, we have considered the cost of operation of a typical branch in units of time. The additional time, and thereby the cost of offering the new NPS-Lite product is incurred by the aggregator during the processes of acquisition of subscribers and servicing them through the field officers.

i. Customer Acquisition Process: This process involves the FO handing out the application forms to the customer, ensuring the application forms and the KYC documents are in order at the time of collection of forms, and issuing a counterfoil to the customer on receipt of the initial subscription amount. The time taken for acquisition of a customer is assumed to be 20 minutes.

ii. Contribution Collection Process: This activity takes a shorter time. The FO collects the contribution from the subscriber and issues the receipt. A customer makes 12 contribution payments per year. The time taken for collecting the monthly contribution from a customer is assumed to be 2 minutes.

A typical aggregator branch has the following personnel:

Table A1

Personnel Per Branch	Number
Field Officers/Loan Officers	5
Accountant	1
Branch Manager	1
Support Staff/Peon	2

With these assumptions, the operating costs of a branch amount to:

Table A2

Particulars	Cost/Month (Rs.)	Per Minute
Rent	5,000	0.1
Electricity	3,000	0.1
Connectivity (Telephone/Mobile)	3,000	0.1
Stationery	4,000	0.1
Fuel Expenses Paid to Fos	6,000	0.1
Miscellaneous	4,000	0.1
Depreciation	3,180	0.1
Employee Related Expenses		
Field Officers/Loan Officers	32,500	0.8
Assistant Branch Managers/Supervisors	10,000	0.2
Branch Manager	12,000	0.3
Support Staff/Peon	6,000	0.1
Employee Benefit/Training	4,000	0.1
Total		2.2

The annual cost per NPS-Lite customer for the aggregator:

Adding the additional costs incurred by the aggregator for offering the NPS-Lite product under the heads of Document & Cash Management and System Maintenance at HO and AO levels (assuming Rs.5 under each head), the cost of acquisition per customer amounts to approximately Rs.52, which is a one-time cost. Apart from this, the aggregator will incur a cost of approximately Rs.51 for servicing one customer through the year.

Annexure B
Best Practices in Awareness Creation

Encouraging adoption of insurance and pension products has proved to be a difficult task worldwide. Post adoption, promoting efficient use of the product has shown to be even more of a challenge. Recent impact evaluation studies across the developing world have provided us with incredibly valuable insight into the constraints to savings by the poor, and strategies by which marketing tools can relax these constraints. In this Annexure, we will review the results from the academic literature that uses field experiments to investigate constraints to savings amongst the poor. Specifically we will analyse the following constraints: transaction costs, lack of trust, regulatory barriers, and informational, social and behavioural biases.

i. Transaction Costs: Transaction costs associated with a savings account are in the form of pecuniary costs – fixed and marginal costs of opening an account, maintaining a balance requirement, and transaction fees; as well as non-pecuniary costs – distance to bank and documentation formalities. These costs can all be high enough to discourage take-up and optimal account usage. Evidence from Kenya (Dupas and Robinson 2011), Nepal (Prina 2013) and Indonesia (Cole, Sampson, and Zia 2011) both point towards an increase in take-up of savings products as a result of eliminating the costs to opening a bank account. Schaner (2011) finds that altering both fixed and marginal costs by providing ATM cards which reduces transaction costs for withdrawals but increases the initial fixed costs to opening the account, significantly increases take-up as well as the savings rate. Looking at the impact of non-pecuniary costs, (Ashraf, Karlan, and Yin 2006a) find that providing a deposit collection service in the Philippines had a take-up rate of 28%. The range of evidence on this type of constraint, both through the type of intervention changing the transaction costs as well as the location of the studies, show that these costs are a considerable barrier to initiating formal savings by poor people.

   With respect to the CSS scheme and its range of products, this type of constraint would be most applicable to the case of pension contributions. Having a single card and account through which all transactions are made could significantly reduce costs, especially non-pecuniary, associated with engaging into a new financial scheme. Furthermore, making use of mobile-phone banking to pay for contributions could be a viable potential tool to reduce transaction costs and increase usage of the account.

ii. Overcoming a Lack of Trust & Regulatory Barriers: Where to save is an important decision and the poor generally have a wide range of formal, semi-formal and informal sources. A field study in Kenya led by Dupas et al. (2012) found that while there is a reasonably high-take up rate for free savings account, there is low active usage. Through a qualitative survey, the authors find that "low trust" in the bank is the most often cited reason for not using the recently opened formal bank accounts. Prudential regulations imposed by governments to assure clients that the bank will honour their

deposits, are vital to building trust with small depositors (Conroy 2000). However while under-regulation poses a problem in establishing trust and stability, over-regulation is a key barrier to entry in the formal market. This is due to both increasing the cost for banks in collection and verification of data, as well as restrictions on customers through identification requirements.

Given that these schemes are aimed specifically at the poorer sections of society, proper targeting and enrolment is critical to making the schemes a success. As a result, substantial investment should be made into making sure that the beneficiaries truly fit the eligibility requirements. Using the Aadhaar scheme would provide a huge advantage to this screening mechanism and reduce costs on behalf of the implementing agency. With respect to the issue of "trust", this is indeed critical especially with a long-term savings product such as pensions. Using an aggregator model, with commercial banks and MFIs as aggregators, where the aggregator maintains strong long-term relationships with the beneficiaries would reduce this constraint.

iii. Overcoming Information Constraints: Lack of knowledge often leads individuals to make choices away from their optimal average outcomes. In the case of savings, lack of information and the associated cost of acquiring it, pushes individuals to often save too little. Knowledge can involve a range of information from numeracy skills such as computing interest rates, to financial awareness such as understanding of a life insurance product. Evidence from a financial literacy program in India by Cole, Sampson, and Zia (2011), shows that only 3% of their respondents answered correctly to all four basic financial principles questions. While it is generally accepted that such levels of financial illiteracy poses a significant barrier to savings, evidence on the impact of intervening through financial training and education programs is mixed. Cole, Sampson, and Zia (2011) for instance, find that offering a 2-hour financial education program has no effect on the general population and only a modest benefit for those with low initial levels of education. Similarly a study by Field, Jayachandran, and Pande (2010) also based in India, find that a 2-day training session has no impact on the probability of saving by women working in the informal sector.

Recently, studies have looked at the impact of altering the channel and format of delivering training. Drexler, Fischer, and Schoar (2010) find that a "rules-of-thumb" training significantly increases the probability of clients keeping accounts, calculating revenues and separating business and personal accounts, compared to no effect from the group having received a standard financial training program. Specific to a pension product in China, Song (2011) finds that individuals who were taught about the principles of compound interest increased their contributions to a pension plan by 37-40% compared to the control group. On the other hand, individuals who were given training on different levels of benefits for different contributions, without explanation of compound interest, only increased their contributions by 17-19%.

Providing educational information on the social security schemes' products is a critical component to maintaining optimal usage of the scheme. Using text messages with informational content is a very cost-effective strategy to curbing information constraints.

iv. Overcoming Social Constraints: Savings behaviour is not only influenced by supply-side factors but also by demand-side factors such as social constraints. These constraints can arise from intra-household bargaining between the household heads, generally husband and wife, mainly due to differences in their preferences. Depending on the decision-making power between husband and wife, evidence from field experiments show different savings behaviour and outcomes. A field study in Kenya by Schaner (2011) finds that reducing transaction costs through ATM cards significantly improves the savings rates of male customers. On the other hand, it has an insignificant negative effect on the account usage of women, with this effect being concentrated to women who score lower than the median on the bargaining power scale. This suggests that for women with less decision-making power within the household, reducing the high costs of withdrawal also reduces their ability to save.

Similar to bargaining issues in the household, inter-household sharing can also lead to sub-optimal behaviour. In fact, evidence suggests that poor individuals are often willing to pay a price to lock their savings away from demands of social and family networks. In a study based in Cameroon, Baland, Guirkinger, and Mali (2011) find that clients who over-borrow use this as a signalling behaviour to their social network that they are too poor to have available savings. Furthermore, field experiments from Malawi by Brune et al. (2011) show that providing individuals with commitment savings account increases deposits, as the account allows individuals to resist social demands for their savings.

Given these results, it is clear that the poor have many demands on their little income, and saving for a pension becomes the last priority. As a result, it's vital to make the pension product attractive to the subscriber, for example lowering the retirement age and potentially allowing for withdrawals from the account.

v. Tackling Behavioural Biases: While one's spouse and family may lead one to under-save, an individual may also be required to overcome his/her own behavioural biases such as temptation, inattention and inertia. Temptation refers to a time-preference bias where the individual is unable to save as they attach greater value to present versus future consumption. In order to help individuals combat this problem, self-commitment devices can be attached to savings products. For example, Ashraf, Karlan, and Yin (2006b) study a hard commitment savings device where an individual is given either a time-based maturity (where the account balance is available only after a specific date) or an amount-based maturity (where the balance is only available after reaching a certain goal) savings account. Compared to the control group, clients receiving these accounts increased their savings by 300%. While hard commitments are

useful to restrict early withdrawals, they are not the only commitment devices available.

Soft commitment devices which have a primarily psychological consequence are also effective. Dupas and Robinson (2011) find that savings for health expenditures is highest using a system where members are encouraged to use their existing ROSCA group to create a "Health Pot" in which they need to contribute an additional amount earmarked for health products only. This mechanism not only helps an individual save by assigning a specific goal and a space protected from others, but also through the pressure of saving as a group.

Another category of biases which individuals often face, relates to the problem of inertia and limited attention. Status-quo, or inertia, is an irrational preference for the current state. Having a default setting on a savings product, which nudges people into taking action, is a powerful tool against this problem. The problem of limited attention is slightly different from inertia, and is based on individuals getting distracted and failing to take into account future conditions. Such problems can often be targeted through simple mechanisms such as advertisements, reminders, and labelling, which draw back our attention. In a key study based on Bolivia, Peru and the Philippines, Karlan et al. (2010) tested the influence of sending monthly reminders of the clients saving targets. The authors find that individuals who received reminders deposited more than the control group.

In the case of the CSS products, a pension product is in fact a hard-commitment savings design where individuals are committed to save over a particular amount of time. The strategy here is therefore more to deal with inertia. Providing a co-contribution incentive can act as the catalyst factor to encourage enrolment. Furthermore as mentioned previously, text message reminders on the minimum amount to contribute, amount of co-contribution and monthly pension target could all serve the purpose of limiting the problem of inattention.

vi. Strategies for Raising Awareness: One of the critical factors which can make a scheme effective is the awareness and level of understanding which beneficiaries have about the scheme. Awareness ensures that beneficiaries know about the existence of a scheme and the benefits which they are entitled to. Knowledge refers more specifically to the understanding which a beneficiary should have about the working of a scheme, for example, the functioning of a non-withdrawal retirement account with compound interest for accumulation of savings, or the step-by-step process which a beneficiary should follow to claim life insurance benefits. Both of these factors can increase not only enrolment into a scheme, but active usage of the product.

Lack of awareness and knowledge is a significant barrier to most currently sponsored government social security schemes. For instance, the life insurance scheme - Aam Aadmi Bima Yojana (AABY) does not require any beneficiary contribution and therefore

has not focused on raising awareness and knowledge of insurance. However, claim ratios for AABY are very low suggesting that while beneficiaries are enrolled, many are not aware of their benefits and how to obtain these. Old age pension schemes, such as NPS–S, face a different problem. In this case, beneficiaries are required to contribute a considerable sum of money. Lack of understanding of the benefits to be accrued, including interest rates on accumulation of savings, form a very significant constraint to both adoption and usage.

Raising awareness should be a vital component of the new social security scheme. There are various easily accessible tools by which to increase awareness amongst target populations. Some of these include:

a. Grass-roots campaigns: Awareness campaigns at the grass-root level including door-to-door and village level meetings can be highly effective. For example, the Society for Elimination of Rural Poverty (SERP), the Nodal Agency for social security schemes in Andhra Pradesh, makes successful use of Community Based Organisations by engaging 3 active members per village whose responsibility it is to create awareness in their community. Furthermore, these members are given a small incentive of Rs.3 per member enrolled. Training a person from the community who can serve as a first point of contact for the schemes is a very effective approach to disseminating simple informational content on the schemes. Wall-painting slogans, banners and leaflets reiterating the schemes' name, concept and logo can also be used for propagation.

b. Mass Media: Radio jingles can prove highly successful amongst an illiterate population, reaching beneficiaries in a way which written publicity cannot. Television publicity, especially given India's growing TV usage amongst the poorer sectors of society, is a very cost-effective advertising tool. TATA-AIG for example, created a marketing movie using a Bollywood narrative and structure where the hero encounters a tragedy but the household manages to overcome the hardship thanks to coverage from TATA-AIG's insurance policy, thereby raising awareness of their life insurance product and its benefits.

c. Mobile Phones: Mobile-phone messages can be used as reminders or for dissemination of information on the scheme. For instance, reminders on the process for claims settlement in AABY include how long a nominee has following the death of a beneficiary to submit a claim or information on how to obtain a death certificate. Texts could also provide details on neighbouring empaneled hospitals and who to approach at the RSBY helpdesk. In terms of a pension product, text messages could serve as a reminder for subscriber contributions and how much money is being accumulated with interest.

d. Call Centres: Call centres can be a source of help and guidance to beneficiaries. SERP for instance, has a call-centre in every district of Andhra Pradesh which members of the community use to report deaths. This allows SERP to track the death of beneficiaries and directly approach the nominees for assistance in claims settlement.

Promoting proper usage of these social security schemes is what allows them to have a significant impact. Ensuring that nominees are given the life insurance pay-out in case of the death of a family earner, that hospitals don't exploit the beneficiaries' health insurance benefits, and that subscribers can accumulate a minimum corpus for a monthly pension at retirement age, are all requirements to making these initiatives successful. Creating awareness and knowledge amongst the target population, is a critical tool in empowering beneficiaries to adequately use and benefit from the schemes provided to them.

Annexure C
Statistical Annexure

A. Forecasting Unorganised Sector Workforce

In this section, we provide a detailed, step by step analysis of how the projections were made. The projected figures are used in the report to estimate the total government outlay required on CSS. 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 C1 below.

Table C1: Profile of workforce in India from 1990-00 to 2009-10 (in million).
Source: Mehrotra et al (2012)

Year	1999/2000			2004/05			2009/10		
Sector	Total	Unorganised	Organised	Total	Unorganised	Organised	Total	Unorganised	Organised
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[78] elasticity of employment in the organised and unorganised sectors. The formula for calculating income elasticity of employment is provided below:

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

The income elasticity of employment calculated based on the formula above is presented in Table C2.

Table C2: 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 C2 by the expected compounded annual GDP growth rate to arrive at employment growth rates. The employment growth rates presented in Table C3 assume a compounded annual GDP growth rate of 7%.

Table C3: 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 C3 to forecast unorganised sector workforce population for the time period 2010 to 2017. This is presented in Table C4.

Table C4: 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%

According to Table C4, the share of unorganised sector in the total workforce will decline from 84.16% to 82.56% over the next nine years. For the purpose of estimating government expenditure on CSS, we have used projected values from 2013 to 2017. The projected number of households in the organised and unorganised sector from 2009 to 2017 is provided in Table C5. This is calculated based on the assumption that there are on average, two working members per household.

Table C5: Projected Figures of Households in Organised and Unorganised Sectors in India (in million)

Year	Organized	Unorganized	Total
2009	36.44	193.67	230.11
2010	37.48	195.75	233.14
2011	38.56	197.86	236.22
2012	39.66	199.98	239.33
2013	40.79	202.13	242.48
2014	41.96	204.31	245.68
2015	43.15	206.51	248.92
2016	44.39	208.73	252.2
2017	45.66	210.97	255.53

B. Data from the Financial Services Institution

For the purpose of this project, we accessed household level data from a financial services institution that provides financial products and services to remote rural households in India. This institution currently services approximately 3,15,000 individuals or 2,00,000 households in 3 different states of India (Tamil Nadu, Uttarakhand and Orissa) through its 164 branches. The institution is guided by a wealth management approach that ensures that products and services are recommended for a household based on an understanding of its financial situation, asset allocation, risk tolerance, needs and goals. This ensures the collection of high quality household level data. On average, the institution enrols 85% of the households in its service area and this ensures that the institution maintains a large data set that is representative of the population in the three states.

The financial services institution captures extensive details of the households it enrols, 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 C6.

Table C6: Nature of Data from Financial Institution

Household Details	For each family member (including enrollee): - 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

The mean household level statistics for three variables- income, expenditure, and surplus, classified by income quintiles are provided in Table C7. Thus, a mean household in the first income quintile earns an annual income of Rs. 44,000 while a household in the fifth income quintile earns Rs. 3,40,000; about 7.7 times more.

Table C7: Income Quintile Wise Mean Household Level Annual Income, Expenditure and Surplus (in Rs.)

	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
Household Income	44,097	78,843	112,830	163,260	339,628
Household Expenditure	30,138	36,722	43,302	50,706	65,654
Household Surplus	13,959	42,121	69,528	112,554	273,973

We use these statistics for various calculations in the report including calculation of human capital and calculation of post-retirement corpus required by individuals.

C. Calculation of post-retirement corpus required by individuals (classified by age and income)

In this section, we provide a step by step analysis of how the post-retirement corpuses required by individuals were calculated. The annual expenditure of an individual across income quintiles is provided in Table C8. Annual expenditure per capita is directly derived from the income quintile wise household expenditure provided in Table C7. The mean household size is assumed to be four. Note that the annual per capita expenditure of all individuals in a certain income quintile remains the same, irrespective of the age of the individual.

Table C8: 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 C9 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. However, the present value of annual expenses (discounted at a rate of 8%) across age buckets remains the same and this is what is presented in Table C8. In other words, Table C8 represents the annual expense that an individual will need to bear if she were to retire today.

Table C9: 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. The post-retirement corpuses required by individuals are presented in Table C10. 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-adjusted annual instalments over a period of 20 years.

Table C10: Post-Retirement Corpuses Required 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	3,273,687	3,988,825	4,703,591	5,507,829	7,131,547
25 years	2,228,016	2,714,727	3,201,185	3,748,536	4,853,611
30 years	1,516,350	1,847,598	2,178,673	2,551,191	3,303,286
35 years	1,032,003	1,257,444	1,482,768	1,736,297	2,248,161
40 years	702,364	855,795	1,009,147	1,181,695	1,530,061
45 years	478,017	582,440	686,809	804,242	1,041,333
50 years	325,330	396,399	467,430	547,353	708,714
55 years	221,414	269,782	318,125	372,519	482,339

The post-retirement corpuses required by individuals across the same income quintiles decreases as the age of entry increases. This is due to the fact that the annual expenditure of these individuals at the time of retirement also behaves similarly (as seen in Table C8). Thus, a 20 year old in the first income quintile requires Rs. 3,273,687 (annual expenditure of Rs. 163,684 multiplied by 20 years) by the time she retires 40 years hence, while a 55 year old requires Rs. 221,414 (annual expenditure of Rs. 11,071 multiplied by 20 years) by the time she retires 5 years hence. However, as Table C11 shows, the present value of the post-retirement corpuses required by these individuals (discounted at a rate of 8%) remains the same across an income quintile. In other words, Table C11 presents the post-retirement corpuses required by all individuals (irrespective of age) if they were to retire today.

Table C11: Present Value of Post-Retirement Corpuses Required at the Age of Retirement (in Rs.)

Age of Entry into Pension Scheme	Income Quintile 1	Income Quintile 2	Income Quintile 3	Income Quintile 4	Income Quintile 5
20-55 years	150,691	183,609	216,511	253,531	328,272

D. Calculation of Expected Terminal Value

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 scenarios:

i. Investment Mix**:**

a. Current investment mix that invests 85% of the amount in government securities and 15% in equity market instruments and
b. NPS life cycle investment mix that follows an age-linked investment process presented in Table C12.

Table C12: 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%				

Asset Class E represents investments predominantly in equity market instruments while Asset classes C and G represent investments in corporate debt and investments in government securities respectively.

ii. Varying degree of Government contribution**:**

Terminal values have been calculated based on:

a. Government contribution of Rs. 1000 for 5 years
b. Perpetual Government contribution of Rs. 1000 (without inflation adjustment)
c. Perpetual Government contribution of inflation-adjusted 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 59 years of age. The life expectancy is assumed to be 80 years for all individuals.

Table C13 presents the one year return on equity, government securities and corporate debt used for calculating terminal values. Return on equity is calculated by the return seen by BSE Top 100 index (from December 1991 to January 2013) while return on government securities is calculated using returns on 91 day Treasury bills (from March 1997 to January 2013) . Return on corporate bonds is calculated based on a weighted average of AAA rated corporate bonds (80% weight) and AA rated bonds (20% weight) from January 2009 to March 2013.

Table C13 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. These estimates are used to calculate expected terminal values under the two investment strategies.

Table C13: One Year Return on Equity, Government Securities and Corporate Debt

1 year return	Equity (BSE Top 100)	Government Securities (T-bill 91 days)	Corporate Debt AAA	Corporate Debt AA	Inflation
Mean	18.00%	6.10%	7.49%	7.86%	8.04%
Median	12.20%	6.20%	7.43%	7.85%	8.32%
Standard Deviation	39.00%	1.50%	2.03%	2.01%	3.67%

E. Calculation of Human Capital

The calculation of human capital rests on the following assumptions:

i. Retirement age of 60 years
ii. Life Expectancy of 80 years
iii. The inflation rate is equal to the risk free rate of return
iv. The mean income and mean expenditure of each quintile is used for human capital calculations across all age groups
v. There are no existing investments that could be potential sources of incomes
vi. There are no sources of income post retirement
vii. There are no existing liabilities for the individual
viii. There are no income differentials between males and females
ix. There are no additional medical expenditures post-retirement
x. The individual does not spend on dependents post-retirement

An individual's Human Capital is defined as the net present value of the future real expenditure and earning streams associated with that individual. Thus, we estimate the present value of the individual's income streams earned till the age of retirement. It is assumed that an individual's income is equal to the mean income of the income quintile she falls in (provided in Table C7). We also assume that the income remains constant across the working life of the individual (18 years to 60 years) till the age of retirement (60 years) when the income falls to zero. The present value of expenditure streams is calculated over a longer time period extending up to the age of death at 80 years. We also assume that the expenditure of the individual is equal to the mean expenditure of the income quintile she is in (provided in Table C7).

The human capital is arrived at by subtracting the present value of income streams from the present value of expenditure streams. Like with income streams, we assume that expenses remain constant throughout the life of the individual till the age of death at 80 years.

F. Calculation of Premium for Life and Disability Insurance

The report offers two premium price points- one, an actuarially fair premium and two, a price offered by the financial services institution. Both price points are calculated based on the mortality data presented in Table C14. The market data has been compiled from data provided by the Institute of Actuaries of India[79]. The price point offered by the financial services institution is inclusive of administrative expenses, taxes and a margin for the insurance company.

Table C14: Mortality Tables Based on Market Data and Data Provided by Financial Services Institution

Age groups	Market data	Financial Services Institution
20-25	0.09%	0.18%
25-30	0.10%	0.19%
30-35	0.12%	0.19%
35-40	0.16%	0.26%
40-45	0.24%	0.35%
45-50	0.40%	0.53%
50-55	0.67%	0.85%
55-60	0.96%	1.26%

The mortality tables are weighted by the percentage of population in each age group (Table C15) to arrive at the weighted mortality rates. Natural mortality is assumed to be 95.3% of overall mortality (Table C14) for all age groups while accidental mortality is assumed to be 4.7%. The breakup of mortality into natural and accidental mortality is obtained from the analysis of claims received by the financial services institution. As of 2012-13, 95.3% of total claims were on natural death of the insured person.

The percentage of population in each age group is provided in Table C15. The population data for India is obtained from United Nations estimates of world population prospects 2010[80].

Table C15: Percentage of Total Population Under Each Age Group

Age groups	Percentage of total population
20-25 years	17.84%
25-30 years	16.45%
30-35 years	15.13%
35-40 years	13.03%
40-45 years	11.48%
45-50 years	10.16%
50-55 years	8.61%
55-60 years	7.29%

The natural and accidental mortality for each age group are weighted by their respective population weights. The weighted mortality rates for each age group are averaged to arrive at an overall natural and accidental mortality rate. The rate thus obtained is multiplied by the cover desired under natural and accidental death to arrive at premium rates. We calculate an overall natural and accidental mortality rate since all beneficiaries, irrespective of their age, will be charged the same premium under AABY.

We calculate the premium that will be charged for natural death cover and accidental death/ disability cover using the following formulae:

Natural Mortality Rate = 95.3% x Overall mortality rate

Accidental Mortality rate= 4.7% x Overall mortality rate

Premium = (Overall Natural Mortality Rate x Natural death cover) + (Overall accidental mortality x Accidental Death Cover)

G. Calculation of Investment Required per Annum for Securing Post-Retirement Corpus

For the purpose of calculating the investment required per annum that will secure an individual's post retirement corpus, we assume the following:

i. The contributions are inflation adjusted every year at a rate of 8%
ii. The rate of return earned on the investment is equal to the inflation rate (8% per annum)
iii. The individual needs to secure the post-retirement corpus by the age of retirement of 60 years
iv. There are no government contributions to the scheme

We estimate that a 20 year old in the first income quintile needs to invest Rs. 3,767 (inflation-adjusted) per annum till her retirement at 60 years. This will secure her a corpus of Rs. 3,273,687 at the time of retirement. The present value of this corpus is Rs. 150,691. The calculation of post-retirement corpus is explained in Section 3 of the document.

Table C16 estimates the expected terminal value of an individual (in the first income quintile) assuming that she contributes the recommended amount per annum under three returns on investment scenarios:

i. The rate of return equals the rate of inflation at 8%
ii. The rate of return earned under the NPS Life Cycle Fund Mix
iii. The rate of return earned under the current NPS-S investment mix

Table C16: Comparison of Expected Terminal Values (in Rs.)

Age of Entry	Expected Terminal Value at 8% return	Expected Terminal Value (NPS Life Cycle mix)	Expected Terminal Value (Current NPS-S Mix)	Contribution per annum
35 years	1,032,003	1,208,167	1,113,993	6,028
40 years	702,364	781,967	752,417	7,535
45 years	478,017	507,745	517,532	10,046
50 years	325,330	342,356	349,454	15,069
55 years	221,414	234,597	238,420	30,138

We see that both the NPS Life Cycle mix and the current NPS-S investment mix provide a rate of return that is higher than the rate of inflation (assumed to be 8%). The returns are greater under the life cycle mix since a larger portion of the investment is invested in equity market instruments, which typically offer a higher rate of return. This holds true especially for younger contributors since they also benefit from a longer duration of exposure to the equity market. However, it is pertinent to note that the expected terminal value from the current NPS-S investment mix closely mirrors the terminal values expected at 8%.

H. Explaining the Difference in Estimates of Total Outlay Calculated by Planning Commission and IFMR

Table C17 presents a summary of the differences in price per annum used and coverage estimated between the total outlay calculations provided by the Planning Commission and us. A significant portion of the difference can be explained by the absence of an unconditional cash transfer scheme in the Planning Commission's calculations. Further, we recommend that subsidy under life insurance and pensions be extended to every single member of the unorganised sector workforce since it would be inequitable to not do so, while the Planning Commission estimates are based on covering one eligible member per household in the unorganised sector.

Table C17: Comparison of Price per Annum and Coverage under the Planning Commission and our Estimates of Total Outlay

Scheme	Planning Commission Calculations		Our Calculations	
	Price per annum	Coverage	Price per annum	Coverage
Life Insurance	Rs. 200	200 million households	Rs. 300	404 million individuals
Pensions	Rs. 1000	200 million households	Rs. 1000	404 million individuals
Unconditional Cash Transfer for Elderly among vulnerable poor	Not Estimated	Not Estimated	Rs. 12,000	22 million individuals
Health Insurance	Rs. 750	200 million households	Rs.1, 250	210 million households

I. Calculation of Division of Budget Outlay between GoI and State Governments for Health Insurance

In order to calculate the GoI-State Government budget sharing mechanism for universal coverage, we assume that the unorganised sector workers are distributed across different states in the country in the same proportion as the general population. Considering the fact that 85% of India's workforce is in the unorganised sector, this is a fairly reasonable assumption to make. We use this assumption to arrive at the number of unorganised sector households in every state in India.

The report recommends that the total outlay for health insurance be shared between GoI and state governments in the following way:

i. 90% from GoI and 10% from respective state governments for the states of Jammu & Kashmir and the seven states of the north-east.
ii. 75% from GoI and 25% from respective state governments for states with Per Capita Income below the national average. This category included eight states.
iii. Equal contribution from GoI and respective state governments for states with Per Capita Income above the national average. This category includes 11 states.
iv. For Union Territories, it is assumed that the entire expenditure is borne by GoI.

The Per Capita Income of India as of 2009-10 is Rs. 46, 117[81]. Using this, we arrive at a weighted budget sharing ratio of 66%-34% between the GoI and state governments. For the coverage of BPL Households under Health Insurance in CSS, we adopt a similar methodology. For BPL households, this ratio becomes 70%-30% between the GoI and state governments. This ratio is different since the distribution of BPL households across different states is distinct from the distribution of general unorganised sector population.

Annexure D
Role of Aggregators in Expediting Aadhaar-Based Delivery of Services

A. Accessing Benefits Using Aadhaar

Currently, in order to access any government provided benefits using the Aadhaar number, a beneficiary must undertake the following steps –

i. Obtain an Aadhaar Number: As of June 2013, almost 400 million Aadhaar numbers have been issued in India, which equals approximately one third of the population. The first, critical step in enabling access to benefits is obtaining an Aadhaar number. This requires visiting an Aadhaar enrolment centre, providing a proof of address, as well as taking biometric scans. The applicant is then issued a temporary number (known as the EID) that is replaced with a permanent number, card, and letter of approval that is issued in the mail.

ii. Beneficiary List Creation and Digitisation: Once a person has her Aadhaar number issued, she needs to be able to enrol into the scheme of her choice. For current government provided schemes, this usually requires the beneficiary to visit a district field office and submit an application form, along with the Aadhaar number.

iii. Aadhaar Seeding in Beneficiary Database: In order for a department to initiate DBT services, the beneficiary list must be seeded with the Aadhaar numbers of the beneficiaries. For new enrolees, this is not a challenge as the Aadhaar number is collected during the enrolment process (see above). However, for existing scheme beneficiaries, the department must reach out to collect Aadhaar numbers, which presents various logistical challenges.

iv. Bank Account Opening: To be able to deposit premiums or access a direct transfer of benefits, the beneficiary must then open a bank account using their Aadhaar number, in a bank that is registered with the Aadhaar Payments Bridge System (APBS). Usually, the beneficiary does this on their own accord, or is directed by the district field officer that was responsible for enrolling the beneficiary into the government scheme.

v. Aadhaar Seeding into the Bank Account: Once the bank account is opened, the bank is responsible for seeding the Aadhaar number into the account, and delivering the information to the Core Banking System (CBS) and the National Payments Corporation of India (NPCI) mapper. This is done in two ways – i) If the beneficiary already has a bank account, then the district officer collects this information during the scheme enrolment stage, and sends a list containing beneficiary details, Aadhaar number, and bank account number, to the appropriate bank, or ii) beneficiaries themselves visit banks and ensure seeding by providing the Aadhaar number.

vi. Benefit Payment: Once seeding of the number is completed in the scheme database and the bank account, the beneficiary is 'DBT ready'. The government department imports this list, payment amounts are allocated to beneficiary names, and the list is sent to the sponsor bank. The sponsor bank initiates the payment through the APBS, and sends a payment advice to the NPCI, which segregates the payment advice according to the bank IIN, and sends a list of Aadhaar numbers and benefit amounts to the respective banks.

B. Challenges Associated with the Aadhaar-Linked Platform

Using the Aadhaar number to access government benefits can be very problematic. As detailed in the preceding section, it requires several steps, many of which have to be initiated by the beneficiaries themselves. This complicated procedure, involving time consuming visits to various entities such as the district office and the bank, has resulted in a very low proportion of Aadhaar number holders that are actually 'DBT ready'. The following challenges were identified with the system –

i. Limited awareness: There is a limited awareness of, and lack of access to Aadhaar enrolment centre locations: The locations of enrolment centres are not well publicised. Media outlets such as newspapers and televisions are not utilised to full potential. Enrolment centres themselves are not geographically concentrated enough either, leading to high transaction costs associated with enrolment.

ii. Seeded beneficiary list creation: New beneficiaries are expected to travel to the district office and register for the scheme, which again is very time consuming. There is also a lack of awareness on the part of the beneficiaries. For existing beneficiaries, the district office is supposed to reach out to them and collect their Aadhaar numbers. This is also a highly time consuming and costly exercise, and many government departments do a poor job of reaching out.

iii. Opening of bank accounts: Beneficiaries are again unaware that they have to open a bank account in only APBS enabled banks. The list of eligible banks, and the documentation required for opening a bank account, is not readily available. The lack of penetration of bank branches in rural areas means that beneficiaries have to travel long distances.

In summary, there are some major obstacles related to the use of Aadhaar for enabling the collection of premiums and disbursement of benefits from any government related scheme, including the proposed CSS scheme. These are mostly to do with a complicated, multi-venue enrolment process for the beneficiary, an over-reliance on district officials to reach out to existing beneficiaries, and a complete lack of awareness about the procedures involved.

C. The Role of the Aggregator in Overcoming these Problems

The proposed CSS scheme should be delivered to clients using the 'aggregator-led' model. That is, the current set of institutions responsible for distributing pensions (such as MFIs, NGOs, banks, and post offices) will be responsible for distributing all schemes through an

Aadhaar-linked platform. The aggregator is usually a for-profit entity that has a natural incentive to enrol, retain, and service clients that generate revenues (either through direct profits resulting from government incentives to sell these products, or through the positive spill over and increased take-up of other financial products that they offer as complements to the CSS products, such as short term savings and loans). The aggregator, by virtue of being a profit maximizing entity with a direct interest in client servicing (and if given the right incentives), is ideally placed to manage a significant burden of the client acquisition process. This includes the steps required to facilitate the direct transfer of benefits through Aadhaar. These institutions could play the following roles –

i. Identification and Aadhaar registration: By being 'sellers' of the CSS products, the aggregator will identify eligible beneficiaries at the 'doorstep'. This can actually mean conducting the identification process at the door, at an enrolment camp, or at a branch. Since the CSS products are meant to be targeted at the entire unorganised sector, aggregators will have to conduct a very basic identification procedure, to ensure that a) the beneficiary has an Aadhaar number, and b) they self-report themselves as unorganised sector workers. This can be done by filling out a basic employment form.

   In the event that many beneficiaries in the area don't have Aadhaar numbers, the aggregators should be able to facilitate Aadhaar registration by coordinating with UIDAI and conducting registration camps in the local area.

ii. Seeding into Beneficiary database: Currently, this is a laborious two-step procedure. A beneficiary database is created by the State Government, based on an amalgamation of various other lists such as the BPL list, NREGA list, etc. This list is housed at the district office. Aadhaar seeding is done by:
   a. either the beneficiary visiting the district office, or
   b. the district official reaching out to the beneficiary.

   Both processes are time consuming and result in a large number of Aadhaar number holders that are not DBT-ready. The aggregator could collect information and enrol the beneficiary on the spot[82]. The creation of the list is done by the aggregator, and then sent to the district office so that the beneficiaries in the list are seeded into the database. Therefore, targeting and enrolment into the scheme, and seeding of the Aadhaar number, are actively enabled by the aggregator. Each aggregator FO can be equipped with a basic online-enabled mobile device that enters this information once it is collected. It can be used to verify that duplicate enrolments are not being conducted (i.e. when an Aadhaar number is entered, the system should flag if the beneficiary has already been enrolled in the scheme, and will not allow a real time, online authentication).

iii. Seeding into Bank account: Many of the aggregators currently enlisted by PFRDA are banks and can therefore enable seeding Aadhaar numbers into the bank account at the time of enrolment into the scheme as well. When a new customer is approached, a

basic targeting exercise is conducted; the person's Aadhaar number is collected and entered onto the scheme enrolment form. If the person already has a bank account, the aggregator can coordinate with the bank and seed her Aadhaar number directly into her bank account. In case she doesn't have a bank account, the aggregator can facilitate the opening of a bank account by sharing the KYC information of the beneficiary with the bank. The SSSA or the equivalent entity could identify banks in districts that can work closely with aggregators for this purpose.
This information is then sent by the aggregator to the district office and the respective banks for record keeping and eventual processing of benefits.

iv. Creation of Awareness: For those that do not have Aadhaar numbers, aggregators could provide information on enrolment location and procedure. The aggregator has a natural incentive to ensure as many people enrol into Aadhaar as possible, as this increases their customer base.

In order to expedite the process of Aadhaar enrolment, aggregators could be entrusted, and incentivised to enable the seeding of beneficiary Aadhaar numbers into scheme databases and bank accounts.

Endnotes

[1] Source: www.oldagesolutions.org/facilities/noaps.aspx

[2] This scheme is sometimes referred to under a different name based on the occupation group, the main cases for this are: Khadi Karigar Janashree Bima Yojana, Bima Yojana for Handicraft Artisans, Aanganwadi Karyakartri Bima Yojana, Bima Yojana for Primitive Tribal Groups, JBY for Women SHG's Credit Link to Banks, JBY for NREGA Workers. However these schemes still follow the same structure for implementation, premiums, benefits and claims procedure as explained here for the AABY.

[3] RSBY does not cover congenital external diseases, drug and alcohol induced illness, sterilisation and family planning, vaccination, attempted suicide, treatments from alternative medicines.

[4] These schemes are provident funds linked to a certain industry, including: Employee Provident Fund, Coal Mines Provident Fund, Seamen's Provident Fund, Assam Tea Plantation Provident Fund, and the Jammu & Kashmir Employee Provident Fund.

[5] In the case of North Eastern state this ratio in increased to 90% for the Central Government.

[6] This has been adopted by Bima Yojana for Powerloom workers, Khendriya Bhed Palak Bima Yojana for sheep breeders and, Mahatma Gandhi Bunkar Bima Yojana for handloom weavers.

[7]The complete act is available at-
http://labour.nic.in/upload/uploadfiles/files/ActsandRules/SocitySecurity/TheUnorganisedWoekersSocialSecurityAct2008.pdf

[8] The Workmen's Compensation Act, The Industrial Disputes Act, The Employees State Insurance Act, The Employees Provident Fund and Miscellaneous Provisions Act, The Maternity Benefit Act and The Payment of Gratuity Act.

[9] GoI's National Optical Fibre Network Plan aims to connect all the 2,50,000 Gram Panchayats in the country by 2015.
Source: http://www.bbnl.nic.in/content/page/national-optical-fibre-networknofn.php

[10] The complete report is available at -
http://pfrda.org.in/writereaddata/linkimages/CRIISP%20Report9681894859.pdf

[11] For more details on the functioning of the NHSO, visit the official website:
http://www.nhso.go.th/eng/Site/Default.aspx

[12] Limwattananon et al (2011) estimate that the Kakwani Index for overall health care finance, which measures the capacity of the health financing system to correct income inequity, changed from -0.0038 (overall regressive) in 2000 to positive (progressive) values of 0.0406 in 2006.

[13] Source: (Kannan and Breman 2013)

[14] National Rural Health Mission and Department of Health and Family Welfare constitute another 24% of nodal agencies.
Source: (Kannan and Breman 2013)

[15] Source: http://www.rsby.gov.in

[16] Source: RBI's Financial Stability Report, June 2013. Available at-
http://rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=712

[17] Kerala has 29 registered worker welfare boards.
Source:http://www.kerala.gov.in/index.php?option=com_content&id=2870&Itemid=2320

[18] Report of the Committee to Review Implementation of Informal Sector Pension, available at-
http://pfrda.org.in/writereaddata/linkimages/CRIISP%20Report9681894859.pdf

[19] The complete eligibility guidelines for NPS-Lite aggregators is available at:
http://www.pfrda.org.in/writereaddata/linkimages/Regulationas%20for%20Aggregator%20Under%20NPS%20Lite-2010_Final7422072029.pdf

[20] From 'Human Capital', (Ananth and Shah)

[21] The financial services firm, through a network of more than 160 branches, serves close to 2,00,000 households. The analysis of human capital is performed on a set of 160,900 households. For a detailed note on the data used from the financial services institution, see Annexure C: Statistical Annexure.

[22]Source : http://planningcommission.nic.in/reports/genrep/rep_pov.pdf
[23] Incidence Ratio is defined as the ratio of total claims in a year to total number of policies issued in a year.
[24] As per actuarial table published by IRDA.
Source: http://www.actuariesindia.org/(S(fdxmsc55msyndez25nfasarv))/publication/IALM-_Mortality_Tables_(2006-08)_ult%20.pdf
[25] Claims ratio is defined as the ratio of total value of claims settled in a year to the total value of premiums received.
[26] The analysis does not differentiate between natural and accident death while calculating the incidence ratio and claims ratio. However, this is a reasonable assumption to make considering that an overwhelming majority of the claims (~95%) for both products are from natural death.
[27] The data for the two products is merged from 2008-09, the year AABY was launched. Prior to this, all data pertains to JBY only.
[28] In the absence of data on yearly renewal rates of AABY, the analysis assumes a renewal rate of 70%. (The only available data source for AABY renewal rates is data from the Andhra Pradesh government. The aggregate renewal rate for Andhra Pradesh as on July 2, 2013 is 71.4%.
Source: http://65.19.149.143/aaby/AABY_renewal_report.aspx)
[29] For a step by step analysis of how the premium is calculated, see Annexure C: Statistical Annexure.
[30] For the purpose of estimating total outlay, we assume vulnerable poor households to mean BPL households. However, we acknowledge that there is debate surrounding the methodology of estimating BPL households.
[31] GDP at current prices 2012-13 is Rs. 94.61 trillion. Source: CSO.
[32] Defined as total public social security expenditure on survivor and disability pension as a percentage of GDP.
Source: World Social Security Report 2011. ILO
[33] A report by the NAC clearly defines a good healthcare package: http://nac.nic.in/pdf/uhc.pdf
[34] Page 97, HLEG Report. Available at-http://www.uhc-india.org/reports/hleg_report_chapter_2.pdf
[35] Pages 2-3 , Social Sectors (Volume III) ,Twelfth Five Year Plan (2012-2017)
[36]Source: http://planningcommission.nic.in/plans/planrel/fiveyr/10th/volume2/v2_ch2_8.pdf
[37] See Van de Ven & Ellis (2000)
[38] See Cutler & Zeckhauser (2000)
[39] See Nagpal (2011)
[40] See Ma & Sood(2008)
[41] See Peters, Yazbeck & Sharma(2002)
[42] See Nagpal (2011)
[43] See Gertler & Gruber (2002)
[44] See Rathi, Mukherji, and Sen (2012)
[45] In a study by Sulakshana Nandi et al in Chhattisgarh, only 4% of respondents received their smart card when they enrolled (Nandi et al. 2012). Further, in a household survey in Himachal Pradesh, 49% of enrollees did not receive instructions with their card, while 15% received a list of empanelled hospitals
[46] See Dasgupta et al (2013).
[47] See Rathi, Mukherji, and Sen (2012).

[48] World Health Organization. ("The World Health Report 2002 - Reducing Risks and Promoting Healthy Life" 2002)

[49] Available at- http://www.world-heart-federation.org/cardiovascular-health/cardiovascular-disease-risk-factors

[50] Available at- http://www.healthmetricsandevaluation.org/sites/default/files/country-profiles/GBD%20Country%20Report%20-%20India.pdf

[51]A recent study highlights that such cases are substantially under-reported in rural India: http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/EconomicImplicationsofNCDforIndia.pdf (Mahal, Karan, and Engelgau 2010)

[52] http://icmr.nic.in/ijmr/2006/september/0903.pdf

[53] http://nac.nic.in/pdf/uhc.pdf

[54] Refer to Table 45.6 in http://files.dcp2.org/pdf/DCP/DCP45.pdf, table 30.2 and 30.3 in http://files.dcp2.org/pdf/DCP/DCP30.pdf,
http://c96268.r68.cf3.rackcdn.com/pdffiles_Lancet_series4.pdf
A very useful paper in this context is http://c96268.r68.cf3.rackcdn.com/pdffiles_Lancet_series4.pdf

[55] Some examples of such tools are: Laboratory-based versus non-laboratory-based method for assessment of cardiovascular disease risk: the NHANES I Follow-up Study cohort; and WHO STEPS guidelines on this approach:
http://www.afro.who.int/en/clusters-a-programmes/hpr/health-risk-factors/diseases-surveillance/surveillance-country-profiles/step-survey-on-noncommunicable-disease-risk-factors.html

[56] There are a number of studies that demonstrate the efficacy of various combinations of drugs within the Polypill. The TIPS study was carried out in India: ("Effects of a Polypill (Polycap) on Risk Factors in Middle-aged Individuals Without Cardiovascular Disease (TIPS): a Phase II, Double-blind, Randomised Trial" 2009) A more recent study was published in PLoS ONE by(Wald, Morris, and Wald 2012): "Randomized Polypill Crossover Trial in People Aged 50 and Over"

[57] A complete list of treatments is available at-
http://www.aarogyasri.gov.in/ASRI/EXT_IMAGES/documents/Scheme_Manual.pdf

[58]Source: http://www.dartmouthatlas.org/downloads/reports/Capacity_Report_2009.pdf

[59] Source: http://www.health.ny.gov/facilities/cons/

[60] Source: http://www.slideshare.net/IPHIndia/a-rapid-evaluation-of-the-rajiv-arogyasri-community-health-insurance-scheme-andhra-pradesh?utm_source=slideshow02&utm_medium=ssemail&utm_campaign=share_slideshow_loggedout

[61] The financial services firm, through a network of more than 160 branches, serves close to 2,00,000 households. The analysis of human capital is performed on a set of 1,60,900 households. For a detailed note on the data used from the financial services institution, see Annexure C: Statistical Annexure.

[62] Source: http://planningcommission.nic.in/reports/genrep/rep_pov.pdf

[63] For a deeper look at the assumptions behind the calculation of the post-retirement corpus, see Annexure C: Statistical Annexure.

[64] The calculation accounts for the matching contribution provided by GoI for five years which amounts to Rs. 5,000 for a subscriber who joined the scheme in 2012-13. All subscribers are assumed to have joined in 2012-13 and hence, to have received Rs. 5,000 from the government. Subscribers are assumed to have contributed Rs. 1,000 (inflation adjusted) every year from age of entry to age of exit.

[65] For a step by step discussion on the calculation of expected terminal values, see Annexure C: Statistical Annexure.

[66] For a detailed analysis of the economic logic behind this, refer to the CRIISP Recommendations Pages 45-46
Available here: http://pfrda.org.in/writereaddata/linkimages/CRIISP%20Report9681894859.pdf

[67] This works out to Rs. 905 per annum per employee, roughly equal to Rs. 1000 matched under NPS-S.
[68] Poverty line at June 2011 price level is placed at Rs.965 (32 per day) per capita per month in urban areas and Rs.781 (26 per day) in rural areas. Source: Planning Commission
[69] The investment mix under the Life Cycle Fund Mix is provided in Annexure C: Statistical Annexure.
[70] Source: G-Sec Yield Curve dated 6th September, 2010.
[71] For a detailed calculation of the investment required for securing post-retirement corpus, refer to Annexure C: Statistical Annexure.
[72] The analysis assumes that the government provides a matching contribution of Rs. 1000 for a period of five years (2013-2017).
[73] GDP at current prices 2012-13 is Rs. 94.61 trillion; Source: CSO
[74]Government contribution in EPS was Rs. 1350 crores as of 2011, about 0.025% of GDP. Source: Annual Report EPF India, 2011-12. Source: http://www.livemint.com/Politics/SCIph2MNONIzdUzFmw3UkI/What-are-the-prospects-for-pension-reform-in-India.html
[75] Defined as Total public social security expenditure on public old age as a percentage of GDP Source: World Social Security Report 2011. ILO
[76] Budget estimates do not include incentives for aggregators.
[77] New research in behavioral economics argues that regulation needs to 'nudge' the consumers into making those decisions which reflect the presumed judgment of what consumers would want, if consumers are unable to maximize their own welfare (due to lack of cognitive capability or financial literacy).
78 We use GDP at constant prices (Base year-2004-05) for calculating income elasticity of employment
[79] Source: http://www.actuariesindia.org/publication/IALM-_Mortality_Tables_%282006-08%29_ult%20.pdf
[80] Source: http://esa.un.org/wpp/
[81] Source: http://pbplanning.gov.in/pdf/Statewise%20GSDP%20PCI%20and%20G.R.pdf
[82] However, if only a subset of the unorganized sector workers like the vulnerable poor are to be subsidised, the beneficiary list must be provided to the aggregators.