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Economic and Financial Establishment Must Be Primary Analysis for Public Policy like Atal Pension Yojana

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Abstract-

In the past and even today it has been observed that, public policy in the area of social security has always been perceived as welfare agenda, no due consideration been given to its financial and economic viability for the policy long-run sustainability. Policy decisions are taken in hurry to give a mere congruence to the political manifesto in the short run to enchant public (who are mostly ignorant of policy operating mechanism and benefit in real term), without ascertaining its long-term consequences and economic impacts on future generation financial health in the economy. The following article is evaluating the Atal Pension Yojana and its sustainability in the long run, which has been in operation since 1st June, 2015.

Keywords-

Defined Benefit (DB), Defined Contribution (DC), APY, NPS, Fund Managers, Sustainability

Introduction to the Atal Pension Yojana(APY)

We are glad that government has concern towards old age income security of unorganized sector workforce because pension to elderly unorganized sector workforce was completely untouched until May 2009 when the National Pension System(NPS) was made open for all citizen . Government of UPA-II showed little more interest for the unorganized sector in 2011, by introducing Swabalamban scheme. The Swabalamban scheme was defined contribution, its main dictum was to provide pension benefit to marginalized section of the society in the old age. Benefit under the scheme was not defined. Under the Swabalamban scheme the subscriber would contribute minimum of □1000 and maximum of □12,000 per annum. Amount so contributed by the subscriber would be invested by professional fund managers and the returns generated by fund manager would be the benefit to subscriber during retirement. There was also co-contribution from the central government amounting 1000 rupee per year to augment participation to the scheme for the initial five years. But subscription to the scheme form the unorganized sector was just **2.81** million as on 31 March 2014 which is **.67%** of unorganized sector workforce of around 415 million (PFRDA, 2015). This low level of participation to the scheme could be traced to three main reasons 1.non defined benefit 2.lack of awareness, 3. No fixed source of income. The APY scheme has replaced the Swabalamban scheme since 1 June 2015.

In the finance budget of 2015-16, the finance minister announced, Atal Pension Yojana(APY) in order to provide pension benefit to the unorganized sector workers, who are not entitled to any kind of statutory social security benefit. These unorganized sector working population constitute the 88% of total labor force of 472.9 million (Ministry of Statistics and Program Implementation, 2010-11). Under this APY scheme government is guaranteeing defined pension benefit in multiple of 1000 up to 5000 per month to the subscriber of the scheme and in case of death of the subscriber spouse/nominee of the subscriber would be entitled to the monthly pension and the accumulated corpus in the account.

Under APY government has defined different amount of contribution from the subscribers based on their age of entry to the scheme and desired defined benefit in the time of retirement. A part from this, the central government would also co-contribute 50% of the subscriber's contribution or 1000 rupee per annum whichever is less but the co-contribution assurance from the government is only for initial 5 years that is from 2015-16 to 2019-20. Co-contribution from the government would be available only if the subscriber joins the scheme in between 1 June 2015 to 31 December 2015 and if he/she is not entitled to any kind benefit under statutory social security scheme and not an income tax payer. The APY would be operationalized through the existing institutional infrastructure under the NPS, like Fund Managers, Point of Presence, Central Record Keeping Agency, Aggregators, etc. The APY is a voluntary scheme in which individual can join the scheme any time after 18 years and before 40 years and those who are already subscribers of the Swabalamaban scheme would automatically be member of APY. So minimum period of contribution in the system is 20 years and maximum could be 42 years.

Illustration- to get monthly pension of 1000 under APY the subscriber needs to contribute 42 per month if he/she joins the scheme at the age of 18 and 291 rupee if he/she joins at the age of 40. Similarly for 5000 monthly pension indicative contribution is 210 rupee per month, if the age of joining is 18 and 1454 rupee if the age of joining is 40. (please see the illustration chart at the end)

Evaluation of APY

The new APY seems to be confronting the issue of undefined benefit in the Swabalamban scheme. The APY scheme main focus is marginalized workers in the unorganized sector as claimed by the government. APY has a unique hybrid combination of defined contribution and defined benefit, that is to say a defined

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contribution of minimum of 20 years and defined monthly benefit for the rest of the life after retirement. The following are some of the common criticism in the exiting newspaper, periodicals, blogs and commentary to the APY

- In the accumulation period compound rate of return on the contribution is calculated by assuming the final refundable corpus as the final value then the Internal Rate of Return is around 8%.which is less than the return provided by Provident Fund or any commercial bank fixed deposit, though these rate are subject to change. But the final corpus is indicative it may be less or more than this.
- Even at the retiring stage return provided in the APY scheme is even less than the interest rate on fixed deposit in the commercial banks for example monthly pension of 2000 rupee for accumulated corpus □3,40,000 that means yearly return of((2000*12)/3,40,000)*100= 7.05% while almost all the commercial banks are providing return of more than 8%.
- Real value of money in the APY scheme is negligible given the inflation level in the economy. Assuming the RBI target zone of 4 (+/- 2) % inflation rate if we discount to the nominal money value of monthly pension to the today's money value at 4% inflation rate for 40 years then for □1000 it would be (1000*PVF at 4% for 40 years) = 1000*.203= 203 rupee in present value of money and for □5000 it would be 5000*.203= □1018.
- Unorganized sector workforce do not have any permanent source of income hence there are possibilities of default in such a long contribution span of 20 to 42 years but the scheme has tough penalty for the marginalized. Continuous default of 6 month leads to account frozen, for 12 months default account deactivation, for 24 month default account closing.

The APY may appear to be fine from the defined benefit angle but a close inspection to the scheme structure and functioning mechanism, suggests that the APY is deficient of a sound economic and financial background. Establishment of a logical economic and financial context is inevitable in public policy issue like pension, it is essential to ascertain the economic consequences and long run sustainability of the scheme, given the financial health of the economy and its citizens.

Let us look at what are the major lacking in social, financial and economic sustainability front. The following analysis has been made

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with the expectation to improve the APY architecture.

The APY scheme has lost its dictum: According to the manifesto of the APY, the scheme must provide some kind of discriminatory benefit to the marginalized, economically weaker unorganized sector workforce since the APY main focus is to assure financial security to economically deprived unorganized working population who do not have any kind social security benefit **however** there is no distinction between have and have-not in the scheme. In a welfare state government should uplift socio-economic status of the marginalized by providing some kind of added benefit. Though the APY specially meant for unorganized sector workforce however anybody could join APY who is a citizen of India. **Contribution and Benefit** under the APY scheme is same for rich and poor irrespective of their financial position. We don't understand why is the scheme testifying it main focus is for unorganized weaker while there is no distinction between organized and unorganized in term of benefits (financial assurance). In the initial stage of introduction economically deprived non-tax paying would get co-contribution from government if they join the scheme before 31 December 2015 and that is also for a limited period of next five years. After 31 December there would be no differential treatment of the economically deprived unorganized and financially sound organized and tax paying citizen in the scheme. Our simple suggestion to the policy maker would be, if the scheme really meant for the economically suffered unorganized workers then they should get some additional incentive and benefit in the scheme so that participation and accumulation would grow and real intention of universal pension could be capitalized.

The APY is based on a stochastic modeling and assuring a deterministic benefit: Illustration- Mr. X is contributing 50 rupee per month to the AYP from the age of 20 and the amount being invested by fund managers for next 40 years and when Mr. X reaches the 60 year of age, the indicative accumulation in his account is expected to be ₹170000 and monthly pension of ₹1000 per month is assured by the government after 60 years. If compounding is made given the final value of ₹170000 and 40 years of contribution, annual return is around (CAGR-Compound Annual Growth Rate) 8.2% per annum. The reason we are calling it a stochastic modeling is the rate of return, which is a hypothetical expected rate of return however it is completely uncertain that the reality would deliver our expectations or near to our expectations. Hence we could see lot of deviation in the rate of return in future, we could not accurately predict what would be the interest rate in 2025, but we are expecting it to be 8.2%, it could be 3% or 5% or 10% or any other figure. Let be pessimistic for a while, let say average portfolio return or CAGR of fund manager is 3% for 40 years then the accumulated funds in the account would be around 46000. In this situation no annuity service provider would agree to pay □1000 monthly pension given the accumulation and interest rate in consideration but government has assured a predetermined monthly pension of □1000, it would be obligation on the part of the government to provide defined pension benefit to the subscribers. There is only one way the deficit could be financed is tax revenue but it will compromise the financial health of future generation workforce which is against the basic principle of sustainability.

No Contingency Fund for Future Shocks: The APY does not have any kind of special fund to meet the unforeseen shocks in the economy. In an economy it is possible that interest rate could even go below 1%, security market could give huge negative returns, huge reduction in future assets prices or anything else could happen that would reduce the subscriber's accumulation and consequently the pension.

For example the SBI Pension Fund Private limited initiated the investment under APY from 1 June 2015 on this day NAV (net assets value) was 10 rupee per unit, now after 2 months of investment in securities the NAV has come down to 9.88 on 31 July 2015 it means in the investment of last two month the scheme has generated a negative return. Of course we understand pension fund are long term investment, it would be irrational to derive any premises from this short span of 2 months but it would not be irrational to state that pension fund might generate much lower or negative return, these possibilities could not be denied. As all investment are subject to market risk and which is unpredictable. In such circumstances of (lower or negative returns) providing defined monthly pension would virtually impossible on the part of the government to ensure the benefit obligation under the scheme and the scheme has no safety net. Hence it is advisable allocate certain sum of money from each year budget towards a special fund to protect the scheme form future shocks and it would not be huge burden on the government at one time when the situation arises. It is also advisable to invest the fund money in safe securities.

No due consideration to financial and economic feasibility: pension is not just as simple as any other social welfare issue; there should be a proper analysis of financial and economic feasibility, for instance hypothetical estimation of different scenario to different level of participation. Let say what should be the present value of future contribution, present value of future benefits to be paid if the participation is 15% or 20% or 25% or 30% or any other percentage of labor force. Does the future value of assets is sufficient to

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meet the future liability. Comparison of NPV of assets and NPV of liabilities should be made to design a sustainable scheme. Though all these calculation are not that simple and would be hypothetical only, it will give a logical support to the scheme. It needs strong actuarial algorithm and expertise. We don't know the Finance Ministry has any rough estimation or not, if they do have, they should put in public domain.

What is needed in APY to make it sustainable and financially feasible in long- run

In most part of the world, DB pension being criticized on the ground of financial non sustainability in the long run and adverse impact on future generation economic health but the DB structure in APY has a support of DC part, which makes it logically sound however as mentioned earlier the scheme has some technical deficiency which would make it financially non sustainable in long-run. Therefore APY scheme needs some parametric changes before introduction, like creation of contingency fund for shocks absorbance in the long run.

(Dave, 2006) argue that DB system could be sustainably solvent over a multi decade horizon but it need some standard principle to follow like

1. Contribution to be fixed and benefit rules are adjusted over time. To ensure solvency

2. Independent consulting on solvency of the system from the world-class professional competence on pension economics.

3. Firm should compute market value of assets, present value of future contribution, and present value of future benefit to be paid out in the light of mortality projection. Estimation of NPV of assets and NPV of liabilities, to ensure that NPV of assets to be 50% higher than NPV of liabilities so that system is protected from unexpected negative shocks.

4. System independence from politics and details of the system to be put in public domain continuously.

There are enough empirical evidences of breakdown of DB but the above conditioning make DB technically feasible. In Indian scenario the APY scheme could be financially feasible with the above parametric changes. We think in the scheme the buffer to protect from the negative shock could be brought down to 25% given the financial constrain of government as we are in the transition phase of pension reforms and widening fiscal deficit, that is to say NPV of assets to be 25% more than the NPV of liabilities. Or a contingency fund to be created which would be financed from the each annul budget with expert actuarial consultation.

Concluding remarks

Given the financial constrain in the hand of the government, size of the workforce and upcoming aging demography it is expected that assuring pension to old age population would not be a simple task on the part of the government. Providing pension could only be possible through the DC because the financial resource in the government disposal is insufficient to support the DB. The formal (organized) sector has some kind of social security like civil servant pension (employee joined before 2004) and NPS (joined after 2004) for government sector employees and (EPF) Employee Provident funds,(EPS) Employee Pension Scheme and(ESI) Employee State Insurance for private organized sector employees but there is no social security scheme like pension for unorganized sector workforce. AYP is a nice combination of DC and DB meant for the unorganized and marginalized workforce however it needs some parametric changes which are mentioned above to make the scheme sustainable and feasible in the long run.

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ILLUSTRATION OF CONTRIBUTION CHART

Age of Entry	Monthly pension of Rs 1000 and return of indicative corpus of Rs 1.7 lacs	Monthly pension of Rs2000 and return of indicative corpus of Rs3.4lacs	Monthly pension of Rs3000 and return of indicative corpus of Rs5.1lacs	Monthly pension of Rs4000 and return of indicative corpus of Rs6.8lacs	Monthly pension of Rs5000 and return of indicative corpus of Rs8.5lacs	Monthly pension of Rs4000 and return of indicative corpus of Rs6.8lacs	*Monthly pension of Rs5000 and return of* indicative corpus of *Rs8.5lacs*
18	*42*	*84*	*126*	*168*	*210*	*168*	*210*
20	*50*	*100*	*150*	*198*	*248*	*198*	*248*
25	*76*	*151*	*226*	*301*	*376*	*301*	*376*
30	*116*	*231*	*347*	*462*	*577*	*462*	*577*
35	*181*	*362*	*543*	*722*	*902*	*722*	*902*
40	*291*	*582*	*873*	*1164*	*1454*	*1164*	*1454*