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Atal Pension Yojana: A Scenario Analysis of its Applicability in India

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ABSTRACT

Availability of money in the post-retirement phase of life is critical to every individual. Only a government official in India, who forms about less than 1% of the total population, gets a pension benefit linked to Consumer Price Index (CPI). The people, in general, would like to save for the future to meet their 'normal' standards of living after they reach 60 years of age. The Atal Pension Yojana (APY) is for a large number of unorganized labourers to enable them to get a pension of Rs. 1000/- per month for a contribution of a small sum for a long period. This entitlement has led to a lukewarm response from the unorganized labourers in India who are at the bottom line of income levels. Apart from awareness about the plan, there are some apprehensions that people believe to be truly addressed, such as the low returns guaranteed on pensions and its inadequacy, the size of the pension over a longer period, and its real value. Hence a detailed study is needed to unearth the implications and on its applicability in the present urban India context.

Index Terms— Atal Pension Yojana (APY), Defined Contribution Plans (DCPs), Pension returns, and Unorganized Workers.

I. INTRODUCTION

India is witnessing improved and efficient financial markets which has enabled individuals earn better return on their savings portfolios. The objective of launching the Employee's State Insurance Act and the Employee's State Provident Fund in 1948 and 1952 respectively was to provide regular income to individuals post-retirement and also provide maternity and health care benefits. In India, as there is a decline in the traditional old-age support mechanism, strengthening the formal channels of retirement savings is a necessity [1]. Radical and strategic reforms will help create adequate and sustainable social security for all individuals in India [2]. Collective action from policymakers and industry stakeholders will ensure better benefits to every individual.

By 2050 elderly population in India will reach 330 million [3]. Report of the Committee on Unorganised Sector Statistics', the National Statistical Commission (NSC), 2012, states ~85% of the workforce (46 million) are in the unorganized sector. As per the India Employment Report, 2016 [4], more than 88% of the labour force in India comes under an unorganized workforce and lacks any form of income security or pension [5]. Only 9.98% of total employment is in the formal sector (2017-18 report by the Annual Survey of Industries (ASI)). As per the 2011-12 labour force survey on employment 2011-12 by NSSO and Ministry of Statistics and Program Implementation, out of the 47.41 crores employed, 82% were in the unorganized sector and 22% of adults 80 years and above participate in the workforce. Savings for liquidity and long-term asset funds are primary preference rather than saving for longevity or pensions. The main challenge to Government is to provide adequate income security at old age [6]-[9].

The majority of research papers at national and international levels discuss pension plan design and architecture [10]-[14], pension behaviour and operational aspects of pension plans [15]-[16], investment and portfolio management of pension funds [17]. Some papers have examined the National Pension System in India [18]. Very few studies have focused on the pension plans for unorganized workers in India. The present study discusses the Atal Pension Yojana (APY) in specific, makes a critical appraisal of feasibility in terms of economic returns through scenario analysis. Analysis of impact of pension reforms on returns obtained by the elderly in India is attempted.

Pension Schemes For The Unorganised Workforce In India

Indian pension system constitute pension schemes under both Defined Benefit Plan (DBP) and Defined contribution Plan

(DCP) that cater to the need of individuals under organized and unorganized sector.

Atal Pension Yojana

Atal Pension Yojana (APY), is a contributory pension scheme introduced by the Indian government on 1st June, 2015,) mainly to encourage voluntary savings as well as a protection against longevity risk. All individuals, 18-40 age group with are eligible.The Central Government co-contributes up to 50% of the total contribution or Rs. 1000 per annum, for a period of 5 years, i.e., from Financial Year 2015- 16 to 2019-20. However, this was applicable for those who have joined the scheme before 31st December 2015 and who are not members of any statutory social security scheme and are non-taxpayers. A fixed minimum pension of Rs. 1000 to Rs. 5000 per month is paid to subscribers (npscra.nsdl.co.in). Subscribers at 60 years of age will receive a guaranteed monthly pension. Premature withdrawal is permitted only under exceptional cases. The Government has introduced its contribution, flexibility and relaxed conditions as 'all inclusive' policy for encouraging participation.

Present status of APY

According to Annual Pension Bulletin 2021, 77% of subscribers have chosen a monthly pension of Rs. 1000 in March 2021 compared to 38% in March 2016. Participation of female subscribers increased to 44% in March 2021 from 37% in March 2016. There is an increase in the people in the age group of 18-25 years participating in the scheme (43% as of March 2021, from 29% as of March 2016).

Table 1: Performance of Atal Pension Yojana

Year	No. of subscribers (in lakhs)	Contribution (in crore)	AUM (in crore)
30/11/2020	249.69	12,314	14,221
31/03/2021	280.49	13,764	15,687
30/11/2021	325.00	16,877	19,352

Source: Pension Fund Regulatory and Development Authority (PFRDA).

As shown in table 1, there is a positive response from individuals towards this scheme. This is reflected in the table in terms of the increase in the number of subscribers, the amount of contribution paid, and the assets under management by fund managers. The scheme returns since inception and 5-year returns are 9.57% and 8.65% for SBI, 9.90% and 8.42% for LIC, and 9.89% and 8.40% for UTI as of 30th November 2021.

The growth is attributed to several advantages offered by the scheme. APY offers tax benefits under Sec.80 CCD for the contributions made. In case of the death of the subscriber, the pension would be available to the spouse. In case of death of the subscriber & the spouse both, then the pension corpus would be returned to the nominee. However, there are some limitations in the design architecture concerning interest rates at the time of withdrawal. To meet the expectations, the government has to co-contribute more amount to the scheme to help realize adequate pension [19]. The penalty for default restricts participation from the informal or unorganized sector workers with no fixed income pattern [20]. Lack of inflation indexation and conservative investment mix leads to a lower corpus accumulation at the time of retirement and hence lower pension amount [21] .

II. STATEMENT OF CONTRIBUTION AND METHODS

The Problem

Although the plan was initiated in 2015 (Swavalamban Yojana 2011 merged with APY in 2015), the basic questions that arise are on the number of organizations and size of registrations until 2018. As of 30th November 2021, there are 325 lakh subscribers whose contribution is Rs.16, 877crores. The Assets under Management (AUM) are Rs.19, 352 crores. This means that a meager 6.96% of the eligible labourers have subscribed for APY. A large potential is yet to be subscribers of the APY. Further added to this dismal figure is that of a plunge in the income of 53% in the year 2021from their levels in 2015-16. The situation apart from awareness about the plan to common citizens, there are some apprehensions which people believe to be true need to be addressed:

1. The low returns guaranteed on pensions and their inadequacy.
2. The size of the pension over a longer time and its real value.
3. The alleged violation of a promise made by the government lead to less than expected returns.

The present study examines APY under conditions questions of the reality of consumers switching to other schemes given their profile.

JOURNAL OF ALGEBRAIC STATISTICS
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Objectives of the study
The set objectives are:

1. To critically dissect APY in terms of returns and
2. To find out possible reasons for its non-acceptance based on developed scenarios.

Research design
Based on the introduction of APY, the design has been formulated by developing critical scenarios in respect of ROI by a labourer in an organized and unorganized sector. The scenarios are developed based on a critical profile of labourers who appear to be compatible with this plan. The labourers are divided into five categories based on percentile income. In addition to this their demographic profile such as working sector, gender, family size and asset holdings in case they have are considered divided into five slices.

The possible income, consumption, and savings for each slice are collated from primary data collected from 92 respondents by the researcher on income, expenditure savings & investment patterns based on the cue sampling method1. These figures are superimposed on APY to get the final results. Investments for an Indian investor household are house, property, products, FDs/Stocks/Shares, savings in PPF/VPF, NSCs, PMVVY, gold, and other metals, any other existing form (Financial-Planning-Questionnaire, FPSB India, 2011). Individual consumption and savings are examined in terms of their variants. The variants of consumption are food, clothing, housing, rent, durables, maintenance, utilities such as electricity, water, etc., travel, socialization expenses, and the like. All this leads to Net Savings which form the basis of types of investments. The Net Savings, in terms of their size, will form portfolios of investments[1].
Total Saving is a function of the four determinants, Gross Income (In), Number of earning members per family (En), Consumption level (Ci), Percentage of returns of the instrument of savings (RA), and Number of savings instruments (p-value closer to zero). Gross Total Income (In) and consumption level (Ci) strongly influence pension saving. Pension Savings acquire importance when savings instruments (I s) used are more or multiple ($t= 6.1001$, $p = 1.17E-08$).

Concerted efforts are needed to optimize pension savings by making pension plans or schemes attractive[1].

The study uses data for 92 respondents who come under the age group of 24-40 years who have eligibiity to subscribe to Atal Pension Yojana and are earners.

Limitations of the Study
1. The study does not consider the entire labour force in India. It is restricted to residents of Bengaluru Metropolitan City.
2. The income-based criterion may not be the right classification overtime period.
3. The scenario profile is relevant to a point in time and valid under specific assumptions made.
4. No aggregate data from authentic sources have been used.

III. RESULTS, DISCUSSION, AND CONCLUSIONS

The data analysis is done in four phases: a. Demographic characteristics, b. Consumption pattern and c. Savings pattern d. Scenario analysis

Respondents Profile
Sixteen variables are considered for profiling respondents. The variables are 1. Gender, 2. Age group, 3. Marital Statistics, 4. Working status of the spouse, 5. Family size, 6. Earning members in the family, 7. Domicile Status, 8. Education, 9. Professional Status, and 10. Nature of Job, 11. Years of Experience, 12. The size of the organization, 13. Number of Dependents, 14. Percentage of Monthly savings, 15. Gross total income (monthly), and 16. Net total Income (monthly). The average figures of the above variables sketch the respondents. All the data on variables of demographics are statistically significant at $p =0.005$ level. As such, consumer profiling is close to reality in understanding their income, expenses, and savings patterns.

All the sixteen demographic variables explain the profile of an average Indian family. Family is a strong sociological unit wherein decisions on expenditure, savings, and welfare are done. The head of the family is male or female depending upon the situation. We will sketch the profile based on the average numbers of the variables set for defining demographics.

Table 2: Demographic Characteristics of respondents

Demographic characteristic	Mean	Standard Error	Standard Deviation	t-statistic (n=92)
Gender (68:32)	1.36	0.05	0.48	27.20**
Age	31.92	0.52	4.96	61.38**
Marital status (86.5:13.5)	1.73	0.06	0.59	28.83**
Working status of spouse (82.5:17.5)	1.65	0.05	0.48	33.00**
Size of the family (Nos)	4	0.13	1.27	13.33**
Number of Earning members	1.99	0.09	0.88	22.11**
Domicile status (91:09)	1.82	0.04	0.39	45.50**
Education status (82.8:17.2)	4.14	0.10	0.98	41.40**
Professional status (66:34)	2.63	0.14	1.33	18.79**
Nature of job	3.24	0.14	1.32	23.14**
Years of experience	8.09	0.59	5.67	13.71**
Size of the organization	2384.17	551.13	5286.28	4.33**
Number of dependents	2.05	0.11	1.03	18.63**
Percentage of monthly savings	2.37	0.13	1.24	18.23**
Gross Total Income	54331.52	2921.29	28020.04	18.59**
Net Total Income	49581.09	2834.79	27190.32	17.49**

Note: 1. The significant value of the t statistic at 90 degrees of freedom is 2.6316 for p=0.005.
***Not significant ** Significant at p=0.005 level.**

Table 2 indicates that the men, women ratio in the sample is 68:32.i.e. for every two men, one woman has been selected for revealing data sets. Further, the average age of the respondents is 32 years. This is the right for a person to have stable employment/job wherein they settle with a family and look for a well-defined expenditure and pattern of savings. The marital status is that 86.5% of the respondents are married and the remaining 13.5% are senior citizens and/or single in status. This characteristic enables us to move towards collecting data from households who have the potential to earn, expend and save continuously, given that they are well employed with stable jobs on hand. The average size of the family is four with two dependents in each family for two earners. The dependents could be children, parents, or parents-in-law. The urban householders are accommodative, generally, of their parents and their parents-in-law–in-law. It could be a family of two children where parents groom them to be a part of a responsible family. The domicile is 91% are from Bengaluru and 9% are from other cities and towns. As much as 82.8% of the respondents are graduates/ Post-graduates. Professionalism is the key to holding on to employment. The respondents are either in a public limited company or in a

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private firm. Bengaluru has had more IT firms operating in the last three decades. As such, it is known that IT is percolating in the Public sector and governmental organizations too. Our respondents are in full-time employment in one of the two types of companies. The average number of years of experience is eight years. They are in big firms with a size of 2400 people. The average monthly savings is 2.37% of the total monthly income. The average salary of the respondents is Rs.54, 000/- month. Their net income of them is Rs.49, 600/- per month. The profile is clear of an upper-middle-class employee in India. All the parameters of demographics are statistically significant at a 0.05 level.

Table 3: Consumption Expenses of respondents

Item of expenses	Mean value (Rs/month)	Standard Error	Standard Deviation	t-statistic (n=92)
Food & incidental expenses	6216.89	388.65	3727.76	16.00**
Rent and lease expenses	3810.37	343.71	3296.73	11.09**
Expenses on household equipment	2567.03	182.97	1754.95	14.03**
Utility expenses	2338.29	132.54	1271.31	17.64**
Medical expenses	1904.54	166.68	1598.78	11.43**
Entertainment expenses	1938.79	183.84	1763.34	10.55**
Travel expenses	2655.48	193.59	1856.83	13.72**
Club membership	1142.79	182.46	1750.10	6.26**
Property taxes, Vehicle maintenance	2622.15	211.72	2030.76	12.38**
Charity and donations	1207.40	183.87	1763.61	6.57**
Mortgage payments	2609.04	296.25	2841.54	8.81**
Credit card and loan payments	2665.37	258.66	2480.95	10.30**
Insurance payments	2840.58	220.73	2117.16	12.87**

Note 1: The significant value of the t statistic at 90 degrees of freedom is 2.6316 for p=0.005.
***Not significant   ** Significant at p=0.005 level.**

Data on consumption patterns as shown in table 3 reveal, a typical family in Bengaluru will have to incur 13 items of expenditure. The family would spend Rs.6200/- per month on food and incidental expenses (12.5% of the Net monthly income). The rent and lease expenses would be Rs.3800/-(7.67% of the total). Expenses on utility and household are about Rs.2500/- (5.1% each). Medical and entertainment expenses would be Rs.1950/- (4.0% each). Travel expenses are about Rs.2600/-(5.2% of the total). Club membership for socialization is about Rs.1150/- (2.4%). Local Taxes are about Rs.2622/-

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per month (about 5%). Charity and donations are about Rs.1200/- (2.5%). Mortgage payments, Credit card payments, and Insurance payments are R. 2500/-(5.5% each respectively). All these payments are statistically significant at the p=0.005 level. We can take these as authenticated in the growing context of cities in every aspect of a metropolitan city.

Table 4: Savings pattern of respondents

Item	Mean	Standard Error	Standard Deviation	t-statistic (n=92)
Residential house or commercial property	1935.45	275.47	2642.23	7.03**
Insurance plan	2492.26	162.57	1559.28	15.33**
Pension plans, National Pension scheme	984.70	160.44	1538.84	6.14**
Equity shares	1295.85	161.99	1553.76	8.00**
Mutual fund	2159.97	214.07	2053.32	10.09**
Bank deposits	2544	241.90	2320.24	10.52**
PPF/VPF	1241.75	223.74	2145.96	5.55**
NSC, Post office savings	1416.52	169.10	1621.98	8.38**
SCSS/ PMVVY	631.21	353.05	3386.33	1.79*
Gold and jewellery	1568.04	172.20	1651.67	9.11**

Note: 1. The significant value of the t statistic at 90 degrees of freedom is 2.6316 for p=0.005. Level.
***Not significant   ** Significant at p=0.005 level.**

As shown in table 4, the savings pattern has ten items of which SCSS/PMVVY schemes are not statistically significant. It is because of its applicability to senior citizens introduced three years ago. Our profile of respondents has an average age of 32 years and only a few belong to the age group 60+years. The other nine items are an investment in mutual funds (Rs.2160/-), insurance plans (Rs.2492/-) residential house (Rs.1935/-), Pension plans, National schemes (Rs.985/-), equity shares (Rs.1295/-) bank deposits (R. 2544/-) PPF/VPF (Rs.1242/-), NSC/Post office savings (Rs.1416/-) and Gold and Jewellery (Rs.1568/-). Consumers have other beneficial options as they are into making the best savings in terms of returns and for buying long-term assets and consumer durables. Allocation in pension schemes is not a priority for them. The investor/consumer thinks that the value deterioration of money, in the long run, is the main cause for investing in short or medium-term benefits for asset value consolidation.

Developed Scenarios

Based on the revelations of the primary data, it is clear that there are many options available for an investor to save to meet the short, medium, and long-term challenges of life. Short and medium-term savings will be used to develop assets for long-term use. In addition, some minimum money is required to meet daily needs after superannuation from service. For the investor who has served in the Government or in places where CPI-linked pensions are available the amount needed every month is a surety and it grows along with the growth of CPI. The data analysed above in three tables have shown the income, expenditure, and savings pattern for a typical householder. Notice that this typical person with an average age of 32 years and getting the uninterrupted flow of Rs 50,000/-per month has multiple choices in savings which he/she perceives as the best options. The lifestyle further dictates his choice of purchases every month. The savings are, generally, of short and medium terms. The long term savings such as contributory pension schemes are available in the market from the 'trusted' organizations such as LIC and established brands like ICICI/SBI. APY is for people of the age group 18-40 years and who contribute for 20 to 38 years without interruptions. NPV analysis has been carried out to understand the utility and influence given a lifestyle of an investor. The primary point of time data has been used to compute NPV at an assumed rate of interest.

The following assumptions are made:

1. The age of respondents at 24, 29, 34, and 40 years are considered.
2. Scenarios are constructed for two slabs of pension amount opted for Rs. 1000 and Rs. 5000.
3. Contribution per month and vesting period based on age is taken from the APY manual.
3. Life expectancy is assumed up to 90 years.
4. NPV is calculated assuming a 5% interest rate.
5. Return of corpus in case of death etc. transferred to the nominee is not considered.

JOURNAL OF ALGEBRAIC STATISTICS
Volume 13, No. 3, 2022, p. 968 - 979
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Table 5: Net Present Value of contributions on the age of the investor and vesting period (for Rs.1000 pension)

Age In years	Years of contribution	Indicative monthly contribution for rs.1000 pension	Monthly net income	Monthly consumption expenses	Net pv @ 5% interest	Recovery % of consumption exp
24	36	70	48,560	35,301	135	0.38 %
24	36	70	10,000	8,114	135	1.66 %
24	36	70	35,000	25,747	135	0.52 %
29	31	106	30,000	24,885	162	0.65 %
29	31	106	48,000	30,782	162	0.53 %
29	31	106	55,000	31,983	162	0.51 %
29	31	106	31,000	27,214	162	0.59 %
29	31	106	33,000	30,444	162	0.53 %
34	26	165	20,000	15,400	209	1.36 %
34	26	165	32,000	23,019	209	0.91 %
34	26	165	42,000	29,595	209	0.71 %
34	26	165	25,000	19,389	209	1.08 %
34	26	165	40,000	33,803	209	0.62 %
34	26	165	1,28,500	90,635	209	0.23 %
34	26	165	36,000	27,338	209	0.77 %
34	26	165	40,000	29,990	209	0.70 %
34	26	165	33,000	19,891	209	1.05 %
40	20	264	45,000	30,042	268	0.89 %
40	20	264	50,000	36,386	268	0.74 %
40	20	264	28,000	20,335	268	1.32 %
40	20	264	53,000	41,208	268	0.65 %
40	20	264	29,000	24,260	268	1.10 %
40	20	264	60,000	33,000	268	0.81 %
40	20	264	56,400	38,842	268	0.69 %

JOURNAL OF ALGEBRAIC STATISTICS
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40	20	264	1,47,000	1,08,550	268	0.25 %

Table 6: Net Present Value of contributions on the age of the investor and vesting period (for Rs.5000 pension)

Age In years	Years of contribution	Indicative monthly contribution for rs. 5000 pension	Monthly net income	Monthly consumption expenses	Net pv @ 5% interest	Recovery % of consumption exp
24	36	346	48,560	35,301	673	1.9 %
24	36	346	10,000	8,114	673	8.3 %
24	36	346	35,000	25,747	673	2.6 %
29	31	529	30,000	24,885	809	3.3 %
29	31	529	48,000	30,782	809	2.6 %
29	31	529	55,000	31,983	809	2.5 %
29	31	529	31,000	27,214	809	3.0 %
29	31	529	33,000	30,444	809	2.7 %
34	26	824	20,000	15,400	1,046	6.8 %
34	26	824	32,000	23,019	1,046	4.5 %
34	26	824	42,000	29,595	1,046	3.5 %
34	26	824	25,000	19,389	1,046	5.4 %
34	26	824	40,000	33,803	1,046	3.1 %
34	26	824	1,28,500	90,635	1,046	1.2 %
34	26	824	36,000	27,338	1,046	3.8 %
34	26	824	40,000	29,990	1,046	3.5 %
34	26	824	33,000	19,891	1,046	5.3 %
40	20	1318	45,000	30,042	1,338	4.5 %
40	20	1318	50,000	36,386	1,338	3.7 %
40	20	1318	28,000	20,335	1,338	6.6 %
40	20	1318	53,000	41,208	1,338	3.2 %
40	20	1318	29,000	24,260	1,338	5.5 %

JOURNAL OF ALGEBRAIC STATISTICS
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40	20	1318	60,000	33,000	1,338	4.1 %
40	20	1318	56,400	38,842	1,338	3.4 %
40	20	1318	1,47,000	1,08,550	1,338	1.2 %

Table 5 and 6 as shown above portrays the NPV under APY for contributions made by an investor of 24 years of Rs. 70 p.m. and Rs. 346 p.m. for a pension option of Rs. 1,000/- or Rs.5000/- per month at 5% as the interest rate and to what extent does his investment help in maintaining his consumption needs.

The Net present value of the contribution made is Rs. 135 for Rs.1000/- and Rs. 673 for a pension of Rs.5000/- per month after 36 years of continuous contribution. With this an investor with a family income of Rs. 10000 p.m. will be able to cover 1.66% and 8.3% of his consumption needs, whereas an investor falling under a higher income bracket of Rs. 48,560 will recover only 0.38% to 1.9% of monthly consumption. An investor of 40 years of age with a lower income bracket of Rs. 28000 will recover 1.32% and 6.6% respectively and 0.25% and 1.2% of monthly consumption expenses at an income of Rs. 147000. The scheme alone is not efficient in managing the expenses at retirement. There are, however, dependents in a family of size two. The numbers could form the entire family. As such, the number of dependents needs to be accounted for.

Table 7: Net Present Value of contributions on the number of earning members in the family

Age In Years	Years Of Contri Bution	Indicative Monthly Contribution For Rs.1000 And Rs.5000 Pension		Monthly Net Income	Monthly Consum Ption Expenses	Net Pv Of Rs. 1000 Pension, 5% Interest	Recovery % Of Consumption Exp	Net Pv Of Rs. 5000 Pension,5% Interest	Recovery % Of Consumption Exp	No. Of Earners
29	31	106	529	31000	27214	162	0.59%	809	2.97%	1
29	31	106	529	33000	30444	162	0.53%	809	2.66%	1
34	26	165	824	20000	15400	209	1.36%	1046	6.79%	1
34	26	165	824	25000	19389	209	1.08%	1046	5.40%	1
34	26	165	824	40000	33803	209	0.62%	1046	3.10%	1
40	20	264	1318	45000	30042	268	0.89%	1338	4.45%	1
40	20	264	1318	28000	20335	268	1.32%	1338	6.58%	1
40	20	264	1318	29000	24260	268	1.10%	1338	5.51%	1
40	20	264	1318	60000	33000	268	0.81%	1338	4.05%	1
40	20	264	1318	56400	38842	268	0.69%	1338	3.44%	1
24	36	70	346	10000	8114	135	1.66%	673	8.29%	2
29	31	106	529	48000	30782	162	0.53%	809	2.63%	2
29	31	106	529	55000	31983	162	0.51%	809	2.53%	2
34	26	165	824	32000	23019	209	0.91%	1046	4.55%	2
34	26	165	824	42000	29595	209	0.71%	1046	3.54%	2
34	26	165	824	128500	90635	209	0.23%	1046	1.15%	2
34	26	165	824	36000	27338	209	0.77%	1046	3.83%	2
34	26	165	824	40000	29990	209	0.70%	1046	3.49%	2
40	20	264	1318	50000	36386	268	0.74%	1338	3.68%	2
40	20	264	1318	53000	41208	268	0.65%	1338	3.25%	2
40	20	264	1318	147000	108550	268	0.25%	1338	1.23%	2
24	36	70	346	35000	25747	135	0.52%	673	2.61%	3
29	31	106	529	30000	24885	162	0.65%	809	3.25%	3
24	36	70	346	48560	35301	135	0.38%	673	1.91%	4
34	26	165	824	33000	19891	209	1.05%	1046	5.26%	4

The above table 7 projects a scenario with the number of earning members as a variable. It could be seen that for one earning member in the family, the NPV values for Rs.1, 000/- and Rs. 5,000/- pension Rs. 162 to Rs. 268 and Rs. 809 to Rs. 1338 with a differential age group with 0.59% and 2.97% & 0.69% to 3.44% rate of recovery respectively. The recovery rate varies from 0.38% to 1.91% and 1.05% to 5.26% with four earning members in the family for age 24 and age 34 years investor. This happens because of the better earning and investment capacity of the family.

Table 8: Net Present Value of contributions on the number of dependents in the family

Age In Years	Years Of Contri Bution	Indicative Monthly Contribution For Rs.1000 And Rs.5000 Pension		Monthly Net Income	Monthly Consum Ption Expenses	Net Pv Of Rs. 1000 Pension, 5% Interest	Recovery % Of Consumption Exp	Net Pv Of Rs. 5000 Pension,5 % Interest	Recovery % Of Consumption Exp	No. Of Dependents
24	36	70	346	10000	8114	134.6107	1.7%	673.0536	8.3%	1
29	31	106	529	55000	31983	161.8075	0.5%	809.0377	2.5%	1
29	31	106	529	31000	27214	161.8075	0.6%	809.0377	3.0%	1
34	26	165	824	42000	29595	209.273	0.7%	1046.365	3.5%	1
34	26	165	824	128500	90635	209.273	0.2%	1046.365	1.2%	1
34	26	165	824	36000	27338	209.273	0.8%	1046.365	3.8%	1
34	26	165	824	33000	19891	209.273	1.1%	1046.365	5.3%	1
40	20	264	1318	28000	20335	267.5661	1.3%	1337.831	6.6%	1
40	20	264	1318	29000	24260	267.5661	1.1%	1337.831	5.5%	1
40	20	264	1318	147000	108550	267.5661	0.2%	1337.831	1.2%	1
24	36	70	346	48560	35301	134.6107	0.4%	673.0536	1.9%	2
24	36	70	346	35000	25747	134.6107	0.5%	673.0536	2.6%	2
29	31	106	529	33000	30444	161.8075	0.5%	809.0377	2.7%	2
34	26	165	824	20000	15400	209.273	1.4%	1046.365	6.8%	2
34	26	165	824	25000	19389	209.273	1.1%	1046.365	5.4%	2
34	26	165	824	40000	33803	209.273	0.6%	1046.365	3.1%	2
34	26	165	824	40000	29990	209.273	0.7%	1046.365	3.5%	2
40	20	264	1318	53000	41208	267.5661	0.6%	1337.831	3.2%	2
40	20	264	1318	60000	33000	267.5661	0.8%	1337.831	4.1%	2
40	20	264	1318	56400	38842	267.5661	0.7%	1337.831	3.4%	2
29	31	106	529	48000	30782	161.8075	0.5%	809.0377	2.6%	3
29	31	106	529	30000	24885	161.8075	0.7%	809.0377	3.3%	4
34	26	165	824	32000	23019	209.273	0.9%	1046.365	4.5%	4
40	20	264	1318	45000	30042	267.5661	0.9%	1337.831	4.5%	4
40	20	264	1318	50000	36386	267.5661	0.7%	1337.831	3.7%	4

Table 8 projects another scenario with the number of dependents as variables. The recovery rate is 0.6% to 3.0 % for a 29-year-old investor at an income of Rs. 10000 per month with one dependent member in the family. However, the recovery rate at 4 dependents, is 0.7% and 3.3% at a monthly income of Rs. 30000. The NPV value is reduced naturally because of the number of dependents in the family and differential rates of interest.

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CONCLUSION AND IMPLICATIONS OF THE STUDY

The results of the study show clarity in terms of the scenario projected for an urban metropolitan consumer. Given the demographic profile of an above-average consumer, he intends to have asset creation in the short term by investing in mutual funds, equity shares, and insurance plans for meeting the challenges of life. However, the senior citizen saving schemes apply to people of age 60+ and hence only a few who were in the sample have responded. The pension plans yield less value in real terms for an investor with a longer period of investment 36 years of work life. The benefits derived therefrom have less real value than what they expect to derive. The uncertainty of long-term duration haunts them in investing in pension schemes along with less real value realization at the end. Participation is necessary for different saving schemes or plans they are aware of. The government-sponsored schemes are the best for them along with mutual funds wherein better options of choice are available. This becomes worse without proper inflation protection and an optimum investment mix to help investors derive sufficient returns to maintain the desired level of standard of living at retirement. APY is not getting positioned because of no intention to subscribe for long-duration savings yielding an investor less than the returns he/she gets in the relatively long run.

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