

National Pension Scheme: A Veracity of India

Deepak Sood, Sachin Sharma and Kavita Sharma

***Abstract---** The impact of national pension funds has been increased day by day in order to promote the social security or pension saving (private) in the economy. Pension funds also helps in improving the growth of the country for the long run. The Main objective of the pension fund is to attain the higher amount of returns and reduce the risk. As pension funds are considered to be a important part of the capital market in various countries hence these capitals market also help in generating the higher returns where as these returns are varying from the country to country. Many country's has been in there life expectancies but they also reduce the fertility rates. This paper emphasis on the comparison of NPS is with Mutual funds, debt funds and equity funds with the help of Sharpe ratio and conceptualize the facts with findings that there is an impact of risk and return with relationship at different point or stages of occurrence.*

***Keywords---** NPS, Mutual Funds, Debt Funds, Sharpe Ratio, Risk, Return.*

I. INTRODUCTION

National pension scheme is a government approved pension scheme in India for Indian citizen in the age of 18-60 years. national pension scheme is also defined an voluntary contribution system in India. National pension scheme is started in 2004 by pension fund regulatory and development authority. as pension plans provide a financial stability when people do not have an regular source of income during the old age and it also helps in upgrading the living standard of the people's during the preceding years. Under national pension scheme minimum contribution is of 6000 per year which can be paid in the instalments of 500 per month. Retirements plans also increase the health and sanitation conditions in India and also increase the life span from 75 years by 2050 from 65 years. Government of India has stopped the definite benefits for all the employee who joined after 1 Jan 2004. Whereas national pension scheme is made for all the government employees. In 2009 it is opened for all the citizens of age 18-60 years. The main motive of government is to made India as pensioned society. Whereas under sec 80ccc and 80 ccd national pension scheme is an tax efficient and readily available. An individual contribute to his retirement account in national pension scheme. Whereas PFRDA was established in 23 august,2003. The main aim is to promote old age income and also help in protecting the interest of the subscribers. Under national pension scheme an subscriber assigned an unique permanent account number this account number is useful for subscribers whole's life and it can also be used anywhere in India at any time.

PRAN permanent account number provides further **two accounts namely:**

- **TIER-1 account** – This account is for the saving for the retirement which is draw able account
- **TIER-2 account** - this account is an saving option in which subscriber can withdraw the money at any time at anywhere

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- Whereas subscribers cannot open the more than one NPS account because as NPS is portal across sectors and location.

Various Tax Benefits

- Tax deduction up to 10% of salary (plus DA). Under section 80C(1) of income tax act within overall ceiling of Rs 1.5 lakh allowed under section 80C and section 80CCE.
- Additional deduction of Rs 50000 under 80CCD (1B)
- Employer contribution to NPS is exempted under section 80CCD (2)

Documents to be submitted along with withdrawal forms:

- Permanent retirement account number. It must be original
- proof identity (Attested copy)
- proof of address (Attested copy)
- A cancelled cheque.

Motives to contribute national pension scheme is:

- To provide income to the individual at the old age.
- In long run, national pension scheme provide a reasonable returns.
- NPS also helps in maintaining financial stability

After the independence the NSSF (national social security fund) was started in **kenya** in 1965 in order to provide retirement benefits to the employees in Kenya after the retirement age. The main aim to improve the growth rate. Saving for future and investment for future is both important for the economic growth of the country. In **china** government has taken an initiative to reduce the social conflicts, also helps in improving practical problems and also helps in attainment of the goals. They also provide various facilities related to education in college and universities. In **Asia** due to a poor productivity, no family support, lower income level which effect the employees life's and Arises the pension crisis in aging population. Where as the govt should implement the various policies which helps in providing the economic security that helps in reduces the risk in large amount. In **UK** young people also attract toward the pension planning they save for their entire life which is useful in development of the country and this saving also helps in fulfilment of the needs at the age of 60 or above. In **India** various pension reforms has been improved for the middle, lower income families so that they can also improve their life and living standards. It also help in reducing a poverty from the country. In **canada and australia** these also has an infrastructure investing from 1990s. These both countries consider has an highest amount of asset allocation to the infrastructure. They also them in improving and compare the infrastructure policies, pension systems and various investment strategies which helps in reducing the risk. In **Latin America** various pension reforms are made in order to reduce the poverty from the Latin America. They provide an financial support to the poor and needy people's so that they can reduce their problem and helps in improving their living standards and there must be optimum utilisation of scare resource. In **Hong Kong** an middle age adults have do little retirement planning for their own future where as 1,078 aged group has retirement satisfaction. in Hong Kong but due to lack of private, financial and public support they unsure to plan for retirement for there future which give them an maximum satisfaction. As govt should implement various policies

in order to improve an financial support. Government should take various measures in order to improve women's right in retirement pension scheme so that they can also take care of their families at any time. There must equality among the pension rights for men's and women's

Distinctive features of national pension scheme:

- ***Flexibility***

National pension scheme offers a various investment options and a choice of PFMs which helps in improvement of investment in appropriate manner and they also see how money grow. The Returns must be related to the market effectively and efficiently. An subscribe can choose the auto choice or active choice for the distribution

- ***Simple***

Permanent retirement account number (PRAN) can be issued which can be used by an subscribers for his whole lifetime. PRAN is unique account number which is issued to subscribers. Which helps in improvement of pension fund system in country's and reduce the rigidity.

- ***Portability***

The citizen of country can use their account anywhere, at any time in the country through the network of (POPs) point of presence.

- ***Independence***

These scheme also help a person to be an independent after giving the various retirement benefits to the employee to improve there productivity.

- ***Safe Investment***

This scheme is considered to be an safe investment because it gives an highest amount of return, reduce the risk associated with this scheme in order to increase an efficiency

- ***Higher Returns***

This scheme also provide an high amount of returns at the retirement age or old age through the asset allocation which helps in improving an productivity of the company and also improves an goodwill of the company.

- ***Economical Plans***

As national pension is considered as a low cost retirement plans to individuals which results in proving the higher amount of profit or returns in future or in retirement age in order for improve the retirement benefits.

- ***Government Sponsored Plan***

National pension scheme approved by an government but it is also regulated by an PFRDA. PFRDA it also provide protect the interest and provide safeguards of the subscribers. Government also provide an creditbility to the scheme.

▪ **Tax Efficiency**

National pension also have a tax efficiency under various section in order to reduce the tax burden on the subscribers at the retirement age. Government can also taken the various initiative or decision to reduce the burden of tax

PFRDA (pension fund regulatory and development Authority) PFRDA was started on 19 sep, 2013 under PFDRA pension system was started for the government employees, but now it is extended for all the employees the Indian citizens and also for the non residents Indians in order to expand pension system in the world.

Various financial regulators Are:

RBI (Reserve Bank of India)

SEBI (securities exchange board of India)

IRDA (insurance regulatory development Authority)

IBBI (insolvency and bank rusty board of India)

Various functions performed by PFRDA are:

- It protect the interest of the employee.
- Promote, expand pension funds.
- Coordinate and file various intermediaries.
- It also help in expanding the professional organisation which is interlinked with the pension system.
- Coordinate various regulated asset.

Various intermediaries of pension fund regulatory and development authority are:

1. Pension Fund

Pension fund is the one of the intermediaries. In which PFRDA given a certificate of registration for the purpose of receiving contributions, devote them and compensate the subscribers in the optimal sequence. It also help in Maintain proper records of books of accounts for these scheme. Where as it also has a risk management committee in order to take right decision during the risk arises.

2. CRA (Central Record Keeping Agenc)

Under PFRDA central record keeping agency is also registered. It also help in proper record – keeping, computing, auditing and services to the subscriber.

- CRA Provide call centre facilities to all the subscribers under PFRDA.
- Pension fund managers.
- CRA offers various services to the subscribers directly and including develop account statements.

3. POP (Point of presence)

Point of presence is also registered under PFRDA and has a electronic network with CRA in Oder to receiving and carry funds and information and produce of funds.

4. Trustee Bank

Trustee bank is a bank and has an intermediary possibility of providing banking efficiency and also proper record of day to day discharge of funds. On 1 July, 2015 Axis bank has been selected as trustee bank. Which is valid for 5 years.

5. Custodian

Custodians also help in proper record of asset or securities under national pension scheme and provide various services :

- It also helps in maintaining proper record of accounts for securities and asset.
- Rights and benefits on the flow of securities or asset.

6. Aggregator

Under PFRDA aggregator is also registered which help in performing subscribers various interface functions under national pension scheme like

7. Retirement Advisor

Under PFRDA society, advisor, trust is also registered in order to give their suggestion on national pension scheme and on various national pension scheme control by the PFRDA

Mutual Funds

Mutual funds is a part of investment. Which collect the saving of investors and invest them in stock bonds, shares. A portfolio manager or fund manager has taken the decision related to how they invest the money? for this he give a fees which comes from the money in the fund

Types of mutual funds:

Balanced Mutual Funds

- Mutual fund are known as hybrid mutual funds. They always invested in different asset classes. They helps in reducing the risk of losing money and also help in increase in returns. The main aim of balanced mutual fund is to give proper growth and regular income. In balanced mutual funds 40% to 60% is invest in equity and debt instruments.

Diversified Equity Mutual Funds

- The main motive of these mutual funds is to attain the long term capital appreciation through investments in stock markets. They also help in reduce the risk that is associated with the investment and provides an long term return for the longer period of time. They also help in to meet the financial goals for the longer period of time like marriage, children education etc

Debt Mutual Funds

- Debt mutual fund is also an investment pool, it may be invest in long term, short term bonds, money market instruments, floating rate. It's also help in reducing the risk but also give an return which help in reduction of risk in mutual funds. under debt mutual fund debt has fixed maturity date and fixed interest rate.

II. REVIEW OF LITERATURE

Adams C. (2018) focused on team mutual fund that submit the welfare of the team management over its cost. Where's the welfare of the team management will also be like to helps in board monitoring. Strong board monitoring also helps in improvement of funds performance and also builds an relationship among an management teams and boards

Ajie H.A (2017) focused in economic, the pension contributors and pension fund asset has positive impact in order to make an proper accountability and transparency in such system. The research depicts on the management of pension fund (government, real estate, bonds) in capital market in order to increase an profitability and efficiency

Barrientos A.(2006) focused on the pension plans is an important constitute in Latin America in order to reduce an poverty. The government should ensuring the old age support for needy and poor people in the Latin America so that they also enjoy their life. The government should also provide them pension facilities at the age of 60 years or above so that the elderly people must also enjoy their life. In order to reduce poverty Latin America government has start various pension scheme in America

Barros Pestana (2006) focused on the measuring the performance of the pension funds company by combining two variables namely operational, financial. They also understand how to invest in the mutual funds in order to get more return and reduce risk that is associated with them

Butterworth v. (1989) focused on the market price or product cost which give an opportunity to the publishers for the investment in the mutual funds in order to reduce the risk and having the higher amount of returns Under which price policies play an important role

Charan Singh (2013) focus on that India has a lowest coverage of pension whereas the developed countries provide pension to whose has contribution for pension whereas universal pension scheme also bring in relief in the unorganised sector related to working population and it also increase coverage of pension, universal pension helps in increase in consumption and reduce risks, poverty and inequality

Cristian Milos Marius (2013),They focused on the short term negative effects on the pension reform as well as long run effects non financial crises in the conditions of ageing population and unsustainable pension schemes An attention towards management,supervision of the pension plans, risk management standard in order to upgrade the more pension reforms in order to reduce risk

Foster L. (2017) focused on the attitudes of the young people towards the pension planing. The people young people prefer to save for their own old age or for the improvement in living standard. They also invest which give them maximum statisfication at the retirement age. They think planning helps in achieving there goals, target, and long run profit in near future to increase an efficiency. Young people gives longest contribution in saving during their working age which helps in them to save for their old age

Georgeta Dragomir (2010), They focused on public pension system in order to indentify the main gap and its also provide an solutions in Romania during the current global crises various types of benefits are provided in Romania and various rights of social insurance like old age pension, early retirement, death grant etc

Gough I. (2001) focused on the effects of globalisation on social welfare systems in worldwide. This article also alter the risk which is associated during investment in capital in various countries namely Thailand, Korea, Malaysia etc In order to improve an welfare regimes government should has been focused on the various macroeconomics problems which is associated over all the country in order to create an security among the countries.

H.D Zachary (2007) focused on the individuals saving in world which has been increase rapidly. Whereas tax declaration are also use to analysis the saving. Various macroeconomic determinants of the saving in the retirement are age, income, employment situation etc. Having higher income, proper retirement benefits, pension system are the some positive pension pillars which have an positive impact on the pension system

Hennessy A. (2011) focused on the agenda that is setting in the market integration in order to increase an pension reforms in the European so that their workplace pension reforms must be expand in the European and people must be aware about the pension reforms which help them in old age for the better retirement benefits at the age of 60

Herce A. (2003) focused on the various accounting standards, methodologies, models that are used in order to determine the variation among the pension reforms in the countries. These models helps in determine the impacts on equilibrium of the pension system whereas ad hoc model also helps in determine the sustainability, formulate various problems in order to maintain an equilibrium in pension system

Inderst advisory (2014) focused on the investment in the infrastructure sector in order to growth for longer period of time. Such investment also reduce an risk in the these sector but also provide an high amount of returns to the infrastructure sector where as government should start an pension reforms in order to growth of infrastructure sector in order to earn an profit for long run

Inderst G. (2014) focused on the investment infrastructure in Australia and Canada since the 1990s whereas both the countries have the world topmost asset allotment in infrastructure. They estimate and differences the experience of the investor on the basis of various factors i.e pension system, investment strategies, infrastructure policies in these countries.

Jefferson T. (2009) focused on women retirement benefits in the age of 60 or above. So that the women's also take care of their families in order to fulfil their all wants and needs. Women's have an equal rights in order to attainment of pension rights in order to attainment of pension rights. So that they can also live their live their life happily at the age of 60 years

Jiang X. (2018) focused on the research conclusion and methods in order to raise the funds that help in buy financial products. The important decision of the investment project is to exploration of money where as the investor has more attention towards the raised funds after the investment in stock.

Karen R. (2002) focused on the individual planning's related to pension system. Planning becoming an important part of the individuals life or become an activity whether they might do planning for their own or for their family. Without planning there is an insecurity for the futures retirement for effect the productivity or the goals of the individuals. In order to attain the security one should planning for the investment which will helps in future.

Kumar Anand 1995, They focused on the various form of old age pension and their related policies and they also provide an relationship among poverty and old age problems, state ideology, fulfilment of various policies in India in order overcome such problems.

Lachman Jack (2013) focused on the pension that employee Plano for its financial security in the age of 60 or above. In order to reduce an fiscal insecurity there is mandatory to long term invest. As pension system is an important source for all elderly citizens and retires as it becomes an opportunity to fulfil the need of the elderly people at the age of 60 years.

Lang R. (1993) focused on diversify mutual funds has increase UK risk adjusted return above on the domestic bench mark mutual fund. Whereas risk adjusted return are totally different from international mutual funds to domestic mutual fund. These risk return has empirical impact on the both international countries in order to find out reasons for risk and return

L Mun Keng w. (2004) focused on the retirement planning and retirement in Hong Kong. As a middle aged adults in Hong Kong do a retirement planning for the future. They think that they do not depend upon their families during the old age so that's why they do planning for retirement saving and retirement planning which give them maximum satisfaction in future

Louzek Marek (2007) focused on pension reforms in Central Europe and Eastern Europe which has been suffers from the political instability which arises an conflict among the various countries due to an indebtedness. In order to reduce these types of conflicts and risk the govt should provide various solutions in order to reduce an problem. Various finance opportunities are use in order to reduce an indebttness. So that both the country should has proper economic growth and helps in earn higher profits.

Martin G. (1988) focused on the various demographic characteristics for the population (aging or elderly). They focused on the sex ratio, material status, retirement, income, health expectancy, life expectancy. They also give an various models which help in determining the role of the family and government which helps in take caring of the families in age of 60 or at the retirement age to attain stability.

Mees Bernard (2018) focused on the firms of wealth management retirement schemes for the profit providers. They widely helps in pension funds in asset ratio so that all the employees must have an retirement saving to take the profit benefit at the age of 60 or above in order to fulfill their needs, desire and wants

Morton M.(2000) focused on the education system, saving, investment for the long term economic growth which provide them maximum profit. Whereas individuals in citizen are try to save more and more for investment. People also tends to save which they can use in old age for fulfilment of needs. As govt provide various tools and technique in order raise finance for education from various financial institution for higher studies

Ogawa N. focused on the changes among the pension programs in Japan. They find out that the impact of the economic has been increase the pension age. Whereas employment ratio has been increase from 2.2 for the age of 55-59, 5.9 for the age of 60-64, 1.9 for the age of the 65 -69 but they does not affect the other age groups in Japan. This Will occur due to an insecurity or for not having an early retirement benefits for the old age. The govt should

start various help in increase in saving and investment which effect the most labour market in Japan

OSU.B and Egbe A (2016) They focused on the optimization of investment contributors of pension asset with a view to encouraging contributors participation in achieving good return on investment of their funds. These results depicts clearly that the regulates pension managers from earning asset management fees even when they practically either did not satisfy 50prcnt of contributors

Park Donghyun (2009) focused on the poor financial stability, low coverage, improper benefits in Malaysia, Korea,,singapore, China etc. They also provide some policies which help in providing an economic security and financial support to the nations. They paper focused on the pension system which helps in improving the poor financial facilities in the countries. Thus pension system also help in providing long term security for the elderly people in order to improve or statisfied there needs and wants.

Pransanta sahu (2016) was focused on govt employee who has 90prcnt of the asset under management under NPS, PFDRA is giving information subscriber through NPS stakeholders and subscribers allowed 50000 deduction over and 1.5 lakh under section 80c of income tax act

Prather L. (2012) focused on the risk differences whether the risk is homogenous or heterogeneous. Whereas greats risk difference are also important suggestion for the management of portfolio risk variety of mutual funds are selected on the basis of risk difference and on the basis of the maximum returns. They depicts higher the risk higher the returns.

Ralf suzle (2012) focus on impact of demographic changes with interaction between stock, bond market pension system. As there will decline in capital market returns due to rise in ageing population which effects the demographic changes, decrease in contribution is the best policy with rising in pensionable age whereas increase in contribution has higher welfare looses

Richard Blundell (2002), They focus on the various prospects of retirement in regarding incentives including the individual pension plan and socioeconomic factors. Whereas these article leads down on option value approach and provide and seperate role for pension wealth for economic and demographic characteristics. Whereas it also differentiate SERPS and private schemes and modules eligibility to disability

Riise Trond (2012) focused on the women's disability among the pension schemes. This study helps in understanding the family situation, their work factors which include the high amount of disability among women pension scheme.and they also help in reduce the gender differences for education. They also focused the risk which is associated with the women's pension reforms

Ring p. (2003) focused on the risk which is associated with the financial services and the related to the pension reforms in UK. This article focused on the importance of the security in UK and also help in understanding the concept of the saving,retirement, security in Uk in order to reduce an risk which is associated with the pension reforms in the UK for their long run growth in future.

Seshmohan v. (2008) focused on that investment in mutual funds and also helps in increasing and providing powerful support to capital market in order to invest them. Where as the proper guidance must be given to the

investor for how to invest, when to invest to take these types of decision. These research always focused on the desire benefits of investing in stock market

Subitha L. Focused on needs of public health which helps in determining the various environmental, social changes. Proper living conditions, proper nutrition, proper safe drinking water are some of the social determinants which helps in improvement of the public health. Government should improvement in education facilities, equality among male and female, working conditions in order to improve the various health issues in the organisation so that employ must get an proper satisfaction among their work and earn more.

Suden A. (2006) focused on the pension system reforms for the women's and men's in Sweden thorough stimulated model they also compare women benefits of pension with the men pension benefits. The important part is to give an equally among men and women's for the pension system in the Sweden so that they can enjoy their retirement benefits and plans in the retirement age equally in Sweden.

Tan jingwen (2018) focused on the slow progress in pension reforms of colleges and universities in china. Whereas china require a sufficient financial support in order reduce social conflicts, solve practical problems and also help in achieving an ideal reform goals

Tobias W. (2014) focused on the market crises which effect the employee participation. These articles helps in coordinating various market strategies, also improve investment strategies in order to reduce an market crises related to finance. They also help in providing customers statisfaction, employees participation in order improve there pension funds in the market in order to have an high equity exposure.

TSADO-EMMANUEL (2011), They focused on the factors that effect the affecting the investment decision in pension fund administration. Whereas under PFA decision based on qualitative and quantitative parameters. respondents are selected through random sampling technique. Economic, risk and security of real estate factors taken into consideration when investment decision is made by PFA managers in order to ensure accountability

Victoria masinde (2014) focused on the retirement benefits among the Kenyan industry in order to create an social welfare in Kenyan for the proper growth and in order to statified the management needs. They also given an well implementation strategy which help in growth as well in order to fullfil the social needs of the employee. The research focused that 6% contribution helps in Meets the needs of the management and also helps in welfare of the Kenyan.

Wahyudi S. (2017) focused on the measurement performance of the equity mutual funds on the basis of various methods of portfolio measurement namely sharpe ratio, Jensen ratio, Treynor ratio, adjusted Sharpe index, adjusted Jensen index. The main aim of these research is to assign the performance of 42 equity mutual funds in Indonesia.

Walker Alan (2009) focused on the various on living standards of the people which can be low due to the poor fincancal position, poverty and dependency. The main reason for the poverty is limited availability of resources which become a major cause of poverty whereas govt should start various pension reform in order to reduce dependency in old age because people should have there retirement saving in old age

Wang zhikai (2011) focused on the social policy and labour policy which effects the China migrants. They use

the two types of techniques labour intensive technique and capital intensive technique which effect the labour and capital relation. In order to improve there relation they focus enforcement law which help them to solve there problem for China migrants workers.

Webb D.C focused on the company's financial and decision related to investment which helps in determine the various benefits of pension plan in order to solve an solvency which helps in determine the future deficits and future surpluses that's effect the investment of the company in order to improve the debt of the company and also helps in improvement of the pension plans.

Xiaoyang zhang (2015) focused on pension rights of families who has lost their child, but it is important for the govt to improve one child policy in china and always supply an support system which was beneficial to the families including financial relief and care and reduce a stigma against family

Xuanyi ren (2009) focused on the pension insurance of UK interept on china pension raising that can interfere stability, social, political, development. Social pension make it difficult to raise the fund due to misunderstanding and china few channels. It is mandatory to open up pension raising funds channels under the support of govt and their guidance

Yuantingwei (2018) focused on the exploration of pathways by social survey and condition of the national profit organisation who has Participated in social pension services in the internal and external perdicament environments.Under such national profit organisation has been improved the socials creditability through stronger construction and management of themselves.

Zajicek M.(2007) Focused on the inequality in Poland. In order to attain economic stability in the country there is need to maintain an equality in the country. In Poland pension system is distributed among the people according to their age, gender and class which doesnot help in long term growth and survival of the people's at the retirement age due to an inequality so there is mandatory to remove an inequality for long term benefits in Poland.

III. RESEARCH METHODOLOGY

Objectives

To compare the returns of national pension scheme with :

- Selected equity diversified mutual funds schemes.
- Selected debt mutual funds.
- Selected balanced mutual funds.

Meaning of Research Methodology

Methodology is the description of the methods, employed in a study, the process rules. Research refers to search for knowledge. It can also define research as systematic and scientific search for appropriate information on a specific topic.

Research Design

Research design refers to the great research approach or strategy adopted for a particular project. The scientific project research must make the data is adequately and economically

Period of Study

The Period of study in which shall be range from 2009-10 to 2018-19

Universe of Study

All the schemes which had been launched the year 2008-09 or earlier shall be the universe of the study

Sample Size

Top 10 schemes of equity diversified, debt and balanced funds shall be selected on the basis of the assets under management

Data for the Study

A secondary data : the data for these study is secondary data

B sources of data the required data shall be calculated from the following websites:

1. The website of the respective company.
2. AMFI

Tools of Analysis

Financial Tools

Returns

SHARPE RATIO: The sharpe ratio is given by William E Sharpe. This ratio helps the investor to accept the return as compared to the risk. This ratio helps in understanding the performance of the investment under risk

$$\text{Sharpe Ratio} = \frac{R_p - R_f}{\sigma_p}$$

R_p = return of portfolio

R_f = risk-free rate

σ_p = standard deviation of the portfolio's excess return

Beta: It helps in understanding whether the investment is invested high or low than market. Thus it also help in measuring the risk associated with it

$$\text{covariance} / \text{variance}$$

Standard deviation: As standard deviation is denoted by S. This is used to find the amount of variation in the data values or it measure the dispersion of data set in relation to the mean and square root of the variance.

Statistical Tools

- MEAN: X/N
- T- TEST: $\text{MEAN OF } X_2 - \text{MEAN OF } X_1/S$

IV. ANALYSIS AND DISCUSSION

Comparison of national pension scheme returns with mutual funds returns.

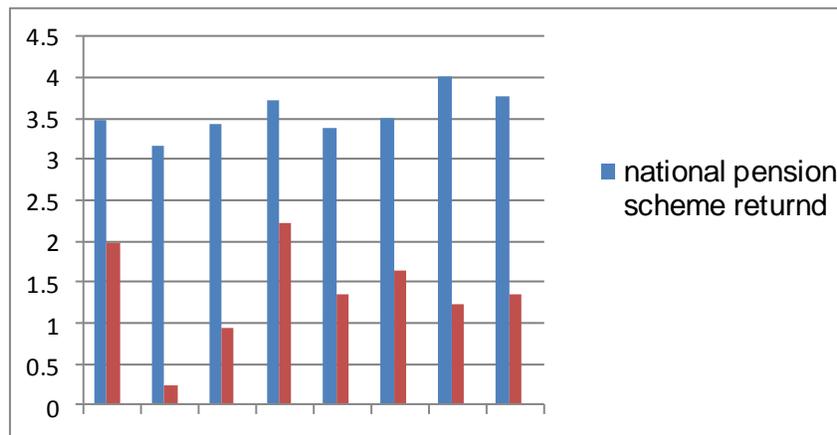
Table 1: Comparison of National Pension Scheme Returns with Equity Diversified Mutual Fund

S. No	National pension scheme (3 months)	Equity diversified mutual fund (3 months)
1	3.48	1.99
2	3.16	0.24
3	3.43	0.94
4	3.72	2.21
5	3.39	1.34
6	3.50	1.65
7	4.00	1.22
8	3.77	1.34
MEAN	3.56	1.36

T- test = 9.27

Table value =2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and equity diversified mutual fund.

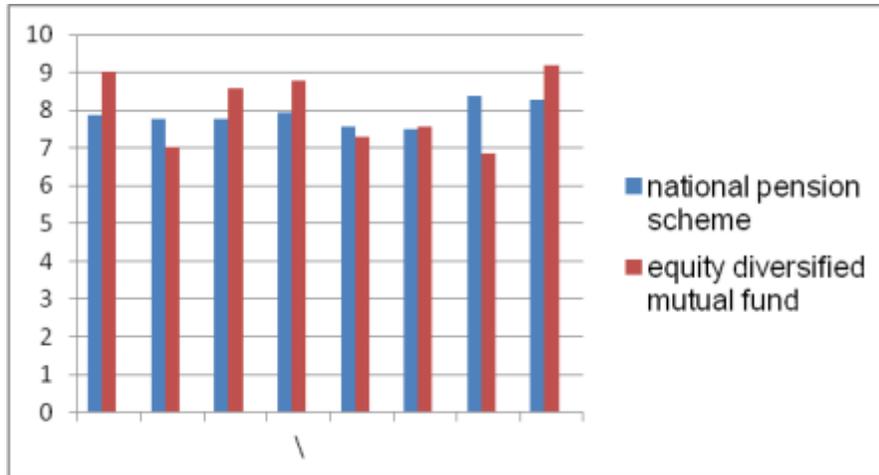
Table 1.2

S. No	National pension scheme (6 months)	Equity diversified mutual funds (6 months)
1	7.86	9.01
2	7.76	7.01
3	7.77	8.57
4	7.95	8.78
5	7.85	7.31
6	7.51	7.56
7	8.38	6.85
8	8.28	9.18
MEAN	7.88	8.03

T test value =0.095

Table value = 2.145

5% level of significance



Interpretation

At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and equity diversified mutual funds.

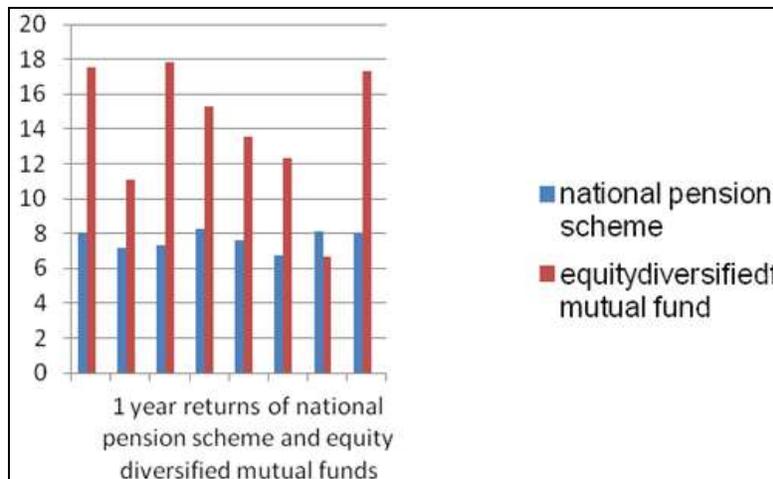
Table 1.3

S. No	National pension scheme (1 year)	Equity diversified mutual fund(1 year)
1	8.07	17.55
2	7.18	11.10
3	7.30	17.81
4	8.27	15.29
5	7.59	13.53
6	6.73	12.31
7	8.15	6.67
8	8.07	17.35
MEAN	7.67	13.95

T test value =4.55

Table value = 2.147

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and equity diversified mutual funds.

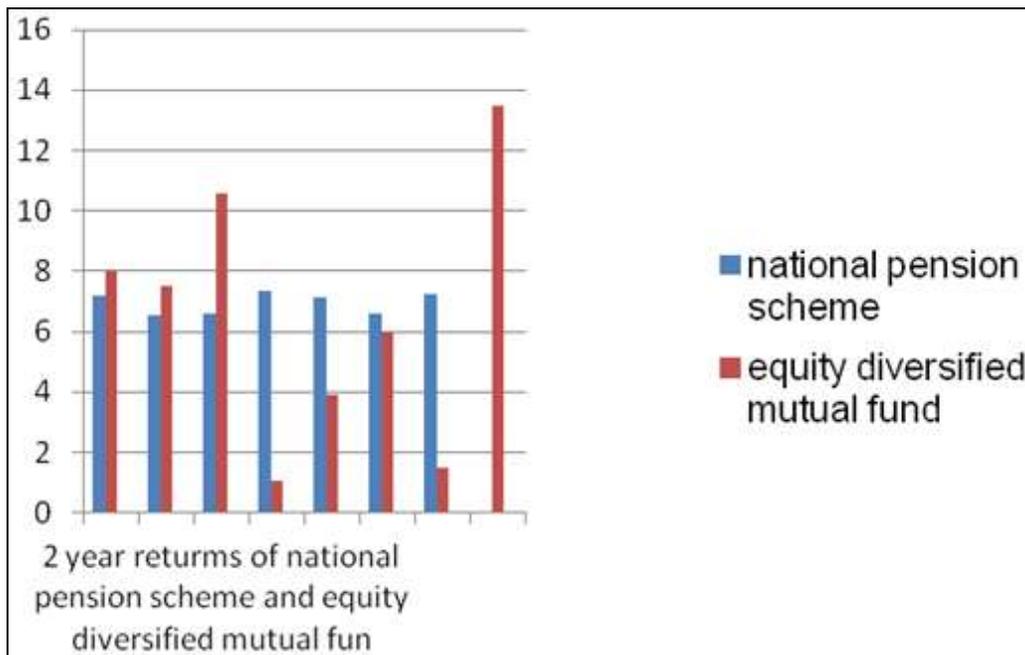
Table 1.4

S. No	National pension scheme (2year)	Equity diversified mutual funds (2year)
1	7.21	8.01
2	6.52	-7.52
3	6.62	10.58
4	7.33	1.04
5	7.13	3.89
6	6.60	5.98
7	7.20	1.49
8	-	13.47
MEAN	6.08	4.61

T test value = 0.632

Table value 2.145

5% level of significance



Interpretation

At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and equity diversified mutual funds.

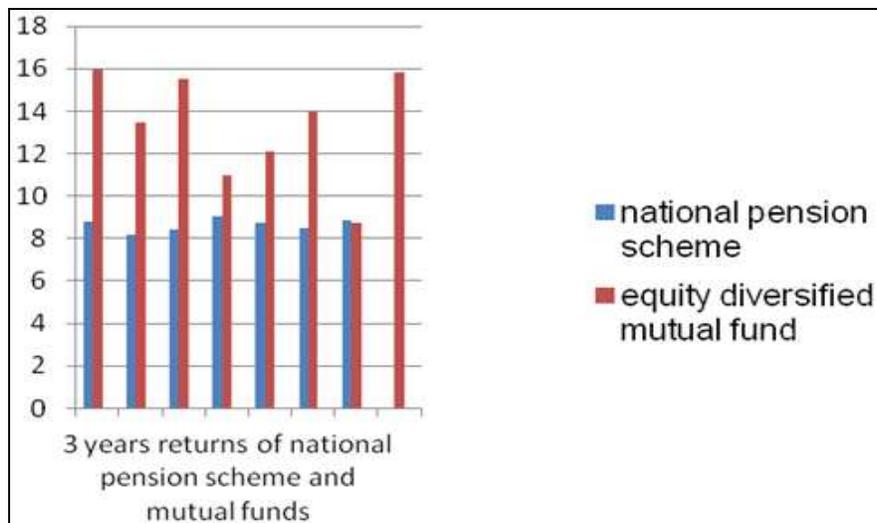
Table 1.5

S. No	national pension scheme (3 years)	Equity diversified mutual fund (3 years)
1	8.77	15.95
2	8.20	13.46
3	8.40	15.50
4	9.02	10.98
5	8.73	12.12
6	8.49	13.97
7	8.88	8.76
8	-	15.82
MEAN	7.56	13.32

T test value = -5.84

Table value = 2.145

5% Level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and equity diversified mutual funds

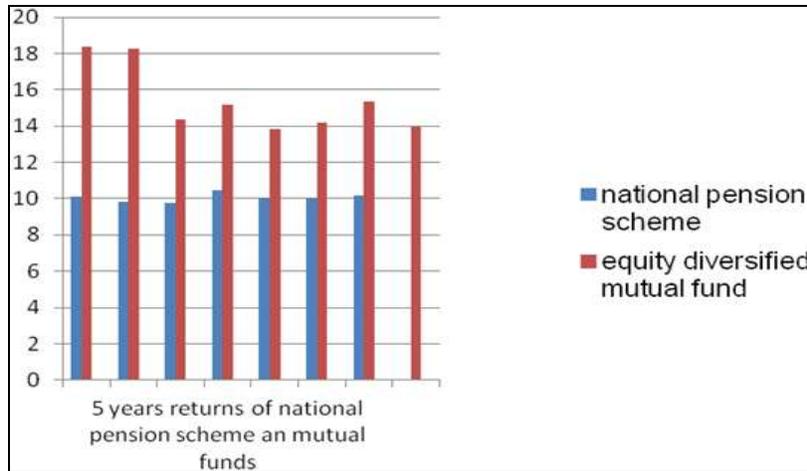
Table 1.6

S. No	national pension scheme (5 years)	Equity diversified mutual fund (5 years)
1	10.11	18.38
2	9.85	18.27
3	9.77	14.35
4	10.48	15.19
5	10.04	13.82
6	9.98	14.21
7	10.18	15.34
8	-	13.96
MEAN	8.80	15.44

T test value = 6.84

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and equity diversified mutual funds

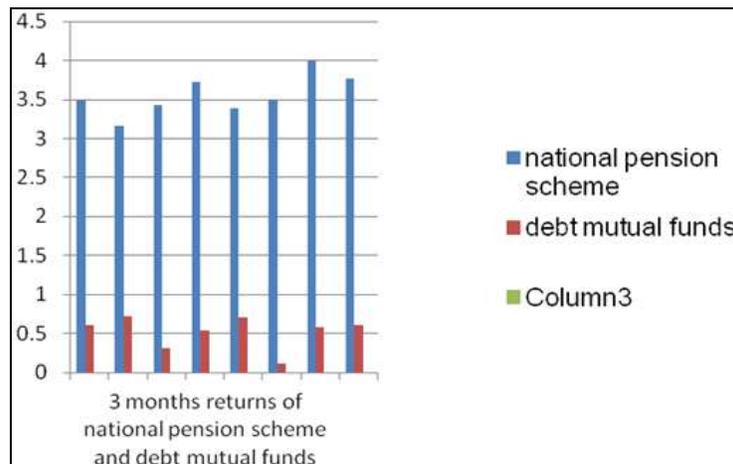
Table 2: Comparison of National Pension Scheme Returns with Debt Mutual Fund Returns

S. No	National pension fund (3 month)	Equity diversified mutual fund (3 month)
1	3.48	0.61
2	3.16	0.23
3	3.43	-0.18
4	3.72	0.05
5	3.39	0.21
6	3.50	0.6
7	4	0.09
8	3.77	0.12
MEAN	3.55	0.495

T test value =23.53

Table value = 2.145

5% Level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and debt mutual funds

pension scheme and debt mutual funds.

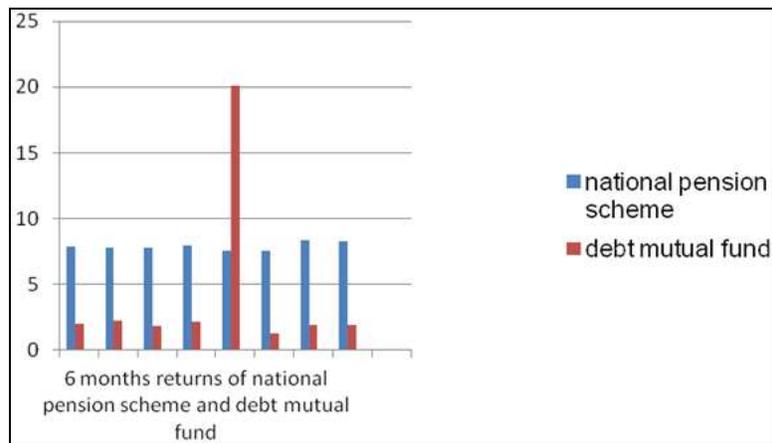
Table 2.1

S. No	National pension scheme (6 months)	Debt mutual funds (6months)
1	7.86	2.01
2	7.76	2.27
3	7.77	1.80
4	7.95	2.18
5	7.58	20.13
6	7.51	1.27
7	8.38	1.87
8	8.28	1.94
MEAN	7.88	4.20

T test value=1.597

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and debt mutual funds

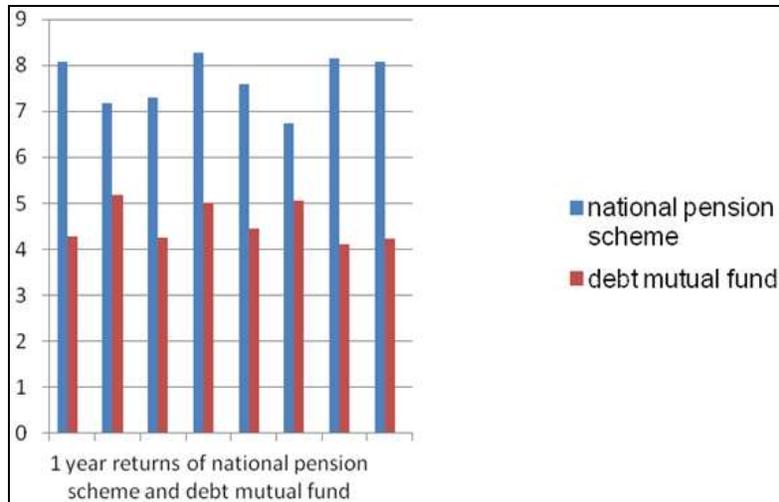
Table 2.2

S. No	National pension scheme (1 year)	Debt mutual fund (1year)
1	8.07	4.29
2	7.18	5.19
3	7.30	4.25
4	8.27	5.02
5	7.59	4.46
6	6.73	5.07
7	8.15	4.11
8	8.07	4.23
MEAN	7.67	4.57

T test value = 12.37

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and debt mutual funds

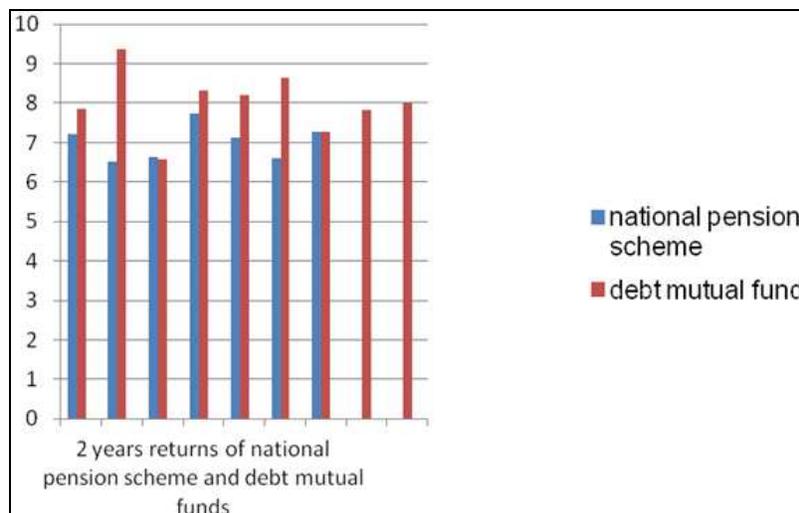
Table 2.3

S. No	National pension scheme (2 years)	Debt mutual fund (2 years)
1	7.21	7.84
2	6.52	9.36
3	6.62	6.57
4	7.73	8.33
5	7.13	8.20
6	6.60	8.63
7	7.26	7.26
8	-	7.81
MEAN	6.08	8

T test value = 0.63

Table value = 2.145

5% level of significance



Interpretation

At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and debt mutual funds.

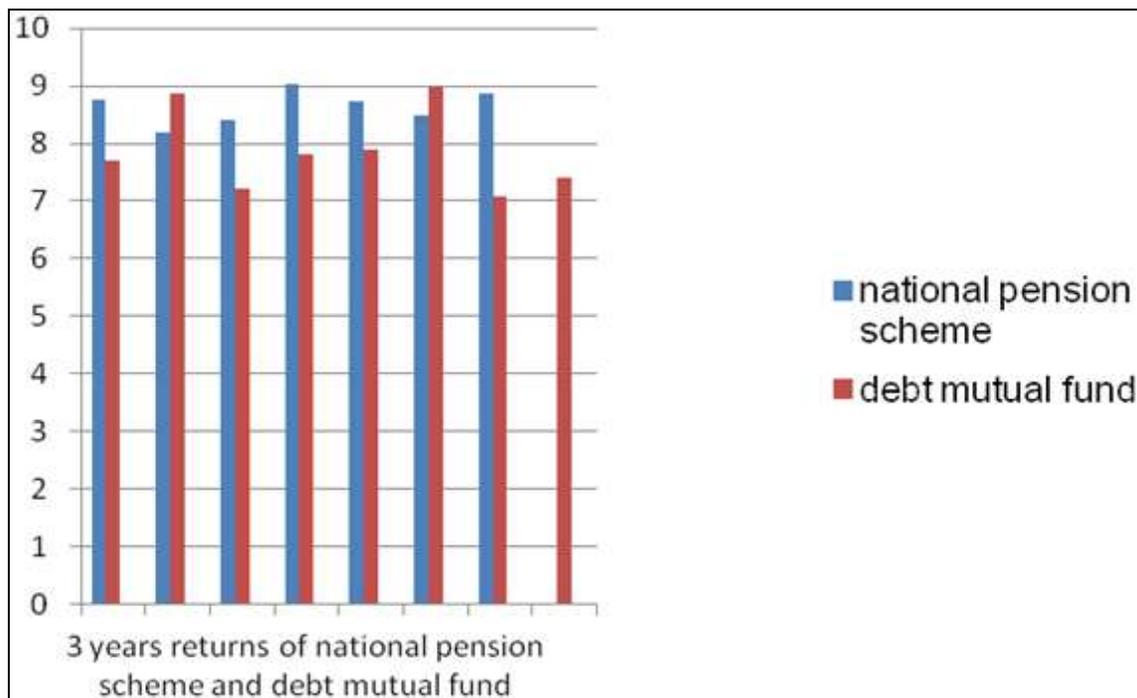
Table 2.4

S. No	National pension scheme (3years)	Debt mutual fund (3 years)
1	8.77	7.70
2	8.20	8.88
3	8.40	7.21
4	9.02	7.80
5	8.73	7.89
6	8.49	8.97
7	8.88	7.09
8	-	7.40
MEAN	7.56	7.86

T test value= 0.641

Value of table =2.145

% level of significance



Interpretation

At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and debt mutual funds.

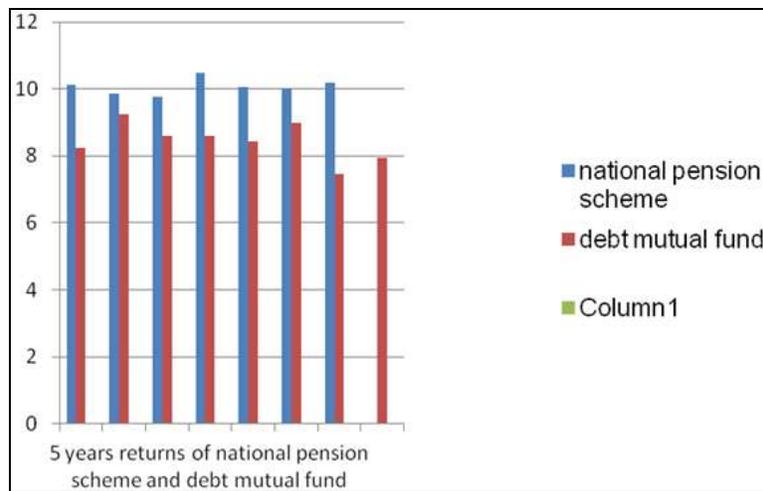
Table 2.5

S. No	National pension scheme (5 years)	Debt mutual fund (5 years)
1	10.11	8.25
2	9.85	9.23
3	9.77	8.60
4	10.48	8.61
5	10.04	8.43
6	9.98	9.00
7	10.18	7.46
8	-	7.96
MEAN	8.80	8.44

T test value =0.485

Table value =2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is less than the table value, so we accepted the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and debt mutual funds

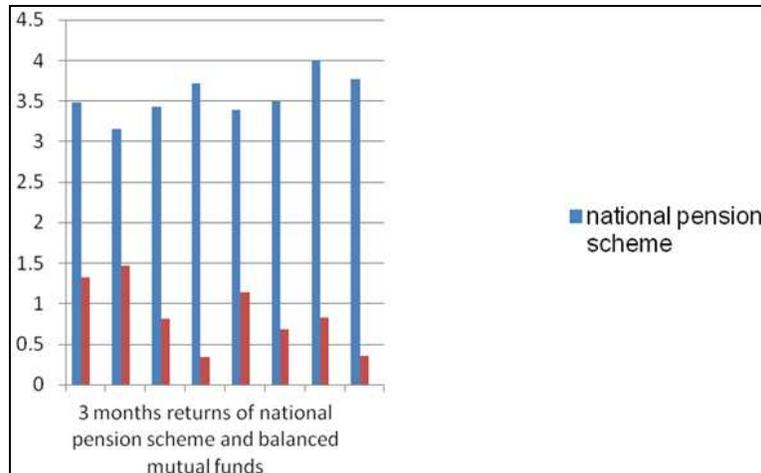
Table 3: Comparison of National Pension Scheme and Balanced Mutual Funds

S. No	National pension scheme (3 months)	Balanced mutual funds (3 months)
1	3.48	1.32
2	3.16	1.47
3	3.43	0.82
4	3.72	0.34
5	3.39	1.14
6	3.50	0.68
7	4.00	0.83
8	3.77	0.36
MEAN	3.55	0.85

T test value = 16.87

Value of table = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and balanced mutual funds.

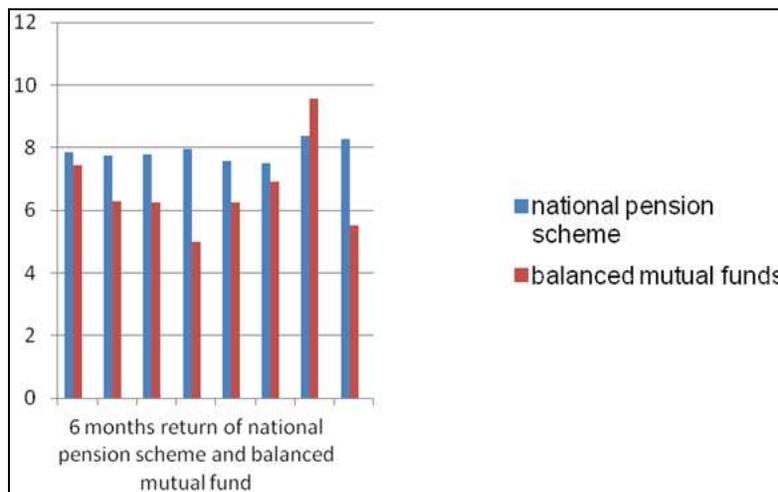
Table 3.1

S. No	National pension scheme (6 months)	Balanced mutual fund (6 months)
1	7.86	7.43
2	7.76	6.29
3	7.77	6.25
4	7.95	4.98
5	7.58	6.24
6	7.51	6.90
7	8.38	9.57
8	8.28	5.52
MEAN	7.88	6.64

T test value=1.59

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is less than the table value, so we accepted

the null hypothesis and conclude that there is no significant difference in the mean of the both returns of national pension scheme and balanced mutual funds.

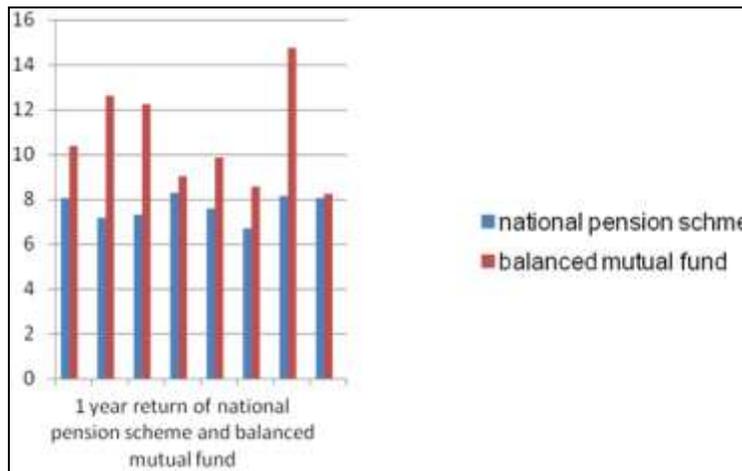
Table 3.2

S. No	National pension scheme (1 year)	Balanced mutual fund (1 year)
1	8.07	10.40
2	7.18	12.63
3	7.30	12.25
4	8.27	9.03
5	7.59	9.86
6	6.73	8.56
7	8.15	14.75
8	8.07	8.26
MEAN	7.67	10.71

T test value = 3.66

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and balanced mutual funds.

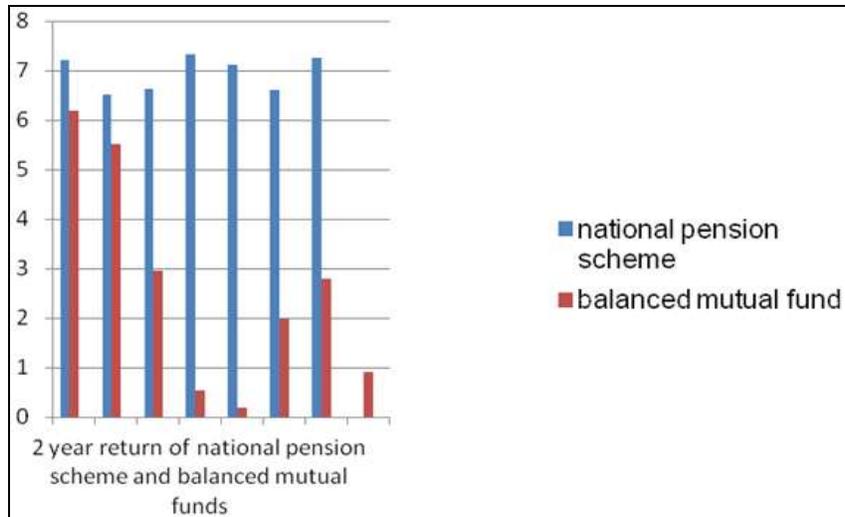
Table 3.3

S. No	National pension scheme (2 years)	Balanced mutual fund (2 years)
1	7.21	6.19
2	6.52	5.51
3	6.62	2.97
4	7.33	0.55
5	7.13	0.20
6	6.60	1.99
7	7.26	2.79
8	-	0.92
MEAN	6.08	1.77

T test value=3.83

Table value=2.145

5 % level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and balanced mutual funds.

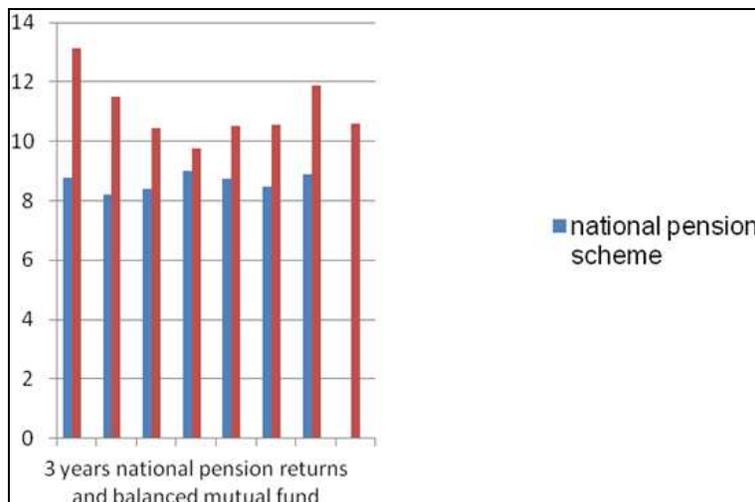
Table 3.4

S. No	National pension scheme (3 years)	Balanced mutual fund (3 years)
1	8.77	13.14
2	8.20	11.52
3	8.40	10.46
4	9.02	9.76
5	8.73	10.52
6	8.49	10.54
7	8.88	11.87
8	-	10.58
MEAN	7.56	11.04

T test value = 6.37

Table value= 2.145

5 % level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and balanced mutual funds.

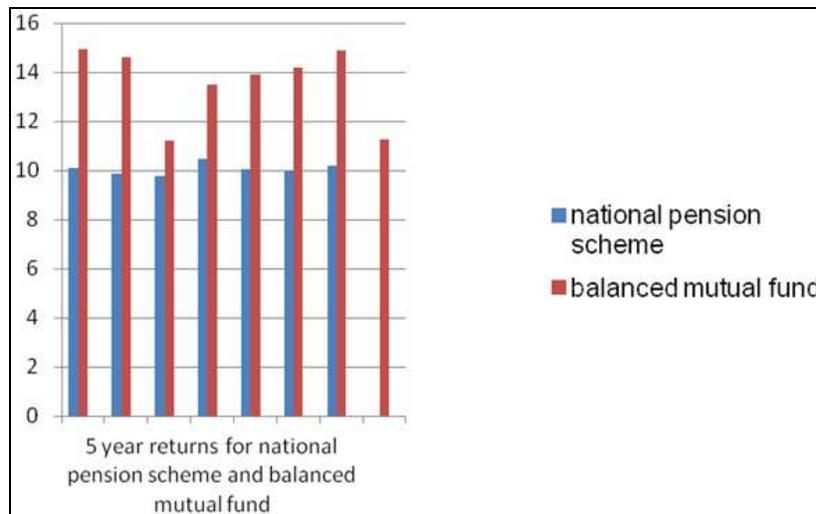
Table 3.5

S. No	National pension scheme (5 years)	Balanced mutual fund (5 years)
1	10.11	14.93
2	9.85	14.61
3	9.77	11.21
4	10.48	13.49
5	10.04	13.92
6	9.98	14.21
7	10.18	14.87
8	-	11.27
MEAN	8.80	13.56

T test value =5.348

Table value = 2.145

5% level of significance



Interpretation: At the 5% level of significance, the calculated value is more than the table value, so we rejected the null hypothesis and conclude that there is a significant difference in the mean of the both returns of national pension scheme and balanced mutual funds

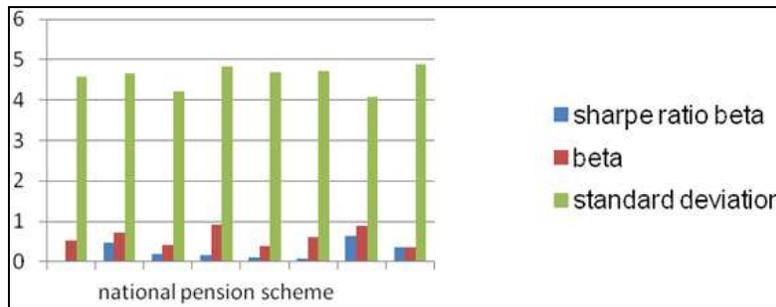
Table 4: Under this table we calculated the Sharpe Ratio, Beta, Standard Deviation.

S. No	National pension scheme	Sharpe ratio	Rank	Beta	Rank	Standard deviation	Rank
1	SBIPF. (national pension scheme SBI)	0.01	8	0.52	4	4.58	3
2	LIC PF	0.47	2	0.71	6	4.66	4
3	UTI retirement solution	0.18	4	0.41	3	4.22	2
4	ICICI prudential fund scheme	0.17	5	0.91	8	4.82	8
5	Reliance PF	0.11	6	0.38	2	4.69	5
6	Kotak PF	0.08	7	0.60	5	4.71	6
7	HDFC PF	0.65	1	0.90	7	4.08	1
8	Birla PF	0.35	3	0.35	1	4.88	7

SHARPE RATIO: The sharpe ratio is given by William E sharpe. This ratio helps the investor to accept th return as compared to the risk. This ratio helps in understanding the performance of the investment under risk

Beta: It helps in understanding whether the investment is invested high or low than market. Thus it also help in measuring the risk associated with it.

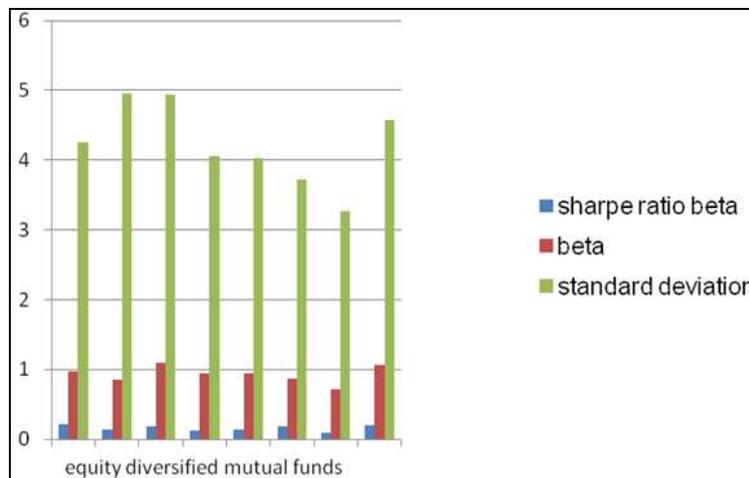
Standard deviation: as standard deviation is denoted by S. This is used to find the amount of variation in the data values or it measure the dispersion of data set in relation to the mean and square root of variance



Interpretation: under national pension scheme rank are given according to ratios. In sharpe ratio highest rank is given to highest ratio because it help n determine the highest return and reduce the risk associated with portfolio. Whereas in beta and standard deviation ranks are given highest to the lowest ratio because denotes lowest the rank highest the risk associated in portfolio.

Table 4.2

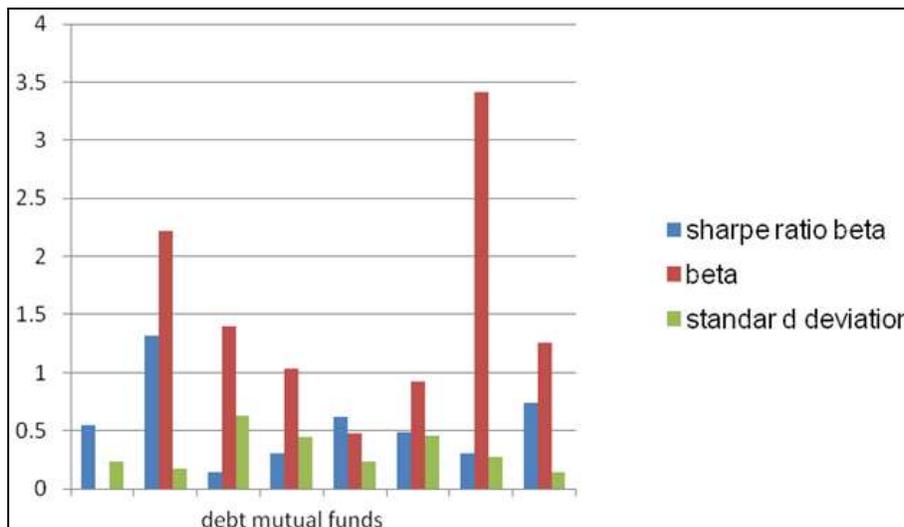
S. No	Equity diversified mutual fund	Sharpe ratio	Rank	Beta	Rank	Standard deviation	Rank
1	Kotak standard Multicap fund	0.21	1	0.98	6	4.26	5
2	HDFC midcap opportunities fund	0.14	5	0.86	2	4.96	8
3	HDFC equity fund	0.18	4	1.09	8	4.94	7
4	SBI blue chip	0.12	7	0.95	4	4.06	4
5	Aditya Birla sun life frontline equity fund	0.14	6	0.95	5	4.03	3
6	ICICI prudential blue chip fund	0.19	3	0.87	3	3.72	2
7	ICICI prudential value discovery fund	0.09	8	0.71	1	3.27	1
8	HDFC top 100 fund	0.20	2	1.06	7	4.57	6



Interpretation: under national pension scheme rank are given according to ratios. in sharpe ratio highest rank is given to highest ratio because it help n determine the highest return and reduce the risk associated with portfolio. whereas in beta and standard deviation ranks are given highest to the lowest ratio because denotes lowest the rank highest the risk associated in portfolio

Table 4.3

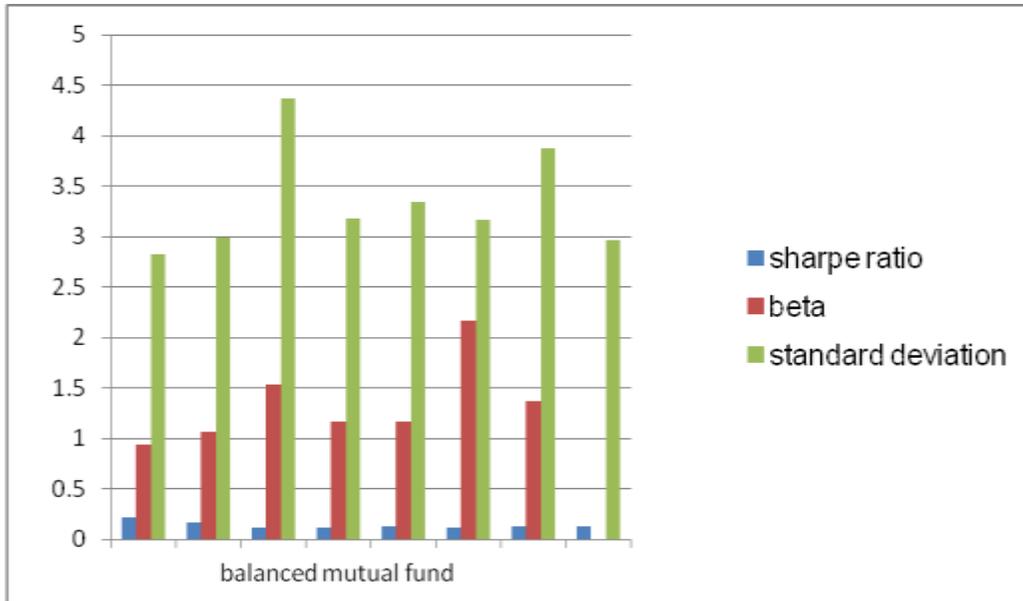
S. No	Debts mutual fund	Sharpe ratio	Rank	Beta	Rank	Standard deviation	Rank
1	ICICI prudential saving fund	0.55	4	0	1	0.23	3
2	Franklin India ultra short bond fund	1.32	1	2.22	7	0.17	2
3	HDFC credit risk debt fund	0.14	8	1.40	6	0.63	8
4	Aditya Birla Sun Life corporate bond fund	0.30	7	1.03	4	0.45	6
5	Aditya Birla Sun Life saving fund	0.62	3	0.48	2	0.23	4
6	Franklin India short term income plan	0.49	5	0.92	3	0.46	7
7	HDFC low duration fund	0.30	6	3.41	8	0.27	5
8	Kotak saving fund	0.74	2	1.26	5	0.14	1



Interpretation: under debt mutual fund rank are given according to ratios. In sharpe ratio highest rank is given to highest ratio because it help n determine the highest return and reduce the risk associated with portfolio. Whereas in beta and standard deviation ranks are given highest to the lowest ratio because denotes lowest the rank highest the risk associated in portfolio

Table 4.4

S. No	Balanced mutual fund	Sharpe	Rank	Beta	Rank	Standard deviation	Rank
1	ICICI prudential equity and debt	0.22	1	0.94	2	2.83	1
2	SBI equity hybrid fund	0.16	2	1.07	3	2.99	3
3	HDFC hybrid equity fund	0.11	7	1.53	7	4.37	8
4	Aditya Birla sun life hybrid 95 fund	0.11	8	1.16	4	3.18	5
5	Reliance equity hybrid fund	0.13	3	1.16	5	3.34	6
6	L and T hybrid equity fund	0.12	6	2.16	8	3.17	4
7	DSP equity and bond fund	0.13	4	1.37	6	3.87	7
8	UTI hybrid fund	0.13	5	0	1	2.96	2



Interpretation: under debt mutual fund rank are given according to ratios. In Sharpe ratio highest rank is given to highest ratio because it help n determine the highest return and reduce the risk associated with portfolio. Whereas in beta and standard deviation ranks are given highest to the lowest ratio because denotes lowest the rank highest the risk associated in portfolio.

V. FINDINGS, SUGGESTIONS & CONCLUSION

Findings

- Due to significance difference in national pension scheme returns and mutual fund returns at the 5% level of significance. So we reject the null hypothesis
- Due to no significance difference in the national pension scheme returns and mutual funds return at the 5% level of significance. So we accept the null hypothesis.
- Due to tax exemption and higher return the investor always want to invest in mutual fund
- National pension scheme are also providing a various retirement opportunities at the age of 60 years
- An individual investor always preferred to invest in low beta in order to improve the portfolio and also reduce the volatility
- Under the Sharpe ratio an investor invest more volatility in his portfolio in order to reduce the risk and get more returns.

Conclusion and Suggestion

- Various strategies and technologies are required to be use in improvement of national pension scheme and mutual funds in order to reduce the risk
- Various financial institutions and education institutions must start. So that the investor must known about how to invest in mutual funds and aware about the national pension scheme.

- Whereas diversification also helps in improvement in reduction of risk in portfolio. It will also help in achieving the retirement saving goals.
- Invest in low beta in order to improve portfolio and it also help in reduction in risk and gives the higher returns.
- Investor should invest more in portfolio in order to reduce the risk associated with this ratio.

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